

## **D14 NATURAL ENVIRONMENT**

### **OBJECTIVES**

- D14/a To ensure that new development, activities and uses of land uphold and promote the principles of sustainable development.**
- D14/b To address climate change mitigation and adaptation issues including the need to ensure that all development is “climate proofed”.**
- D14/c To minimise energy use in new development and reduce CO<sub>2</sub> and greenhouse gas emissions which contribute to climate change;**
- D14/d To use energy efficiently;**
- D14/e To make greater use of renewable energy sources;**
- D14/f To promote on-site renewable energy generation;**
- D14/g To protect and improve the ambient noise environment;**
- D14/h To protect and improve air quality.**

### **INTRODUCTION**

- D14.1** The need to conserve and protect the Earth’s natural resources underlines the importance of ensuring future development is achieved within known biophysical limits. This now lies at the heart of international commitments on sustainable development and sustainability. These same principles also need to be applied within the context of the Cambridge East.
- D14.2** It will therefore be important for a wide range of issues is taken into account. Climate proofing aims to ensure buildings and associated infrastructure are capable of enduring the future impacts of climate change, for example minimising risk of flooding, minimising risk of subsistence, installing water saving measures and devices (greywater, rainwater harvesting systems, water efficient systems and appliances), fitting and / or making future provision for installing heating and power systems that have low or zero carbon dioxide (CO<sub>2</sub>) and greenhouse gas (GHG) emissions, constructing buildings that are naturally ventilated and capable of enduring higher diurnal and nocturnal temperatures without the need to install air conditioning systems, and using materials that have low / zero CO<sub>2</sub> and GHG emissions (i.e. wood rather than concrete etc.).

## **ENERGY**

### **POLICY CE/28 Energy**

#### **Energy Efficiency**

- 1. Cambridge East will be required to demonstrate that it will achieve a high degree of measures to increase the energy efficiency of buildings, for example through location, layout, orientation, aspect, internal and external design and the use of improved insulation.**
- 2. Developers will be encouraged to reduce the amount of CO<sub>2</sub> m<sup>2</sup> / year emitted by 10% compared to the minimum Building Regulation requirement when calculated by the Elemental Method in the current Building Regulations for notional buildings of the same size and shape as that proposed.**

#### **Renewable Energy Technologies in New Development**

- 3. Cambridge East will include technology for renewable energy to provide at least 10% of its predicted energy requirements.**

#### **Energy Efficiency**

D14.3 The UK is committed to reducing its CO<sub>2</sub> and GHG gas emissions by 12.5% from 1990 levels by 2012. At the same time there is a target to reduce CO<sub>2</sub> emissions in the UK by 20% by 2010, and the target is 10.4% of electricity to be from renewable sources by 2011.

D14.4 There is a need to seek a high level of energy efficiency and energy conservation measures in all new development. Energy conservation of buildings is an important part of meeting that requirement. The policy requires a high degree of measures to increase the energy efficiency of new buildings through, for example, location, layout, orientation, aspect, internal and external design and the use of improved insulation. It also encourages developers to reduce the amount of CO<sub>2</sub> m<sup>2</sup> / year emitted by 10% compared with the minimum Building Regulation requirement. Applying this policy will help ensure that the performance of Cambridge East over the long period of its implementation will always remain challenging and forward thinking. The Building Regulations are proposed to become more stringent on energy conservation over time, so encouraging energy conservation above the current minimum requirement is appropriate.

### Renewable Energy Technologies in New Development

- D14.5 Policy ENV8 of the Draft Regional Spatial Strategy for the East of England (RSS14) requires all Local Development Documents to include policies to promote and encourage energy efficiency and renewable energy. The Government is committed under the 1997 Kyoto Agreement to reduce greenhouse gas emissions.
- D14.6 The recent report “Delivering Renewable Energy in the Cambridge Sub-Region 2004” by Energy for Sustainable Development with Global to Local Ltd for Cambridgeshire County Council, Cambridge City Council, and South Cambridgeshire, East Cambridgeshire and Huntingdonshire District Councils assessed the potential and capacity at the major development locations proposed in the Structure Plan to implement renewable energy systems. In the Cambridge area, with greater than the UK average levels of sunshine, solar power can make a significant contribution.
- D14.7 The scale of development at Cambridge East 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. This could take various forms including localised wind generators, solar panels and photo-voltaic cells being incorporated into the design of buildings. The provision of these technologies may also be off-site as appropriate.
- D14.8 In terms of electricity generation from renewable resources, the most flexible approach would be for the electricity generated to be directed into the national grid where it could help smooth out fluctuations in supply and demand; it would also not require the developments receiving the electricity to be limited to a single energy supply company.

## **SUSTAINABLE BUILDING METHODS AND MATERIALS**

### **POLICY CE/29 Sustainable Building Methods and Materials**

**Development should, where practicable, use sustainable building methods and verifiably sustainable, locally sourced materials, including recycled materials, and include a Travel Plan to address the travel needs of labour during construction.**

- D14.9 Building methods and the source of building materials are a key way that development impacts on the environment. A sustainable approach to both methods and materials is therefore an important aspect of ensuring a sustainable development. Measures used in the development of this major new urban quarter should wherever practicable include use of recycled materials and include a Travel Plan to address the needs of labour during construction.

## **NOISE**

### **POLICY CE/30 Noise**

- 1. Where a planning application for residential development or other noise sensitive development such as hospitals, residential institutions, nursing homes, hotels, guesthouses and schools and other educational establishments is near an existing noise source, the applicant will be required to demonstrate that the proposal would not be subject to an unacceptable noise levels.**
- 2. The Councils will seek to ensure that noise from proposed commercial, industrial, recreational or transport use does not cause any significant increase in the background noise level of nearby existing noise sensitive property which includes dwellings, hospitals, residential institutions, nursing homes, hotels, guesthouses and schools and other educational establishments.**
- 3. The Councils will seek to ensure that noise from proposed development does not cause any significant increase in the background noise level of nearby existing noise sensitive recreational areas or areas of open space.**

D14.10 For Phase 1 North of Newmarket Road a major noise source would be the aircraft engine testing bay for Marshall Aerospace which is currently located immediately to the south of Newmarket Road. Assessment of potential impacts will be required and appropriate mitigation measures identified and provided, including potentially relocating the aircraft testing bay, to ensure that an acceptable residential environment can be created.

D14.11 It may be possible for land north of Cherry Hinton to come forward for development ahead of the relocation of the Airport (see Phasing and Implementation chapter). In order to ensure that an acceptable residential environment could be created, any development which takes place ahead of the relocation of the Airport will need to take account of aircraft noise because of the proximity to the southern end of the main runway. Any existing grass runways would have to be closed for reasons of noise as well as safety.

## **AIR QUALITY**

### **POLICY CE/31 Air Quality**

- 1. Development proposals will need to have regard to any emissions arising from the proposed use and seek to minimise those emissions to control any risks arising and prevent any**

**detriment to the local amenity by locating such development appropriately.**

- 2. Proposals will have regard to the impact which any existing emissions in the vicinity of the site would have on the proposed development, particularly where this involves residential use.**

D14.12 Air pollutants (including odour) have been shown to have adverse effects on health and the environment. Emissions arising from development at Cambridge East, including indirect emissions such as those attributable to associated traffic generation, must therefore be considered in determining planning applications.

D14.13 The impact of existing uses in the area on the proposed development, including from the Airport for Phase 1 north of Newmarket Road, but also for development north of Cherry Hinton which could come forward ahead of relocation of the Airport, must be properly assessed as part of any proposals.

## **CONTAMINATED LAND**

### **POLICY CE/32 Land Contamination**

**Where development is proposed where there is an issue of land contamination the District Council will, in consultation with appropriate regulatory authorities, require the following:**

- 1. The applicant to undertake a detailed investigation of the site and a proper risk assessment study, and submit a report to the District Council; and**
- 2. That appropriate treatment, monitoring and after-use of the site be agreed and capable of implementation.**

**D14.14 In its broadest sense land contamination describes a general spectrum of soil and site conditions. It can include areas with elevated levels of naturally occurring substances, as well as specific sites which have been occupied by former industrial uses which may have left a legacy of contamination from operational activities or from waste disposal. It can also include areas of land where substances have been deposited by direct or indirect events, such as accidents, or spillages or aerial deposition.**

**D14.15 Contamination of land may threaten public health and safety, the environment, the built environment and economic activities through its impact on the users of the land, and neighbouring users. Land contamination, or the possibility of it, is therefore a material planning consideration in the preparation of development plans and the decisions on planning applications. In some cases the carrying out of remediation activities may itself constitute**

"development" within the definition at Section 55 of the Town and Country Planning Act 1990, and therefore require planning permission.