

Monmouthshire Replacement Local Development Plan

**Tackling Climate Change
Candidate Site Advice Note**

June 2021



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Planning Policy Service

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1. Purpose of Note

- 1.1. The purpose of this note is it to provide guidance on the policy considerations to tackle climate change and reduce carbon emissions in relation to candidate site submissions. Tackling climate change is a key policy objective at both the national and local level and it is essential that the allocations that may follow in the Deposit Plan have direct regard to climate change and decarbonisation measures from the outset. This note aims to offer advance notice of policy requirements that are under consideration for inclusion in the Deposit Plan. It primarily relates to residential development but many of the principles can be applied to all forms of development being promoted through the candidate site process.

Please note that this paper sets out guidance and is not policy. The policy wording on the issues discussed will evolve as we progress towards the Deposit Plan.

- 1.2. We also offer the opportunity for site promoters to engage with the Council through the Planning Policy Candidate Sites Advice Service to determine site-specific issues. Please see the Council's website for details of this service: <https://www.monmouthshire.gov.uk/planning-policy/candidate-sites/>

2. Key Policy Context

- 2.1. It is widely recognised that the planning system plays a key role in tackling climate change and achieving a decarbonised and climate resilient society. Key legislation and policy driving this agenda are set out in Box 1:

Box 1: Key Policy Context

- **Environment (Wales) Act (2016)** – requirement to achieve an 80% reduction in carbon emissions by 2050. In June 2019, Welsh Government accepted the UK Committee on Climate Change recommendation to increase the decarbonisation target to 2050 from at least 80% decarbonisation to at least 95%.
- In January 2021, Welsh Government announced a commitment to achieve a **Net Zero Wales by 2050** following a recommendation report by the Climate Change Committee (CCC).
- **The Well-Being of Future Generation (Wales) Act (2015)** – sets an obligation to consider the longer-term impact of decision made with respect to all elements of sustainable development to ensure that the well-being of future generations is safeguarded.
- **PPW11 Energy Hierarchy** – requirement for new development to accord with the energy hierarchy through reducing energy demand, increasing energy efficiency and meeting remaining energy demands in a sustainable manner.

Box 1 continued: Key Policy Context

- **Monmouthshire County Council's Climate Emergency Declaration** (May 2019) In May 2019 Council voted unanimously to declare a Climate Emergency and passed the following motion:
 - That this council will ensure it will reduce its own carbon emissions to net zero before the Welsh Government target of 2030.
 - That this council will develop a strategy and associated costed action plans to aim to deliver these targets as soon as practicable.
 - That this council revise the Corporate plan, Well-being plan, Local development plans and other relevant plans and policies in support of above.
 - Publicise this declaration of a climate emergency to residents and businesses in the county and encourage, support and enable them to take their own actions to reduce their carbon emissions in line with a 2030 target.
 - Work with partners across the county and other councils and organisations to help develop and implement best practice methods in limiting global warming to less than 1.5 degrees Celsius.
- **Replacement Local Development Plan (RLDP) (2018 – 2033)** – Objective 17 – Climate Change sets an objective to strive to limit the increase in global temperatures to 1.5°C, supporting carbon reduction through a variety of measures including the use of renewable energy, the design and location of new development, encouraging balanced job and population growth to reduce out-commuting, the provision of broadband connectivity to reduce the need to travel, the provision of ultra-low emission vehicle charging infrastructure to reduce emissions and improve air quality, and the provision of quality Green Infrastructure.

3. Building Regulations Changes

- 3.1. As part of its commitment to reduce carbon emissions, Welsh Government published its proposed changes to Building Regulations in March 2021¹. In summary these changes seek to make new homes more energy efficient and to future-proof them for the introduction of low carbon heating systems. The key points of the anticipated changes are set out in Box 2.
- 3.2. Building Regulations are the legal minimum requirement that developments must currently meet. However, to achieve objective 17 of the RLDP will require higher standards. Planning Policy Wales edition 11 (PPW11) notes that in order to meet Welsh Government's policy to secure zero carbon buildings, strategic sites should be assessed to identify opportunities to require higher sustainable building standards, including zero carbon (5.8.2 & 5.8.4). Site promoters should be mindful of the Council's and Welsh Government's increased ambition in relation to zero carbon buildings as well as the aim in the new Building Regulations to future proof dwellings.
- 3.3. The reduction of energy demand in new developments can help achieve the goal of limiting carbon emissions while also reducing the cost of living via lower energy costs and help address fuel poverty. Carefully targeted interventions at this stage will often enable homeowners to

¹ <https://gov.wales/building-regulations-part-1-review-0>

recoup their investment in energy efficiency over time and enable developers to make their development more marketable.

Box 2: Changes to Building Regulations

Proposed Changes to Building Regulations

Welsh Government published its response to the consultation on the proposed changes to Building Regulation Part L (conservation of fuel and power) and Part F (ventilation) of the Building Regulations for new dwellings in March 2021. Key changes include:

- Spring 2022 - new homes will produce 37% less CO₂ emissions compared to 2014 Part L standards. This performance standard would be achieved through high fabric standards, a natural ventilation system, and additional measures to further reduce energy demand.
- 2023 – consultation on the full technical specification for the Future Homes Standard.
- 2025 – Part L 2025 Standards for new homes to come into force:
 - New homes built will produce at least 75% less CO₂ emissions compared to 2014 standards.
 - Performance standards will be set so that new homes will be built with low carbon heating (e.g. heat pumps and heat networks).
 - Aim for new homes to be future proofed so that no further energy efficiency retrofit work will be needed to enable them to become zero-carbon as the electricity grid continues to decarbonise.

4. Developing RLDP Policies and an Evidence Base – Strategic Site Assessments

- 4.1. Work is on-going in terms of developing an evidence base for the RLDP and policy preparation. PPW11 states that planning authorities should assess strategic sites to identify opportunities to require higher sustainable standards, including zero carbon, in their development plans (5.8.5). In accordance with the requirement for a robust evidence base, we have commissioned The Carbon Trust to assess renewable energy generation resources within the County and develop energy efficiency policy recommendations to feed into the preparation of the RLDP. Part of this evidence base will involve an assessment of the renewable energy potential for Strategic Development Sites for inclusion in the Deposit Plan. This will help establish site-specific energy efficiency measures and renewable energy power generation options for inclusion in Strategic Site policies. In the meantime, this note aims to highlight several key principles that should be considered from the outset to ensure carbon reduction targets are achieved.

5. Viability

- 5.1. Land being promoted for development as part of the candidate site process needs to ensure that climate change adaptation and resilience measures are incorporated within proposals. Site viability needs to take full account of climate change considerations. The Council is continuing to work on the policy framework of what measures will be sought from development proposals; however, this document seeks to outline what is currently being considered. Land promoters and developers need to ensure that they promote their sites with specific reference to how development will adapt, avoid and mitigate against climate change and meet carbon reduction targets. It needs to be clearly evidenced in the viability assessment that the measures proposed have been fully considered in relation to the deliverability of the site.
- 5.2. For the RLDP to be considered ‘sound’ at examination, it must meet its stated objectives. It is therefore essential that if sites are to be allocated they address this topic.

6. Tackling Climate Change & Decarbonisation Considerations

The Energy Hierarchy for Planning

- 6.1. The following section of the Candidate Site Advice Note aims to establish some core, high-level design and construction principles to ensure that developments are considering sustainability in a holistic manner. Welsh Government’s Energy Hierarchy for Planning² should, however, form an overarching policy focus for developments. PPW11 states that the Welsh Government expects all new development to mitigate the causes of climate change in accordance with the energy hierarchy for planning (5.7.13). In accordance with PPW11, all aspects of the energy hierarchy have their part to play, simultaneously, in helping meet decarbonisation and renewable energy targets and candidate sites will be expected to demonstrate compliance with the hierarchy.

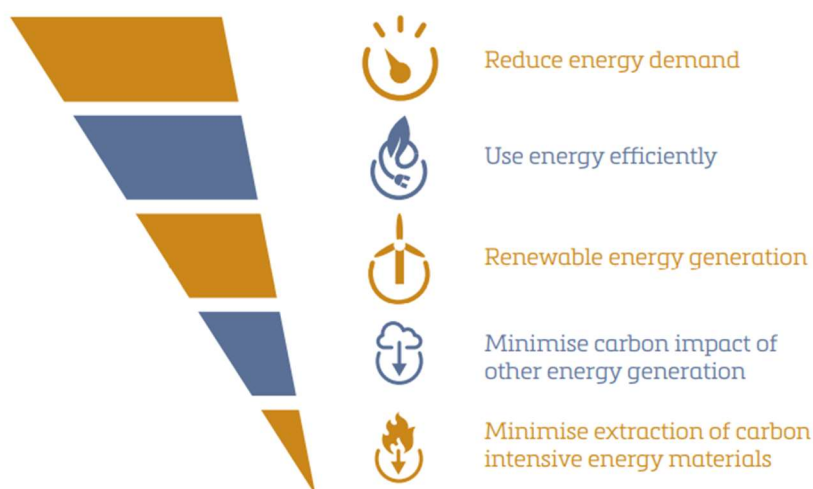


Figure 10 of PPW11 – The Energy Hierarchy for Planning

² Further details on Welsh Government’s Energy Hierarchy can be viewed via:
https://gov.wales/sites/default/files/publications/2021-02/planning-policy-wales-edition-11_0.pdf

6.2. Candidate site submissions should consider how the site can work towards net zero carbon aspirations and meet the requirements of the energy hierarchy. Four core categories are discussed below:

- Reducing Energy Demand
 - Site Layout and Design
 - Building Layout
 - Energy Efficient Building Fabric
 - In Home Energy Efficiency Measures
- Energy Generation and Storage
- Decarbonising Heating Systems – Low Carbon/Renewable and District Heat Networks
- Sustainable Transport and Electric Vehicle Charging Infrastructure

Reducing Energy Demand

6.3. Measures to reduce the energy demand of buildings can be divided into ‘passive’ and ‘active’ categories. ‘Passive’ measures reduce the energy demand of the development without themselves consuming energy and are therefore to be preferred. ‘Active’ measures involve efficiencies in energy consumption by building services, such as heating, ventilation and air conditioning, and should only be considered after the potential of passive measures to reduce energy demand has been fully exploited. Many of the measures discussed are regulated through Building Regulations, which are currently going through a series of consultation stages as noted in section 3. Site promoters should familiarise themselves with the proposals to uplift standards. It will also be necessary to consider the energy used by the occupier and the energy efficiency of the equipment such as lighting, heating and plug-in devices.

Site Layout and Design

The spatial layout and design of a site provides opportunities for reducing energy demand and increasing energy efficiency in several ways. Opportunities include:

- **Efficient use of land and co-location of uses** – sustainably located and mixed use development may result in fewer travel movements and contribute towards place-making objectives.
- **Avoid Flood Risk Areas** – in accordance with national policy new development must avoid flood risk areas and must not increase the risk of flooding on and off the development site.
- **Sustainable urban drainage schemes (SuDs)** – all new developments of more than one dwelling or with a construction area of 100m² or more will require SuDs. These must be designed and built in accordance with the Statutory SuDs Standards published by Welsh Government and SuDs schemes must be approved by SuDs Approving Bodies (SABs) before construction begins.
- **Digital Infrastructure** – Developments should be built to enable the integration of digital infrastructure from the outset. Broadband capacity will facilitate working from home/remotely and the use of smart appliances and heating systems that communicate with each other via wifi.
- **Green Infrastructure** – ensure that green infrastructure policies are fully embedded within the master planning of the site and are used to reduce the development’s carbon footprint and mitigate increasing temperatures and reducing flood risk. Development can enhance Monmouthshire’s green infrastructure network and ensure biodiversity

and ecological resilience. Comprehensive provision of green infrastructure has multiple benefits in terms of climate change adaptation and mitigation. Please see Monmouthshire's Green Infrastructure Supplementary Planning Guidance³ for further details.

- **Onsite woodland plantation** – this can play a role in climate adaptation and mitigation and reduce the impact of development. This would be in addition to placemaking and green infrastructure landscaping.
- **Food production opportunities** should be explored at the outset of the development.
- **Waste Reduction** – developers should adopt sustainable construction techniques and local supplies through applying the circular economy principle and waste management hierarchy⁴.

Building Layout

- **Solar gain** – orientation of buildings on a site or plot to maximise opportunities for passive solar gain.
- **Natural ventilation** – plot layout and building location should seek to facilitate air movement and enhance natural ventilation. The position, size and type of windows should allow for natural ventilation solutions, for example windows that can be left partially open at night without compromising security.
- **Overshadowing** – consider the orientation of buildings to reduce the level of uncontrolled shading from overshadowing buildings.
- **Green Infrastructure** – incorporate green infrastructure such that it supports energy demand reduction through summer shading or winter wind breaks. Green spaces also provide evaporative cooling at night, reducing any heat island effects.

Energy Efficient Building Fabric

- **Part L 2025 Standards as a minimum** – in line with Welsh Government's proposed Part L changes, new homes must produce at least 75% less CO₂ emissions compared to 2014 standards as a minimum for sites coming through the RLDP process, with a view to achieving net zero carbon emissions as the grid decarbonises. The RLDP runs to 2033 so **all** sites will be required to meet, as a minimum, the 2025 Part L standards regardless of their proposed delivery trajectory or when the site is registered for Building Regs purposes. The addition of the use of a combination of other measures such as those set out in this guidance note will be required to meet objective 17.
- **Thermal efficiency** – increased airtightness by avoiding unnecessary gaps or thermal bridges in new parts of the building fabric (thermal bridges are parts of the fabric which are significantly less effective at containing heat than the surrounding parts).
- **Mechanical ventilation and heat recovery systems** - Such measures should be combined with thermal efficiency measures to improve air quality, overheating and moisture levels.
- **Fabric Efficiency** – The selection of materials for the building envelope provides further opportunity to reduce energy demand. One way of doing this is to use thermal elements and fittings with lower u-values than required by the Building Regulations. Such

³ <https://www.monmouthshire.gov.uk/app/uploads/2015/07/GI-April-2015.pdf>

⁴ Circular economy principle – whereby the use of material resources in the building industry is influenced by making the most appropriate and sustainable use of finite resources. Such an approach sources materials as locally as possible, makes best use of the resources available through design and construction techniques, and minimises waste by re-using materials on site wherever possible.

measures aim to limit heat loss and reduce the demand for heat. Higher standard fabrics should be incorporated for the whole building including walls, floor, roof, doors, windows.

- **Thermal mass** – energy efficiency can be further improved by careful location of thermal mass. This is the ability of a material to absorb, store and release heat energy. At its most effective, thermal mass can absorb heat during the day and release it at night, thereby evening out temperature variations over the course of the day.

In Home Energy Efficiency Measures

- **Smart meters, appliances and controls** – the integration of such technology from the outset will act as enablers for smart control of heating, water and appliances and allow householders to use energy efficiently and flexibly.
- **Highly efficient lighting** – including daylight and motion detection systems to lighting in appropriate areas, for example communal areas, to ensure they are only operated when required.
- **Install energy efficient white goods and electrical appliances** – many new homes include appliances such as fridges, freezers and dishwashers.
- **Water efficiency savings** – to reduce demand, but also to have an impact on energy, carbon and bills. Measures include dual flush WC, low flow shower and taps, low water-use dishwasher and washing machine, and water butts. Proposals to capture and use grey water will be welcomed.
- **Waste management** – consideration should be given to sustainable waste management options for the people living in the homes once complete. Adequate facilities for storage, separation and collection should be included in schemes.

Renewable Energy Generation and Storage

- 6.4. All candidate site promoters should consider opportunities to increase the renewable and low carbon energy generation capacity of the site. This will be an important element to offsetting carbon emissions and achieving net zero homes. As noted above, the policy requirements of the RLDP are under consideration, however, they are likely to require developments to make savings in CO₂ emissions from energy use through on-site generation of renewable energy and maximise the opportunities for roof-mounted solar. Other energy generation opportunities should also be explored. Key considerations are set out below:

Renewable Energy Generation and Storage

- **CO₂ emissions reduction through on-site energy generation** – developments should make further CO₂ emission reductions through on-site generation of renewable energy.
- **Solar Power** – solar panels should be maximised on each home and on other appropriate buildings in a development. This will increase local renewable energy delivery, reduce the cost of living, and reduce the need for large, off-site renewable energy production.
- **Micro renewable energy technologies** – large-scale developments should consider opportunities for onsite communal/joint micro renewable energy technologies or connection into existing renewable energy schemes such as solar farms.
- **Grid Connection and Electricity Supply** - All schemes will need to check the potential for connection to the national grid, where electricity is to be produced at a householder or larger scale. Additional electricity demand for new ways of heating homes and charging

infrastructure should also be considered. Early discussions should take place with the local distribution network operator Western Power Distribution.

- **Battery Storage** – sufficient space to accommodate battery storage infrastructure should be incorporated into homes and buildings. This will facilitate the efficient use and demand management of the power generated.
- **Suitable for net-zero systems** – new homes should be suitable for a net-zero carbon energy system to avoid costly retrofits.

Decarbonising Heating Systems

- 6.5. Decarbonising how homes are heated is a key factor in achieving net-zero ready homes. In March 2021, Welsh Government in its response to the consultation on Building Regulations changes confirmed that from 2025 new homes are to have low carbon heating systems in place of gas boilers. Developments should incorporate this change. Key considerations include:

Decarbonising Heating Systems

- **Low Carbon Heating Systems** – all new homes should be built with low carbon heating systems in place of gas boilers in advance of the Part L 2025 date. The RLDP runs to 2033 so **all** sites will be required to meet, as a minimum, the 2025 Part L standards regardless of their proposed delivery trajectory or when the site is registered for Building Regs purposes. The addition of the use of a combination of other measures such as those set out in this guidance note will be required to meet objective 17.
- **Heat Pumps** – heat pumps are anticipated to become the primary heating technology for new homes. Options include air, ground and water source pumps and often require a small compressor unit located either within or outside the building.
- **Design in space requirements** – new homes and space standards should be designed with low carbon heating systems and the associated infrastructure requirements in mind. For example, be able to accommodate larger radiators needed for heat pumps and space for the unit itself.
- **District Heat Networks** – developers and site promoters should explore opportunities for district heating schemes, including sharing or sourcing heat resources with adjoining development.

Sustainable Transport & Electric Vehicle Charging Infrastructure

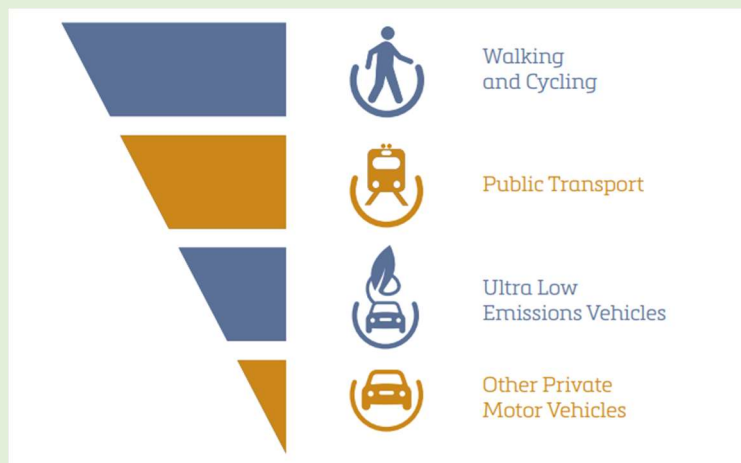
- 6.6. The decarbonisation of the transport sector, as one of the largest contributors to greenhouse gas emissions, has a significant part to play in achieving net zero developments. A policy aim is to increase the use of public transport in the County and encourage more cycling and walking and reduce the need to travel through the creation of the '20-minute neighbourhoods' principle. We recognise, however, that given Monmouthshire's rural character, electric vehicles will play an important part in the future of transport system of the County. In December 2020, Welsh Government published its Electric Vehicle Charging Strategy for Wales⁵. This establishes a commitment that by 2025, all users of electric cars and vehicles in Wales are confident that they can access electric vehicle charging infrastructure when and where they need it. The Council is commissioning its own EV Strategy for the County, including its own fleet and

⁵ <https://gov.wales/electric-vehicle-charging-strategy>

premises and on-street charging, but this will not be considering candidate RLDP sites. Key development considerations include:

Sustainable Transport & Electric Vehicle Charging Infrastructure

- **Sustainable Transport Hierarchy** – Developments must demonstrate that the principles of the sustainable transport hierarchy have been met by prioritising walking, cycling and public transport ahead of cars. This will be a key factor in the Council’s site selection process.



- **Active Travel Networks** – developments should promote Active Travel Networks and safeguard, enhance, and expand on existing routes identified in the Integrated Network Maps. The Council is currently consulting on the proposed INMs <https://mccactivetravelconsultation.commonplace.is/> which purposefully take into account the strategic growth options identified in the Preferred Strategy.
- **Electric Vehicle Charging for new homes** – an EV charging point must be installed on each home and in 10% of parking spaces for commercial uses. Welsh Government’s draft Electric Vehicle Charging Strategy sets out a commitment for new homes to have charging facilities, and this is expected to become a Building Regulations requirement.
- **Electric Vehicle Charging for wider use** – charging facilities should be incorporated into all aspects of a development including workplace charging, on-street charging, destination charging (e.g. cinemas, shops), on-route charging and transport hub charging.
- **Charging Infrastructure** – developments should include appropriate cabling ready for installation of additional electric vehicle charging infrastructure that may emerge. For example, more than 10% EV chargers in car parks for commercial uses.
- **Smart Charging** – charging infrastructure should use smart technology to take advantage of off-peak periods and grid restrictions.

7. Demonstrating Carbon Reductions

- 7.1. It is up to site promoters to demonstrate through Candidate Site Submissions that they have considered the issues raised in this paper and are providing an appropriate response to

demonstrating carbon reductions and tackling climate change. Detailed policy will be set out in the Deposit RLDP.

- 7.2. The Second Call for Candidate Sites runs alongside the Preferred Strategy consultation from **5th July to 31st August 2021**. Further details of the Second Call for Candidate Sites can be found on the Councils website in the following location:
<https://www.monmouthshire.gov.uk/planning-policy/candidate-sites/>
- 7.3. Candidate sites that progress to allocations will be expected to set out the decarbonisation measures incorporated into a scheme and how policy requirements are to be met. As sites progress through the Plan process further details may be required on this issue. This is likely to take the form of a Sustainability/Energy Masterplan Statement. The full details of this are not known at this stage but it is anticipated that it will be a document to accompany Deposit allocations, having regard to the findings of the Strategic Site Assessment to be undertaken by The Carbon Trust and Statements of Common Ground prepared in relation to site allocations. They are likely to address:
- What measures have been explored and which measures have been adopted and integrated into the design.
 - Details of CO₂ emissions reductions. This is likely to take the form of a calculation showing the CO₂ emissions savings achieved. Opportunities to use a carbon reduction calculator will be explored to simplify this process.
- 7.4. The use of planning conditions will be considered to ensure that measures set out in the Sustainability/Energy Masterplan are delivered on the ground.
- 7.5. Supplementary Planning Guidance will be prepared on this issue, expanding on many of the considerations highlighted in this note and the method for demonstrating policy compliance.