

Climate Change Paper

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To: **Cambridgeshire Horizons Board**

Date: **17 September 2008**

From: **Chief Executive**

Purpose: **To consider the interaction between growth and carbon emissions across the county, and to look at actions that could be taken to maximise the contribution the growth agenda can make towards effective climate change mitigation and adaptation.**

Recommendation: **That the Board approves the paper, and provides a steer on the developing Action Plan.**

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Climate Change & Growth: Executive Summary **Practical Measures for Mitigation and Adaptation:**

1.0 Introduction

1.1 The growth agenda provides a major opportunity for Cambridgeshire Horizons and its partners to translate policy ambitions into deliverable actions against climate change. Despite the abundance of policy proposals at a range of levels, there remains a significant gap between intention and impact, and without an understanding of how to achieve desired goals and targets, they will likely remain ineffective.

1.2 Given the challenging carbon reduction targets that are being set nationally and regionally, it will not be enough for growth to be low carbon; there is also a need for concerted efforts to reduce emissions from existing communities. It is therefore vital that the solutions we put in place in new communities to deliver low-carbon buildings, energy, water, transport, and waste can also facilitate carbon reductions in existing communities.

2.0 Policy Context

2.1 Policy on climate change has operated on four main levels: International, European, National and Regional. The most significant of these are summarised below:

- **International:** The Kyoto Protocol has committed the UK to a 12.5% CO₂ reduction by 2012, from a 1990 baseline. Following the Bali Climate Change Conference of 2007 the G8 nationals have agreed to a further reduction in CO₂ emissions of 50% by 2050.
- **European:** The EU has operated an emissions trading system since 2005, allowing each country a certain volume of emissions that can be traded between member states.
- **National:** The Stern Review concluded that mitigation against climate change is now an essential, economically justified, investment, and has resulted in the Climate Change Bill, which will commit the UK to a statutory target of 26% lower CO₂ emissions by 2020 and 60% lower by 2050.
- **Regional:** The draft East of England Regional Economic Strategy sets a target of an 80% reduction in emissions. These are to be delivered through local area agreements, and the Cambridgeshire LAA includes two important National Indicators: 186 (per capita CO₂ emissions) and 188 (adapting to climate change).

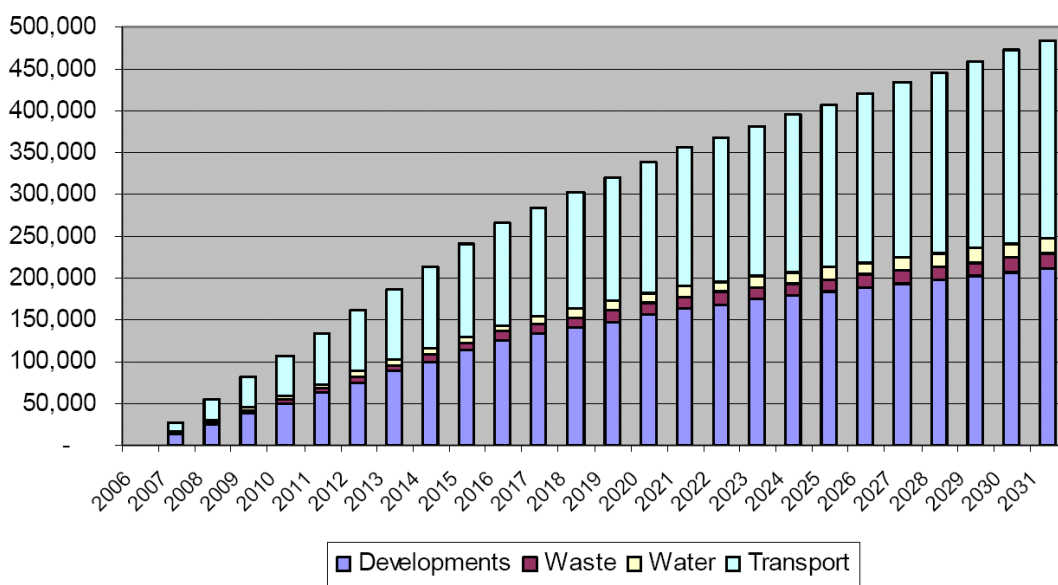
3.0 Issues for Cambridgeshire and the Growth Agenda

3.1 The current carbon footprint of Cambridgeshire is 6.5 million tonnes of CO₂ annually, which will grow to 7 million tonnes annually by 2031 if growth follows a business as usual trajectory. Please see the table below.

3.2 Construction and the built environment is highly carbon-intensive. Development must be well planned to minimise the loss of green space and prevent unsustainable patterns of transport and consumption becoming entrenched. Careful design, use of efficient materials and well considered siting can all help to demonstrate a more sustainable approach to growth.

3.3 Transport is responsible for more than a third of CO₂ emissions in Cambridgeshire. As the table below shows, this percentage will grow over coming years as population increased and as lower carbon solutions are (more readily) found for other activities that contribute to CO₂. One part of the solution to reducing transport emissions is to seek to locate jobs, social infrastructure and homes close to each other, or well-connected by public transport options. However, population increases of the scale envisaged in Cambridgeshire, will, unless accompanied by significant investment in public transport and effective demand management, lead to unacceptable levels of increased CO₂ from road transport, as well as increased congestion problems.

Business As Usual emissions associated with the new development



3.4 Energy use by homes, businesses and public buildings already contributes a substantial proportion of Cambridgeshire CO₂ emissions, approximately 60% in 2005, and “business as usual” would mean this would only increase with the building of new communities. Nevertheless, the Carbon Appraisal of the Long Term Delivery Plan, undertaken by ESD, notes that the technical renewable energy potential of the county is almost seven times the capacity currently installed, giving Cambridgeshire, with its strong high tech economy, an opportunity to lead the way in these sectors.

4.0 How can the growth agenda support carbon reductions?

4.1 Whilst growth poses major challenges and offers some exciting opportunities, when viewed in isolation it is only a part of the much greater challenge of ensuring that existing communities and housing can mitigate their impacts on the environment, and adapt to the climate change that is already inevitable. The low carbon appraisal of the LTDP notes that without substantial work with existing communities, Cambridgeshire’s carbon footprint will increase by nearly 20%, even if all new developments are at zero-carbon.

4.2 It is therefore clear that the major challenge for all partners in Cambridgeshire is how to engender changes to existing communities and behaviours. The growth agenda must be part of the solution, demonstrating the art of the possible in terms of low-carbon buildings and lifestyles. This will require a huge programme of innovative infrastructure for new communities, which can then act as an example for behavioural change, with the benefits promoted across the whole of Cambridgeshire and beyond.

4.3 Cambridgeshire Horizons can act as both a broker and an innovator in this, facilitating dialogue between partners and taking a lead role in delivering innovative infrastructure projects that demonstrate the possibilities of a low-carbon future. An example of this is the 'Renewable Energy Project for Northstowe' supported by Housing Growth Funds to establish the viability of area-wide renewable energy supply and infrastructure to reduce Northstowe's carbon footprint.

5.0 Towards an action plan

5.1 The action plan annexed to this paper considers both adaptation and mitigation to climate change. The Climate Change Bill has emphasised the need to decouple economic growth and the perception of wellbeing from increased CO₂ emissions, in four ways:

- Reducing demand for emissions-intensive goods and services;
- Increased efficiency;
- Action on indirect emissions, for example avoiding deforestation;
- Switching to less carbon intensive technologies for power, heat and transport.

5.2 It is with these in mind that this action plan is being developed. As a partnership organisation, Cambridgeshire Horizons works closely with others to achieve outcomes. It is therefore vital that the action plan attached as appendix A is consistent with and supportive of our partners' objectives. This in effect means it must be embedded within the LAA to support the delivery of the climate change targets.

5.3 This executive summary highlights the main issues from the full climate change paper, which is attached as Appendix B. The full paper provides substantial context and background to the wider climate change and growth issues. The Action Plan at Appendix A attempts to provide a means of making change a reality rather than an ambition.