

**HERTFORDSHIRE COUNTY COUNCIL****STRUCTURE PLAN AND REGIONAL ISSUES PANEL: 13 NOVEMBER****LIVING WITH CLIMATE CHANGE in the East of England – Implications for Hertfordshire****Report of the Director of Environment**

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**1. Purpose of the report**

- 1.1 To inform the panel of the publication and launch of the “Living with Climate Change in the East of England” study and the issues it raises that are of relevance to Hertfordshire County Council. The study began in September 2002 with the appointed consultants guided to ‘undertake a study to provide authoritative guidance to enable the development of a range of policy initiatives and practical actions for regional adaptation to climate change’. The purpose of this report is to obtain the panels views on the County Councils response to this study and in particular to note of the key messages contained within its communications strategy component.
- 1.2 This report will be supported by a presentation at the panel to provide further detail and clarification on the study and its findings.

**2. Summary**

- 2.1 The study into “Living with Climate Change in the East of England” has been commissioned by the East of England Sustainable Development Roundtable and is being led by Hertfordshire County Council. It is being undertaken by a consortium of consultants led by Land Use Consultants who are supported by CAG Consultants and SQW. The project is supported financially by the East of England Regional Assembly, the East of England Development Agency, the Countryside Agency, Government office for the East of England, all six County Councils in the East of England and the Hertfordshire Environmental Forum. Additional support is being provided by the Environment Agency and the UK Climate Impacts Programme.
- 2.2 The study has looked at adaptation strategies for dealing with climate change at the regional and local level. Using defined climate change sub regions (see appendix 1) the study has identified the likely climate

change impacts on the East of England and the adaptation responses to them for a range of local authority service areas as well as service areas for other public sector agencies such as the NHS and for business.

2.3 The “Living with Climate Change in the East of England Study” is due to be published in March 2004 and will comprise 5 documents which are as follows:

- Stage 1 report on regional spatial issues
- Stage 2 report on local service provision
- Summary report for the whole study
- Summary report highlighting key issues for local authorities and public sector agencies
- Summary report highlighting key issues for business

### **3. Background**

3.1 According to the UK Climate Impacts Programme (UKCIP), one of the main partners involved in the study, there is now clear and robust evidence that climate change is occurring and is being influenced by both natural and human impacts. These combined, pose both a significant threat, but also offer opportunities for various aspects of future planning and economic growth aspirations and to existing infrastructure, heritage and wildlife concerns.

3.2 Work on looking at climate change impacts has been well underway in many of the English regions for a while but not in the East of England as regional agencies did not want to just repeat work that was being done elsewhere and wanted to look for a way to take the national debate forward as well as adding value to the knowledge base in the East of England. With this in mind the East of England sustainable development roundtable chose to undertake a study aimed at looking for adaptation responses to the known climate change impacts.

3.3 In September 2002 a team of consultants were appointed comprised of Land use Consultants, CAG Consultants and SQW to undertake a study to look at the climate change adaptation issues for the East of England. The study was to be undertaken in three parts. Stage 1 was to look at adaptation responses that were applicable at the regional level with a view that these would feed into the emerging regional planning guidance and Regional Economic Strategy as well as other regional documents. Stage 2 was to focus on issues that affected local service provision for local authorities, key public sector agencies and business. Stage 3 was to look at the dissemination mechanisms and materials that would be necessary to get all of the study findings out to key decision-makers and the public.

3.4 The study was commissioned by the East of England Sustainable Development Roundtable and is being funded by a wide range of

regional agencies as well as all Six County Council in the region. As a result of its role in bringing about the study Hertfordshire County Council was requested to lead the study and undertake the management of the consultants throughout the duration of the work which will conclude with the study's launch in March 2004.

#### 4.0 Findings from the “Living with Climate Change in The East of England” Study

4.1 Stage 1 of the study looking at spatial issues affecting the whole of the region identified the main climate change impacts on the regions and these are shown in table 1.

**Table 1 Key climate changes in the East of England (under low and High Emissions scenarios) by the 2080s**

Climate changes	Low Emissions scenario	High Emissions scenario
<ul style="list-style-type: none"> <li>Hotter drier summers</li> </ul>	2-3°C warmer and 20-30% drier	Up to 5°C warmer and 40-60 % drier
<ul style="list-style-type: none"> <li>Milder wetter winters</li> </ul>	1.5-2°C warmer and 10-20% wetter	3- 3.5°C warmer and 25-35% wetter
<ul style="list-style-type: none"> <li>Significant decrease in soil moisture content</li> </ul>	Decrease of 10-30% in summer and autumn	Decrease of 30- 50% in summer and autumn and up to 10% in winter
<ul style="list-style-type: none"> <li>Extreme high temperatures more frequent</li> </ul>		
<ul style="list-style-type: none"> <li>Extreme winter precipitation more frequent</li> </ul>		
<ul style="list-style-type: none"> <li>Increase in thermal growing season</li> </ul>	Increase by between 45 and 55 days	Increase by up to 100 days
<ul style="list-style-type: none"> <li>Net sea level rise</li> </ul>	Approximately 22 cm	Approximately 82 cm
<ul style="list-style-type: none"> <li>Increase in sea storm surge height</li> </ul>	50 year return surge height will increase by up to 1 m (but high level of uncertainty)	50 year return surge height will increase by up to 1.4m (but high level of uncertainty)

4.2 The study then went on to look at whether any of these climate change impacts were more pronounced in certain areas of the region and broke the region down into climate change sub regions as shown in the map contained in appendix 1. Hertfordshire lies in the area defined as the East of England Southern Heartland.

- 4.3 Stage 1 of the study concluded by defining a series of climate change principles that should be applied at the regional level and used to inform the development of regional strategies including RPG14. These principles are shown in Appendix 2.
- 4.4 The outcomes of the stage 1 study were presented to the Regional Planning Panel early in 2003 and have been used to provide a climate change dimension to the development of RPG14. In addition they are being used as part of the appraisal criteria for the sustainability appraisal of the RPG14.
- 4.5 Stage 2 of the study undertook to look at issues and adaptation responses for local service provision by a range of local actors including local authorities, other public sector agencies such as the Environment Agency and NHS and for business. In the case of business the sectors looked at where the nine key business sectors for the region as defined by EEDA.
- 4.6 For the section of the stage 2 report focused on adaptation strategies for local authorities the key services examined where:
- Transport Infrastructure
  - Buildings and Estates
  - Emergencies
  - The Economy
  - Waste and Pollution
  - The Wider Environment
  - Wider Co-ordination

Against all of these service areas key principles were applied which are as follows:

- Putting people at the centre.
- Taking a long-term perspective.
- Taking account of costs and benefits.
- Creating an open and supportive economic system.
- Combating poverty and social exclusion.
- Respecting environmental limits.
- The precautionary principle.
- Using scientific knowledge.
- Transparency, information, participation and access to justice.
- Making the polluter pay.

The adaptation responses developed where then all categorised against three different timescales for action which are act now, plan for the future and keep a watching brief. These are intended to inform decision-makers of the relative importance and need for them to take action as well as giving some guidance on the timeframe for that action. The final stage 2 report goes into some detail on the adaptation

responses for local authorities and a short summary of them will be given in the presentation to the Panel

- 4.7 The final stage of the study is to disseminate its findings through a comprehensive communications strategy that encourages the development of an action plan within local authorities to identify areas both at risk and which pose new opportunities. This action plan for adaptation to climate change should be developed to complement other local plans to ensure the sustainability of the existing quality of life for the people of Hertfordshire, by identifying and expanding upon opportunities for sustainable growth.
- 4.8 As part of the overall communications strategy an executive summary of the study is expected to be completed by late November. Additionally both a Local Authority and Business sector specific information booklet will be produced as part of the communications strategy aspects of the report, with a launch scheduled for early March 2004.

## **5 Conclusions**

- 5.1 The Living with Climate Change in the East of England Study has many implications for the work of the County Council in the future and across all of the authorities service areas. Work is already being undertaken with regional agencies to determine how they are going to respond to this study when it is launched in March 2004. The panels views are requested on how they would like to deal with this report and how they would wish for consideration of its findings to be dealt with between now and March 2004. It should be noted that as the lead partner on the study it would be advantageous if the County Council was able to say what it was doing about the study findings as and when it is launched.



## Appendix 2

### Key climate change principles applying to each climate change sub-region

Climate change principles	Climate change sub-regions				
	- Key principle - Secondary principle				
	The coast	The Fens	The Thames Gateway and Fringes	East of England southern 'Heartland'	East of England northern 'Heartland'
Protect existing land uses from the impacts of sea level rise and fluvial flooding only where the benefits of doing so in environmental, economic and social terms clearly outweigh the capital and revenue costs					
Avoid allowing development in locations that could constrain or reduce effectiveness of future options for adaptation (e.g. allowing development in areas that might prevent effective coastal and fluvial flood management in the future)					
Where possible, allow for sea level rise to take its natural course					
Avoid new development being located in areas at risk from sea level rise and storm surges					
Guide new development to areas not at risk from fluvial flooding					
Minimise the requirement for 'technical fixes' to solve flooding and water supply issues					
Encourage local access to goods, services and facilities in order to reduce the need for movement and reliance on transport infrastructure that could be vulnerable to climate change impacts	Should be applied throughout				

Climate change principles	Climate change sub-regions				
	- Key principle - Secondary principle				
	The coast	The Fens	The Thames Gateway and Fringes	East of England southern 'Heartland'	East of England northern 'Heartland'
Guide new development to locations that are least likely to experience water supply shortages					
Guide development to locations that will not be at risk from subsidence arising from climate change (e.g. clay soils)					
Exploit the environmental, social and economic opportunities afforded by climate change	Should be applied throughout				
Where possible compensate for loss of habitats by creation of similar habitats in less vulnerable areas					
Identify opportunities to create new habitats and landscapes as a result of climate change and create corridors and stepping stones to allow species to adapt and migrate					
Promote agricultural production systems in areas that are compatible with and adaptable to the impacts of climate change					