# 4.0



# Responding to the climate emergency and moving to net-zero carbon

## Local Plan policy responses to climate change

4.1 The current Local Plan includes policies to meet the challenge of climate change by supporting a low carbon future, energy efficiency and increasing the use and supply of renewable and low carbon energy. However, Plan Mid Devon provides an opportunity to review these in light of current national planning policy and practice guidance, and also the Council's recent climate emergency declaration. The new Local Plan will need to take a proactive approach to mitigating and adapting to climate change, supporting appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, whilst recognising the link between climate change and biodiversity loss. This can be broad ranging in terms of what policy responses can be included in the new Local Plan. This Issues Paper therefore takes climate change and the transition to a low carbon future into consideration throughout, where it can cut across a number of themes in relation to the development and use of land and buildings. For example, new development should be planned for in ways that can reduce its carbon footprint and help make it resilient to climate impacts, by:

- facilitating active travel by making sure that cycling and walking are available as the 'default' modes of transport, rather than 'designing in' a reliance on car-based travel
- increasing the use of, and access to, high quality public transport
- avoiding increased vulnerability to flood risk to people and property
- helping reduce greenhouse gas emissions through its location, orientation and design
- including design measures to avoid overheating in extreme hot weather, such as encouraging use of materials which maximise sunlight reflection and increasing areas of blue and green infrastructure
- providing access to, and support and encourage the use of new technologies and digital communications
- increasing the use and supply of renewable and low carbon energy

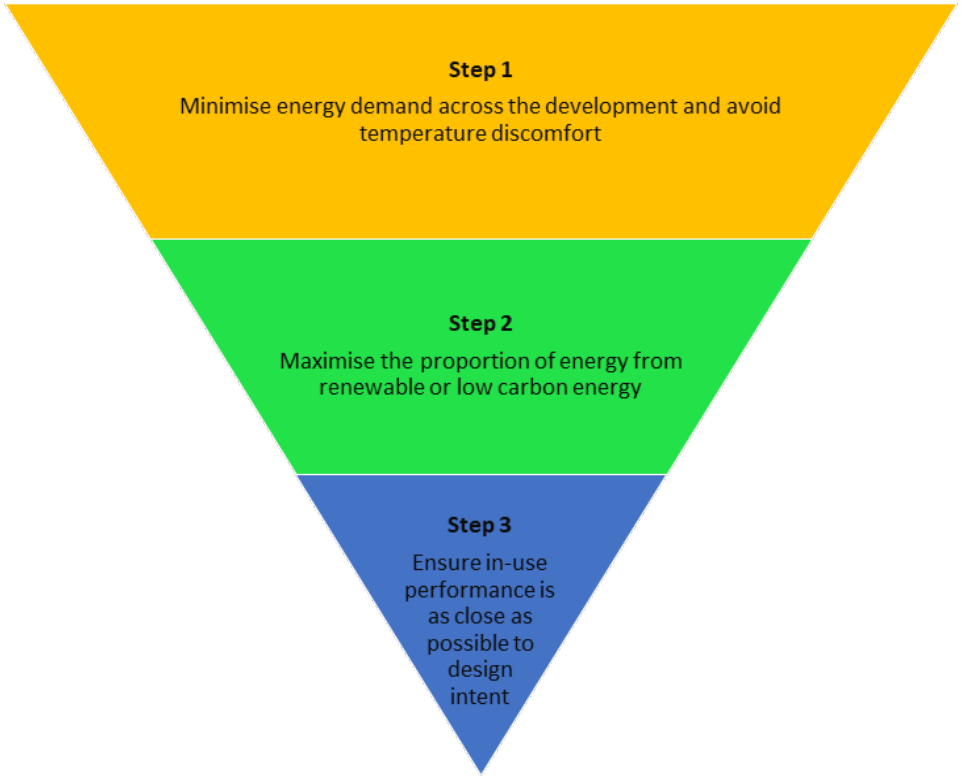
View West of Crediton

## Net-Zero Development

4.2 Measures to reduce carbon emissions nationally have been driven by the power and waste sectors. However, all sectors will need to achieve significant carbon reductions to meet legally binding targets, including transport and buildings. Development plan documents are one of the key areas where local authorities can influence carbon emissions at a local level.

4.3 Development location and sustainable transport investment is the most significant way to reduce carbon emissions from new development.[5] By ensuring easy access to jobs and basic services/facilities by active travel and high quality public transport links, the need to travel by private car can be reduced, particularly within the three main towns. Reducing the need to travel, particularly by private car, will be reflected in the spatial development strategy for Plan Mid Devon and where land is identified for development (such as through site allocations). Digital connectivity is also key to reducing the need to travel, by enabling the ability for home working and access to online services.

4.4 In respect of buildings, there is an opportunity for Plan Mid Devon to become more ambitious in supporting its net-zero activities. The current evidence base[6] advocates the application of an 'Energy Hierarchy' approach as summarised below:




[4] Low Carbon and Climate Change Study 2020

4.5 The energy hierarchy essentially provides a flexible process that can be applied to development proposals to ensure effective and efficient carbon emissions reductions. It starts with considering how fabric efficiencies can reduce energy demand across the development before considering how to maximise the proportion of energy from renewable or low carbon sources. The proposed approach is flexible as to how carbon reductions are met in order to take into account site specific feasibility and viability considerations. Additional guidance on how to apply the energy hierarchy approach is provided below:

## Mechanism

**Step 1**

- Use masterplanning to minimise energy demand through passive design.
- Effective use of landscaping and green/blue infrastructure.
- Adopt a 'fabric first' approach.
- Development should be designed to be climate resilient.

**Step 2**

- On-site renewable energy generation should reduce unavoidable carbon emissions associated with any residual energy use.
- Enable electric vehicles to discharge to the grid (vehicle to grid) and help meet the power needs of the buildings.
- Off-site measures are a potential option for developments where on-site measures are not practical/viable.
- **As a last resort**, carbon offsetting could be used to fund a large scale energy efficiency programme in existing buildings, large scale renewable energy installations, and community energy projects and heat network expansions for instance.

**Step 3**

- Use a recognised building quality regime and monitor in-use data to ensure the in-use performance of the buildings is as close as possible to the way they were expected to perform.
- Performance monitoring and evaluation will need to ensure that the sample data is representative of the development as a whole.
- Where a performance gap is identified corrective action should be taken.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# Question 3

**Do you think that the Local Plan should introduce policies requiring that all developments which propose the construction of new homes or non-residential floorspace will be designed, constructed and will perform to deliver net-zero carbon emissions? (Yes / No - please provide your reasons)**

4.6 To date, the built environment sector has been focussed on addressing mainly operational emissions via reduction targets in building regulations (Part L) with the embodied aspect of carbon emissions not being fully addressed. This is particularly important since over half of all carbon emissions associated with the lifetime of a residential development are 'locked in' prior to practical completion[7]. It is therefore important that Plan Mid Devon considers the impact of a development both in terms of anticipated operational and embodied emissions of its entire life-cycle. There is an opportunity for Plan Mid Devon to establish policy which helps identify the overall best combined opportunities for reducing lifetime emissions, and help to avoid any unintended consequences of focussing on operational emissions alone.


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## Question 4

**Do you think that the Local Plan should introduce a policy to address the Whole Life-cycle carbon impacts of a development? If yes, do you think we should take the following approach(es):**

- **Exclusion – banning 'things' with unacceptably poor performance / impact (Yes/No)**
- **Preference – preferring 'things' with better performance / lower negative impact (Yes/No)**
- **Quantified performance – setting explicit, quantified limits that determine which 'things' are acceptable / unacceptable (Yes/No)**

**Do you have any other comments on Whole Life-cycle carbon impacts, or which circumstances each of the three approaches might apply?**

### Reducing the need to travel by car

4.7 The COVID-19 pandemic has offered a glimpse into a carbon neutral future. In Devon, road transport emissions represent 28% of the county's total carbon emissions. It has been estimated that Devon's carbon emissions reduced by almost a quarter (23%) during the first lockdown and average traffic flows decreased by 60%, reducing total emissions by 17% as travel restrictions were imposed and many people were forced to work from home.


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4.8 There is potential for working from home to continue to affect working and commute patterns in the longer term. While a return to the work place is likely for many, this could be through a hybrid approach with fewer days each week. The ability to work from home may be influenced by the suitability of people's properties and the also quality of broadband connectivity. Reduced travel can also be achieved through there being local job opportunities, and provision of local shops and services. However, given the rural nature of much of the district it is recognised that the car is likely to remain the dominant mode of transport for many, particularly where there are no alternatives, or where public transport may be unaffordable or not convenient.

## Question 5

**How do you think we should plan the future of Mid Devon to help reduce the need to travel by car?**

### Renewable and low carbon energy

4.9 The Government's approach in tackling climate change has evolved over time. Ambitious carbon reduction targets have led to Government incentives for renewable energy schemes, resulting in a marked increase in planning applications for wind turbines and field-scale solar energy development. The Mid Devon Landscape Sensitivity Assessment considers the susceptibility of different parts of the landscape to change as a result of wind and solar energy development of different sizes, scales and groupings. While this assessment is a material consideration in decision-making, alongside evidence of biodiversity, noise, glare and other impacts, with the exception of several urban extensions (North West and East Cullompton) the current Local Plan does not identify other areas in the district that may be suitable for renewable and low carbon energy development.

4.10 There is an opportunity through the new Local Plan to look afresh at measures to increase the use and supply of renewable and low carbon energy and heat. This could include identifying suitable areas in Mid Devon for renewable and low carbon energy development such as solar and wind, hydro-electric and other potential sources and its supporting infrastructure, while ensuring that potential adverse impacts i.e. on landscape and amenity, are addressed satisfactorily. It can also include opportunities for other proposed developments to have their own decentralised renewable or low carbon energy supplies (e.g. district heating), and for co-locating potential heat customers and suppliers.


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## Question 6

**How do you think the new Local Plan should plan for renewable energy developments?**

- **Identify one or more broad areas in the district within which proposals for renewable energy could be supported e.g. for wind and solar? (Yes/No)**
- **Identify one or more specific suitable sites in the district for renewable energy e.g. for wind and solar or small-scale hydro? (Yes/No)**
- **Do not identify suitable locations but set out criteria for determining planning applications? (Yes/No)**
- **Require all strategic urban extensions and the Culm Garden Village to include decentralised renewable or low carbon energy supplies (subject to feasibility and viability)? (Yes/No)**
- **Restrict renewable energy development in Mid Devon? (Yes/No)**

**Other (please tell us what you think this should be)**

## Question 7

**Which renewable energy technologies should be prioritised in Mid Devon?**

- **Onshore wind (Yes/No)**
- **Solar Photovoltaic (PV) (Yes/No)**
- **Small scale hydro (Yes/No)**
- **Biomass energy (Yes/No)**
- **Energy from waste (Yes/No)**
- **Anaerobic Digestion (AD) (Yes/No)**
- **Heat networks (Yes/No)**
- **Solar thermal (Yes/No)**
- **Heat pumps (Yes/No)**
- **Other (Please state what this is)**

**Do you have any further comments?**

## Question 8

**Are there any other measures in relation to the development and use of land and buildings that you think the Local Plan should consider to help address climate change and help us move towards a low carbon future?**