Bath and North East Somerset Council

Local Plan 2022 – 2042

Options Consultation

January 2024

Topic Paper: Climate Change

Contents

1 Background

1.1 Bath and North East Somerset has declared a climate emergency and has committed to provide the leadership for the district to be carbon neutral by 2030. This will contribute to the UKs legally binding target of net zero carbon by 2050. There are three key priorities to achieve this which are;

- Energy efficiency improvement of the majority of existing buildings (domestic and non-domestic) and zero carbon new build.
- A major shift to mass transport, walking and cycling to reduce transport emissions;
- A rapid and large-scale increase in local renewable energy generation.

1.2 A publication by the Intergovernmental Panel on Climate Change has advised that cuts in emissions can stabilise rising temperatures but that action must be taken now. The past five years have been the hottest on record with human influence very likely the main driver.

2 Launch Document Consultation and Engagement Responses

2.1 A range of workshops were held around key issues and priorities of the new B&NES Local Plan. Sessions included workshops around Bath and its Environs, Keynsham and Saltford, Whitchurch Village, Somer Valley, rural areas of the district and also consultation with seldom heard groups.

2.2 Feedback was as follows:

Bath and its Environs

- Adaptation to climate change should be integrated into design approaches.
- Decarbonising the city could be made through the greening of the city
- Wish to continue to see high energy and zero carbon standards for new builds

Keynsham

- The increased levels of flood risk need to be accounted for. For example the Memorial Park is prone to flooding and therefore not viable to active travel.

- Housing sites need to approach development holistically, including renewables alongside housing.

Somer Valley

- The increase in energy and transport cost has disproportionately affected people in rural communities due to their isolated nature

- Digitisation is an important opportunity to link together a relatively disconnected area, however the aging population need to be included in the conversation. Services need to remain physically available.

Rural

- A strategic approach is needed, wish to see communities become more resilient and energy self-sufficient at a neighbourhood scale.
- Role of sharing good practice and highlighting, learning from and promoting community led retrofit and energy initiatives.
- Make delivery of appropriate wind and solar farms easier. Prepare strategies with communities.
- Enable diversification of land use to support sustainable rural business, serve with digital connectivity.

Whitchurch

- Further development would increase the already prominent traffic issues and will be in contradiction of addressing the climate emergency.
- Climate resilience is impacted by a wide variety of factors including transport, housing, and any form of development

Seldom Heard Groups

(including B&NES Youth Climate Conference, Bath Ethnic Minority Senior Citizens Association, Twerton Sheltered Housing Lunch Club, Bath Wheelchair Basketball Club, Somer Valley Family Food and Play Hub, Bath Young Professionals, Chew Valley School and Interactive Poster Engagement)

- Low emission zones are difficult for those on low incomes who often carry out multi-stage journeys, dropping off in multiple places. They can't afford to replace their old car, but there aren't the bus services they need to get where they need to go.
- Need to retrofit old homes for energy efficiency, especially with rising prices.
- There have been issues with listed buildings, which is leaving people cold and struggling with bills – these old buildings are losing as much heat as they produce.
- Ideas about carbon accounting and offsetting wishing to see new development be more self-sufficient and carbon and biodiversity positive.
- More windmills and solar panels on new buildings.
- More electric car charging points.
- Existing social housing stock should be provided with solar panels and better insulation, not just new-build housing.
- Need to accept that some members of the population will struggle to fully adopt active travel etc due to additional challenges they face so in designing things like low traffic neighbourhoods remember that one size doesn't fit all.
- Consider maintaining access to the city for disabled travellers.
- What are the incentives for installing renewable energy?
- Key focus of Local Plan should be on renewable energy generation, particularly utilising solar.
- Improvements required to all sustainable transport methods - cost, reliability, infrastructure provision.
- All new houses should be carbon neutral or carbon positive, well-insulated, built from sustainable materials, and located where they will not be reliant on car use.
- Key aim should be to 'see green' wherever you look, i.e. tree planting and small green spaces / areas of rewilding linking larger parks and natural green spaces.
- It is important to build homes that are affordable to heat and use clean energy.

3 Current position

3.1 In January 2023 the Local Plan Partial Update was adopted. The plan included new and updated policies to address the climate emergency.

3.2 This included new policies on sustainable construction which sets standards for space heating and energy use with the aim to facilitate zero carbon construction on operational energy. The policy takes a fabric first approach and requires energy needs to be met through on site renewables.

3.3 The LPPU also introduced the requirement for embodied carbon assessments for large scale major development.

4 Proposed Policy Areas

4.1 The following proposed policy areas are addressed in this topic paper. For each of these, further detail is provided on the national, regional and local policy context, current evidence, further work and proposed Options.

- CP1: Retrofitting Existing Buildings
- C/RE Renewable Energy
- C/RD Sustainable Construction for New Residential Development
- C/NRD: Sustainable Construction for New Build Non-Residential Buildings
- C/EC: Embodied Carbon
- SCR2: Roof Mounted/Building Integrated Scale Solar PV
- SCR4: Community Renewable Energy Schemes
- SCR5: Water Efficiency
- CP4: District Heating
- SCR9: Electric Vehicle Charging Infrastructure

5 Policy CP1: Retrofitting Existing Buildings

National Context - NPPF

5.1 152. The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.

5.2 153. Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.

5.3 154. New development should be planned for in ways that:

5.4 a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and

5.5 b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government’s policy for national technical standards.

Regional / Local Context

5.6 Energy Efficiency, Retrofitting and Sustainable Construction, Supplementary Planning Document.

5.7 This document provides guidance on how to retrofit existing homes. A lot of retrofitting measures are now permitted development and therefore do not require the need for a formal planning application. The document also provides guidance on retrofitting heritage buildings.

Proposed Options

5.8 The policy was updated through the Local Plan Partial Update. This included the requirement for EPC C certificates in houses in multiple occupation.

5.9 The policy remains fit for purpose and will not be updated.

6 C/RE Renewable Energy

National Context

6.1 Paragraph 152 of the NPPF notes that the planning system should support renewable and low carbon energy and associated infrastructure. To help increase the use and supply of renewable and low carbon energy and heat, plans should:

- Provide a positive strategy for energy from these sources that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily.
- Consider identifying areas suitable for renewable and low carbon energy sources and supporting infrastructure.
- Identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers.
- Community-led initiatives for renewable and low carbon energy should also be supported, giving consideration to the role of neighbourhood planning as well as local plans.

6.2 Footnote 54 of the NPPF notes that in the case of proposed wind energy development involving one or more turbines, these should not be considered acceptable unless they are located in an area identified as suitable for wind energy development in the development plan. In addition, such applications also need to demonstrate that following consultation, the planning impacts identified by the affected local community have been fully addressed and the proposal has their backing.

6.3 Further detailed guidance on developing policies on renewables and low carbon energy and the planning considerations involved in such schemes is provided in the Planning Practice Guidance (PPG).

Regional / Local Context

6.4 The Council's current approach to renewable energy is set out in Policy CP3. Policy SCR4 sets out the Council's approach to and support for Community Led Projects. Policy SCR4 is proposed to be retained as is.

6.5 The policy approach was reviewed through the LPPU to set out a positive approach for determining applications and guiding development to the most suitable locations.

6.6 The revised Policy CP3 sets out the criteria for all stand alone renewable energy projects, as well as specific criteria for wind energy and ground-mounted solar PV.

6.7 Through the LPPU, the Council has set out a landscape led approach for wind energy and ground-mounted solar PV to guide development to the best locations, which is based on the Landscape Sensitivity Assessment (LSA) for Renewable Energy Development (LUC, 2021).

6.8 It was not possible to review the Core Strategy target for renewable energy generation through the LPPU. This Options Document presents options for how both the target and approach to CP3 could be revised to plan positively for renewable energy while ensuring that adverse impacts are addressed satisfactorily.

Changes since adoption of the LPPU

6.9 Since the adoption of the LPPU there have been changes issued by the Government in relation to Wind Energy, through the release of 5th September Written Material Statement (WMS) and subsequent revision to the NPPF.

6.10 Through the WMS the Government is seeking to restart development of onshore wind in England. The NPPF has been revised to allow alternative ways of identifying potential locations for new wind farm developments, rather than solely local development plans. This now includes local and neighbourhood development orders, or community right to build orders.

6.11 There have also been changes to the wording around the test applied in relation to community backing of onshore wind, on which further guidance is expected from Government on how public support for wind farms will be assessed, and how communities that host wind farms could benefit from lower energy bills. Officers will monitor this policy area and the implications of any changes on Policy SCR4.

Proposed Options

Target

6.12 It was not possible to review the Core Strategy target for renewable energy generation through the LPPU. Consequently, a misalignment exists between the Core Strategy target and the Council's Climate Emergency goal.

6.13 Stretch Pathway modelling outlined in the Council's Climate Emergency Strategy 2019-2030 indicates the magnitude and urgency of our ambitions in B&NES to achieve our 2030 goal. According to the Anthesis 2019 report, it is suggested that we need a minimum additional 300MW of renewable energy to contribute to the decarbonisation of electricity, heat, and transport. Rapid and large-scale development of local renewable energy installations is essential, such as equipping 50% of existing homes with roof mounted solar PV by 2030, installing solar PV on commercial roof space equivalent to around 116 football pitches, and incorporating approximately 28 large (2.5 MW) wind turbines.

6.14 Through National Policy there is no prescribed way of determining how much energy should be generated from installations located within B&NES. However, in order to explore the implications of our Climate Emergency 2030 target on renewable energy development and provide an indication of the scale of the challenge, we refer to our evidence base, specifically the Renewable Energy Resource Assessment Study (RERAS).

6.15 The RERAS was commissioned, working with our partners (South Gloucestershire, North Somerset and the West of England Combined Authority (WECA)) to ensure a consistent approach across those areas. As part of this, we have projected local energy demand in Bath and North East Somerset in 2030 based on the assumption that we are living in a carbon neutral scenario.

6.16 The RERAS presents a 'snapshot' theoretical projection of local energy demand in 2030 in terms of Gigawatt hours (approximately 1,260 GWh), and it is based on a number of assumptions:

- by 2030, total overall energy demand (heat and power) is expected to reduce significantly (up to 50%) due to accelerated progress with home energy efficiency improvements, technology efficiency improvements, and changes in consumer behaviour,

- action is needed (in addition to the Local Plan) to help make these progressive assumptions occur, and the Council is playing its part in this through its wider Climate Emergency response,

- it is expected that the proportion of total energy demand that is met by electricity is going to increase significantly (approximately 250%), due to switching fuel for heating and transport to electricity,

- In the RERAS, the electricity element (1,066 GWh) of the projected 2030 local energy demand has been translated into three scenarios of what it could mean on the ground in terms of the number and mix of additional solar and wind renewable energy installations in B&NES.

6.17 These three options are presented in the table below in terms of High, Medium and Low approach.

- **Low – Meet the Distribution Future Energy Scenario (DFES) Projection by 2030.**

  Scenario 1 results in B&NES greening its share of the grid electricity by 2030. Once other areas ‘catch-up’ in 2050, as per DFES, B&NES electricity consumption will become net zero. This assumes 2 additional 50MW solar farms and 5 additional 5MW wind farms – An additional installed capacity of 125MW

- **Medium - Meet the equivalent of 33% of the demand in B&NES by 2030 and set out a pathway and targets to ensure the equivalent of 100% of the demand is met by 2050.**

  Scenario 2 acts as a steppingstone between Low and High and assumes that 33% of the electricity demand in B&NES in 2030 will be met by installing additional wind and solar developments. This assumes 3 additional 50MW solar farms and 9 additional 5MW wind farms – An additional installed capacity of 195MW

- **High - Meeting Bath and North East Somerset’s 2030 Electricity Consumption**

  Scenario 3 provides enough renewable energy generation to meet the 2030 electricity consumption. This assumes 18 additional 50MW solar farms and 9 additional 5MW wind farms – An additional installed capacity of 945MW

6.18 However, we acknowledge that the RERAS options do not align well with the Council's 300MW target, which we consider the minimum requirement.

6.19 Given this misalignment, we believe that linking back to the Council's Climate Emergency declaration and emphasizing the 300MW minimum target is the most appropriate way forward. This approach ensures a clear connection between planning applications for renewable energy and the overarching climate targets, allowing for flexibility over the plan period in case of changes to targets or evolution in the evidence base. Notably, evidence base documents, such as the RERAs, act as snapshots in time and are based on assumptions. This strategic approach helps avoid scenarios like the LPPU policy review, where the target was set in the Core Strategy many years before the declaration of the Climate Emergency by B&NES

6.20 Therefore the Options document will present a flexible target to link the determination of planning applications for renewable energy back to the Council’s and National climate targets.

6.21 This approach would allow flexibility over the plan period in case of changes to targets or evolution in the evidence base; noting that evidence base documents such as the RERAs act as snapshots in time and are based on assumptions. This could help mitigate a scenario like the LPPU policy review where the target was set in the Core Strategy, many years prior to the declaration of the Climate Emergency by B&NES.

Proposed Approach

6.22 Given that the CP3 has recently been reviewed, the policy approach could be said to be appropriate to take forward into the new Local Plan. Officers have noted increased interest in Solar PV operators looking at sites within the District, such as the permitted 15MW solar farm on Marksbury Plain. An option will be presented to enable review of the approach and if additional technologies could be added to the considerations, for example Heat from Mines, on which a feasibility study is currently underway with WECA and The Coal Authority.

6.23 The RERAs evidence base also includes a review of the technical potential of renewable energy technologies in the district. In particular, the study provides evidence on the potential areas for wind energy and solar PV, based on a variety of criteria and looking at factors, such as different wind turbine sizes, as required by national policy.

6.24 The RERAS shows that the potential opportunities and areas where large scale wind installations can effectively operate on a commercial basis are limited within B&NES. The Options consultation will consider a scenario where these areas could be safeguarded.

6.25 It is important to stress that both the safeguarded areas and the broad areas of search are only ‘potentially suitable’ for wind turbines: being within these locations does not mean that an application for a wind turbine or turbines would automatically be approved. All applications for wind turbines would be assessed against the detailed policy criteria and all other relevant policies in this Local Plan, as well as National Policy or relevant Neighbourhood Plans.

6.26 Given the potential sensitivity of the areas identified (AONB) through the technical assessment, it is not proposed to constrain these sites for large wind turbines only but to provide a degree of flexibility on turbine size, consistent with our overall desire to increase renewable energy generation and to bring forward wind development, balanced against the need to protect environmental assets.

6.27 In stark contrast the RERAs shows that the solar resource is widespread across the district. Officers consider that there would be no benefit in safeguarding these areas.

7 Policy C/RD Sustainable Construction for New Residential Development

National Context - NPPF

7.1 152. The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.

7.2 153. Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.

7.3 154. New development should be planned for in ways that:

7.4 a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and

7.5 b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government’s policy for national technical standards.

National Policy changes

7.6 On the 13th December 2023 DLUHC released a Written Ministerial Statement that discourages local authorities from setting their own standards with regards to energy efficiency in homes and setting out the desired approach for sustainable construction policies. The statement specifies the metric to be used for any locally set policies should be as follows;

7.7 The additional requirement is expressed as a percentage uplift of a dwelling's Target Emissions Rate (TER) calculated using a specified version of the Standard Assessment Procedure (SAP).

7.8 In addition, DLUHC are currently consulting on the Future Homes Standards which looks at changing building regulations and introducing new requirements for residential development. The aim is for new residential buildings to be 'zero carbon ready', meaning that no further work will be needed for them to have zero carbon emissions once the electricity grid has decarbonised. The standards will require heating and hot water demand to be met through low-carbon sources and fossil fuel methods will not be permitted.

7.9 The consultation proposes minimal changes in fabric standards from Building Regulations Part L 2021, with only option number one proposing a slight improvement in air tightness. The proposed option one includes the installation of wastewater heat recovery systems, decentralised mechanical extract ventilation and solar PV panels to cover the equivalent of 40% of ground floor area. Option two proposes none of these changes. The consultation does not state a preferred option.

7.10 The proposed changes rely on the electricity grid becoming decarbonised for new buildings to achieve zero carbon emissions and therefore, it is still considered that a policy on sustainable construction is required.

Evidence Base

Net Zero New Buildings: Evidence and Guidance to inform Planning Policy, South West Energy Hub

This provides a summary of all available evidence that can be used to produce sustainable construction policies

LETI Climate Emergency Design Guide, London Energy Transformation Initiative

The documents details how new buildings can reach climate change targets. In terms of operational energy it is recommended that when assessing operational energy that the metric of energy use intensity and space heating is used. The target of 15kwh/m2.yr for space heating and 35 15kwh/m2.yr for EUI are recommended.

Renewable energy should be maximized on site. In terms of small scale residential 100% of energy needs can be met from Solar PV.

For embodied carbon the baseline for current practice is 800kg/Co2 per year. It is recommended that following best practice this can change to 500kg/CO2 per year.

The report also recommends targets for some non-residential typologies such as schools and offices.

Overheating in New Homes, Good Homes Alliance

The document details how overheating can be mitigated against in new buildings. The tool includes a score sheet with 14 questions to allow for identification of overheating risk and mitigation.

UK Housing: Fit for the future?

Sets out best practice sustainable construction standards and guidance for new build homes.

Cornwall Council Energy review and Modelling report

This report sets out the financial uplift for the provision of standards adopted by Cornwall and B&NES for a zero carbon construction policy. The report includes a future policy scenario where stricter standards are set.

Cornwall Council Technical Evidence Base for Policy SEC 1 – New Housing

The document provides a full technical assessment of the space heating and energy use standards currently adopted by Cornwall Council and B&NES. The document also provides the cost uplift for a range of development typologies. The document also looks at the uplift of future stricter standards.

Adapting London Plan Offsetting Rates for 2022 Building Regulations Updates, evidence for Bath and North East Somerset Council, South West Energy Hub

The documents provide the evidence for energy offsetting and its viability.

Examples from other authorities and their evidence bases

Central Lincolnshire Local Plan: Climate Change Evidence Base, Policy recommendations

Central Lincolnshire local plan was adopted on the 13th April 2023. The policy uses similar metrics to the current adopted policy SCR6 but goes further in setting stricter standards.

The policy on non - residential also sets standards for space heating and EUI.

Greater Cambridge Local Plan, net zero carbon evidence base, policy recommendations.

The draft of the Greater Cambridge Local Plan is intended to be published in 2023. The options consultation and evidence base includes sustainable construction policies that set stricter standards than policies SCR6 and 7.

Cornwall Council, Climate Emergency Development Plan Document

Cornwall Council have adopted the same policy as B&NES on sustainable construction for residential buildings. The evidence included looking at reducing the targets to stricter standards

Bristol City Council. Local Plan Review Draft Policies

The draft policy of the Bristol Local Plan includes sustainable construction policies that set stricter standards than policies SCR6 and 7.

Zero Carbon Toolkit, Cotswold District Council 2021

Cotswold Council have released a zero carbon toolkit which includes guidance on zero carbon construction. The document proposes using the metrics of energy use intensity and space heating, but proposes to set lower parameters than Cornwall Council. The document also proposed an embodied carbon benchmark of 500kg/sqm.

Proposed Options

7.11 The current adopted policy sets space heating and energy standards, whilst also requiring energy needs are met by onsite energy generation with a preference for solar PV. This policy was one of the first in the country alongside Cornwall Council.

7.12 The available evidence and work progressed by other authorities shows that there is scope to set further stricter standards with regards to space heating and energy use on residential buildings.

7.13 The options detailed below explore the possibility of setting standards currently adopted in Central Lincolnshire and proposed in the available evidence.

Option 1

7.14 Retain existing standards and keep the policy as adopted.

Option 2

7.15 Set stricter standards in line with the available evidence base. This would be subject to viability testing.

7.16 New build residential development will be required to meet the standards set out below. New build residential development will aim to achieve zero operational emissions by reducing heat and power demand then supplying all energy demand through onsite renewables. Through the submission of an appropriate energy assessment, having regard to the Sustainable Construction Checklist SPD, proposed new residential development will demonstrate the following;

- Space heating demand less than 15kWh/m2/annum;
- Total energy use less than 35kWh/m2/annum; and
- On site renewable energy generation to match the total energy use, with a preference for roof mounted solar PV
- Connection to a low- or zero-carbon District heating network where available

Major residential development

7.17 In the case of major developments where the use of onsite renewables to match total energy consumption is demonstrated to be not technically feasible (for example with apartments) or economically viable, renewable energy generation should be maximised and the residual on site renewable energy generation (calculated as the equivalent carbon emissions) must be offset by a financial contribution paid into the Council's carbon offset fund where the legal tests set out in the Community Infrastructure Regulations are met.

Option 3

7.18 The third option would alter the metric used from space heating and energy use intensity to a % carbon reduction from the target emission rate of the building as assessed by the standard assessment procedure (SAP) and as referenced in the recent Written Ministerial Statement. This option will also explore the addition of requiring no use of on-site fossil fuels.

- Require a 100% reduction in carbon emissions from the target emission rate as outlined in the Standard Assessment Procedure
- No use of on-site fossil fuels

Overheating and Adaption to Climate Change

7.19 Temperatures have risen due to the impacts of climate change. Summer 2022 saw temperatures in the UK reach 40 degrees. Other councils such as Bristol and Cambridge are proposing separate policies on overheating to allow for new buildings to adapt to climate change.

7.20 Therefore there is an option to include specific additional requirements relating to overheating. The Good Homes Alliance document referenced above sets out standards relating to the mitigation of overheating. This relates to measures such as orientation and external shading.

8 Policy C/NRD: Sustainable Construction for New Build Non-Residential Buildings

National Context - NPPF

8.1 152. The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.

8.2 153. Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.

8.3 154. New development should be planned for in ways that:

8.4 a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and

8.5 b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards.

Future Buildings Standards

8.6 The Future Buildings standards 2021 required a 27% carbon reduction compared to existing standards. This was an interim uplift brought in following consultation.

8.7 DLUHC are currently consulting on the Future Building Standards which looks at changing building regulations and aims for new non-domestic buildings to be 'zero-carbon ready', meaning that no further work will be needed for them to have zero carbon emissions once the electricity grid has decarbonised. The consultation proposes two options, the proposed option one roughly doubles the coverage of solar PV in Building Regulations Part L 2021 with solar PV panel coverage equivalent to 40% of the building's foundation area for side-lit spaces and 75% for top-lit spaces. Option two proposes to retain the coverage of solar PV in Building Regulations Part L 2021 with solar PV coverage equivalent to 20% of the building's foundation area for side-lit spaces and 40% for top-lit spaces. The consultation states that option one is the government's recommended option.

8.8 The proposed changes rely on the electricity grid becoming decarbonised for new buildings to achieve zero carbon emissions and therefore, it is still considered that a policy on sustainable construction for new build non-residential buildings is required.

Evidence Base

Evidence Base for West of England Net Zero Building Policy, Operation Carbon for Non-Domestic Buildings

The study focused on operation carbon in non-residential buildings. It sets targets for four different typologies using space heating and energy use intensity.

Net Zero New Buildings: Evidence and Guidance to inform Planning Policy, South West Energy Hub

This provides a summary of all available evidence that can be used to produce sustainable construction policies

LETI Climate Emergency Design Guide, London Energy Transformation Initiative

The documents details how new buildings can reach climate change targets. The report also recommends targets for some non-residential typologies such as schools and offices. Renewable energy should be maximized on site. In terms of small scale residential 100% of energy needs can be met from Solar PV.

Overheating in New Homes, Good Homes Alliance

The document details how overheating can be mitigated against in new buildings. The tool includes a score sheet with 14 questions to allow for identification of overheating risk and mitigation.

Cornwall Council Energy review and Modelling report

This report sets out the financial uplift for the provision of standards adopted by Cornwall and B&NES for a zero carbon construction policy. The report also includes a viability assessment of requiring BREEAM excellent on non-residential buildings.

Examples from other authorities and their evidence bases

Central Lincolnshire Local Plan: Climate Change Evidence Base, Policy recommendations

Central Lincolnshire local plan was adopted on the 13th April 2023.

The policy on non - residential also sets standard for space heating and EUI with an option for BREEAM excellent if standards cannot be met.

Greater Cambridge Local Plan, net zero carbon evidence base, policy recommendations.

The draft of the Greater Cambridge Local Plan is intended to be published in 2023. The options consultation and evidence base includes sustainable construction policies that set stricter standards than policy 7.

Cornwall Council, Climate Emergency Development Plan Document

Cornwall Council recommends requiring BREEAM excellent for non-residential buildings.

Bristol City Council. Local Plan Review Draft Policies

Bristol city council are proposing to require BREEAM excellent on non-residential buildings.

Zero Carbon Toolkit, Cotswold District Council 2021

Cotswold Council have released a zero carbon toolkit which includes guidance on zero carbon construction. The document proposes using the metrics of energy use intensity and space heating, and sets out standards for schools, offices, hotels and light industrial.

Proposed Options

8.9 Policy SCR7 required a 100% reduction in carbon emissions from building regulations standards. The policy includes a requirement to maximise opportunities for renewable energy to mitigate regulated operational emissions. The policy currently only applies to major developments and there is an opportunity to broaden the scope of the policy to minor non-residential development.

8.10 At the time of adopting the LPPU there was limited evidence regarding the use of space heating and energy use intensity for non-residential development. However the published Greater Cambridgeshire evidence base introduces the concept of using such standards. The evidence sets out a variety of EUI standards for different non-residential typologies.

8.11 There are a number of advantages to setting these standards rather than looking at percentage carbon reduction and therefore there is an opportunity of exploring setting new standards through the Local Plan.

8.12 The use of space heating and EUI standards means that any changes to building regulations standards such as the future buildings standards will not impact the implementation of the policy.

8.13 The use of space heating and EUI standards means that account can be taken of the form and design of the building which is not taken into account on the notional building used in building regulations.

8.14 It is also accepted that non-residential buildings vary widely in their form on operational energy. Therefore it may not always be possible for a non-residential building to adhere to the standards set out below in option 2. Therefore the option of using BREEAM standards is also being explored.

8.15 BREEAM is only one of many third-party accreditation schemes for non-residential buildings, however it is the most ubiquitous in the UK and referred to in the local plans of 193 authorities. Managed by BRE, it is a credit-based framework across a range of sustainability criteria with a mix of mandatory and tradable credits.

8.16 In itself BREEAM does not mandate net-zero energy or carbon, however this can still be demonstrated and checked through a mix of compulsory and innovation credits. BREEAM also has credits relating to construction materials and embodied carbon.

8.17 BREEAM ‘Excellent’ is the most common level of performance referred to, both in planning policy and corporate strategies. Typical energy reduction of meeting this level of performance is approximately aligned to a 25% reduction over current Building Regulations, and like building regulations, does not consider unregulated energy as a minimum requirement. Beyond BREEAM Excellent, BREEAM Outstanding is the next highest level of accreditation.

Option 1

8.18 Retain existing standards but broaden the scope of the policy to minor developments.

Option 2

8.19 Set space heating and energy use intensity standards for non-residential buildings.

Option 3

8.20 Retain the existing policy but also require all minor and major applications for new non-residential buildings to meet as a minimum BREEAM excellent.

9 Policy C/EC: Embodied Carbon

National Context

9.1 152. The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.

9.2 153. Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.

9.3 154. New development should be planned for in ways that:

9.4 a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and

9.5 b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards.

Evidence Base

Evidence Base for WOE Net Zero Building Policy

The study focused on the embodied carbon of buildings and the cost uplifts anticipated. Two non-domestic typologies were looked at and two domestic typologies. The study looks at, the Product Stages, the Construction Process stages, the Replacement Stage and the end of life stage. The lifecycle of materials was analysed and compared with current building practice.

LETI Climate Emergency Design Guide, London Energy Transformation Initiative

For embodied carbon the baseline for current practice is 800kg/Co2 per year. It is recommended that following best practice this can change to 500kg/CO2 per year.

The report also recommends targets for some non-residential typologies such as schools and offices.

Examples from other authorities and their evidence bases

Bristol City Council. Local Plan Review Draft Policies

The draft policy of the Bristol Local Plan includes sustainable construction policies that set stricter standards than policy SCR8.

Zero Carbon Toolkit, Cotswold District Council 2021

Cotswold Council have released a zero carbon toolkit which includes guidance on zero carbon construction. The document proposes using the metrics of energy use intensity and space heating, but proposes to set lower parameters than Cornwall Council. The document also proposed an embodied carbon benchmark of 500kg/sqm.

Proposed Options

9.6 Embodied carbon emissions are those associated with raw material extraction, manufacture and transport of building materials, construction, maintenance, repair replacements, dismantling, demolition and eventual material disposal.

9.7 Policy SCR8 introduced the requirements for embodied carbon assessment for large scale major development. The requirement of 900 was used as this took a cost neutral approach, setting a standard that was easy to reach and introducing the concept of embodied carbon assessments to the development industry.

9.8 As operational carbon from development decreases, embodied carbon will make up a higher proportion of a developments carbon emissions. Therefore through the Local Plan there is an opportunity to review the impact of SCR8 and set a stricter standard. This would then require embodied carbon emissions to be reduced.

Option 1

9.9 Retain existing standards but broaden the scope to include all new major and minor new building development.

Option 2

9.10 Major and minor new-build developments are required to submit an Embodied Carbon Assessment having regard to the Sustainable Construction Checklist SPD for the substructure, superstructure and finishes. The development must meet scores set out below.

- Residential (4 storeys or fewer) - <625 kgCO2e/m²
- Residential (5 storeys or greater) - <800 kgCO2e/m²
- Major non-residential schemes - <900 kgCO2e/m²

10 Policy SCR2: Roof Mounted/Building Integrated Scale Solar PV

National Context - NPPF

10.1 152. The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.

10.2 153. Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.

10.3 154. New development should be planned for in ways that:

10.4 a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and

10.5 b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government’s policy for national technical standards.

Proposed Options

10.6 The policy remains fit for purpose and will not be updated.

11 Policy SCR5: Water Efficiency

National Context - NPPF

11.1 152. The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.

11.2 153. Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.

11.3 154. New development should be planned for in ways that:

11.4 a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and

11.5 b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government’s policy for national technical standards.

Proposed Options

11.6 The policy remains fit for purpose and will not be updated.

12 Policy CP4: District Heating

National Context - NPPF

12.1 152. The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.

12.2 153. Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.

12.3 154. New development should be planned for in ways that:

12.4 a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and

12.5 b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards.

Proposed Options

12.6 The policy was updated as part of the Local Plan Partial Update. The policy allows for district heating scheme to come forward and no alterations are proposed.

13 Policy SCR9: Electric Vehicle Charging Infrastructure

National Context - NPPF

13.1 107 If setting local parking standards for residential and non-residential development, policies should take into account: a) the accessibility of the development; b) the type, mix and use of development; c) the availability of and opportunities for public transport; d) local car ownership levels; and e) the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles.

Proposed Options

13.2 The electric vehicle policy was adopted through the Local Plan Partial Update alongside the Transport and Development Supplementary Planning Document and no alterations proposed.