

DRAFT Technical Advice Note

Energy efficiency and renewable and low carbon energy generated within new development



1.0 Introduction

- 1.1 Hart District Council adopted the Hart Local Plan (Strategy & Sites) 2032 in April 2020. This Technical Advice Note (TAN) has been produced to support the implementation of Policy NBE9 (specifically criteria i and j). The full text of Policy NBE9 and supporting text is attached as an Annex to this TAN.
- 1.2 In July 2020 Design for Homes announced the release of Building for a Healthy Life. Building for a Healthy Life replaced Building for Life 12. The new name also recognises that this latest edition has been written in partnership with Homes England, NHS England and NHS Improvement. BHL integrates the findings of the three-year Healthy New Towns Programme led by NHS England and NHS Improvement. This is referenced in paragraph 133 of the NPPF21 (see below).
- 1.3 In April 2021 Hart District Council declared a Climate Emergency. The Council has pledged to:
 - Make Hart District carbon neutral by 2040 whilst bringing forward the current 2040 target to 2035 for areas under direct control of Hart District Council;
 - Report to full Council every six months setting out the current actions the Council is taking to address this emergency and the plan to measure annual District-wide progress towards meeting the 2040 target;
 - Meaningfully engage with the local community and to work with partners across the District and County to deliver these new goals through all relevant strategies and plans drawing on local, national, and global best practice;
 - Actively work with Hampshire County Council and the Government to provide the additional powers and resources needed to meet the 2040 target; and
 - Actively encourage and push for Hampshire County Council to reduce its target for net zero carbon to 2040, acknowledging that 2050 is too far away for such an emergency.
- 1.4 The National Planning Policy Framework was updated in July 2021 (NPPF). This sets out the government's planning policies for England and how these are

expected to be applied. Section 14 of the NPPF deals with “Meeting the challenge of climate change, flooding and coastal change”.

- 1.5 The NPPF notes the UN agreement to pursue 17 Global Goals for Sustainable Development in the period to 2030 which includes goals to address social progress, economic well-being and environmental protections.
- 1.6 In November 2021 the Environment Act was published.
- 1.7 The Government is introducing higher standards for carbon reduction through changes to the Building Regulations:
 - from June 2022 buildings will need to show a 31% reduction in CO² emissions compared to the current requirements.
 - from 2025 new homes will need to meet the Future Homes Standard (FHS) which will require:
 - 75-80% lower CO² emissions than current standards, and
 - all homes will need to be ‘zero carbon ready’ becoming zero carbon homes over time as the electricity grid decarbonises, without the need for further costly retrofitting work.
- 1.8 In Spring 2019, the Government announced that ‘fossil-fuel heating systems’ would not be installed in any domestic new build properties from 2025 as part of the Future Homes Standard. These systems include gas and oil boilers. The decision was part of the Government’s plan to tackle climate change and growing carbon emissions.
- 1.9 The Government has announced that new homes and buildings in England will be required by law to install electric vehicle charging points from 2022.
- 1.10 In 2030 there is a ban on the sale of new petrol and diesel cars.

2.0 Details

- 2.1 Taking a holistic approach to Place Shaping and Place Making we will seek to build new communities where we plan for the impact of climate change, and mitigate their impacts, build places which promote active and healthy lifestyles, and maximise the benefit to the environment and biodiversity net gain. All these ambitions can be delivered in well planned and designed places.
- 2.2 The world is experiencing a period of significant change with global warming and the depletion of natural resources becoming ever more pressing issues. Hart

District Council is committed to taking a lead by reducing carbon impact, using the planning system to improve the health and wellbeing of residents, businesses, and visitors.

- 2.3 Minimising the use of energy and delivering the resultant energy through on site renewable energy is important not only in relation to tackling Climate Change, but helping to prevent fuel poverty, and therefore the health and wellbeing of the residents of the homes.
- 2.4 Energy hierarchy - The first [step](#) is to reduce energy demand (be [lean](#)), the second [step](#) is to [supply energy](#) efficiently (be clean) and the third [step](#) is use [renewable energy](#) (be [green](#)).
- 2.5 Climate responsive developments and resource efficient buildings must be complemented by making the effective and efficient use of land (without compromising other design quality considerations) and reducing reliance on the private car as the dominant mode of travel.

3.0 Reducing the demand for energy

- 3.1 Policy NBE9(i) requires new development to reduce its energy consumption through sustainable approaches to building design and layout, such as through the use of low-impact materials and high energy efficiency.
- 3.2 High quality design will also ensure that new development is resilient and enduring. There is a need to protect development from the risks of climate change, through an appropriate layout that avoids or mitigates increased flood risks (i.e. through enabling the incorporation of sustainable drainage systems) and allows buildings to be orientated to benefit from 'solar gain', thereby reducing their energy requirement.
- 3.3 A significant opportunity exists for developments to address issues relating to climate change. Climate responsive developments must respond positively to the orientation and microclimate of their site and location.
- 3.4 They will also:
 - be compact in their form and less dispersed;
 - be designed to encourage travel by walking, cycling and public transport in preference to the car;
 - address the risks of the urban heat island effect created by heat-absorbing impervious materials;

- reduce the amount of waste material transported to other locations including, but not limited to surface water;
- generate more of their own energy needs (for example, district energy networks), whilst also reducing energy consumption and loss;
- utilise natural features, such as deciduous tree planting, to provide shade in summer and light penetration in winter months;
- support the wider ecosystem through the protection, enhancement and creation of habitats within which native species can thrive, with the need to create linkages / corridors between habitats as an important part of supporting biodiversity; and
- provide opportunities for small-scale food production.

3.5 Appropriate tree planting needs to be carefully integrated within developments. For example, deciduous trees can provide shading in summer, but in the winter allow solar gain. In addition, trees absorb carbon, and can off-set some of the carbon generation of a scheme. The NPPF and the National Design Guide expects Tree Lines Streets. Hart District Council will expect to see a tree strategy as part of the design process, and we expect at least 2 trees for every new home delivered across the application site.

3.6 Applicants will be required to objectively demonstrate the performance of proposed developments through an assessment framework, such as BREEAM Communities (or its successor). BREEAM Communities is an international certification scheme used to improve, measure and assess the economic, social and environmental sustainability of developments by integrating sustainable design into the master planning process.

Major developments of 10 or more homes, or other development of 1,000 m² or more, or on land of 0.25 hectares or more, are required to demonstrate objectively how they respond positively to issues relating to climate change. Objective methodologies include, but are not limited to, BREEAM Communities.

For developments less than the above thresholds applicants are expected to demonstrate their consideration of and inclusion of climate responsive design features.

4.0 Renewable and Low-Carbon Energy Technologies

- 4.1 Policy NBE9(j) requires development to incorporate renewable or low carbon energy technologies, where appropriate.
- 4.2 The emission of greenhouse gases that is associated with new development can be reduced through including energy generating technologies such as solar panels or ground source heat pumps. The inclusion of renewable and low carbon technologies is encouraged, to be achieved in a way that is consistent with the other objectives of good design.
- 4.3 In applying this approach, Hart District Council expects applicants to start with a fabric first approach (see Policy NBE9(i) above) both in the design and layout of the site and going above and beyond the national minimum insulation set out in the Building Regulations.
- 4.4 In applying policy NBE9(j) Hart District Council expects developments of 10 or more homes, homes or other development of 1,000 m² or more or on land of 0.25 hectares or more are expected to achieve at least 20% of their energy consumption (regulated and unregulated) from renewable or low-carbon technologies, such as photovoltaic solar panels, heat pumps, and biomass.
- 4.5 The 20% renewable energy target applies to the remaining energy need following the fabric first approach.
- 4.6 In calculating the energy use of the homes, the ban of 'fossil-fuel heating systems' any domestic new build properties 2025 and the ban on the sale of new petrol and diesel cars in 2030 needs to be considered and factored into the calculated electric requirement of each property.
- 4.7 The Energy Statement needs to be submitted alongside the planning application, and details relating to the orientation needs to be included in the Design and Access Statement (DAS).

Planning permission will be granted for developments of 10 or more homes, homes or other development of 1,000 m² or more, or on land of 0.25 hectares or more, provided that they achieve at least 20% of their energy requirements (regulated and unregulated) from on-site renewable or low-carbon technologies. Exceptions will be made only where it can be demonstrated that such provision is not feasible.

Applicants will need to submit an Energy Statement must include details of how the target will be achieved.

For developments less than the above thresholds applicants are expected to demonstrate their consideration of and inclusion of low carbon design features.

Annex 1: Policy NBE9

Design

301. Good design is indivisible from good planning. This is because design is about more than just the appearance of buildings; it also concerns the relationships between people and places and how buildings fit together within their local environment to create a distinctive sense of place. Achieving good design will involve creating new buildings and spaces that look good, that are fit for purpose and accessible, and that are adaptable to the changing needs of residents and visitors. Policy NBE9 will enable us to ensure that a good standard of design is achieved, and that the distinctive qualities of our towns and villages will be reflected in new development.

Policy NBE9 Design

All developments should seek to achieve a high-quality design and positively contribute to the overall appearance of the local area.

Development will be supported where it would meet the following relevant criteria:

- a) it promotes, reflects and incorporates the distinctive qualities of its surroundings in terms of the proposed scale, density, mass and height of development and choice of building materials. Innovative building designs will be supported provided that they are sensitive to their surroundings and help to improve the quality of the townscape or landscape;**
- b) it provides or positively contributes to public spaces and access routes and public rights of way that are attractive, safe and inclusive for all users, including families, disabled people and the elderly;**
- c) the layout of new buildings reinforces any locally distinctive street patterns, responds to climate change, and enhances permeability by facilitating access by walking or cycling modes;**
- d) it respects local landscape character and sympathetically incorporates any on-site or adjoining landscape features such as trees and hedgerows, and respects or enhances views into and out of the site;**
- e) it protects or enhances surrounding heritage assets, including their settings;**
- f) it includes sufficient well-designed facilities/areas for parking (including bicycle storage) taking account of the need for good access for all users;**
- g) the design of external spaces (such as highways, parking areas, gardens and areas of open space) should be designed to reduce the opportunities for crime and anti-social behaviour and facilitates the safe use of these**

areas by future residents, service providers or visitors, according to their intended function;

- h) the future maintenance and servicing requirements of buildings and public spaces have been considered, including the storage and collection of waste and recycling;**
- i) it reduces energy consumption through sustainable approaches to building design and layout, such as through the use of low-impact materials and high energy efficiency; and**
- j) it incorporates renewable or low carbon energy technologies, where appropriate.**

Development proposals should demonstrate compliance with the above criteria through a Planning Statement or a Design and Access Statement (where one is required), submitted alongside a planning application.

Proposals must also demonstrate that they have taken account of any local supplementary guidance (such as any local town or village design statements, design codes or conservation area appraisals) and design related policies in Neighbourhood Plan.

302. Hart District is an attractive, largely rural area with historic towns and villages that contribute to its distinctive sense of place. New development should help to preserve and enhance the built environment, and whilst some changes are inevitable, new development must reinforce the fact that the district is a highly desirable place to live and work. We expect the requirements of Policy NBE9 to be met by all relevant development proposals. The criteria are intended to be flexible so that they can be applied to most forms of development at different scales.

303. Proposals will need to take account of the health and well-being of future residents, workers and visitors, and will need to take an inclusive approach to design that will allow everyone to benefit. New development must include considerations as to how all potential users would access new buildings and move around new spaces.

304. High quality design will also ensure that new development is resilient and enduring. There is a need to protect development from the risks of climate change, through an appropriate layout that avoids or mitigates increased flood risks (i.e. through enabling the incorporation of sustainable drainage systems) and allows buildings to be orientated to benefit from 'solar gain', thereby reducing their energy requirements. The emission of greenhouse gases that is associated with new development can be reduced through including energy generating technologies such as solar panels or ground source heat pumps. The inclusion of renewable and low carbon technologies is encouraged, to be achieved in a way that is consistent with the other objectives of good design.

305. Proposals should not only be of a high quality in design terms, but in many locations across the district they will also need to protect and enhance the historic character of existing development. This means that they will also need to meet the criteria of Policy NBE8.

306. To support the implementation of Policy NBE9, the Council may produce additional planning policies, supplementary planning documents or supplementary planning guidance

Glossary

Climate Change: A change in global or regional climate patterns, in particular a change apparent from the mid to late 20th century onwards and attributed largely to the increased levels of atmospheric carbon dioxide produced by the use of fossil fuels

Combined heat and power (CHP): A highly efficient process that captures and utilises the heat that is a by-product of the electricity generation process. By generating heat and power simultaneously, CHP can reduce carbon emissions by up to 30% compared to the separate means of conventional generation via a boiler and power station.

Renewable Energy: Energy from natural resources that can be naturally replenished, such as sunlight, wind or rain. Examples of renewable energy technologies include wind turbines and photovoltaic arrays.

Annex 2: NPPF

Glossary

Renewable and low carbon energy: Includes energy for heating and cooling as well as generating electricity. Renewable energy covers those energy flows that occur naturally and repeatedly in the environment – from the wind, the fall of water, the movement of the oceans, from the sun and also from biomass and deep geothermal heat. Low carbon technologies are those that can help reduce emissions (compared to conventional use of fossil fuels)