



# Climate Change Action Plan

Sheryl French

Delivery Manager

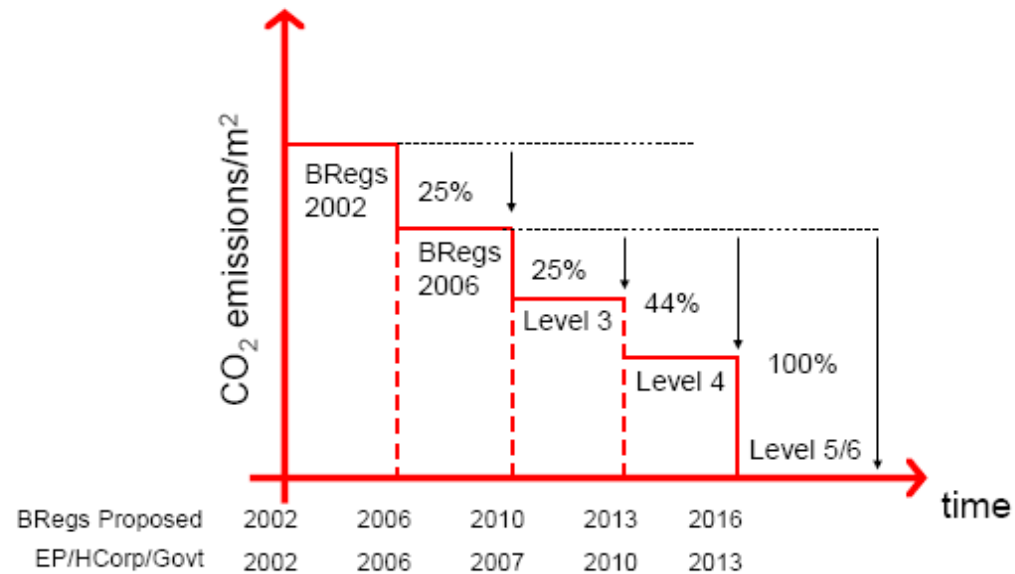
# Why a Climate Change Paper?

- Bills, Strategies, Targets, Standards, Codes, and Indicators
- Translating Policy into impact



## Changes in Building Regulation Requirements

- Opportunities in Growth



# Structure of the Climate Change Paper

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- Executive Summary
- Action Plan
- Full Report - Context

# Horizons Role

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- Minimising Growth's contribution to Cambridgeshire's carbon footprint
- Taking a lead in delivering innovative infrastructure projects
- Demonstrating low carbon communities and life-styles through pilot projects
- Promoting and creating high quality green infrastructure

# Climate Change Bill

- Reducing demand for emissions-intensive goods and services
- Increased efficiency
- Action on Indirect emissions e.g avoiding deforestation
- Switch to less carbon intensive technologies for power, heat and transport

# Mitigation and Adaptation

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Reducing CO2 emissions

e.g. energy, transport, buildings etc

Living with a changing and variable climate

e.g. design, green infrastructure, behavioural  
change

# Action Plan

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- Delivering low/zero carbon growth
- Identifying how growth can support CO2 reductions in existing communities
- Reduce 'Horizons' business CO2 emissions

# Action Plan

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- Promote Energy Efficiency and renewable energy infrastructure
- Minimise CO2 emissions from growth related transport
- Deliver water neutrality for new growth
- Design Zero Waste Communities
- Make Cambridgeshire the UK Hub for Sustainable Construction
- Promote high quality green infrastructure and support habit recreation

# Examples

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- Northstowe Renewable Energy Project
- Renewable Energy Strategy for Growth
- Water Cycle Strategies and pilot projects for non-potable water supply
- Quality Charter
- Sustainable Transport Plans
- Green Infrastructure – Wicken Fen, Great Fen, Green Necklace

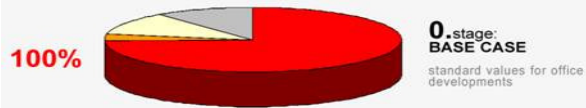
# Unit 1 Cambridge Business Park

Very Good BREEAM rating

- Sub metering for services
- Recycling facilities
- Enhanced cycling storage
- FSC timber
- Ecology package
- PIRs for lighting controls



# Learning from Others



## CO<sub>2</sub> SAVINGS

0.stage: 62kg CO<sub>2</sub>/m<sup>2</sup>

1.stage: 47kg CO<sub>2</sub>/m<sup>2</sup>  
2.stage: 42kg CO<sub>2</sub>/m<sup>2</sup>  
3.stage: 39kg CO<sub>2</sub>/m<sup>2</sup>  
4.stage: 37kg CO<sub>2</sub>/m<sup>2</sup>

5.stage: 26kg CO<sub>2</sub> / m<sup>2</sup>

6.stage: 18kg CO<sub>2</sub> / m<sup>2</sup>

7.stage: 0 kg CO<sub>2</sub> / m<sup>2</sup>

saving to stage 0: 25kg CO<sub>2</sub>/m<sup>2</sup>

saving to stage 0: 44kg CO<sub>2</sub>/m<sup>2</sup>

saving to stage 0: 62kg CO<sub>2</sub>/m<sup>2</sup>

- heating + hot water
- fans + pumps
- lighting
- small power + other electricity

basic improvements

additional improvements

carbon neutral



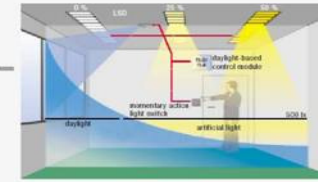
Additional insulation for improved u-values



Appropriate shading design helps to reduce summer cooling loads



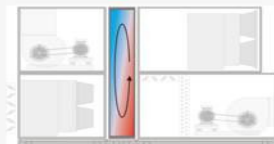
Solar water heating panels on roof area greatly reduce overall water heating load



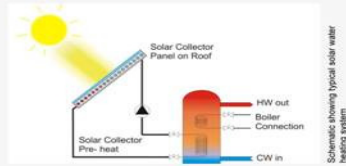
Energy saving lighting design with daylight sensors



Low energy light bulbs reduce lighting load



Heat recovery systems can reduce overall energy load by a further 15%



Schematic showing typical solar water heating system



Earth pipes in pile foundation provide together with heat pumps heating and cooling throughout the year

**PETERBOROUGH INNOVATION CENTRE: SUSTAINABILITY STRATEGY**  
reducing the overall energy demand, reducing CO<sub>2</sub> levels