

## **POLICY 1 CLIMATE CHANGE**

**All development proposals will be expected to deliver high levels of building sustainability, in advance of national standards where viable and achievable, in order to mitigate against and adapt to climate change.**

**Development, including refurbishment where it requires planning permission, will be expected to demonstrate the following:**

**a) How it makes effective use of sustainably sourced resources and materials, minimises waste, Carbon Dioxide emissions and water use. For residential development, water use should be in accordance with level 3 or higher of the Code for Sustainable Homes;**

**b) How it is located, laid out, sited and designed to withstand the long term impacts of climate change, particularly the effect of rising temperatures, sustained periods of high temperatures and periods of intense rain and storms;**

**c) That the building form and its construction allows for adaptation to future changes in climate; and**

**d) That the building form and its construction permits further viable subsequent reduction in the buildings carbon footprint.**

**The onus will be on developers to robustly justify why full compliance with policy requirements is not viable.**

### **1 Stand Alone Energy Generation**

**The development of stand alone renewable energy schemes appropriate for Greater Nottingham will be promoted and encouraged, including biomass power generation, combined heat and power, and micro generation systems. The extension of existing low or zero carbon energy schemes will be encouraged, and adjacent new developments will be expected to utilise such energy wherever it is viable to do so.**

### **2 Residential Development**

**All residential development will comply with national targets in the Code for Sustainable Homes or equivalent, as a minimum. Where viable, development will be expected to accelerate progress towards Zero Carbon prior to 2016, particularly for developments of around 500 dwellings or more. In all these cases, target levels will be set out in Development Plan Documents.**

**In addition, where viable, zero or low carbon energy sources should contribute to the ongoing energy usage of completed homes to achieve reductions in Carbon Dioxide emissions by the following proportions:-**

**Nottingham and Nottinghamshire Authorities:**

	<b>2010 - 2013</b>	<b>2013 – 2016</b>	<b>2016 onwards</b>
<b>RESIDENTIAL % Low/Zero carbon Contribution</b>	23.5%	27%	National standards apply

**NB** The percentages above apply to both regulated and unregulated emissions and should be calculated from pre-set domestic benchmarks in line with the known future trajectory of Building Regulations for emissions from housing as introduced by the Code for Sustainable Homes (2006) see paragraph 3.1.12 below.

**Erewash Borough Council:**

	<b>2010 - 2013</b>	<b>2013 – 2016</b>	<b>2016 onwards</b>
<b>RESIDENTIAL % Low/Zero carbon Contribution</b>	20%	26%	National standards apply

**NB** The percentages above apply to regulated emissions only, and should be calculated against the Building Regulations in force at the time, see paragraph 3.1.14.

**3 Non-Residential Development**

**All non residential development will be expected to incorporate sustainable construction design, materials and methods to achieve BREEAM standard ‘excellent’ where viable and feasible, unless national standards for the construction of non residential development are agreed in the future.**

**In addition, where viable, zero or low carbon energy sources should contribute to the ongoing energy usage of completed non residential development to achieve reductions in Carbon Dioxide emissions by the following proportions:-**

**Nottingham and Nottinghamshire Authorities:**

	<b>Current - 2011</b>	<b>2011 - 2015</b>	<b>2015 - 2019</b>	<b>2019 onwards</b>
<b>NON-RESIDENTIAL % Low/Zero carbon Contribution</b>	10%	13.5%	18%	National standards apply

**NB** The percentages above apply to both regulated and unregulated

emissions and should be calculated from pre-set benchmarks in line with the known future trajectory of Building Regulations for emissions. See paragraph 3.13 below.

**Erewash Borough Council:**

	<b>2010 - 2013</b>	<b>2013 – 2016</b>	<b>2016 – 2019</b>	<b>2019 onwards</b>
<b>NON-RESIDENTIAL % Low/Zero carbon Contribution</b>	10%	10%	26%	National standards apply

**NB** The percentages above apply to regulated emissions only, and should be calculated against the Building Regulations in force at the time, see paragraph 3.1.14 below.

**For both residential and non-residential development, the targets for energy usage derived from zero or low carbon energy sources may be waived where equivalent carbon savings are achieved through enhanced construction and building design.**

#### **4 Flood Risk and Sustainable Drainage**

**Development proposals that avoid areas of current and future flood risk and which do not increase flooding elsewhere, adopting the precautionary principle to development proposals will be supported.**

**Where no reasonable site within Flood Zone 1 is available, allocations in Flood Zone 2 and Flood Zone 3 on a sequential basis will be considered in accordance with PPS25 and the Strategic Flood Risk Assessments.**

**Where it is necessary to apply the PPS25 Exception Test within the urban areas, the following factors will taken into account when considering if development has wider sustainability benefits to the community that outweigh flood risk:-**

**a) There are exceptional and sustainable circumstances for locating the development within such areas, including the necessary re-use of brownfield sites; and**

**b) The risk can be fully mitigated by engineering and design measures.**

**All new development should incorporate measures to reduce surface water run-off, and the implementation of Sustainable Drainage Systems into all new development will be sought unless it can be demonstrated that such measures are not viable or technically feasible.**

## JUSTIFICATION

3.1.1 This policy does not address all aspects of climate change. Further guidance can be found at Policy 10 (Design, the Historic Environment and Enhancing Local Identity), which includes considerations which need to be taken into account when designing mitigation and adaptation measures in sensitive environments, Policy 13 (Managing Travel Demand) which seeks to reduce the need to travel and encourage modal shift, and Policy 15 (Green Infrastructure) which emphasises the role of the green and natural environment in mitigating and adapting to climate change.

3.1.2 Climate change is one of the biggest challenges facing Greater Nottingham. It is a global problem requiring local action. Major changes in attitude and practices are required if we are to make changes to the earth's climate and reverse the effects of global warming. National objectives to address climate change will not be achieved without substantial efforts to reduce energy consumption and increase energy produced from naturally occurring, renewable sources.

3.1.3 The UK Government is actively seeking to reduce greenhouse gas emissions and has set targets in the Climate Change Act 2008 to reduce carbon dioxide (CO<sub>2</sub>) emissions by 80% below current levels by 2050. More recent publications, including the supplement to PPS1 on Climate Change and Building a Greener Future: Towards Zero Carbon Development pave the way for the delivery of more resource-efficient buildings in general and carbon zero homes by 2016.

3.1.4 The councils have signed the Nottingham Declaration on climate change which is a public statement of intent to work with the local community and businesses to respond to the challenges of climate change. This includes cutting gas emissions such as CO<sub>2</sub> and preparing for the changes climate change will bring.

3.1.5 The Local Development Framework needs to ensure the use and development of land will help slow down the rate of climate change and be resilient its effects. In this respect the Aligned Core Strategies' task will be to:

- reduce consumption of natural and non-renewable resources;
- reduce pollution to levels that do not damage natural systems;
- help improve air quality;
- reduce dependence on non-renewable energy sources and promote renewable energy use and development;
- effectively manage and reduce the impacts of flood risk across the area.

3.1.6 Simple measures, such as the design, siting and orientation of development, appropriate sourcing of materials, and minimising waste, both during construction and in use, can improve the sustainability of development at little or no cost.

3.1.7 The Greater Nottingham and Ashfield Outline Water Cycle Study (2010) highlights that the area is one of moderate 'water stress' (ie scarcity) in terms of water supply. It is therefore important that new development makes as efficient use of water as possible, and the Water Cycle Study recommends that new residential development adopt the water usage standards of level 3 of the Code for Sustainable Homes as a minimum, ie not more than 105 litres per person per day.

3.1.8 Supporting low carbon decentralised renewable energy schemes is an important component of meeting carbon reduction targets, and in the short term at least, they are capable of delivering greater carbon savings than achievable through the development of low carbon new buildings. These types of energy generation are already an important component of energy use in Nottingham, with the energy from waste facility at Eastcroft providing both electricity and heat to parts of the City centre and St Anns. Greater Nottingham is also home to small scale hydro and wind energy generation. There is considered to be considerable scope for further development, especially in the use of biomass energy generation, and development of such facilities will be supported wherever appropriate.

3.1.9 Building Regulations and the Code for Sustainable Homes govern the sustainability of construction of new residential development, and are agreed between the development industry and Government. In order to reduce CO<sub>2</sub> emissions from energy used in completed development, and to assist in progressing decentralised energy schemes, a 'Merton Rule' is proposed, setting out the levels of CO<sub>2</sub> emissions reductions expected to be achieved through the use of low and zero carbon energy generation. For residential development the levels increase until 2016, when government guidance on what constitutes zero carbon development is expected to be in place, and for non residential, to 2019. The Government has now made it clear that house builders will not be expected to be responsible for abating carbon emissions caused by the occupants' use of appliances, such as computers or televisions, because this is not influenced by the design or structure of their home and is therefore beyond their control. The regulatory threshold for zero carbon will therefore cover only emissions which are within the scope of Building Regulations.

3.1.10 The percentages for Erewash and the rest of Greater Nottingham vary due to being based on different Sustainable Energy Studies covering the two Counties.

3.1.11 For Nottinghamshire authorities, the targets relate to all energy used in the building, ie both regulated emissions, (those covered by Building Regulations, principally emissions from heating and lighting) and unregulated emissions (emissions arising from the use of the building, such as cooking and entertainment – see glossary). Although this approach goes beyond the Government's regulatory framework for zero carbon (see paragraph 3.1.9 above), it is nonetheless considered to continue to be appropriate in relation

to reducing carbon emissions overall, and in progressing decentralised energy schemes.

3.1.12 The Nottinghamshire percentages for residential should be calculated from pre-set domestic benchmarks in line with the known future trajectory of Building regulations for emissions from housing as introduced for the Code for Sustainable Homes (2006), and are aimed at achieving a constant (1 tonne) reduction in CO<sub>2</sub> per annum above Building Regulations levels. The percentages therefore rise in parallel with anticipated changes to Building Regulations.

3.1.13 'Towards a Sustainable Energy Policy for Nottingham', Nov 2009 based the non-residential percentages of 10% for each period on a static 2005 benchmark, and because Building Regulations will be progressively improving energy efficiency over the period, the constant 10% requirement would become an increasing proportion of energy use. More information can be found in 'Towards a Sustainable Energy Policy for Nottingham', Nov 2009. However, now that the trajectory towards zero carbon is known for non residential development, these targets have been converted to be measured against the Building Regulations in force at the time. The carbon savings between the two methodologies are identical, but using current Building Regulations rather than a static 2005 benchmark is simpler, and consistent with the approach for residential development.

3.1.14 For Erewash, the targets relate to regulated emissions only, due to the different evidence base for Derbyshire. For both residential and non-residential development, they should be calculated on the basis of the emissions standards of the Building Regulations in force at the time. More information can be found in 'Cleaner, Greener Energy Study, Report 1 – LDF Evidence Base', Dec 2009.

3.1.15 The aim of this part of the policy is to reduce energy usage in completed and occupied buildings, to compliment the national approach to construction promoted through Building Regulations. However, where development is designed to enhanced standards that make equivalent carbon savings to the low and zero carbon energy targets set out in the policy, the need to meet those targets may be waived.

3.1.16 Approaches to adapting to climate change and mitigating its effects are changing rapidly, as are technologies available to reduce carbon emissions and generate low or zero carbon energy. In addition, some approaches may be more appropriate in some localities than others. Further guidance, in the form of Supplementary Planning Documents or Development Plan Documents will be prepared as necessary.

### **Flood Risk and Sustainable Drainage**

3.1.17 Flood risk is a significant issue in Nottingham, which is likely to be exacerbated by unpredictable weather associated with climate change.

Development proposals that avoid areas of current and future flood risk and which do not increase flooding elsewhere, adopting the precautionary principle to development proposals will therefore be supported.

3.1.18 Greater Nottingham contains significant areas of brownfield land in urgent need of regeneration, but which may also be at risk of flooding. The PPS25 Exception Test applies to development in these locations, if lower risk alternatives are not available. Regeneration of this land can bring significant wider sustainability benefits to the wider community, in terms both of reducing the need to travel and reducing the need for greenfield development, and will therefore be an important consideration in applying the Exception Test.

3.1.19 Some parts of the urban area of Greater Nottingham are also prone to flooding from surface water runoff. A Surface Water Flooding Management Plan is in preparation for the City area. Reducing runoff can be helpful in reducing the risk of flooding from this source, and the councils will seek the implementation of Sustainable Drainage Systems into all new development, unless it can be demonstrated that such measures are not viable or technically feasible. For development on greenfield sites, the aim should be to reduce or maintain runoff levels compared to those present prior to development.