

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

SUMMARY REPORT

**Prepared for
Yorkshire and Humber
Regional Assembly
by Land Use Consultants
in association with
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SUMMARY REPORT

INTRODUCTION

1. Land Use Consultants and Cobbetts¹ were commissioned by the Yorkshire and Humber Assembly (YHA) 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.
2. This Summary Report provides an overview of the study objectives, methodology and research findings, followed by the conclusions and recommendations of the study team. It is structured as follows:
 - Background.
 - National Legislation and Guidance.
 - Regional Policy.
 - Stakeholders Views.
 - Analysis.
 - Conclusion and Recommendations.
3. The main Research Report explores these issues in more detail, and references are provided to the relevant sections throughout this Summary Report (in bold). A separate volume of Appendices provide a record of the evidence on which the research findings and recommendations are based.

BACKGROUND

Context – the need for the study

4. The Government has set a national target for a reduction in carbon dioxide (CO₂) 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 2010².
5. 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 Programme³.
6. In the Yorkshire and Humber region the main contributors to climate change have been identified⁴ as the power generation industry (58% of CO₂

¹ Wilbraham & Co is the Planning & Environmental Practice of Cobbetts.

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

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

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.

7. Trends show that, during the period 1990 to 2001, greenhouse gas emissions declined in most sectors⁵ 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 also increasing rapidly. The decline in greenhouse gas emissions in other sectors can be put down to a restructuring of the economy from manufacturing to office-based commerce, cleaner and more efficient technologies, and a switch in energy generation from coal to gas.
8. 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.
9. 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 damage⁶. 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.
10. 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

⁴ 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).

⁵ 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).

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

buildings and infrastructure to cope with flood risk, higher temperatures and storm damage⁷.

11. Further details of the regional picture in relation to climate change can be found at **Section 3** of the main research report (p.17).
12. The current RSS addresses the need for both climate change mitigation and adaptation⁸ 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 resource shortages. Details of the current approach can be found below at para. 61-66, and at **Section 6** of the main research report (p.45).
13. 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.
14. 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

15. 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 (see **Section 1** of the main report for more detail, p.1).

⁷ 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.

⁸ 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.

16. 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).
17. 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

18. The study team used the following research methods to meet the objectives set, explained in detail at **Section 2** of the main report (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.

NATIONAL LEGISLATION AND GUIDANCE

Legislation

19. The study's review of legislation considered three main issues with respect to the RSS:
- The legal basis for the preparation of the RSS, and what it can legitimately contain (to withstand legal challenge).
 - The scope of the planning system to deal with climate change issues.
 - Other legal levers relevant to climate change issues.
20. The Planning and Compulsory Purchase Act 2004 provides the statutory basis for the preparation of RSS⁹. 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

21. While there are a number of other levers, the planning system is central to pursuing climate change objectives. The main legal planning mechanisms for expressing and applying climate change policies¹⁰ are:
- The development plan (although policies are not in themselves legally binding).

⁹ 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).

¹⁰ In particular through the Planning & Compulsory Purchase Act 2004 and Town & Country Planning Act 1990

- 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.

Other legal levers relevant to climate change issues

22. 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.
23. 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.
24. Section 1 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.
25. 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.
26. 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).

27. 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.
28. 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.
29. 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.
30. Changes to the Building Regulations in 2005 (**Amendments 2005 to the Approved Documents**)¹¹ 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 leakage¹². *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.
31. 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.

¹¹ Interim versions of Approved Documents have been published in preparation for the changes to the Building Regulations, and are available on the OPDM website (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).

¹² ODPM Press Notice 13th September 2005.

32. 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 2006¹³.
33. 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 buildings¹⁴, with consultation with stakeholders planned for Spring 2006.
34. 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 1,000m² floorspace, which, where feasible, should also include an upgrade in energy efficiency performance¹⁵. Recent changes to Building Regulations will implement this Directive.

Other legal mechanisms

35. 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.

¹³ ODPM Press Notice 13th September 2005.

¹⁴ ODPM Press Notice 13th September 2005.

¹⁵ ODPM Press Notice 13th September 2005.

- **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 1st 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.

NATIONAL STRATEGIES AND POLICIES

36. A number of national strategies and policies address the need to mitigate and adapt to climate change as set out below (see **Appendix 4** for further details).
37. Climate change and energy is one of the priority actions of the **UK Sustainable Development Strategy**¹⁶ (2005). This includes a Government commitment to secure change in the way energy is sourced and used, and recognises the need for behavioural change. The Government is committed to raising the energy efficiency of homes by a fifth by 2010 compared with 2000. The strategy highlights the potential savings to the UK economy of resource and energy efficiency, and states the need to consider road pricing schemes. It states that RSS should articulate a spatial vision for

¹⁶ Securing the future: delivering the UK sustainable development strategy. The UK Government Sustainable Development Strategy (March 2005).

the region and how this will contribute to sustainable development, and highlights the importance of sustainability appraisal.

38. The **Energy White Paper**¹⁷ (2003) *reiterates* the UK's carbon emissions reduction targets, and states that RSS must put in place policies to contribute towards these targets. The Government expects more than half of emissions reductions to come from improved energy efficiency. In the longer term, it wants to see regional bodies developing innovative ideas and strategies for more sustainable energy use that go beyond their statutory functions.
39. The **Aviation White Paper** (2003) recognises that the main responsibility for reducing aviation emissions lies with Government and the international community. However, airport 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.
40. The latest update from the **UK Climate Impacts Programme**¹⁸ provides a progress report on action taken to research and adapt to climate change (for example, all regions have completed climate change scoping studies). It gives information on sectors likely to be most affected and provides guidance on priorities and methods of adaptation, in particular highlighting that there are benefits from taking anticipatory action now (e.g. market opportunities and resource / energy savings). It notes that spatial planning is a critical mechanism for coping with climate change impacts, highlights research gaps (e.g. emergency planning and aspects of adaptation), the need for more local authority involvement, and the important role which regional and sectoral partnerships have to play.

NATIONAL PLANNING POLICY GUIDANCE

The Role of RSS

41. Planning Policy Statement 11 requires that RSS should set out a spatial vision for the region, showing how this will contribute to achieving sustainable development, and provide a spatial strategy for achieving the spatial vision, illustrated by a key diagram. (PPS 11: Regional Spatial Strategies, 2004).
42. PPS11 provides that RSS should be regionally specific, addressing matters of regional or sub-regional importance. It should provide spatially specific policies, applying national policies to the circumstances of the region, and identify broad locations for development. The RSS should be integrated with other regional frameworks and strategies which influence the nature of places and how they function. It should focus on implementation and is subject to a statutory annual monitoring report.
43. As set out in PPS11 (para. 1.7), the RSS should not:

¹⁷ Energy White Paper – Our energy future – creating a low carbon economy. DTI (2003).

¹⁸ Measuring Progress. Preparing for climate change through the UK Climate Impacts Programme. UKCIP Technical Report (2005).

- Repeat national policies.
 - Address local issues which should be the subject of a Local Development Document.
 - Identify specific sites as suitable for development.
44. PPS1 I states that 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* (PPS1 I, PPS1). This means that the RSS needs to be clear whether its policies are:
- Strategic development control policies.
 - To be delivered through LDDs or LTPs.
 - To be delivered through other means of delivery as agreed with the bodies concerned.

Addressing climate change in RSS

45. PPS1, Delivering Sustainable development (2005) confirms the role of the planning system in helping to reduce greenhouse gas emissions and **mitigating** climate change, and requires that development plans should include policies that:
- 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.
46. PPS1 also states that design and construction of the built environment to achieve the prudent use of natural resources is a key part of sustainable development and that regional planning authorities should promote resource and energy efficient buildings.
47. PPG13 Transport (2001) and PPS1 highlight transport as a particular target sector for reducing greenhouse gas emissions by reducing the need to travel through spatial planning and encouraging a switch to more sustainable modes. The need for more sustainable patterns of development which concentrate new development on previously developed land in towns and cities is stressed in PPG3 Housing (2000).
48. The other main target for climate change mitigation in national planning policy is renewable energy. PPS22 Renewable Energy (2004) provides the key guidance:

- RSS should contain policies to promote and encourage development of renewable energy resources. RSS should recognise a range of resources, characteristics, locational requirements and potential.
 - RSS should include regional, and preferably sub-regional, renewable energy capacity targets.
49. Beyond the above, national planning policy guidance provides little other advice on mitigation measures.
50. Recognising the need to **adapt** to the impacts of climate change, national planning policy requires that development plans should include policies that:
- Take climate change impacts into account in the *location and design of development*, having regard to regional climate impacts studies (PPSI and PPSI I).
 - Promote the sustainable use of water resources and the use of sustainable drainage systems in the management of runoff (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 and taking a sequential, risk-based approach to determine the location of development (PPG25 Development and Flood Risk, 2001).
 - Take into account the impacts of climate change on the distribution of habitats and species, geomorphological processes and features (PPS9 Biodiversity and Geological Conservation, 2005).

OTHER NATIONAL POLICIES AND STRATEGIES

51. The other main guidance issued by Government with respect to climate change mitigation and adaptation is 'The Planning Response to Climate Change' (ODPM, 2004). This sets out detailed advice on the role of planning to take account of climate change in RSS and Local Development Frameworks (LDF), and addresses a range of issues including transport, infrastructure, flooding and energy. It brings together the messages from national planning policy and reinforces these with more practical guidance.
52. In terms of **mitigation**, the guidance focuses on the use of spatial planning to reduce the need to travel and work towards achieving Government emissions reduction targets, as well as on supporting renewable energy development. It also notes that *RSS should 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.
53. In respect of **adaptation**, the Planning Response to Climate Change advises that the RSS/RPB should:

- With the RES and RSDF ensure that the *regional economy is not undermined by climate change impacts*, and exploits positive opportunities.
- *Avoid policies which constrain or reduce effectiveness of future adaptation options* (e.g. building in a floodplain may jeopardise future flood management options) and 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 and design of infrastructure developments* (to withstand climate change impacts).
- *Ensure the urban environment (spaces and buildings) is designed to cope with the effects of climate change* (e.g. warmer temperatures, subsidence, flood risk etc).
- Adopt the precautionary principle in formulating policies which allow for change and uncertainty in supply and promote water efficient development.
- Set objectives to protect and enhance landscapes and biodiversity under climate change conditions, and ensure agriculture can adapt.

REGIONAL POLICY

Regional Context

54. It is essential that RSS both shapes and is informed by other regional strategies (PPSI I, 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.
55. The key regional strategies for Yorkshire and the Humber are set out below highlighting their role in tackling climate change and also where they identify actions for the RSS (see also **Appendix 5**). 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 above those mentioned in national strategies and policies.
56. **Advancing Together**, 2004 sits above the other regional strategies: *it sets the framework and draws together the region's plans and strategies, establishing a shared vision for the region*, and identifies indicators for measuring progress in the region towards the 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.
57. The **Regional Sustainable Development Framework**, 2003-5 (RSDF) is the mechanism to realise the vision for a sustainable region expressed in 'Advancing Together'. 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.

58. The **Regional Economic Strategy, 2003-12 (RES)** is the only regional strategy other than RSS to have a statutory basis (PPSI I). *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'.*
59. Other key strategies at the regional level include the draft **Regional Housing Strategy (RHS, 2005)** and the **Northern Way (ODPM, 2004)**. *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. The Northern Way, prepared by Government, 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.*
60. The **Climate Change Action Plan for Yorkshire and Humber, 2005**, currently in draft form, will provide the region with the framework of action to respond to the threat of climate change. It aims to 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.

The approach of the current RSS to climate change

61. 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.

Mitigation

62. 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.
63. 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.
64. Additional policies which aim to reduce climate change in terms of mitigation are associated with the economy (E2 & E4) and social infrastructure (SOC1-SOC4).

Adaptation

65. Policy S5 also sets the approach to adaptation in the current RSS. It states that local and regional authorities, agencies and others should take into account the land use implications of climate change impacts. They should

plan for both the successful adaptation to resulting effects, and to maximise potential economic and social opportunities in land use terms.

66. 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).

The approach of other regions

67. The approach to climate change in the current RSS for Yorkshire and the Humber was compared with two other regions, the draft RPG for the North West (2004) and the draft South East Plan (2005), see **Section 6**, p.45 of the main report for more details. The South East was chosen as it is the most advanced of the new RSS, and as the strongest economic region might 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 geographical characteristics and is also subject to Northern Way policy.
68. The review of the approach to climate change in two other regions found that:
- 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 LDD policies to help the region meet national targets to reduce carbon emissions. Topic based policies back up the cross-cutting approach, with spatial strategies which reduce the need to travel, an acknowledgement of the need for more sustainable freight and restrained development of airports, along with increasing resource efficiency, including sub-regional targets for development on previously developed land, and the promotion of renewable energy.
 - Both regions require progress on CO₂ emissions reductions to be in line with national targets for 2010. The draft South East Plan has the same additional emissions reduction target as Yorkshire and the Humber for 2015. The South East and North West RSS both require progress towards regional targets for Combined Heat and Power. The draft South East Plan includes a target that at least 10% of energy demand should be provided from renewable sources for housing schemes over 10 units and commercial schemes over 1,000m². Both regions promote renewable energy, with sub-regional targets included in the draft South East Plan.
 - Less attention is given to adaptation, but there is a common focus on three key areas: coastal zone management and flood risk, water resources and biodiversity. The draft South East Plan goes further in relation to the

built environment – as well as guiding strategic development to locations offering greater protection from impacts, adaptation will also be achieved by ensuring new and existing building stock is more resilient to climate change impacts. The draft North West RSS refers to the need to consider the role of greenspaces in adapting to the effects of climate change, for example, in enhancing or replacing threatened habitats.

- 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), and requires developments which are significant consumers of water to meet BREEAM 'very good' and 'increasingly excellent'. 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').

THE VIEWS OF STAKEHOLDERS

69. Regional and local stakeholders were consulted to determine what they considered the RSS should do to address climate change issues and, at the local level, whether they considered the current approach of the RSS could be easily reflected in and implemented through Local Development Frameworks.
70. Thirteen interviews were carried out with regional stakeholders from the 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. In addition, ten interviews were carried out with planning and local transport plan (LTP) 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.
71. A range of opinions were expressed relating to what the RSS should and should not be doing to address climate change issues (see **Section 7**, p.61). *The coverage of climate change in RSS policies was generally felt to be sufficient. However, while some felt that the RSS is already doing enough, others felt that it could go further, though they were not generally able to identify how this could be done.* While the majority of local stakeholders felt that RSS policies on climate change were being reflected in Local Development Frameworks, authorities identified the need for guidance on how to implement policies and *difficulties were identified in relation to monitoring progress, particularly in terms of emissions.* The main area of concern appeared to be that *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.

72. There were genuine concerns raised by some stakeholders 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.*

ANALYSIS OF RESEARCH FINDINGS

Contradictions / Gaps in National Policy

73. 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 CO₂ 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.

74. 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.*
75. 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

76. 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.
77. 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.
78. 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. 114-123 below).

79. 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.
80. 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.
81. 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.
82. 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 nationally¹⁹, and within the region²⁰. 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.
83. 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 improvement²¹.

¹⁹ Securing the future: UK Government Sustainable Development Strategy, 2005.

²⁰ 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.

²¹ Regional Spatial Strategy for Yorkshire and Humber Annual Monitoring Report (2004).

84. 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.
85. 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.
86. A combination of actions at the regional level and by lobbying Government should also help to make a difference. These are explored further below.

Legal Review: Summary of Key Findings

87. The parameters for the lawful preparation of RSS pursuant to the Planning and Compulsory Purchase Act 2004²² 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. 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 (see **Section 4** of the main report for a more detailed discussion, p.21).
88. 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, including the Regional Economic Strategy (RES) and Regional Sustainable Development Framework (RSDF), and an assessment needs to be made as to which objective is best established in which of those policy documents (see also paras. 54-60 above, and **Section 5**, p.33).
89. There is a robust legal 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. With respect to the inclusion of regional or sub-regional targets, e.g. for emissions reductions or renewable energy, there would be nothing intrinsically unlawful in this, assuming that there is an adequate evidence base to justify them.
90. *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).

²² 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).

91. Similarly, there would be a risk in promoting 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* LPAs to consider the use of BREEAM/Ecohomes. This route will be supported by the Government's forthcoming Code for Sustainable Buildings, which goes beyond current Building Regulations.
92. 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 with gaps. Linked with this, it must be remembered that RSS has the status of policy only, and 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. *The ability of the RSS 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*, depending instead on other regimes (e.g. fiscal policy) which national Government and, at the regional level, other strategies are better placed to address and influence (e.g. the Regional Economic Strategy).
93. 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.

Policy Review: Summary of Key Findings

94. 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 (PPSI). 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 (PPSI I, PPG3, PPG13). However, the ability of RSS to achieve significant change is limited by its remit. 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).
95. 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.

96. 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.

Extent to which the RSS meets national and other policy guidance

Mitigation

97. 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 **Section 8**, p.71 and **Appendix 8** for more details).
98. Aside from national planning policy, analysis of other national and regional policy, guidance and strategies, the approach of other regions, and stakeholder feedback has identified the following gaps in current RSS relating to climate change mitigation:
- A clearer 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 Regional Economic Strategy, 2006-15).
 - The RSS should complement the Regional Housing Strategy by supporting the specification of low emission housing and sustainable construction.
 - Encouragement of the use of BREEAM, Ecohomes, and Zero Emissions Standards (ODPM Planning Response to Climate Change, 2004).
 - 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 (Regional Sustainable Development Framework, 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, p.33).
 - 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.
99. In view of the approach of the South East and North West regions, the YHA 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).
 - Progress towards a regional CHP target.
100. 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 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 developed²³.
- 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-firing²⁴.

Adaptation

- I01. The RSS reflects the requirements of national planning policy to adapt to climate change through land use planning: **there are no major policy omissions** (see **Section 8**, p.71 and **Appendix 8**). 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.
- I02. 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 for flood risk manual' by the Regional Assembly. The provision for LPAs to carry out strategic flood risk assessments has helped achieve significant progress in reducing the number of planning decisions made contrary to Environment Agency advice (see para. 83 above).
- I03. 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.
- I04. 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

²³ The value of trees in our changing region. A strategic framework for trees, woods and forests in Yorkshire and Humber, 2005.

²⁴ www.dti.gov.uk/renewables/policy/eligible_renewables.shtml

not referred to in RSS as part of policies on sustainable building design, S4 and S6 (PPSI, Planning Response to Climate Change, 2004).

- 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 (Planning Response to Climate Change), although the supporting text to Policy S5 acknowledges that climate change impacts will have varying effects on different economic activities. However, this issue is 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. However, the likely impacts of climate change in relation to these issues are not specifically mentioned, 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, p.33).

105. The approach of the South East and North West regions suggest that the YHA could consider:
- 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 impacts in the built environment as part of sustainable construction, e.g. higher ground floor heights and / or two storey development in high flood risk areas, etc.

IMPLEMENTATION

106. 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 PPS11 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.
107. However, when identifying the bodies responsible for implementation of the RSS, greater clarity is needed in terms of which organisations are being referred to and the roles that such bodies are expected to play, for example, ‘other partners in the development process’ (policy SOC3) or ‘other public agencies’ (Policies S3 and S4) are expected to have a role in implementing policies.
108. Where local authorities or other agencies are expected to play more than one role in implementing policy this should be clearly stated. For example, when preparing the LDF, the local planning authority 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.
109. It may be most appropriate for this type of detailed guidance to be provided as part of the Regional Climate Change Action Plan.
110. As referred to above, when considering implementation, it is important to note the role of the RSS and its relationship with other strategies and delivery mechanisms, and we have therefore identified actions for the RSS

and for other regional strategies in the Conclusions and Recommendations section (see also paras. 54-60 above, and **Sections 4 and 5** of the main report, p.21 and 33).

MONITORING

- I 11. Our consultations with regional stakeholders identified significant uncertainty as to how to measure progress towards climate change policy objectives.
- I 12. 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.
- I 13. Although there is a large amount of data on transport, there are problems associated with how this data is interpreted by different organisations and a need for an agreed and consistent approach. A lack of data on biodiversity was also identified.

THE COSTS OF CLIMATE CHANGE POLICIES

- I 14. A key concern in the Yorkshire and 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 (i.e. resulting in an 'opportunity cost' to the region).
- I 15. However, in addition to considering the direct monetary and economic costs of mitigating and adapting to climate change, it is also important to consider opportunity costs, including the cost of *not* taking action.
- I 16. Our review of the costs of climate change drew on key publications by the UK Climate Change Impacts Programme among others²⁵ (see **Section 8**, p.95).
- I 17. Economic and financial costs (and savings) associated with **mitigating** climate change through reduced emissions can be linked to:
 - 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).

²⁵ Sources include: Costing the Impacts of climate change in the UK – Overview of the guidelines, UK Climate Impacts Programme, 2004 and Climate Change and local communities – how prepared are you? An adaptation guide for local authorities in the UK, UKCIP, 2003.

- Incorporating renewable energy into new developments (e.g. solar panels).
 - Renewable energy generation (e.g. windfarms, hydro, biomass).
118. These are likely to affect the whole region, although there may be variations, e.g. renewable energy costs may vary across the region depending on the types of scheme involved.
119. Costs issues in deciding on **adaptation** measures are likely to relate to:
- 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).
120. 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.
121. Our 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 (See **Section 8**, p.95), but provides signposts to useful guidance on considering costs.
122. 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.

123. 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 (2003-12), along with strong arguments related to anticipatory action and securing a 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.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

124. 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.
125. 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.
126. 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.
127. 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

128. 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.

129. 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

130. 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 CO₂ reduction target is unlikely to be met, both nationally²⁶, and within the region²⁷, 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 (PPSI, Energy White Paper, 2003). In addition, the RSS has a key role to play in reducing and recovery of waste (PPSI, Planning Response to Climate Change 2004).

²⁶ Securing the future: UK Government Sustainable Development Strategy, 2005.

²⁷ 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.

- 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 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 (PPSI, PPSI I, 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 Guidance²⁸), 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 (PPSI I). 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

²⁸ Regional Spatial Strategies: Guide to Producing Regional Transport Strategies, Consultation Draft, DfT 2005.

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 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 (PPS I I).

What RSS could or should way in relation to adaptation

131. 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).
132. 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.
133. 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.
134. 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

135. 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'²⁹.
- 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

²⁹ Advancing Together: the Vision and Strategic Framework for Yorkshire and the Humber (2004)

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

136. 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).
137. 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).

7th October, 2005.

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