

## Climate Change and Growth Areas – current policy, advice and guidance

The following policies and statements can be seen as potentially contributory in driving baseline requirements:

### Ministerial Statements

*Gordon Brown (Chancellor of the Exchequer and Prime Minister in waiting)*

*13<sup>th</sup> May 2007:* Set out his proposals to build five new eco-towns of which Northstowe will be the first. Each new eco-town home will be built to zero-carbon standards, allowing them to qualify for a zero rate of stamp duty, all the energy they use will be generated locally from sustainable sources, and they will all be built with strong public transport infrastructure. They will include new state-of-the-art zero carbon schools and health centres.

*Ruth Kelly (Secretary of State for Communities & Local Government)*

*18<sup>th</sup> October 2006:* "I think we're already pushing back the boundaries. Like the feasibility study for low and carbon neutral development in the Thames Gateway. And the new development at Northstowe. These are opportunities for scaling up, massively, the best of what is already being developed."

*ODPM Press release*

*28<sup>th</sup> March 2006:* This week the Government also announced the creation of 'exemplar' developments in growth areas beginning with 10,000 new homes including shared equity units at a former MoD site at Northstowe in Cambridgeshire, which will include high eco-standards including micro-renewable technology. Local services and amenities will also be provided in a sustainable way.

*Yvette Cooper (Minister for Housing & Planning, DCLG)*

*17<sup>th</sup> May 2006:* "We are promoting other exemplars too. At Northstowe in Cambridge around 10,000 new homes are to be built on former MoD land in a development managed by English Partnerships. Broadly we want to achieve up to 50% reductions on energy and mains water use compared with conventional housing, using technologies and design approaches such as microgeneration."

*13<sup>th</sup> September 2006:* "The challenge now is for UK developers to create low cost and low carbon homes. We believe that new developments in the Thames Gateway and in areas like Northstowe can also lead the way."

*7<sup>th</sup> November 2006:* "Already we have announced that Northstowe in Cambridge will be an exemplary new development, with 10,000 new homes on former MoD land to be built to standards at least 50 per cent higher than conventional new homes."

*7<sup>th</sup> March 2007:* "We have already made substantial progress, with the new timetable for zero carbon development and proposals for places like Northstowe."

### Climate Change Bill 2007

Seeks to create new legal framework for the UK achieving at least a 60% reduction in carbon dioxide emissions by 2050, and 26-32% reduction by 2020, against a 1990 baseline.

### Meeting the Energy Challenge: a White Paper 2007

Amongst other aims this encourages more energy saving through better information, incentives and regulation and provide more support for low carbon technologies.

### Climate Change. The UK Programme 2006

"Setting an example: The Government, working with partners, including English Partnerships, is showing leadership in creating exemplar sustainable new settlements in the growth areas, of which Northstowe, Cambridgeshire will be one of the first".

### Building Regulations – Part L (2006)

Instead of the traditional Elemental and Target U-value methods of compliance for new build thermal building regulations via U-values, under Approved Document L (2006) each new dwelling will be given a Target Emission Rate of CO<sub>2</sub> (TER) to achieve. This is the only way of showing compliance to the new Building regulations. U-values and the other relevant factors will be based around achieving the TER.

The calculation tool for dwellings is SAP 2005 (2006 edition) and is carried out in two stages: Stage 1 – Dwelling CO<sub>2</sub> Emission Rate (DER) calculated from 'notional' dwelling benchmark based on 2002 Part L standard.

Stage 2 – DER re-calculated – this time using SAP 2005 to give a 20% improvement against the 2002 standard.

At Stage 2, building services fuels and low or zero carbon energy sources are inserted for the proposed dwelling.

To show compliance the following integrated processes must be completed:

- Calculation of CO<sub>2</sub> emissions incorporating design limits to be adhered to, with the following elements taken into consideration: insulation, boiler efficiency, heating type, heating system controls, hot water system and controls, any low or zero carbon technologies, building air tightness, lighting, building type, brick and block, and windows.
- Limiting solar gains in summer (avoid need for cooling).
- Demonstration that the quality of construction has been achieved (thermal bridging and air tightness).
- Providing information for the building owner on how to use energy efficiently and achieve economy).

Current proposals are to manage the transition to zero carbon through gradually strengthening the energy/carbon performance in Part L 2006.

| Date  | 2010         | 2013         | 2016         |
|---|--------------|--------------|--------------|
| Energy/carbon improvement as compared to Part L (2006)              | 25%          | 44%          | Zero carbon  |
| Equivalent energy/carbon standard in the Code for Sustainable Homes | Code level 3 | Code level 4 | Code level 6 |

### Home Information Packs – Energy Performance Certificates/Reports

Under the new Housing Act, from 2007 all homes on sale will be required to have a Home Information Pack. An energy efficiency grading system will be a compulsory part of Home Information Packs which are to be made available to potential buyers from August 2007. An Energy Performance Report will include an 'Energy Performance Certificate' will provide an easy-to-read A to G colour-coded rating for both a home's energy efficiency and reference to carbon dioxide emissions. The report will include other details relating to the energy efficiency of the home, covering:

- Estimated annual consumption of electricity, gas, and other fuels – all based on current energy performance
- Current levels of thermal insulation
- Details of the type of heating system, its efficiency, and its controls
- Details of recommended measures, such as cavity wall insulation or a new boiler, to improve energy efficiency, and raise the banding in the Energy Certificate
- Details of the costs involved to achieve a higher banding
- Details of annual savings achieved by carrying out recommended measures.

It will also highlight current average costs for heating, hot water and lighting (an important consideration given rising energy prices) and will list any straightforward energy-saving improvements which have not been made to date.

### **Planning Policy Statement 1: Delivering Sustainable Development (Feb 2005)**

“Regional planning authorities and local authorities should promote resource and energy efficient buildings; community heating schemes, the use of combined heat and power, small scale renewable and low carbon energy schemes in developments”

“Many local planning authorities (LPA) want to move quickly to ensure new development delivers higher environmental standards. *Planning and Climate Change* encourages LPAs to engage constructively and imaginatively with developers to secure the delivery of sustainable buildings and recognises there will be local circumstances that justify higher standards for particular developments”.

“In considering planning applications before development plans can be updated to reflect this PPS, have regard to this PPS as a material consideration which may supersede the policies in their development plan.”

“In considering and justifying a local approach, planning authorities should:...

– focus on specific development opportunities and securing an earlier application of higher levels of performance of nationally described standards, for example by expecting identified development proposals to be delivered at higher levels of the Code for Sustainable Homes”.

### **Planning Policy Statement 22: Renewable Energy (Aug 2004)**

*“Renewable energy developments should be capable of being accommodated throughout England in locations where the technology is viable and environmental, economic, and social impacts can be addressed satisfactorily”*

“Local planning authorities and developers should consider the opportunity for incorporating renewable energy projects in all new developments. Small scale renewable energy schemes utilising technologies such as solar panels, Biomass heating, small scale wind turbines, photovoltaic cells and combined heat and power schemes can be incorporated both into new developments and some existing buildings”.

### **Consultation: Planning and Climate Change – Supplement to PPS1 (Dec 2006)**

“Applicants for planning permission for substantial new development should through their Design and Access Statement demonstrate in broad terms how the proposed development will comply with the target carbon emission rate applicable through Building Regulations.

In particular, applicants should explain the contribution to be secured through decentralised energy supply systems including from on-site renewable sources”.

“In their consideration of the environmental performance of proposed development, taking particular account of the climate the development is likely to experience over its expected lifetime, planning authorities should:

– expect substantial new development to gain a significant proportion of its energy supply on-site and renewably and/or connect to a decentralised, renewable or low carbon, energy supply where available or, where no network is yet available but is proposed through the core strategy with an identified and secured means of implementation, be designed so as to allow connection to that network at a future date.”

“Many local planning authorities (LPA) want to move quickly to ensure new development delivers higher environmental standards. *Planning and Climate Change* encourages LPAs to engage constructively and imaginatively with developers to secure the delivery of sustainable buildings and recognises there will be local circumstances that justify higher standards for particular developments”.

“in considering planning applications before development plans can be updated to reflect this PPS, have regard to this PPS as a material consideration which may supersede the policies in their development plan.”

“In considering and justifying a local approach, planning authorities should:…  
 – focus on specific development opportunities and securing an earlier application of higher levels of performance of nationally described standards, for example by expecting identified development proposals to be delivered at higher levels of the Code for Sustainable Homes”.

**Code for Sustainable Homes: A step-change in sustainable home building practice (Dec '06)**

The Code for Sustainable Homes is the national standard for the sustainable design and construction of new homes. It is a voluntary star rating system that shows the sustainability of a new home as a complete package. It is a flexible framework that enables developers to demonstrate the sustainability of new homes. For consumers it is a mark of quality, giving them information they can trust. It sets minimum standards for energy and water use at each level and, within England, replaces the EcoHomes scheme, developed by the Building The Code measures the sustainability of a home against design categories. The design categories included within the Code are: energy/CO2; pollution; water; health and well-being; materials; management; surface water run-off; ecology; waste.

The sustainability rating which a home achieves represents its overall performance across the nine Code design categories. Minimum standards exist for a number of categories – these must be achieved to gain a one star (\*) sustainability rating. Energy efficiency and water efficiency categories also have minimum standards that must be achieved at every level of the Code, recognising their importance to the sustainability of any home.

| Achieving a sustainability rating |  |                |                                      |                |                                    |
|-----------------------------------|--|----------------|--------------------------------------|----------------|------------------------------------|
| Minimum Standards                 |  |                |                                      |                |                                    |
| Code Level                        | Energy   |                | Water                                |                | Other Points <sup>4</sup> Required |
|                                   | Standard (Percentage better than Part L <sup>1</sup> 2006) | Points Awarded | Standard (litres per person per day) | Points Awarded |                                    |
| 1(★)                              | 10   | 1.2            | 120                                  | 1.5            | 33.3                               |
| 2(★★)                             | 18   | 3.5            | 120                                  | 1.5            | 43.0                               |
| 3(★★★)                            | 25   | 5.8            | 105                                  | 4.5            | 46.7                               |
| 4(★★★★)                           | 44   | 9.4            | 105                                  | 4.5            | 54.1                               |
| 5(★★★★★)                          | 100 <sup>2</sup>   | 16.4           | 80                                   | 7.5            | 60.1                               |
| 6(★★★★★★)                         | A zero carbon home <sup>3</sup>                            | 17.6           | 80                                   | 7.5            | 64.9                               |

**Notes**

1. Building Regulations: Approved Document L (2006) – ‘Conservation of Fuel and Power.’
2. Zero emissions in relation to Building Regulations issues (i.e. zero emissions from heating, hot water, ventilation and lighting).
3. A completely zero carbon home (i.e. zero net emissions of carbon dioxide (CO<sub>2</sub>) from all energy use in the home).
4. All points in this document are rounded to one decimal place.

**Building a Greener Future: Towards Zero Carbon Development – Consultation (Dec '06)**

Consultation report that outlines how Government sees that zero carbon new homes can be achieved by 2016 (Now less than 10 years away) – using Planning System, Building Regulations and Code for Sustainable Homes.

“From April 2008, after learning from the voluntary phase, we are currently minded to propose that all new homes should be required to have a mandatory Code rating, indicating whether they have been assessed and the performance of the home against the Code. We believe that mandatory rating of all new homes will encourage take-up of higher environmental standards, and will boost demand for more environmentally friendly technologies and construction methods. Before taking this step we will complete a fuller analysis of the likely costs and benefits, both environmental and economic, and will undertake a further consultation on any specific proposals.”

*“As a final step, we are proposing that all new homes are zero carbon by 2016 – within a decade. For a new home to be genuinely zero carbon it will need to deliver zero carbon (net over the year) for all energy use in the home – cooking, washing and electronic entertainment appliances as well as space heating, cooling, ventilation, lighting and hot water. This will require renewable or very low carbon energy in addition to high levels of insulation, etc. Again it could be at the development or building level. The Code for Sustainable Homes sets out what this would look like in a typical Code level 6 (zero carbon) home.”*

“We also understand that many local authorities want to move quickly to ensure new development delivers higher environmental standards and that, in some areas, land values will support a much faster transition than in other areas. And we want to support that effort. The draft PPS encourages local planning authorities to engage constructively and imaginatively with developers to secure the delivery of sustainable buildings and recognises there will be local circumstances that justify higher standards for particular developments.”

### **The DCLG’s ‘Carbon Challenge’**

The Carbon Challenge has been launched by Government to accelerate the house building industry’s response to climate change by fast-tracking the creation of a number of zero and near zero carbon communities. The key objective is to raise the environmental performance of new communities while still delivering quality and high standards of design.

Zero carbon means no net carbon emissions from all energy uses in the home – so the amount of energy taken from the national grid is less than or equal to the amount put back through renewable technologies. This equates to Level 6 of the Code for Sustainable Homes and will qualify for Stamp Duty relief.

Near zero carbon means no net carbon emissions in relation to core Building Regulations energy performance specifications relating to heating, hot water, ventilation and lighting. This equates to Level 5 of the Code for Sustainable Homes.

The key aspirations of the Challenge are to:

- raise environmental standards – development will achieve at least Level 5 of the Code for Sustainable Homes – zero or near zero carbon;
- deliver high-quality design combined with exceptional environmental performance – homes that keep warm in the winter and cool in the summer;
- drive down construction and supply chain costs through economies of scale – while aiming to approach zero carbon, the programme should also seek to maintain the cost efficiency achievements of the Design for Manufacture initiative;
- incorporate lifestyle features that cut emissions within the community through good designs that encourage behavioural changes in the use of electrical appliances such as televisions and computers, and include changes in transport, waste collection and food delivery; and
- ensure that affordable and low cost homes are included, especially for families.

## East of England Plan (Regional Spatial Strategy)

The Secretary of State's Proposed Changes to the Draft Revision (December 2006)

### ***Policy ENG1: Carbon Dioxide Emissions and Energy Performance***

To meet regional and national targets for reducing climate change emissions, new development should be located and designed to optimise its carbon performance.

Local authorities should:

- maximise opportunities, particularly in major growth locations and Key Centres for Development and Change, for developments to set new yardsticks of performance in the use of energy from on site renewable and / or decentralised renewable or low carbon energy sources, and for reducing emissions;
- promote innovation through incentivisation, master planning and development briefs; and
- encourage the supply of energy from on site renewable and / or decentralised renewable or low carbon energy sources and through DPDs set ambitious but viable proportions of the energy supply of substantial new development (as defined in the Planning Policy Statement on Planning and Climate Change) from these sources. In the interim as a minimum, 10% of the energy consumed in new development should come from such sources. To help realize higher levels of ambition local authorities should encourage energy service companies (ESCOs) and similar energy saving initiatives

### ***Policy ENG2: Renewable Energy Targets***

*The development of new facilities for renewable power generation will be supported, with the aim of meeting the following regional targets:*

By 2010

At least 1192 Megawatts of installed capacity for renewable energy

By 2020

At least 4250 Megawatts of installed capacity.

These targets are equivalent to 14% of total electricity consumption in the East of England (or

10% excluding offshore wind) by 2010, and 44% (17% excluding offshore wind) by 2020.

The above targets are subject to revision and development through the review of this RSS.

## **Local Development Framework**

### **Development Control Policies**

#### ***Policy DP/1 Sustainable Development***

1. The development will only be permitted where it is demonstrated that it is consistent with the principles of sustainable development, as appropriate to its location, scale and form. It should :

...

g) where practicable maximise the use of renewable energy sources, in accordance with Policies NE/2 and NE/3

#### ***Policy NE/1 Energy Efficiency***

2. Developers are encouraged to reduce the amount of CO<sub>2</sub>m<sup>3</sup>/ year emitted by 10% compared to the minimum Building Regulations requirement when calculated by the Elemental Method in the current building regulations for a notional building of the same size and shape as that proposed, particularly for new or substantially demolished buildings.

*Policy NE/2 Renewable Energy*

1. The District Council will grant planning permission for proposal to generate energy from renewable sources, subject to proposals to generate energy from renewable sources, subject to proposals according with the development principles set out in Policies DP/1 to DP/3 and complying with the following criteria:

- a) The proposal can be connected efficiently to existing national grid infrastructure unless it can be demonstrated that energy generation would be used on-site to meet the needs of a specific end user;
- b) The proposal makes provision for the removal of the facilities and reinstatement of the site, should the facilities cease to be operational.

*Policy NE/3 Renewable Energy Technologies in New Development*

All development proposals greater than 1,000m<sup>2</sup> or 10 dwellings will include technology for renewable energy to provide at least 10% of their predicted energy requirements, in accordance with Policy NE/2.

**Northstowe Area Action Plan – N.B. Inspectors report contains binding changes to the below**

*Policy NS/2 Development Principles*

The Character and Design of Northstowe:

10. A flexible design, energy efficient, built to an exemplar of sustainable living with low carbon and greenhouse gas emissions and able to accommodate the impacts of climate change

*Objective D14 An Exemplar in Sustainability*

D14/a: To include within Northstowe, projects which are an exemplar in terms of the use of the earth's resources, including energy, water and materials.

D14/b: To minimise energy use in new development and reduce CO<sub>2</sub> and other greenhouse gas emissions which contribute to climate change.

D14/c: To use energy efficiently.

D14/d: To make greater use of renewable energy sources (**Inspector set 20% renewables on site as target**)

*Policy NS/26 An Exemplar in Sustainability*

1. Northstowe will include within the development exemplar projects in sustainable development, including energy efficient measures. This could be achieved by:

- a. Providing an increased level of sustainability across the development as a whole above current requirements to a material extent;
- b. Building a proportion of the development to advanced practice which fully addresses sustainability issues and minimises any environmental impact by pushing at the boundaries of the proven technology available at the time of the development.

*Understanding 'Exemplar'*

"an example of excellence in the creation of a sustainable settlement ...and will promote the sub-region as a leader in technological innovation" (from Structure Plan). This aspiration could be met in various ways. It could be achieved by a proportion of the development being built to advanced practice and pushing at the boundaries of technology. Alternatively, and potentially bringing a greater level of overall sustainability benefit, an increased level of sustainability above current requirements could be provided across the whole development. This would need to be at a level that was materially higher than could normally be required of the development. This approach would have the advantage of bringing benefits to a wider number of people and promote more effectively the principles of sustainable development.

A major development of the scale of Northstowe, and the fact that it will be a freestanding new settlement, enhances the potential for a comprehensive approach towards the provision of energy. It offers the opportunity for innovative measures, including the use of renewable energy.

The "Delivering Renewable Energy in the Cambridge Sub-Region 2004" report identified that Northstowe offers the greatest technical potential for incorporating a

range of renewable energy sources, including photovoltaic energy (PV), solar, thermal, biomass and wind. It also suggests that it is likely to have the greatest potential for planned development of infrastructure, such as heat grids and private wire electrical networks needed to provide energy independently of the National Grid... aim is to achieve a forward thinking approach to maximising renewable energy provision in the new town.

*Indicative planning obligations*

An Exemplar in Sustainability.

- The provision of renewable energy to provide at least 10% of predicted energy requirements of Northstowe.
- Provision of exemplar developments, in sustainable development, including energy efficient measures.
- Support for the provision for the setting up an Energy Supply Company (ESCO) for Northstowe.

**Nottingham Declaration (signatory from Feb 2002)**

*South Cambs District Council commits to:*

*Publicly declare, within appropriate plans and strategies, the commitment to achieve a significant reduction of greenhouse gas emissions from our own authority's operations, especially energy sourcing and use, travel and transport, waste production and disposal and the purchasing of goods and services.*

Assess the risk associated with climate change and the implications for our services and our communities of climate change impacts and adapt accordingly.