BATH & NORTH EAST SOMERSET COUNCIL RESPONSE TO ID/7

Issue 5: Are the policies to respond to climate change justified and deliverable?

12.1 Policy CP2 does not require any acceleration of the energy efficiency requirements currently planned to be increased through the Building Regulations to 2016. It does, however, require adherence to specific Code for Sustainable Homes (CfSH) levels by set dates. As the CfSH is more wide-ranging than the likely equivalent future Building Regs, this element of the policy amounts to the imposition of a local construction standard. It needs to be justified in relation to the tests in the Supplement to PPS1 Planning and Climate Change (especially paragraph 29-33). I have taken into account the Council's further explanation in BNES/2, but this still does not explain the local circumstances that warrant and allow the imposition of a local standards. My current view is that this aspect of the policy is not justified or consistent with national policy and that at least the last paragraph of the policy ("The standards set out…") and the related table should be deleted (or at least amended to make clear that this is not a requirement). If so deleted, the targets for Policy CP2 in Table 9 (Monitoring) would no longer be applicable. Comments invited.

12.1.1 Policy CP2 includes a requirement for major developments to reach specific Code for Sustainable home levels, stepping up in line with the building regulations, but applying the full Code requirement. The 2016 residential and 2019 commercial zero carbon requirements included within the table, are in line with the Government's commitments in the *2010 Carbon Plan* (CD1/24). *The Plan for Growth* (CD1/15), published alongside the 2011 budget, also reiterates the Government's commitment that all new homes from 2016 would be zero carbon.

12.1.2 The Council's proposed policy targets for residential development 2016, to be "zero carbon" (the Council defined as Code Level 6 but this may be superseded in future by Government definitions) and 2019 for commercial to be "zero carbon" (the Council defined as BREEAM Excellent but this may be superseded in future by Government definitions) reflect these Government targets. However, it is considered that the interim targets for residential development to meet Code level 3 in 2011-12 and Code level 4 in 2013 do constitute local targets; and that the justification should therefore focus on these.

12.1.3 The Council considers that its reference to nationally recognised methodologies (i.e. BREEAM and Code for Sustainable Homes), is in line with the *draft National Planning Policy Framework* (CD2/27) which specifies in para 150 that:

When setting any local requirement for a building's sustainability, do so in a way consistent with the Government's zero carbon buildings policy and adopt nationally described standards

12.1.4 The justification for the local requirements in this policy in relation to the tests in PPS1 is included within BNES/2 para 9.10. Further justification, includes specific local conditions is as follows:

Local Condition 1: Existing Building stock

The nature of the residential buildings in B&NES and the fact that the area has a significant proportion of hard to treat historic buildings means it is critical that new residential development leads the way in terms of sustainability and energy efficiency.

Local Condition 2: Residential Development Viability

The fabric first approach of the Code for Sustainable Homes up to Codes 3 and 4 can be reached at modest additional cost, and has been factored into viability assumptions used to set policies such as CP9 Affordable Housing, and its evidence base (specifically CD4/H8).

Local Condition 3: Reaching Zero Carbon in Future

The Council's evidence (CD4/S7 and CD4/S8) suggests that given the brownfield focus of development and the more limited potential for renewable energy installation within some of the urban sites, it is important that a strategic approach is taken to being able to deliver zero carbon residential development in 2016. For example, the use of District Heating to meet Code 4 and above is likely to be a preferred option for developers seeking to reach zero carbon. By increasing local standards to Code 4 before 2016 the Council will be supporting the setting up and growth of this technology making it easier for later phases of development to meet zero carbon requirements in 2016.

Local Conditions 3: Local Schemes showcasing Sustainable Construction

Schemes in B&NES such as Bath Western Riverside phase 1 are already being built to achieve Code for Sustainable Homes level 4, exceeding the local policy requirements included in the Supplementary Planning Document for this site which are require development to Code 3. This Sustainable Construction level applies to both market and affordable housing development. This demonstrates that higher Code levels can already be reached in the district. Details of these higher standards are being included

in the marketing information suggesting that there is also a perceived uplift in value. The inclusion of such policies facilitates a design stage consideration of sustainable construction raising the quality of new developments in sustainability terms.

12.1.5 One of the key issues in relation to these local standards that has been raised is the perception that higher local standards impact on viability. While additional costs have been factored into the Council's viability work, recent national guidance for Surveyors published by the Royal Institute of Chartered Surveyors (2011) show that sustainable construction is increasingly being recognised as adding value to development. The Code for Sustainable Homes assessments can be used to demonstrate these higher standards, for example para 6.2.1 of the *Information Paper on Sustainability and Residential Valuation* (CD4/S9) states that:

Aspects of sustainability may affect value in different ways. 'Value add' features may be those that reduce expenditure on utilities, such as the installation of an energy-efficient boiler and water-saving features. Those that do not provide a value add feature, but do avoid a discount for being unsustainable, may be those that add to user comfort, such as insulation, or they may apply to property that has the potential to be easily upgraded. The sustainability matrix in Appendix B provides a guide on the likely significance of some commonly included sustainability features. However, valuers should not rely on this but seek to establish a detailed understanding of the features available, their costs and their payback periods, where applicable, in order to consider them in a valuation context.

12.1.6 The Council also considers that the market for energy efficient homes is increasing. A recent (2011) RIBA study CD4/S10 found that 69% of people who would buy a new home said that energy efficiency was the most important reason for them. This is highly likely to translate into higher house prices, as it has in Australia CD4/S11, enabling developers to recoup their costs and increase their sales values by building to a nationally recognised standard.

12.1.7 Furthermore, the cost of building to these sustainable construction standards is decreasing as supply chains and building skills adjust to the requirements. The updated cost review of the communities and local government department 'Cost of building to the Code for Sustainable Home' paper found that the average cost of building homes to code level 3 standards had fallen by almost three quarters in the last three years – from £4,458 in 2008 to £1,128 in 2010 CD4/S12.

12.2 BNES/2 (9.16) states that policy CP4 (district heating) is an encouraging rather than requiring policy. Whilst the first sentence of the policy says district heating will be encouraged the second sentence is that within the district heat priority areas development will be expected to…. The only exception introduced by FPC7 is viability. My reading of the policy is that within the district heat priority areas it is a requiring policy. If this is not the Council's intention, the Council should put forward changes to make clear that policy requirements will not be imposed.

12.2.1 The response in BNES/2 (9.16) requires clarification. While the first sentence of Policy CP4 (District Heating) is a general encouraging policy, it is the case that within specific areas ("district heating priority areas") as defined in the diagrams, the Council has developed evidence in its *District Heating Opportunity Assessment Study* (CD4/S1-S5) to show that there is significant potential for district heating to be implemented.

12.2.2 Therefore, within these areas, where the Council has supporting evidence, it will "expect" development to "incorporate infrastructure for district heating and connect to existing systems where and when this is available" thereby supporting existing and planned district heating systems and helping to extend and develop new networks.

12.2.3 The incorporation of infrastructure need not be expensive and can merely involve design stage considerations or modifications (this issue is explained further below).

12.2.4 The wording proposed in the policy is "expect" rather than "require", if a developer can make the case that this is not feasible (i.e. there has been a significant change since the evidence was prepared by the Council) this would be given due consideration alongside the viability considerations. It is, however, important that cases are not just made on a site by site basis; otherwise the case for a communal CHP/CCHP system to serve a collection of sites can be lost.

12.2.5 In addition to viability, other exceptions are included in para 1 of Policy CP4 which states that "where and when" existing systems are not yet available to connect to, full preparedness for district heating connection would not be expected. However, it is expected that appropriate measures should be taken to incorporate infrastructure appropriate to the stage of the network development.

12.2.6 Furthermore, the policy states that "Masterplanning and major development proposals should demonstrate a thermal Masterplanning approach", this should help to ensure that existing networks are safeguarded and enabled to grow and that lower cost design stage solutions are optimised alongside a consideration of the business case for district heating. If, at this stage, an applicant can demonstrate, contrary to the

Council's evidence, district heating is not feasible and the opportunities identified cannot be realised, this case will be considered by the Council.

12.2.7 The Council will therefore not require the incorporation of full preparedness to connect to a district heating scheme where it is demonstrated that its evidence has been superseded or where more proportional measures can be taken.

12.3 If the policy wording is to remain, is it justified?

12.3.1 Policy CP4 is considered to be "justified" in terms of the tests included in PPS12 para 4.52 i.e. it is "founded on a robust and credible evidence base" (CD4/S1-S5; CD4/S7 and CD4/S8) and in that it is "the most appropriate strategy when considered against the reasonable alternatives". The latter issue is explained below.

12.3.2 As summarised in *Topic Paper 3: Climate Change* (CD6/S4) in Table 2, District Heating was recommended as one of the most appropriate solutions for future development to reach zero carbon, given the profile of the new development sites in B&NES. The *Renewable Energy and Planning Research* (CD4/7) recommended district heating as a key policy response to opportunities and as an important way of helping new buildings to reach the government's zero carbon targets. This study considers the "base case for achieving zero carbon" and within this "communal infrastructure" enabling the incorporation of CHP is a critical element. This study states that:

In order to achieve zero carbon, a heat distribution network is likely to be the developers' preferred option because without one the development will find it extremely hard to achieve zero carbon (section 6.3.1.2 point 2).

12.3.3 It goes on to conclude in the technical feasibility section:

Camco believe that with current technology the average small scale Bath urban brownfield developments, often consisting of high density flats, will struggle to achieve 60% CO2 reductions unless it can share energy systems with existing neighbours. This is mainly due to the fact that PV will be relied on to generate electricity and with limited space to integrate PV in dense urban brownfield developments it may not be technically feasible…

For larger urban brownfield developments over 500 dwellings, the chances of achieving zero carbon are greater if biomass/biogas CHP can be used. Without biomass/biogas CHP the larger urban developments will also find it very difficult to achieve zero carbon due to insufficient potential to generate renewable electricity (section 6.4).

12.3.4 In the recommendations section of the study it states that:

New policy mechanisms will be required in order to capitalize on the low carbon infrastructure for new communities, and develop this into existing communities. Measures will be needed to encourage and enable the roll out of district heating, through planning policy and enforcement, through connecting public sector buildings and through establishing a financing mechanism to help reduce the level of risk and help integrated networks get started. (section 7.1.4)

12.3.5 In light of this clear recommendation that district heating was key to achieving zero carbon in technical terms and the understanding that this was one of the lowest cost interventions for development to reach these government requirements, the Council undertook further work in the form of its *District Heating Opportunity Assessment Study* (CD4/S1-S5).

In the absence of a district heating system being operational in a locality the installation of district heating infrastructure may represent a waste of resources (both financially to the developer and in terms of physical materials used) until such times as it can be integrated with a working system.

How would the application of this policy relate to the other policy requirements for sustainable construction especially where there would be no working district heating system in place for a proposed development to utilise from the start?

12.3.6 It is considered that the policy approach is justified, in this regard, for the following reasons:

i. This policy allows the future proofing of new developments so that opportunities to develop support and link to existing, planned or future district heating networks are capitalised. As outlined above, the thermal Masterplanning approach advocated will ensure that the approach taken is appropriate and proportional for strategic or major development. This will allow developers to challenge the Council's evidence base on this issue and propose alternative strategies for consideration should they see fit. In the case of small scale development or single buildings simple measures can be taken that are not resource hungry (as outlined below). It is substantially more cost effective to future proof in this way than to retrofit into exiting development where the key factors have not been considered at the design stage.
ii. The meaning of "incorporation of infrastructure for district heating" is discussed in BNES/2 para 9.17. This demonstrates the range of interventions that can be considered, ranging from minor modifications to an individual building (e.g. capped off connections to the internal heating system), to considering future requirements (e.g. enabling future soft dig for insulated pipework installation or locating plant rooms appropriately) to full readiness

to connect, connection to existing networks or initiating a new network. Appropriate and proportional measures will be acceptable.

iii. Smaller scale networks can also be included as an interim measure, with the potential for these to be scaled-up, phased or connected together at a later stage. District heating is neutral in energy terms so the energy source can also be modified and changed over time as fuel prices or fuel accessibility change over time (CD4/S1-S5). Therefore, new development can still benefit from this technology at a more micro-scale in the short to medium term.

12.3.7 To demonstrate that this approach is already being taken in B&NES, it is worth drawing attention to the examples of development and development proposals that are implementing or proposing to implement district heating, CHP or CCHP:

a) The first phase of Bath Western Riverside is being built to Code for Sustainable Homes Level 4 and includes measures such as district heating, brown roofs and state-of-the-art insulation (CD4/S13). New homes will have central heating powered from a communal gas fired communal heating system. This network is currently under construction, and is a section 106 requirement included in the outline planning permission for the whole site in CD4/O15. Section 4 of the Environmental Statement, which is carried forward into the section 106 for the detailed permission for phase 1 in CD4/O16 states that:

> *In addition to mains electricity connection, the proposed development will include a Combined Heat and Power (CHP) system to provide renewable energy. The biomass CHP will be implemented in the first phase and will supply heat and power to the proposed development to supplement mains electricity and standard gas boilers within each building. The gas CHP will include two separate systems, which will be implemented further during the phasing of the proposed development. Gas CHP requires a certain level of demand before it becomes an economical source of both heat and electricity, therefore a large number of residential units will need to be constructed before these become feasible.*

b) Current Sainsbury's Bath proposal, where "the design team is looking at means by which the relocated store can export energy to surrounding development, using renewable sources where possible"

c) Current Tesco proposal for a new supermarket on the Bath Press site in Bath proposes a highly efficient Combined Heat and Power (CHP) unit to provide low carbon energy to the store.

12.3.8 Where there is no working district heating scheme from the start of a development this will effect the ability of the scheme to reach the sustainable construction standards, in particular zero carbon, on or near the

site. However, alternatives include (i) the use of "allowable solutions" to pursue off-site measures (ii) the implementation of scaled-down CHP solutions or alternative energy sources for the district heating/CHP/CCHP systems.

12.3.9 Essentially, the district heating approach is also likely to be a very cost effective way for new development to reach zero carbon requirement, as outlined in para 1.3.2 in the Council's District Heating Study (CD4/S1):

Connection to district heating networks would provide developers with a more straightforward and potentially cheaper solution for meeting the increasingly stringent energy performance standards of the current (and forthcoming revisions) of the Building Regulations as well as higher standards of the Code for Sustainable Homes (CSH) and BREEAM.

Building Regulations targets for energy consumption and CO2 emissions associated with new buildings are being tightened, with the government set to require all new dwellings to be 'zero-carbon' by 2016 and for all new non-domestic building to achieve this standard from 2019.

These increasingly difficult targets are likely to have a significant cost impact as they will require buildings to optimise additional fabric and energy efficiency measures as well as install decentralised, low and zero carbon (LZC) technologies in order to achieve compliance. In this context connection to a district heating network could be a much more cost effective option of achieving compliance than an alternative strategy involving extensive on-site LZC technologies.