



Mansfield Local Plan Review

Net Zero Carbon support: Draft Policy P5 Review

10 August 2026
Final Draft

Introduction, overview & navigation



Contents

Introduction, overview and navigation 2

 Glossary of terms and acronyms 4

 Abstract: Introduction, purpose, overview & headlines 7

 Introduction 7

 Purpose of this document 8

 Coverage and topics of this document 8

Full report 9

 Draft Policy P5 as it currently stands 10

 Policy text and supporting/explanatory text to the policy 10

 Initial commentary on scope of existing draft policy & supporting text 10

 Comparing existing Draft Policy P5 against the NPPF and the relevant legislation on climate change 11

 Comments on existing Draft Policy P5 received at Regulation 18 Consultation in 2025 17

 Comparing existing Draft Policy P5 against best practice in the industry and in precedents 23

 Recapping relevant headline insights from our previous suite of reports 24

 Recap of key insights from Work Package 1 (Literature Review) 24

 Work Package 2 (Renewable Energy Capacity study) 25

 Recap key relevant insights from Work Package 3 (Energy standards / policy options risk matrix assessment) 25

 Work Package 5 (funding mechanisms) 25

 Resulting compiled tracked changes for suggested amendments to Draft Policy P5 and associated supporting text 26

References 34



Glossary of terms and acronyms

BREDEM	Buildings Research Establishment Domestic Energy Model. A methodology to estimate the energy use and fuel needs of a home based on its characteristics. BREDEM is the basis for SAP, but BREDEM retains more flexibility by allowing the user to tailor some assumptions made in the calculations to better reflect the project.
Carbon, or carbon emissions	Short for ‘carbon dioxide emissions’ but can also include several other gases with a climate-changing effect, that are emitted to the atmosphere from human activities (see ‘GHG’, below).
Carbon budget	Amount of greenhouse gas that can be emitted by an individual, organisation or geographic area. Usually set to reflect a ‘fair share’ of the global amount that can be emitted before reaching a level of atmospheric carbon that causes severely harmful climate change.
Carbon intensity/ carbon factors	A measure of how much carbon was emitted to produce and distribute each kWh of grid energy at a certain point in time. For electricity, this has been falling as coal-fired power stations have been phased out over years. It also varies on an hourly basis: at times of high renewable energy generation, the carbon intensity is lower than at points where gas-fired electricity dominates the generation mix.
CIBSE	Chartered Institution of Building Services Engineers.
CIL	Community Infrastructure Levy. A charge that the local authority can levy on developers to provide necessary infrastructure.
Climate change adaptation	Adaptation to climate change – acting to make human or natural systems better prepared to continue functioning throughout the impacts of the climate change that is occurring, such as preparedness for heatwaves, droughts or heavier peak rainfall.
Climate change mitigation	Mitigation of climate change means acting to reduce the degree of impact that human activity has in changing the climate. This means reducing the total amount of greenhouse gas that is emitted or increasing the amount of that is sequestered.

CO ₂	Carbon dioxide. Often shortened to ‘carbon’.
CO ₂ e	Carbon dioxide equivalent. The sum of a mixture of gases, in terms of their climate-changing impact in a 100-year period expressed as the amount of CO ₂ that would have the same effect. Often shortened to ‘carbon’.
Embodied carbon	Carbon that was emitted during the production, transport and assembly of a building, infrastructure, vehicle or other product before the product is in use, and also emissions from maintenance/refurbishment across its use period and end of life demolition/disposal. As opposed to ‘operational carbon’ which is emitted due to energy use when operating the building / infrastructure / vehicle / other product.
EUI	Energy Use Intensity, a measure of how much energy a building uses per square metre of floor space. Expressed in kilowatt-hours per square metre of floor space per year.
FHS / FBS	Future Homes Standard / Future Buildings Standard. These are updated versions of Part L of Building Regulations, expected to be implemented from 2025.
GHG	Greenhouse gas (CO ₂ and several other gases: methane, nitrogen dioxide, and fluorinated refrigerant gases). Often collectively referred to as ‘carbon’; see above.
ICROA	International Carbon Reduction and Offset Alliance.
ICVCM	Integrity Council for Voluntary Carbon Markets.
IPCC	Intergovernmental Panel on Climate Change. An international entity set up via the United Nations, of which the UK is one of the 195 member states. The IPCC’s role is to assess the consensus within the global scientific studies on climate change, including the extent and effects of climate change and future predictions about how much climate change will occur depending on how much greenhouse gas is emitted.
LETI	Low Energy Transformation Initiative. A coalition of built environment professionals working to establish and achieve the energy performance needed for net zero.
LPA	Local Planning Authority.



m ²	Square metre. In this context, m ² refers to building floor space in most cases, but sometimes refers to building footprint area.
MDC / Mansfield DC	Mansfield District Council
MVHR	Mechanical Ventilation with Heat Recovery
NPPF	National Planning Policy Framework. A central government document laying out how the planning system should function, including plan-making and decisions.
Operational carbon	Greenhouse gas emissions that occur due to operation of the building / infrastructure / vehicle / other product. Primarily associated with energy use.
Part L	Building regulations section that sets basic legal requirements regarding buildings' energy and CO ₂ emissions, for a certain scope of buildings' energy use.
Performance gap	The difference between the amount of energy a building is predicted to use during design, versus the actual amount of energy it uses. The gap is due to poor prediction methodologies, errors in construction, and unexpected building user behaviour.
PV	Photovoltaics: solar panels that generate electricity.
PHPP	Passivhaus Planning Package: A tool to accurately predict a building's energy use. It is used to design buildings that seek Passivhaus certification, but can equally be used to improve any building design process even without pursuing certification.
Regulated energy or carbon	Carbon emissions associated with energy uses that are 'regulated' by Building Regulations Part L. This covers permanent energy uses in the building, (space heating, space cooling hot water, fixed lighting, ventilation, fans, and pumps).
RIBA	Royal Institute of British Architects.
SAP	Standard Assessment Procedure – the national calculation method for residential buildings' energy and carbon, used to satisfy building regulations Part L. SAP is based on the

	BREDEM model, but with fixed assumptions and thus less flexibility.
SAP Appendix L	An appendix to the SAP (explained above) which estimates unregulated energy use, whereas the main body of SAP estimates only regulated energy use. Appendix L was created when it was anticipated that national regulations would require fully zero carbon homes from 2016, which in fact never was enacted. As Appendix L has not since been updated, it overestimates unregulated energy demand because it was based on older data about the energy efficiency of household appliances.
SBEM	Simplified Buildings Energy Model – the national calculation method for non-residential buildings' energy and carbon, used to satisfy building regulations Part L.
Section 106	A section of the Town & Country Planning Act 1990. Section 106 of that Act enables the Local Planning Authority to require contributions from developers towards projects that are necessary to mitigate the impact of that development. In 'net zero carbon' policy this has often been used to raise carbon offset funds where a new development is technically unable to reach net zero on site.
Sequestration	Removal and storage of greenhouse gases from the atmosphere, to prevent their harmful climate-changing role. Currently only achieved at scale by trees/plants/soil.
SHD or Space heat demand	A measure of the amount of energy needed to heat a building to a comfortable temperature, as a result of the building's design and occupancy. Expressed in in kilowatt-hours per square metre of floor space per year.
TER	Target Emission Rate – a limit set by Part L of building regulations on CO ₂ emissions per square metre of floor space, from regulated energy use in the building.
TPER	Target Primary Energy Rate – limit set by Part L of building regulations on 'primary energy' use per square metre of floor space. Unlike metered energy, 'primary energy' takes into account energy lost to inefficiencies during power generation and distribution.



TFEE	Target Fabric Energy Efficiency – limit on space heat energy demand per square metre of floor space, set by Part L of building regulations. Based only on fabric; not affected by building services like heating system, lighting, ventilation ⁱ .
TM54,	A method to accurately calculate buildings’ energy use. Devised by CIBSE (as above).
UKNZCBS	UK Net Zero Carbon Buildings Standard. A voluntary standard devised by a coalition of all the major standard-setting organisations in the UK buildings industry. It sets targets for operational energy use, space heat demand, renewable energy, and embodied carbon, among other topics. Its targets are differentiated for new build, existing building retrofit, building type, and year. Its name reflects that it would make buildings’ energy performance compatible with the UK’s carbon reduction trajectory to net zero 2050, but please note that it does not necessarily make a building net zero carbon in itself simply by meeting the targets that are set within the standard.
Unregulated energy or carbon	Carbon associated with energy use in a building or development but which is not covered by Building Regulations Part L. Includes plug-in appliances, lifts, escalators, external lighting, and any other use not covered by Part L.

Up-front embodied carbon	(First, see ‘embodied carbon’) All of the embodied carbon emissions that occur up to the point of completion of a building, piece of infrastructure, or other product.
Whole-life carbon	The total greenhouse gas emissions that are caused by the creation of a new building (from material extraction to completion of the building), the entire period of its existence (including energy use, water use, and maintenance/refurbishment) and its eventual demolition. ‘Whole-life embodied carbon’ refers to all of the above excluding the emissions associated with operational energy use and water use.
WMS (for example, WMS2023)	Written Ministerial Statement. A statement of national policy made by a minister in writing. These can be part of the body of national policy with which Local Plan-making is expected to be broadly consistent. Where a number is attached, e.g. “WMS2023”, this relates to the year in which a particular WMS was made.



Abstract: Introduction, purpose, overview & headlines

Introduction

1. Bioregional (in partnership with the Centre for Sustainable Energy, CSE) is appointed to provide Mansfield District Council (MDC / Mansfield DC) with an assessment of options available within the Local Planning system to address climate change in Mansfield.
2. Local Planning Authorities (LPA) have a legal duty to mitigate climate change (deliver carbon reductions) via the planning process, and national planning policy confirms these reductions should be in line with the Climate Change Act. The Climate Change Act includes both the 2050 goal for a net zero carbon UK, and steeply falling five-yearly carbon budgets until then.
3. Our current appointment to support Mansfield DC in this effort comprises the following:
 - **Work Package 1: Literature Review & position statement, covering:**
 - Exploring definitions of ‘net zero carbon’ at different scales
 - Exploring planning duties, and powers, to act towards achieving net zero carbon
 - Exploring how those powers have been used in precedents from other Local Plans, and the success of these at examination (and in practice, where known)
 - Recommended ‘Net Zero position statement’ on the role that this Local Plan Review could most effectively take in achieving net zero.
 - **Work Package 2: Renewable energy capacity**
 - Led by CSE, this work conducted a renewable energy capacity analysis, updating the Low Carbon Energy Opportunities and Heat Mapping for Local Planning Areas Across the East Midlands.
 - This involved a desk-based assessment of three issues: existing decentralised renewable energy; technical potential of renewable energy; and heat demand at building level.
 - Outputs from the three assessments will inform the Local Plan Review as the information will be used to analyse the relevance and propriety of Policy CC1 criteria.
 - **Work Package 3: Energy standards-**
 - In light of the insights established in the literature review, this output presented an assessment of policy options for the District Council to consider regarding the improvement of energy and carbon performance in buildings.
 - It included a Policy Risk Matrix, which:
 - Identified a range of potential policy options derived from the powers, precedents and definitions of ‘net zero’ buildings from Work Package 1
 - Evaluated the relative merits of each of those potential policy options, in terms of differing risks in different criteria including climate mitigation effectiveness, consistency with relevant national policy, and various other important issues.
 - Following that evaluation of the relative merits of different potential policy options, Mansfield District Council would then make a decision of which policy option to pursue (if any) for the subsequent Work Package 4.
 - **Work Package 4: Sustainable Design Principles (the current report)**
 - This will be shaped by the outcomes of Work Package 3 where the decision on the policy options from the policy matrix will determine the approach to the review of Policy P5.
 - Policy P5 Review as designed in our current appointment includes:
 - Assessing the wording and scope of the policy
 - Benchmarking standards against national and regional best practice
 - An assessment of proposed design measures for different developments, typologies, and scale.
 - **Work Package 5: Funding**
 - The Work Package 5 report is designed to provide guidance on relevant and available funding streams and best practices to support climate change mitigation and adaptation initiatives within the district. This involved desk-based research and the development of a final report.
4. This report comprises **Work Package 4**.



Purpose of this document

8. This report’s purpose is to review Mansfield District Council’s draft Local Plan Review policy P5 (and its associated supporting text) to identify any possible updates that could be made to strengthen or clarify the policy.
9. However, following consideration of the insights from the prior work packages, Mansfield District Council concluded that the policy review should not add any concrete requirements for development to meet particular quantified standards at this stage. Although MDC recognises the importance of securing higher standards of environmental performance, it also seeks to remain aligned with emerging national policy and provide an appropriate and proportionate basis for addressing these matters through the Local Plan Review. In particular, the Council anticipated that the emerging new NPPF (consultation version 2025) national development management policies would present a barrier to the implementation of policies that seek specific improvements to standards on energy/carbon¹. The Council also anticipated that there could potentially be viability implications of introducing additional quantified requirements, particularly given the associated costs for development within the district.

Therefore, the intent in this exercise is to compare the scope and general topics of the policy against national climate mitigation and adaptation priorities and best practice in general design approaches other than specific standards. The function is to identify tweaks that could be made to the policy to nudge developers in the right direction and

to aid development management officers identify what would constitute as ‘best practice’ or ‘improvement’ compared to basic legal compliance.

Coverage and topics of this document

14. To aid Mansfield DC’s decision-making on potential refinements to draft policy P5, this report:
 - Recaps the content of the draft Policy P5 and key elements of its supporting text
 - Recaps the climate mitigation and adaptation instructions in the relevant legislation and the NPPF
 - Compares the policy scope against the scope of necessary climate mitigation and adaptation priorities for the fulfilment of the Climate Change Act, as put forward by the Climate Change Committee which is the independent watchdog that advises on the fulfilment of that Act
 - Reviews the commentary on this topic from the 2025 Regulation 18 consultation and considers whether any of these comments reveal a need to update the policy, and then
 - Recaps the findings of the relevant previous reports (Literature Review and Policy Risk Matrix).
15. It then concludes in a suggested tracked-changes version of Policy P5 and its supporting text.

¹ This Local Plan Review is anticipated to be submitted before the cutoff date for the existing plan-making system and therefore would be examined against the current NPPF (2024) version. However, the emerging new NPPF that was consulted upon in 2025/2026 contained not only *plan-making* policies but also *decision-making* policies (DM policies), including DM7 which states that decisions should not “extend or duplicate” controls imposed by Building Regulations. The draft new NPPF also contains an annex stating that where a local plan’s policies conflict with any of the new national DM policies, the local policy would

hold little weight unless it had been examined against the *new* NPPF. Although the new NPPF’s final content has not yet been published, and although the draft new NPPF’s stance creates a conundrum by attempting to give more weight to non-statutory national DM policies than the local plan itself which has statutory status, it was felt that there would be too much risk involved in pursuing a Local Plan Review policy that could come into conflict with that emerging new NPPF DM policy.

Full report



Draft Policy P5 as it currently stands

Policy text and supporting/explanatory text to the policy

16. We here focus on the text of emerging [Policy P5 as it was presented in MDC's Regulation 18 consultation in 2025](#). This was as follows:

“Policy P5 Climate change and new development

1. Development proposals will be supported where it can be satisfactorily demonstrated that it incorporates high standards of design and construction to reduce, mitigate and adapt to the impacts of climate change by incorporating the following measures, where practical and viable, having regard to the type, location and size of the proposal:
 - a. sustainable design and layout that maximises energy efficiency;
 - b. green / blue infrastructure, biodiversity and landscaping;
 - c. sustainable drainage and water management measures;
 - d. appropriate flexibility to allow for future adaptation;
 - e. sustainable waste management facilities;
 - f. renewable and/or low carbon energy technologies or scope for their future provision; and
 - g. sustainable transport and travel facilities.”
17. The supporting [“explanation” text to draft Policy P5](#) outlines the rationale for the policy, and gives further detail that could be interpreted to clarify the policy requirements themselves. Specifically, this includes:
 - Clarification that the Council will “expect applicants to consider, at the outset of the development process, what measures could be incorporated ... to reduce, mitigate and/or adapt to climate change” and that this should be laid out in “design and access statements or planning or sustainability statements” where those statements are required by separate Policy P1.
 - Acknowledgement that there are likely to be fewer opportunities to incorporate such measures in smaller developments or heritage settings
 - Acknowledgement that the Council may need to prepare further guidance on how to design for climate change mitigation, but meanwhile [table 4.5 in the draft plan outlines suggested potential features](#) that development proposals could utilise to achieve Policy P5’s desired outcomes. These included:
 - **Energy:** Passive solar design; green/brown roofs to regulate temperature and mitigate water quality; renewable/low-carbon generation technology. (However, we note that the table does not mention fabric thermal efficiency. Also, EV charging is named as a low carbon technology whereas it is more appropriately also found in the ‘transport & travel’ row.)

- **Water efficiency:** Rainwater harvesting and a suggested limit of 110L/P/D (which we note reflects the Building Regulations Part G optional enhanced efficiency standard, although this is not named directly in the draft plan text. Local plans can seek this where justified e.g. in areas of severe water stress – such as most of the Severn Trent supply areaⁱⁱ and where viable).
 - **Urban cooling:** Green infrastructure and landscaping, noting preference for trees, hedges and woodland rather than amenity grassland, and a resilient species mix. (However, we note that the table omits another potential urban cooling feature: light-coloured materials on buildings and paving, which convert less sunlight to heat unlike dark-coloured materials).
 - **Drainage:** Sustainable Drainage Systems (SUDS), with the examples of permeable surfaces and planting being mentioned.
 - **Waste:** Specifically composting bins and recycling bin storage.
 - **Transport and travel:** Specifically, encouraging the provision of EV charging points and noting the impact of conventional combustion engines on air pollution and health. (However, this does not highlight Part S of Building Regulations which mandates certain amounts of EV charging; see our response to Regulation 18 consultation input [later in this report](#)).
 - **Materials:** Expressing a preference for locally sourced and recycled materials, and materials that are resilient to changing/extreme weather. (However, embodied carbon is not specifically mentioned).
- Noting that the Council is in the process of updating its Strategic Flood Risk Assessment and that a Local Area Energy Plan is being produced by consultants as part of a wider programme within the EMCCA area.

Initial commentary on scope of existing draft policy & supporting text

18. It is clear that the policy itself does not set any specific standards that developments must meet. This means it cannot be guaranteed that the policy will drive forward any improvements beyond what developers would already do for their own purposes or for compliance with national minimum legal requirements of Building Regulations.
19. However, following consideration of policy options, MDC decided that the policy should not add any concrete requirements for development to meet particular quantified standards at this stage. Although MDC recognises the importance of securing higher standards of environmental performance, it also seeks to remain aligned with emerging national policy (in particular, wanting to avoid setting any local policy whose implementation could be made impractical by the emerging new NPPFⁱⁱⁱ policy DM7. The Council also anticipated that there could potentially be viability implications of introducing additional quantified requirements, particularly given the associated costs for development within the district.



Comparing existing Draft Policy P5 against the NPPF and the relevant legislation on climate change

20. The Planning & Compulsory Purchase Act 2004 section 19 establishes that the Local Plan is legally obliged to include policies that contribute to climate change mitigation and adaptation, but does not say how far or to what standard.
21. The National Planning Policy Framework (NPPF) 2024 stipulates that the Local Plan's climate change mitigation should be "proactive" and "in line with the objectives and provisions of the Climate Change Act". That Act sets legally binding carbon reduction goals of two types: The national net zero goal in 2050, and the five-yearly carbon budgets between 2008 and 2050 (limits on the amount of emissions that the UK is legally allowed to emit in each five-year period). The Climate Change Act also establishes the Climate Change Committee, an independent body that devises the carbon budgets before Parliament signs them into law, and also advises on the most credible ways that those carbon budgets can be met and reports on progress toward them.
22. It is therefore relevant to consider whether Mansfield's proposed Policy P5 covers the range of issues that will need to be addressed in order for the UK's carbon budgets to be achieved. The Climate Change Committee (CCC) divides the UK's carbon emissions into the following sectors:
- **Surface transport** – as opposed to air transport. Surface transport is clearly relevant to the Local Plan Review's sphere of influence, via the choice of *where* to permit development, and what standards to seek in development that includes transport infrastructure or impacts travel behaviours (which may include contributions towards transport infrastructure).
 - **Residential buildings** – This is clearly highly relevant to the Local Plan Review, as residential development typically forms the majority of planning applications. The Committee has in the last few years identified that new homes built from 2025 onwards should have very low space heat demand of 15-20kWh/m²/year (which would need standards of insulation and airtightness beyond those set by current Building Regulations Part L or the incoming Future Homes Standard) and should have low-carbon heating (not gas) and ideally be net zero carbon.
 - **Non-residential buildings** – Similarly highly relevant to the Local Plan Review, as any building would form part of what the Local Plan will grant or refuse.
 - **Electricity supply** – This is relevant to the Local Plan Review in that the Local Plan can define whether planning decisions should either grant or deny applications to develop large-scale renewable electricity generation facilities, and is also empowered to set "reasonable" requirements that "a proportion of energy used in development in their area" to be from renewable sources (Planning & Energy Act 2008). In practice this means that Local Plans can require new buildings to include a certain amount of renewable energy generation capacity on the site itself.
 - **Waste** – This is somewhat relevant to the Local Plan in that the Local Plan can have a role in enabling the development of modern waste management facilities that can reduce carbon emissions (such as through effective recycling of a larger portion of waste, and separate treatment of biodegradable waste which may enable reduced methane emissions). The Local Plan can also influence design standards in new development to make it more likely that occupants of new buildings will accurately separate their waste which is a key step in enabling lower-carbon treatment of waste in the waste management system as described above. Design to encourage/enable better waste practices by occupants would mean ensuring there is enough space to separate and store the waste at homes or workplaces, and then ensuring that layouts enable easy transport of waste to the collection point.
 - **Industry** – The new development sector is somewhat linked to the industry sector in terms of the use of a large amount of construction materials which often have high embodied carbon due to their raw material extraction and manufacturing. The Local Plan Review's influence over this would be to encourage, or require, the selection of low embodied carbon materials or the use of designs that avoid unnecessary use of materials. This could be done in a qualitative manner, but some local plans are also now pursuing this more strongly by setting requirements for the reporting of embodied carbon or in some cases even bringing in quantitative limits on embodied carbon that new developments must not exceed.
 - **Agriculture & land use** – Not strongly relevant to the influence of a local plan.
 - **Fuel supply** – Not strongly relevant to the influence of a local plan. However, any local plan policy that encourages the development of renewable energy (whether standalone or as part of new buildings) will help contribute towards the changes that need to happen in the fuel supply sector as part of the UK's legislated carbon reduction trajectory.
 - **F-gases** – This relates to the leakage of refrigerant gases that are used in technologies such as refrigeration, air conditioning, heat pumps, and some medical devices. Not relevant to the Local Plan Review without the introduction of quantified targets, which it has been established that MDC does not wish to do (and in any case we are not aware of any precedents of this).
 - **Shipping & aviation** – Not relevant to the sphere of influence of a local plan.



- **Engineered removals** – this refers to technology for the purpose of directly removing greenhouse gases from the atmosphere. This technology does not yet exist at scale, but is anticipated to be most likely to be developed for use at sources such as cement kilns, incinerators or other large industrial fuel-using facilities. Not relevant to the sphere of influence of a local plan, except in the event that proposals come forward in Mansfield for research and development facilities to develop carbon capture technologies.

23. While climate change mitigation (reduction of greenhouse gas emissions) has been considered above, the other strand of climate action in the Climate Change Act is adaptation (preparing to better cope with the impacts of climate change, such as increases in the frequency of heavy rain, drought, peak summer temperatures and wind, and the knock-on effects that can flow from these). Therefore, we next look at the Committee on Climate Change’s most recent assessment of climate change adaptation priorities^{iv}, which include the following topics:

- **Protecting from heat, especially in homes, care homes and hospitals** – including that “New buildings should be designed to keep people cool from the outset”, noting that “Low-cost passive cooling measures, such as natural shading, may be sufficient interventions in some parts of the country” and yet “Active cooling measures, alongside low-cost passive measures, are more likely to be needed for retrofitting [of] existing homes” to avoid overheating risks.
 - i. New buildings are clearly within the Local Plan Review’s sphere of influence. However, Building Regulations Part O (2021) addresses overheating risk in new homes, and a 2021 Written Ministerial Statement states that there is “no need for policies in development plans to duplicate this”. There are two routes to compliance with Part O – a simplified method in most cases, or a more in-depth method that is based on the Chartered Institution of Building Services Engineers (CIBSE) “TM59” methodology which has been the industry’s best practice standard for residential overheating mitigation for several years. Some recent local plans elsewhere have successfully adopted a requirement to follow CIBSE TM59 or the more in-depth route to Part O compliance, on the basis that this does not represent “duplication” of Part O but rather specifying the preferred route. Further policy options could be to encourage the use of future weather files instead of historical weather files in that assessment, and/or to specify that *non-residential* new buildings for vulnerable persons (e.g. care homes or hospitals) should follow CIBSE TM52, which is the corresponding method for *non-residential buildings* (as Part O does not address non-residential).
 - ii. The CCC’s recommendations also include “the creation of public cool spaces (as seen in other European countries)”. The Local Plan Review could help to delivery this by encouraging tree planting, the use of light-coloured materials (which reflect sunlight instead of converting it to heat), and blue infrastructure, in developments that include a public space element.
- **Managing flood risk** – noting that by 2050, even in the most optimistic climate change scenario, the number of UK properties at risk of flood could increase by 40% from today’s figure.
 - i. This is clearly highly relevant to the Local Plan Review, in terms of determining where to let development take place (avoiding existing and future flood risk zones) and potentially seeking to ensure that development proposals demonstrate resilience to higher flood levels than today’s typical level.
 - ii. CCC’s priorities include to “Ensure new buildings are not increasing the risks of climate change impacts. Planning policy must be sufficiently robust to ensure new builds are fit for the future climate over their lifetimes (2°C global warming level by 2050 and considering 4°C by 2100) and don’t increase risks, either locally or for others. New developments should not be built in undefended areas at risk of existing and future flooding ... Climate resilience needs to be a core part of planning frameworks, reflective of the latest evidence. Compliance needs to be enforced.” It recommends permeable paving, green space, and property-level items: “one-way valves on wastewater pipes, flood doors [and] barriers”.
- **Avoiding water shortages** – recommending making the UK’s water supply resilient to a 1-in-500-year drought by 2040. A key recommendation is to “New homes should be built to use water efficiently ... Water intensive infrastructure, such as data centres, should be sited and constructed without adding to regional drought risk, and with minimum standards to avoid the lock-in of less efficient technologies”. This is clearly relevant, as the Local Plan Review can require the Building Regulations optional target of 110L/person/day where needed and viable.
- **Supporting nature to adapt [to the changing climate]** – this has low relevance to the Local Plan Review given that it is principally about land management practices. However, anything the Local Plan Review can do to preserve and encourage more connectivity and diversity of habitats could assist this aim.
- **Keep farming viable** – Little to no relevance to the Local Plan Review as it relates mainly to creation of favourable economic and regulatory conditions and assisting farming practices to adapt to climate change impacts. The Local Plan Review cannot affect farming practices nor national subsidy regimes. Similarly, the topic of **Understanding the risks to food security** also has little to no relevance to the Local Plan Review as the CCC’s descriptions in this topic focus on international food supply chains.
- **Maintain access to insurance** – furthermore not relevant to the Local Plan Review other than via the aforementioned point about avoiding development in areas of current or future flood risk.



- **Adapting infrastructure to avoid cascading disruption:** Climate impacts in one type of infrastructure (e.g. electricity outages or data centre outages due to overheating) may trigger knock-on effects in other systems (e.g. payment systems; transport; public services). CCC advice on this topic relates largely to national government-led regulation (to set climate resilience standards and coordinate between infrastructure providers), rather than local planning policy. Relatedly, a 2025 national infrastructure strategy^v confirms that government will “map existing resilience standards across all 14 critical infrastructure sectors ... by the end of 2026” and put them in place by 2030 after updating them where necessary, noting that any climate resilience standards should be “in line with agreed climate scenarios [as identified in] Climate Change Risk Assessments (CCRA) ... [e.g.] CCRA3 was based on a minimum of 2°C warming, while assessing for 4°C”. The role it mentions for local plans is to identify the amount and location of growth in homes and social infrastructure, so that this can inform the infrastructure planning being undertaken by larger-scale bodies such as the new NESO (National Energy Systems Operator).

24. In light of the above priorities for climate change mitigation and adaptation, the content of Mansfield’s draft policy P5 (with its supporting text) does appear generally appropriate, i.e.:

- Climate change mitigation (reduction of emissions):
 - **Policy point a** (energy efficiency) and **point f** (renewable and/or low-carbon energy technologies). These are vital in that our previous report, drawing on nationally published data² on local emissions profiles, found that **homes are the largest-emitting sector in Mansfield today, emitting 37.5% of total emissions**. These figures also noted that the commercial sector is responsible for 9.2% of Mansfield’s emissions, of which the majority is from commercial buildings.
 - **Policy point g** (sustainable transport/travel). This is also vital as the aforementioned local emissions dataset found that **transport is the second largest-emitting sector in Mansfield (31.2% of Mansfield’s emissions)** and transport is also the largest-emitting sector in the UK (30% of national emissions).
 - **Policy point e** (sustainable waste management facilities) – although the climate mitigation effect of this is necessary, it will be smaller than that of points a, f and g, as the aforementioned local emissions dataset shows that the **waste sector is responsible for only ~3.8% of Mansfield’s emissions** and similarly around 5% at the national level.
- Climate change adaptation:
 - **Policy point b** (green/blue infrastructure and biodiversity). Where developments thoroughly pursue the incorporation of this, it has potential to contribute to the CCC’s climate adaptation priority items of managing flood risk, supporting nature to adapt to the changing climate, and possibly also protecting from heat.
 - **Policy point c** (sustainable drainage / water management, which overlaps with policy point b). Where developments thoroughly incorporate this, it would contribute to the CCC’s climate adaptation priority items of managing flood risk. Where developments also implement the supporting text’s suggested water efficiency target of 110 litres per person per day, this would also support the CCC’s climate adaptation priority of avoiding water shortages (compared to if new developments had a higher water usage than this, although not compared to if development did not take place at all).
- Additionally, **policy point d** (flexibility for future adaptation) is relevant to both climate change mitigation and adaptation. This is because not only could this include enabling future climate adaptation, but could also help keep the buildings in use for longer instead of being knocked down and replaced in future. Because a significant amount of embodied carbon is associated with the construction of a new building, any future demolition and rebuilding that can be avoided means avoiding future embodied carbon emissions.

25. **However - points within the UK’s climate mitigation and adaptation trajectory that Mansfield’s draft Policy P5 does not yet reflect include:**

- Climate mitigation:
 - **Fabric thermal performance as a key part of energy efficiency** – this could be added to the existing plan’s supporting text Table 4.5 content on energy efficiency, either in isolation or by introducing a reference to the **energy hierarchy** which is a well-established design approach used in many other precedent local plans both historical and recent.
 - **Embodied carbon** – If the policy were amended to address this topic, this could help to influence emissions reductions in the industry/manufacturing sector as it relates to the development sector. As the industrial sector is responsible for 10.7% of Mansfield’s emissions (as per DESNZ local emissions data cited in the previous Literature Review report), this is a sufficiently significant source of emissions to warrant local policy to address it.

² As cited in our previous Literature Review report, the source of this data is the HM Government Department of Energy Security & Net Zero annual dataset on local authority and regional greenhouse gas emissions statistics, available at: <https://www.gov.uk/government/collections/uk-local-authority-and-regional-greenhouse-gas-emissions-statistics>. At the time of writing, the latest available data release was in August 2025, which covered up to year 2023.



- **Acknowledgement of what Building Regulations Part S (2021) already requires on electric vehicle charging** – and the situations or ways in which developments could usefully go beyond the Part S standards in order to better support the UK’s necessary shift to electric vehicles. We note that it is not the role of the Local Plan Review to implement or repeat Building Regulations. Following consideration, the Council has also decided not to introduce additional quantified targets within the policy at this stage, taking account of the direction of the emerging NPPF and the potential implications for development viability within the District, given the potential costs associated with meeting standards that exceed national regulatory requirements. However, currently the draft policy’s supporting text frames EV charging as an optional recommended feature, whereas in fact Building Regulations now makes it a legal requirement in most developments that have car parking (see our response to a Regulation 18 consultation comment on this topic, [later in this report](#)). The policy and/or its supporting text could therefore be amended to acknowledge what is the basic standard in Part S, so that developers and DM officers can identify whether a development’s proposed EV charging provision would represent an *improvement* as opposed to basic compliance that would be delivered regardless of the plan.
- **Encouragement of provision for specific sustainable transport options other than EV charging** – such as cycle parking. However, cycle storage is mentioned in Table 4.5 which sits alongside Policy P5, and is also encouraged in a separate Local Plan policy IN10. A cross-reference to that could be inserted to sit within Table 4.5 for consistency.
- Climate adaptation:
 - **Adding explicit reference to the Building Regulations Part G optional standard of water efficiency**, as the basis for the existing draft supporting text’s cited figure of 110L/P/D.
 - **Consider referencing some optional guideline non-residential water efficiency targets**, for consistency with the residential one – for example those set by the RIBA Climate Challenge^{vi} for schools and offices, or for more water-hungry uses like data centres the ‘best practice’ could be defined by voluntary industry standards, so long as there is evidence and consensus for this.
 - **Encourage, or recognise the benefits of, specific standards for overheating risk mitigation**: CIBSE TM52 (non-residential, especially in ‘more vulnerable’ uses), CIBSE TM59 (residential), and more specific additional features that are not counted towards these standards but can contribute to mitigating overheating risk (such as shading from trees).
 - **Encouraging the use of future weather files reflecting a 2°C global warming scenario** in the assessment of overheating risk and flood risk.
- Overarching:
 - **Specific baselines against which ‘improvements’ could be identified** – this relates to several of the topics mentioned in the policy or its supporting text, such as energy efficiency, renewable energy provision, EV charging, overheating risk, or drainage rates. Given the Council’s decision, following consideration, not to introduce mandatory quantified targets or standards within the policy at this stage, any relevant baselines or benchmarks could instead be included in the supporting text as non-mandatory guidance or reference points. Development management officers could use these benchmarks as a baseline from which to identify whether any given application is proposing to make any improvement beyond what would be the necessary minimum standard for legal compliance with Building Regulations. This would allow the Council to inform the design and assessment of development proposals without being expressed as policy requirements, while remaining consistent with the direction of the emerging NPPF and the Council’s concerns regarding development viability and associated costs.

26. These identified gaps versus the aforementioned Committee on Climate Change priorities are summarised overleaf in Table 1 and Table 2.



Table 1: Comparison of Climate Change Committee mitigation priority topics (in aid of Climate Change Act goals) vs the scope of Mansfield draft local plan Policy P5 and associated supporting text

CCC mitigation topic	Relevance to Local Plan?	Subtopic for potential local plan action	Is this addressed in Mansfield draft Policy P5 and/or supporting text?
Surface transport	High - <i>where</i> to permit development for minimal car use, and what standards to seek in development that impacts transport infrastructure/behaviours	Locating development to minimise likelihood of driving	N/A - more suited to spatial strategy/site allocation, rather than Policy P5
		EV charging provision	~ Encouraged in policy and supporting text table 4.5, but framed as an optional feature yet in fact is a Building Regulations requirement in new homes with parking
		Cycle parking provision	✓ Covered in current and draft separate policy IN10 & also in table 4.5 which is part of the supporting text to Policy P5.
		Other transport infrastructure provision or contribution	Not covered in this policy
Residential and non-residential buildings	Highly relevant	Energy efficiency	~ Partially covered, but supporting text table 4.5 omits fabric efficiency
		Clean heating	✓ Implied under policy topic of “maximis[ing] energy efficiency”
		Renewable energy provision	~ Encouraged, but framed as an optional feature whereas in fact is a requirement in most cases via Building Regulations Part L (current, and Future Homes Standard)
Electricity supply	Highly relevant	Welcome proposals for standalone renewable energy	N/A Addressed in separate policy CC1. Beyond individual policies, a further way to support this would be by identifying suitable sites via a spatial strategy.
		Requiring renewable energy provision at new developments	~ Encouraged, but not required, in the policy. Framed as an optional feature, but is in fact a requirement in building regulations Part S 2021.
Waste	Relevant, but low climate impact compared to other sectors	Development of modern waste management facilities	N/A Outside scope of this policy – more suited to a Minerals & Waste Plan, and/or site allocations/site safeguarding or contributions to develop such a facility
		Reduction in construction waste (especially to landfill)	! Currently missing from Policy P5 and supporting text.
		Enable building users to easily separate their waste for recycling collection	✓ Covered in the draft policy & supporting text table 4.5.
Industry	Some relevance in terms of building material manufacturing	Keeping buildings in use for longer	✓ Supported by draft policy point d (designing buildings for future adaptation) and supporting text table 4.5 item on resilient materials
		Renewable or otherwise sustainable material use in construction	~ Encouraged in supporting text table 4.5 (locally sourced or recycled materials) but not in the policy itself.
		Low embodied carbon in buildings	! Currently missing from Policy P5 and supporting text.
Agriculture & land use	N/A Little to no relevance (as this topic relates mainly to agricultural land management practices, which are not something the Local Plan can influence).		
Fuel supply	N/A Little to no relevance as this relates to upstream management of the fossil fuel supply chain – however, any local plan actions to increase the supply and use of renewable electricity (as above) would help support climate mitigation in this topic, as this will help wean the area off its dependence on fossil fuels.		
F-gases	N/A Little relevance without introducing quantified targets, which MDC has specified wanting to avoid, and which is not precedent as far as we have identified to date		
Shipping & aviation	N/A Not relevant to the sphere of influence of this Local Plan Review.		
Engineered removals	N/A Unlikely to be relevant to the sphere of influence of a local plan – unless proposals come forward for development of facilities to research and develop or manufacture carbon removal technologies, in which case this would be treated on its own merits, not needing to be specifically addressed in policy.		

Table 2: Comparison of Climate Change Committee adaptation priority topics (in aid of Climate Change Act goals) and comparison to Mansfield draft local plan Policy P5 and associated supporting text

CCC adaptation topic	Relevance to local plan?	Subtopic for potential local plan action	Is this addressed in Mansfield draft Policy P5 and/or supporting text?
Protecting from overheating, especially in homes, care homes and hospitals	Highly relevant – as this relates to new building designs and public spaces	Overheating risk mitigation assessment using specific standards and future weather files	~ Not covered in the policy itself, although the content of supporting text table 4.5 could partially support this, and Building Regulations Part O requires a basic level of overheating risk mitigation in residential uses only
		Use of green infrastructure (shading & evapotranspiration) to mitigate urban heat island	✓ Covered in supporting text table 4.5, albeit not in the policy itself
		Light-coloured reflective materials	! Currently missing from Policy P5 and supporting text.
Managing flood risk	Highly relevant – both to the proposed development and in its effect on surrounding areas	Locating new development away from current or future flood risk	N/A - more suited to spatial strategy/site allocation, rather than Policy P5
		Effective, sustainable drainage schemes	✓ Covered in current and draft separate policy CC3 & supporting text table 4.5 – although more detail could be given on what an effective and sustainable drainage scheme may involve
		Flood-resilient property design if development in an area of current or future flood risk is unavoidable – e.g. permeable paving, green space, one-way valves on wastewater pipes, flood doors, flood barriers.	~ Partially covered in the policy & supporting text table 4.5 (permeable paving and green space) but could include more detail on building-level flood resilience features.
Avoiding water shortages	Moderate to high relevance	Building-level water efficiency targets	✓ Implied in the draft policy, and more specificity in supporting text table 4.5 – although more detail could be given on where the suggested L/P/D target is from
		Landscape-level water efficiency measures e.g. drought-tolerant planting mix, where applicable	~ Could be implied in the draft policy point on ‘water management’, and in supporting text table 4.5 mention of a resilient species mix.
		Deterring, or setting specific water efficiency standards for, water-hungry infrastructure such as data centres	N/A Not within the sphere of draft Policy P5 without the introduction of specific numeric targets, which MDC has expressed a wish to avoid.
		Support for developments related to water supply infrastructure, if these arise	N/A Not within the sphere of draft Policy P5 specifically – but more suited to site allocations/site safeguarding if the water provider proposes to develop these
Support nature to adapt to climate	~ Low relevance, as the CCC’s advice defines this topic principally in terms of land management practices, which do not need planning permission. However, it could be helpful to insert explicit encouragement for developers to explain how their landscape designs support the Nottinghamshire Local Nature Recovery Strategies (LNRS) ^{vii} .		
Keep farming viable	N/A Not in the Local Plan Review’s influence other than avoiding building on high-quality farmland. The best tool would be in the spatial strategy or site allocations, not Policy P5.		
Understand risks to food security	N/A Not within the sphere of influence of a local plan, as the CCC’s advice on this topic relates primarily to overseas supply chains. Even where UK supply chains are part of this, it still relates to practices that the local plan cannot influence.		
Maintain access to insurance	N/A Not within the sphere of influence of a local plan, other than indirectly via not permitting development in areas at significant risk of flooding, as already covered above		
Adapting infrastructure to avoid cascading disruption	Low relevance – as this is defined mostly around national coordination	! Currently missing from Policy P5 and supporting text. Although the Local Plan Review’s potential influence over this is likely to be low, a reference could be inserted to encourage that where local planning permission is needed for infrastructure development (social, transport or	



	and regulation of infrastructure standards.	utilities), the application should explain how cascading risks to or from this infrastructure have been identified for at least a 2°C future climate scenario and have been mitigated as far as reasonable, following any applicable industry standards that are available at the time.
--	---	---

Comments on existing Draft Policy P5 received at Regulation 18 Consultation in 2025

27. All commentary is identified from the Council’s consultation website for the Regulation 18 consultation “What people said” section^{viii}; specifically the answers to Question 10 which was the question covering “Climate change and new development”. We here present the comments as a table, making reference to specific parts of the policy that the comments relate to and how they might be acted on where applicable.

28. We note that the Regulation 18 consultation question on this topic was simply phrased as “let us know if you agree with our approach to this policy”.

Code	Comment text	Relevant part of policy	What amendments might be considered in light of this comment?
LPR335-22	Do you agree with our approach? “Yes” “I also believe that developers and the Council should be learning from other countries who are ahead of us in terms of looking at better ways to support climate <i>[sic]</i> change objectives e.g. using solar panels on fencing, above car parks and on the sides of roads like in Germany and European <i>[sic]</i> countries. Small changes to design can stop land being used unnecessarily when with a bit of thought and consideration on design this can be avoided, this would help to preserve green spaces within communities.”	Entire policy, but especially point f) (incorporation of renewable / low carbon energy into developments)	This comment does not imply any vital need to change any of the existing policy wording of Policy P5, as the suggested features would already be supported by point f) of the policy, which requires that developments should “incorporat[e], where practical and viable ... renewable and/or low carbon energy technologies or scope for their future provision”. Rather, a response to this comment would focus more on ensuring that decision-making is welcoming to any proposals for solar panels that are sited on structures such as fences or as car parking canopies. To support this, some additional supporting text could be added to clarify that such the exploration of scope for provision of renewable energy technology under point f) is not limited to the building itself but should also consider opportunities on structures such as fences or parking canopies.
LPR419-10	[yes/no answer not displayed in online record of commentary] “We note from the LPR that the Mansfield SFRA is being updated and will be provided as part of the evidence base. Within Policy P5 we welcome reference to NbS in relation to climate change adaptation and mitigation, including 1b green / blue infrastructure, biodiversity and landscaping and 1c sustainable drainage. We welcome the further detail provided in supplementary plans, once updated and confirmed. We would direct MDC to the Climate Change Adaptation Manual ¹⁰ and Carbon Storage and Sequestration by Habitat Report ¹¹ for further detail on NbS to mitigate and adapt to climate change. We welcome further clarity on how development will be climate resilient through Policy P5 1d appropriate flexibility to allow for future adaptation.”	Entire policy, but especially the following points of the existing policy: Point b) green/blue infrastructure, biodiversity & landscaping Point c) sustainable drainage & water management Point d) flexibility for future adaptation.	As the online record of comments does not offer the files referred to by number in this comment, we are assuming: • That the “Climate Change Adaptation Manual” is the Natural England 2020 publication titled “Climate Change Adaptation Manual (NE751). Evidence to support nature conservation in a changing climate”^{ix}. • That “Carbon Storage and Sequestration by Habitat” is the Natural England 2021 publication titled “Carbon Storage and Sequestration by Habitat 2021 (NERR094): a review of the evidence (second edition)”^x. • That NbS is an acronym for ‘nature-based solutions’, a broad term used to refer to any natural or semi-natural combination of water, landscape and wildlife where this helps solve a particular environmental problem, usually carbon capture, adaptation to the impacts of climate change (e.g. flood risk), or water pollution. The two Natural England publications cited in this comment do contain detailed content that would be relevant to assessing whether an application has made sensible efforts towards points b) and c) of the policy. However, these are lengthy documents (at 582 pages and 243 pages for the ‘Carbon Storage & Sequestration’ document). Reproduction of the contents of these documents in any meaningful level of detail would make the policy very long and potentially unwieldy. Reference could be made to those publications either in the



Code	Comment text	Relevant part of policy	What amendments might be considered in light of this comment?
			policy or the supporting text; however, in our experience of other Local Plan examinations, objectors tend to then raise concerns that these references may become obsolete if the publications are withdrawn or updated in the lifetime of the plan. Therefore, a reasonable way to respond to this commentary could be to insert within the supporting text a reference to how these Natural England publications could form a useful basis for the design and evaluation of applications, and that development applications are encouraged to make reference to these resources as appropriate to the size and content of the proposed development. With regards to where such an insertion could be made in the supporting text, existing supporting text paragraph 4.40 appears to be the most natural context for this as that paragraph already mentions green infrastructure and biodiversity as part of development layouts.
LPR492-9	[yes/no answer not displayed in online record of commentary] “We agree with this policy in principle but it will be important that the judgement regarding what is “practicable and viable” is made by the LPA or independent experts and not left for the applicants/developers to make.”	Entire policy	While it is fair to note that developers’ claims of non-feasibility or non-viability should be validated, and not given free rein to veto any sustainability improvements without interrogation, this does not mean that they should have no bearing on the local authority’s decision. The crux will be ensuring that the local authority’s development management (DM) team develops the capacity to understand ‘what good looks like’ in various aspects of sustainability performance, and the range of circumstances in which certain features are or are not likely to be practical and effective solutions to reaching those outcomes. The range of potential features, benchmark/outcomes, and contextual situations in which each feature would or would not be suitable, is vast and varied. It will not be practical to cover all of this in the Local Plan Review itself without making the plan document excessively long and unwieldy. Therefore, it may be suitable to consider some minor amendments/additions to the supporting text to give a few examples of the sort of contextual issues that can create valid challenges in feasibility or viability and thus valid reasons for non-use of certain features. Meanwhile for the fuller amount of detail to aid developer understanding and grow DM officers’ grasp of these issues, the appropriate vehicle would be the future creation of accompanying guidance that the Council notes may be developed (at supporting text paragraph 4.43). DM officers might also benefit from training as an introduction to that guidance.
LPR361-9	[yes/no answer not displayed in online record of commentary] “TLG agrees with the overarching principle of Draft Policy P5, which seeks to incorporate high standards of design and construction to reduce, mitigate and adapt to the impacts of climate change. TLG however does have concerns regarding the requirements of Draft Policy P5 and particularly how all these measures will be delivered	Entire policy	Given that the policy does not set any specific standards that must be achieved, it is difficult to see how the commenter came to the purported concern that this could make a scheme unviable. The policy only requires evidence that these various desirable sustainability features or outcomes have been <i>considered</i> and pursued to whatever extent is appropriate. However: The request for further clarification on how this would be assessed is valid, for the purpose of efficient policy implementation (both by the developer in devising their designs,



Code	Comment text	Relevant part of policy	What amendments might be considered in light of this comment?
	on all sites and how these will be assessed. The concern is that delivering all the measures listed in Draft Policy P5 would make many schemes unviable and may compromise the delivery of other planning obligations and contributions. Whilst it is noted that the policy references that viability will be taken into account, TLG would request further clarification on this matter in terms of how this would be assessed as it is seen as likely that the introduction of this Policy would make many schemes unviable.”		and by the development management team at the Council in making swift and consistent decisions about whether an application complies with the policy). For that purpose, the appropriate vehicle would be the future creation of accompanying guidance that the Council notes may be developed (at supporting text paragraph 4.43). In advance of that fuller separate guidance, it may be helpful to consider a policy wording amendment to clarify that broadly the approaches mentioned in supporting text table 4.5 will be expected, yet also that sufficient flexibility will be given where valid reasons are presented for not implementing those specific features and pursuing the desired sustainability outcomes in other ways. The supporting text table 4.5 could also be amended to include some examples of valid reasons for not incorporating specific features. However, it is reasonable to postpone most of this detail to the aforementioned future supporting guidance rather than inserting all of this into the plan itself – both due to plan timescale constraints and to avoid making the plan overly lengthy and cumbersome.
LPR427-7	[yes/no answer not displayed in online record of commentary] “HBF have concerns about the Council seeking to replicate and/or go beyond Building Regulations, including the introduction of the Future Homes Standard in Local Plan policies. HBF believes that Councils rely on the Building Regulations process as the way to manage improving energy efficiency standards, water efficiency and climate change policies and as such policies on these issues are simply not needed in the Local Plan.”	Policy P5 points a (sustainable design & layout & energy efficiency); c (water management), and f (renewable and/or low carbon energy technologies) Supporting text table 4.5 rows on energy, water efficiency, and potentially also urban cooling.	Given that the policy does not set any specific standards that must be achieved, it is difficult to see how the commenter came to the conclusion that this necessarily requires development to go beyond building regulations standards nor replicates them. However, it is noted that the supporting text includes table 4.5 which provides examples of various features that can help to deliver the desired sustainability outcomes. This does not contain any specific quantified benchmarks but only a list of possible example features. This is given merely as an indication of how a development management officer would be able to tell whether a development has ‘maximised’ energy efficiency or incorporated renewable energy. Where the proposed development merely meets building regulations (which is the legal minimum requirement), this would clearly not represent a ‘maximisation’ of the energy performance could be achieved in most cases. As previously noted, the Planning & Energy Act 2008 empowers the Local Plan to set enhanced standards for energy efficiency and renewable energy provision in developments within the Local Plan area. Therefore, there is no validity to the argument that building regulations are the only appropriate tool for energy performance improvement. Similarly, the Planning & Compulsory Purchase Act 2004 (s.19) lays a legal obligation on the Local Plan to mitigate and adapt to climate change, therefore there is no validity to the argument that Local Plan policies for this purpose are “simply not needed”. There is no clear need to amend the policy in any way in light of this comment.
LPR358-7	[yes/no answer not displayed in online record of commentary] “Bellway notes the updated references to local and national strategies and evidence in the policy and the	Policy P5 points b (green/blue infrastructure, biodiversity and	While the commenter’s affirmation of corporate commitment to certain future sustainability goals is appreciated, this does not hold any particular implications for the Local Plan Review content itself.



Code	Comment text	Relevant part of policy	What amendments might be considered in light of this comment?
	insertion of blue infrastructure (where practicable and viable) and biodiversity. We reiterate that policy should not become overly prescriptive and we reserve the right to comment further on any emerging Supplementary Plans, Climate Change Study, the forthcoming Local Area Energy Plan and updated SFRA. 3.29 Bellway shares the ambition to making development more sustainable. The ‘Better with Bellway’ policy comprises a number of strategic priorities which ensure Bellway are ‘putting people and the planet first’. Such commitment is exemplified by the launch of their own Future Homes scheme, with exemplar plots being built to Future Homes Standard ahead of the introduction of the Government’s standard due in 2025. 3.30 Bellway is committed to a number of targets: • (i) (ii) The delivery of Future Homes; Bellway is seeking to be Carbon Net Zero by 2050; • (iii) To increase their year-on-9-month National Building Council score to at least 90% by July 2026; and • (iv) To reduce their scope 1 and scope 2 emissions by 46% by 2030. 3.31 Bellway is committed to delivering sustainable housing development, including at the Old Mill Lane site, which contributes to Mansfield’s overarching vision of ensuring development is climate resilient.”	landscaping) and c (sustainable drainage & water management) Supporting text table 4.5 – rows on water efficiency, urban cooling and drainage	Similarly, the commenter’s assertion that they “reserve the right to comment further” on any further emerging plans or studies does not imply any particular amendment to the draft policy or supporting text as it stands. The commenter states that “the policy should not become overly prescriptive” but does not give any rationale for that argument nor do they give any examples of what they would consider overly prescriptive and why. Given that the draft policy does not set any specific standards that must be achieved, it certainly could not be interpreted as prescriptive in any way in its current form. This comment should be kept in mind when considering potential amendments to the policy or supporting text, but only as far as noting that any addition of more prescriptive aspects to the policy should be carefully devised based on necessity and effectiveness.
LPR495-5	“1.g. It worth mentioning EV charging provision.”	1.g. (that the development incorporate, where practical and viable, sustainable transport & travel facilities)	It is true that EV charging provision is an essential feature to enable mitigation of occupants’ transport-related carbon emissions. However, the required provision in <i>residential</i> development is generally sufficient through the Building Regulations Part S which was introduced in 2021/2022. This requires, in summary, that: • For each proposed home that has outdoor “associated parking”, there must be at least one EV charging point installed for that home’s use. (Or in all proposed outdoor “associated parking” spaces if the number of spaces is fewer than the dwellings). ○ Also, if the number of spaces exceeds the number of dwellings AND is more than 10 spaces, then cabling must be provided to enable future installation of EV charging points at the remaining “associated parking”.



Code	Comment text	Relevant part of policy	What amendments might be considered in light of this comment?
			• Where non-residential development is proposed to have 10 or more “associated parking” spaces, it must have at least one EV charging point. • With some slight variations, requirements also apply to change of use to residential, and major renovations • These requirements are subject to a cost cap per EV charge point installed. Where the cost of meeting the standards would exceed that price cap, the developer is expected to install as many charge points as can be achieved within the spending cap. • EV chargers for Part S compliance must meet BS61851 standard, and output $\geq 7\text{kW}$. However, there are some places where the requirements set by Part S might neglect to fully deliver the amount of EV provision that would fully support the necessary switch to EV. The omissions or loopholes in Part S include that: • Part S requirement wording for <i>non-residential development</i> EV provision does not appear to scale up in proportion to the number of non-residential car parking spaces provided (so there could be 100 non-residential parking spaces and still just 1 charging point) • “Covered car parking” is exempt from the requirement to provide EV chargers, although in some cases will be required to have cabling to enable future charger installation, if the outdoor spaces are not enough to fulfil the required coverage. This will mean Part S does not oblige developers to enable use of EVs from first use if their proposed parking provision is in the form of garages, underground parking or multi-storey car parking. • The definition of “associated parking space” generally excludes on-street parking (under separate ownership to that of the building, and/or separated from the building by a public highway or road under separate ownership to that of the building). Therefore, where a developer proposes that the new occupants could use on-street parking rather than within the curtilage of the building, Part S does not deliver the EV chargers that would be necessary for those occupants to make the switch to EV. This replicates the problem faced in existing housing whereby those without driveways are deterred from switching to EV, due to having to rely on public chargers which may not always be available overnight or conveniently located. • Charger speed: A charger at the Part S minimum output of 7kW would fall into the industry definition of a “fast” charger and take circa 10 hours to fully charge a typical car^{xi}. While this is not a problem for residential overnight charging, it may not be very helpful for the non-residential situation where workers or visitors tend not to be present for that long, especially in light of the fact that single non-residential charger required by Part S would be shared between at least 10 parking spaces and possibly many more, creating competition for the single 7kW charger. In light of the above, it may be relevant to consider amendments to Policy P5 to encourage developers to address the following:



Code	Comment text	Relevant part of policy	What amendments might be considered in light of this comment?
			• Provision of chargers in ‘covered’ car parking too, where this is the only parking available to particular residents/occupants of the development • Provision of EV charging points as a relative <i>proportion</i> of non-residential parking, rather than just 1 charger regardless of how large the parking is. • Provision of some faster/rapid chargers in non-residential uses where dwell time is short (e.g. 22kWh output), although some 7kW chargers should also still be provided as the RAC reports^{xiii} that not all EVs can accept more than 7kW. However, following consideration of policy options, Mansfield District Council has decided not to introduce further quantified standards within the policy at this stage. This reflects the Council’s concerns regarding alignment with the direction of the emerging NPPF and the Council’s anticipation that there could potentially be viability and cost implications if the policy were to introduce requirements that go beyond those established through the Building Regulations. Therefore in our later recommended policy amendments, this will be expressed as a requirement for applications to <i>explain how the developer has considered the scope</i> for such enhanced EV charging provision where appropriate to the development, feasible and viable, rather than as a requirement to meet any particular enhanced standard.



Comparing existing Draft Policy P5 against best practice in the industry and in precedents

29. In the previous suite of reports for Mansfield District Council, several examples of best-practice policy for climate change mitigation through emissions reduction in *buildings* were identified. A number of different policy options were laid out based on recent precedents. **The policy options included:**
- a. **Requiring developments to demonstrate that their design process has followed the ‘energy hierarchy’**, which is the industry’s general consensus on best practice design approaches to optimise energy performance and thus reduce carbon emissions. Designing in line with the energy hierarchy means exploring/pursuing improvements at earlier steps of the hierarchy before moving on to others. The degree of improvement in each step can vary somewhat between different developments, but the steps still have to be explored in turn and pursued as far as appropriate and practical for the particular development in question. It was noted that the steps of the hierarchy are sometimes expressed in slightly different ways in different parts of the industry or policies, but broadly consists of the following:
 - i. Step 1: Reducing energy demand/energy use (also sometimes referred to as “be lean”). Generally achieved through the use of thermally efficient building fabric and efficient energy-using technologies (lighting, heat recovery, appliances etc).
 - ii. Step 2: Supplying energy efficiently (also sometimes referred to as “be clean”). Generally, this refers to the use of clean heating (not gas or other fossil fuel on site), waste heat/power where there is an available source of those, and any other energy supply technology that makes more efficient use of the energy source than a typical gas boiler would.
 - iii. Step 3: Generating and utilising renewable energy on site (also sometimes referred to as “be clean”).
 - iv. Some versions of the hierarchy then proceed to further steps involving monitoring and disclosure of energy performance (“be seen”) and/or offsetting of any shortfall in annual renewable energy generation as compared to annual energy use.
 - b. **Setting a target for % reductions on the baseline of the Building Regulations Part L Target Emissions Rate (TER) in new buildings:**
 - i. These reductions could be specified by step of the energy hierarchy (e.g. that 10-15% TER reduction via energy efficiency improvements compared to Building Regulations Part L).
 - ii. It was also noted that the TER reduction could be complemented, or contributed to, by improvements on other Part L metrics such as the TFEE (Target Fabric Energy Efficiency)
 - iii. However, it was noted that any requirement expressed in TER or TFEE can only ever address “regulated energy uses”, which represent only 25-75% of a building’s total energy use.
 - c. **Setting targets for “net zero energy” in new buildings** expressed in terms of energy demand for space heating (space heat demand per square metre of floor space), then total energy use per square metre of floor space (EUI; energy use intensity), and then renewable energy generation on site to match the above.
 - i. It was noted that this would more effectively optimise energy performance and ensure ‘true net zero’ in these buildings, as it would address actual total energy and be calculated using accurate methods – and that this optimised performance would more effectively bring down energy bills for occupants compared to a TER-based policy.
30. However, it was noted that **any specific quantified targets (b and c above) would need to come with justification evidence/arguments in order for the Local Plan Review to pass its Examination In Public (EIP)**, as they diverge from the national building regulations and could be thought to diverge from a particular written ministerial statement of 2023 (explained in previous reports). This would need to include robust evidence of build cost uplift, to be fed into the whole-plan viability assessment to reveal any effect on the ability for housing delivery targets to be met. It was noted that policies of both types had recently successfully passed EIP and been adopted, therefore such evidence and argument can clearly be made. However, MDC did not consider itself in a position to commission such evidence just now, and did not wish to take the risk of the entire policy being found unsound if these arguments were not made strongly enough at EIP, or becoming unimplementable in light of the aforementioned emerging new NPPF national development management policy DM7.
31. Outside setting of quantified targets for new buildings’ energy performance, other policy measures were identified from other Local Plan precedents and climate mitigation design guidance:
- a. **Existing buildings:** Some precedents take an explicitly positive stance towards proposals that would improve an existing building’s energy/carbon performance. While many such energy retrofit actions do not need permission, it may be helpful to clarify that where permission is needed, such improvements will be given material weight in favour of the development,
 - b. **Transport:** Prioritising developments where car use will be minimal (e.g. within walking distance to jobs, schools, services and public transport) and ensuring that non-car transport options are made as convenient as possible (e.g. access to public transport, safeguarding land needed for public transport or cycling routes, priority for non-car modes in road layouts, and convenient secure cycle parking). While Building Regulations Part S delivers good EV charging provision at homes with associated parking, emissions reduction could be further supported by EV charging standards greater than that set by Part S in non-residential, and on-street parking (which Part S often neglects as it is not counted as ‘associated’ parking).



Recapping relevant headline insights from our previous suite of reports

Recap of key insights from Work Package 1 (Literature Review)

32. The key driving force is the legal duty for the Local Plan Review to mitigate climate change, set by the Planning & Compulsory Purchase Act 2004 and echoed in the Levelling Up & Regeneration Act 2023 (LURA). The extent to which that mitigation is to be taken is not defined in either of those Acts, but the National Planning Policy Framework (NPPF) expresses that it should be in line with the Climate Change Act 2008. This means action should be taken to achieve not only the 2050 net zero goal, but also the intermediate 5 yearly carbon budgets that are devised by the Committee on Climate Change and legislated by Parliament via that 2008 Act.
33. Data analysis by the Committee on Climate Change shows that current national action is not going far or fast enough to meet those carbon budgets and net zero goal, including in many topics that the Local Plan Review could influence, including:
- Exemplary energy efficiency in new builds, especially in thermal fabric, including a space heat demand of 15-20kWh/m²/year in new homes completed from 2025
 - Clean heat in new buildings (not gas, oil, coal or other fossil fuel)
 - Renewable energy provision on new buildings
 - Other renewable energy capacity growth, whether standalone or on existing buildings
 - Active travel / public transport
 - Enabling energy retrofit of existing buildings (upgrading fabric to retain heat, switching from gas to heat pumps or waste heat, and adding renewable energy equipment).
34. The Local Plan Review has powers to act on these topic areas, stemming from the provisions in the Planning & Energy Act 2008 and Town & Country Planning Act 1990 S106. This includes the power to set standards for energy efficiency, renewable energy provision and carbon reductions that exceed national building regulations Part L. Additionally, Local Plans can make spatial choices that minimise carbon emissions from transport. These powers have been used in various ways by other local authorities. This report focussed mainly on policy for emissions of buildings.

35. The carbon for which a building is responsible (thus a 'zero carbon building') is subject to differing definitions in the industry and precedent Local Plans. These broadly fall into two camps:
- **Building Regulations Part L** – this defines a building's energy use and carbon by using the National Calculation Methodologies, named SAP (for homes) or Simplified Building Energy Model (SBEM) (for other buildings). It sets limits per m² per year for carbon³, space heating/cooling demand⁴, and "primary energy"⁵ use. These calculations only cover part of the operational carbon (energy use) but omit embodied carbon (materials/construction) and 'unregulated' energy use. As a result, the Part L definition of zero carbon building is not truly net zero.
 - **Industry professional bodies (LETI, RIBA, UKGBC, CIBSE, UKNZCBS and others)** – all agree that Part L metrics and calculation methods are insufficient and that the preferred metrics to be used instead are EUI (total energy use intensity) per m² floorspace, space heat demand (SHD) per m² floorspace, and that a 'net zero' building must have renewable energy to annually match its total energy use.
36. While the majority of 'net zero' Local Plan policy precedents use Part L metrics, these are mostly older examples. A more recent vanguard instead uses the EUI/SHD metrics instead (of which four adopted Local Plan precedents to date⁶ and three further that have passed examination and are awaiting adoption as of October 2025). Despite the industry's general message that EUI/SHD metrics are more effective, and necessary for the national carbon budgets, a previous Government 2023 policy statement purports to require the use of Part L metrics instead. This report discusses the extent to which that national policy is or is not binding in light of the legal obligation to mitigate climate change.
37. In addition to energy metrics in new builds, the Literature Review explored many examples of how precedent Local Plans have sought carbon reductions via other standards expressed as:
- Carbon offsetting policies
 - Energy offsetting policies
 - Promotion of standalone renewable energy development
 - Promotion of energy improvements in existing buildings
 - Protection of specific mapped green landscape features that capture carbon.

³ The Building Regulations target metric for carbon is termed the Target Emissions Rate (TER). It is expressed in kilogramme of carbon dioxide emissions per square metre of building floor space per year (kg/m²/year).

⁴ The Building Regulations metric for space heating and cooling demand is termed Fabric Energy Efficiency (FEE). The target is Target Fabric Energy Efficiency (TFEE). It is expressed in kilowatt-hours per square metre of building floor space per year (kWh/m²/year).

⁵ The Building Regulations metric for primary energy is termed the Primary Energy Rate (PER). The target is "TPER", or Target Primary Energy Rate.

⁶ These adopted precedents are in Cornwall, Bath & North East Somerset, Central Lincolnshire, and Tendring/Colchester (the latter is DPD for a specific development site spanning the border of two local authority areas). The ones that have received initial approval at examination but are still awaiting the final steps to adoption as of October 2025 are in Uttlesford, Winchester and Salt Cross. For more detail see relevant section [later in the current report](#).



38. For further context, the literature review report explored the recent carbon emissions of the Mansfield District (the Local Plan Review area), and commitments made by Mansfield District Council to reduce those, including an intent to make this geographic area net zero carbon by 2040, 10 years ahead of the nationwide target date of 2050. For conceptual clarity, it explored how the term ‘net zero carbon’ can be defined for a geographic area, referring to the available methodologies for local area carbon accounting. Insights from those methodologies were then used to explain how a local area’s emissions relate to the national carbon account, emphasising the importance of action at all local levels in order to achieve the legally binding national goals. This was provided for the purpose of offering useful background for later choices about which emissions should be targeted by policy.
39. This report concluded in a suggested draft Position Statement that would establish a logical stance from which policy on buildings’ carbon reduction could be developed. The statement included the following:
- Acknowledgement of the national and local carbon reduction imperatives
 - Definition of what a ‘net zero carbon Mansfield’ should mean
 - Definition of a ‘net zero carbon building’ via best practice criteria
 - Commitment to realise those definitions through policy to the greatest extent possible.

Work Package 2 (Renewable Energy Capacity study)

40. We do not here recap Work Package 2 as that related primarily to identifying the potential for standalone renewable energy provision, whereas the current report’s focus is on potential ways to strengthen Policy P5 only, whose scope focusses more on integration of overarching sustainability features (including renewable energy) within developments that primarily consist of buildings or other uses other than energy generation.

Recap key relevant insights from Work Package 3 (Energy standards / policy options risk matrix assessment)

41. Work Package 3 consisted of a report that identified and evaluated several options for ‘net zero carbon new buildings’ policies. Its insights were already recapped in the current report’s previous section “Comparing existing Draft Policy P5 against best practice in the industry and in precedents”.
42. Three broad policy options for ‘net zero carbon’ new buildings were identified, i.e.:
- i. A 63% reduction on Building Regulations Part L TER (Target Emission Rate) through energy efficiency improvements, followed by sufficient renewable energy provision to further result in reduction of the building’s emissions rate (BER) to zero. This would be a ‘net zero regulated carbon’ policy.

- ii. As above, but with a 10% improvement on Part L TFEE (Target Fabric Energy Efficiency) as a step towards the 63% TER reduction, and further adding more renewable energy whose generation would annually equal the building’s unregulated energy as well as its regulated energy. As the TER metric is not highly effective at reducing buildings’ energy use, it was anticipated that the renewable energy requirement might not always be feasible to meet on site (because the building’s energy use might remain too high to be matched by the capacity of solar panels that could fit on its own roof). This would result in quite widespread use of an energy offsetting mechanism that the Council would need to manage by charging developers a certain fee representing the shortfall in PV provision, and then utilising that fund to install PV elsewhere in the district.
 - iii. A policy that would set fixed targets for EUI (Energy Use Intensity) and space heat demand, which would both vary by building type (residential, and various types of non-residential development). As in option (ii) above, the policy would also then require on-site renewable energy provision whose generation would annually match the building’s annual demand – but because the EUI metric is highly effective at minimising buildings’ actual total energy use, it was anticipated that it would be feasible in most cases to meet this PV requirement without the need for offsetting (although the offsetting mechanism would remain available in the event that it was not feasible).
43. As noted in that section, MDC decided not to go for any of the ‘net zero carbon buildings’ policy options presented. Introducing any of these standards would have required additional evidence on technical feasibility, development cost uplift and reassessment of the viability of the selected approach through the Local Plan examination process. Following careful consideration, the Council concluded that commissioning and preparing this further evidence would not represent the most proportionate approach at this stage, particularly in light of the direction of the emerging new NPPF whose proposed new development management policy DM7 could have made it highly challenging to implement any such policy even where the Plan in question would have been examined against the current NPPF.
44. Therefore, the Council’s choice was to instead continue with the original proposed support by Bioregional in simply reviewing the existing draft policy P5 as it is with a view to identifying ways to strengthen it without inserting any particular performance standards that would need costing for viability testing nor special proof of feasibility. The current report represents that next step.

Work Package 5 (funding mechanisms)

45. We do not here recap Work Package 5 as that focussed only on funding mechanisms, which does not hold insights relevant to how draft Policy P5 could be updated, which is the focus of the current report.

Resulting compiled tracked changes for suggested amendments to Draft Policy P5 and associated supporting text

“Policy P5 Climate change and new development

1. Development proposals will be supported where it can be satisfactorily demonstrated that it incorporates high standards of design and construction to reduce, mitigate and adapt to the impacts of climate change by incorporating the following measures, where practical and viable, having regard to the type, location and size of the proposal:
 - a. sustainable design and layout that optimises energy performance. In new-build developments of 1 or more homes or 100+m² floorspace, applications are encouraged to demonstrate how their designs have followed the energy hierarchy by pursuing the following steps into the design in the following order of priority:
 1. maximising energy efficiency (reducing energy demand) while avoiding overheating risks;
 2. utilising clean and efficient energy supply, especially for heating;
 3. Incorporating renewable and/or low carbon energy technologies or scope for their future provision;
 - b. green / blue infrastructure, biodiversity and landscaping (which, in schemes that include a significant landscape element, should make reference to how the proposed green/blue features support the Local Nature Recovery Strategy);
 - c. sustainable drainage and water management measures (which should achieve the Building Regulations Part G enhanced target of 110 litres/person/day water use unless unviable, and major schemes should also demonstrate how the proposed drainage scheme would be resilient to the future changes in rainfall);
 - d. appropriate flexibility to allow for future adaptation;
 - e. sustainable waste management facilities;
renewable and/or low carbon energy technologies or scope for their future provision;
 - f. sustainable transport and travel facilities, and
 - g. construction designs and materials to minimise embodied carbon emissions.
2. Towards the achievement of points (a.1.), (b), (c), and (d), major developments are strongly encouraged to demonstrate climate adaptation by taking into account the relevant future changes in climate conditions in a 2050 2° global warming scenario, in particular with regards to overheating risk, flood risk and infrastructure resilience.
3. Proposals that would deliver significant improvements to the energy/carbon performance or climate adaptation performance of an existing building will be granted material weight in favour of the development in proportion to the improvement that is quantitatively demonstrated. These benefits will be part of the overall planning balance in combination with heritage protection requirements outlined in separate policies in this plan.

Explanation

4.37 Mitigation and adapting to climate change is an international and national priority. The Climate Change Act 2008 commits the UK to cut greenhouse gas emissions against 1990 levels by at least 80% to net zero by 2050 (and by at least 35% by 2020 circa 59% by 2030 and then circa 77% by 2035, compared to 1990 levels⁷). According to the latest UK, local authority and regional CO₂e emission⁸ estimates (2024⁵) produced by National Statistics the Government Department for Energy Security and Net Zero⁹, the top sources of carbon dioxide greenhouse gas emissions in the district are from domestic gas usage (103.1kt) and domestic electricity consumption-vehicle use on minor roads (61.2kt). This varies slightly to estimates for same pattern is seen at County level, whereby across Nottinghamshire domestic gas usage is the highest-emitting sector at 748kt, whereas road transport (A-roads minor roads) is the highest emits 632kt and domestic gas road transport on A-roads is the second third highest (522kt). Overall trends in emissions in the Mansfield district have decreased between 2005 and 2023³; the overall percentage change for CO₂e emissions between this period was -40.3-50% (from 612.1-706.9 to 365.1

⁷ Data source: Climate Change Committee (2025), *The Seventh Carbon Budget: Charts and data*, tab ES1. 2030 is the middle year of the legislated 5th carbon budget (CB5) which covers 2028-2032, during which total emissions must not exceed 1725 megatonnes, meaning annual average emissions in 2030 should be 345 megatonnes, compared to 1990's emissions of 836.07 megatonnes. 2035 is the middle year of the legislated 6th carbon budget (6CB) which covers 2033-2037, during which total emissions must not exceed 965 megatonnes, meaning that annual emissions at 2035 should be 193 megatonnes. These figures are excluding headroom for international aviation/shipping.

⁸ CO₂e is carbon dioxide equivalent. The majority of this is carbon dioxide itself; the remainder is other gases expressed in terms of the climate-warming effect they would have over a 100-year period.

⁹ <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-greenhouse-gas-emissions-statistics-2005-to-2023>



352.1 kilotonnes CO₂). This is slightly ~~less~~^{more} of a reduction in CO₂e when compared to the East Midlands region (~~-33.4~~⁻³⁷%) and the UK (~~-43.4~~⁻⁴⁶%). Emissions have decreased in all regions since 2005⁽³⁾

4.38 Paragraph 162 (and footnote 61) of the National Planning Policy Framework (NPPF 2024) instructs that local plans should take a proactive approach to mitigating and adapting to climate change, in line with the objectives of the Climate Change Act. Paragraph 166 of the National Planning Policy Framework (NPPF 2024) sets out that new development is expected to take account of land form, layout, building orientation, massing and landscaping to minimise energy consumption. Paragraph 165 sets out that local plan policies should be designed to maximise renewable and low carbon energy development. Therefore, improving the efficiency in these areas and seeking low carbon, renewable sources are key to reducing the district's impact on climate change. Policy P5 point a, by expressing the best-practice 'energy hierarchy' approach, is therefore designed to define the information that would objectively enable the Council to establish whether a proposed development's energy consumption is minimised and its renewable energy reasonably maximised, compared to what the developer would have to do to meet Building Regulations in absence of the policy. In aid of this, applicants should note that:

- Improvements at any of the 'energy hierarchy' steps will win weight in favour of the development, in proportion to the degree of improvement. An 'improvement' will only be recognised where the application demonstrates this as an improvement in comparison to the baseline of the applicable Building Regulations Part L notional building. However, the Council accepts that the appropriate degree of improvement may vary between developments, and in some cases may be none for reasons of feasibility or viability.
- Major developments are strongly encouraged to quantify the improvement made at each step of the energy hierarchy. Where the application claims that energy or carbon performance is a benefit of the development, this will only be valid where quantified versus the applicable Building Regulations notional building. Quantification may be expressed either as a % reduction on the Part L TER or TFE, reduced kWh energy use, or increased kWh of renewable generation.

4.39 Point 2 within the policy encourages applicants to demonstrate that their development will support climate adaptation by being resilient to the anticipated impacts of climate change within the development's lifespan. Again, this is in line with NPPF 2024 paragraph 162 and footnote 61 which instruct the local plan to be proactive about climate change adaptation in line with the objectives of the Climate Change Act. While the relevant impacts and relevant solutions for each development may vary, some examples of how applications could effectively address this include:

- Overheating risks: Taking the more in-depth route to Part O compliance in dwellings. In non-residential, conducting a CIBSE TM52 assessment especially in uses that will accommodate vulnerable users, such as care homes and hospitals. In any overheating assessment, testing the designs against future weather files.
- Flood risks: Demonstrating how the proposed drainage scheme would protect the building and its users from the anticipated changes in rainfall as per UK Climate Projections or successor dataset. Where development in a zone at current or future risk of flooding is unavoidable, flood resilience features should be designed-in.
- Infrastructure (including social infrastructure): Considering how the infrastructure can be resilient to failures in infrastructure that it relies upon, and vice versa.

4.40 NPPF paragraph 167 instructs the local planning authority to "give significant weight to the need to support energy efficiency and low carbon heating improvements to existing buildings ... including ... heat pumps and solar panels where these do not already benefit from permitted development rights ... [while] also apply[ing] [heritage protection] policies" where relevant. Policy P5 point 3 is designed to make clear that energy retrofit improvements will be supported, subject to heritage impact. The developer could demonstrate such benefits by submitting evidence of the building's energy/carbon performance 'before' and 'after' the proposed development, for example in such indicators as:

- Energy efficiency:
 - Improvement in U-values of doors, windows, walls, roofs, or floors: The U-value is a measure regularly used in the construction industry (including Building Regulations Part L) to express how much heat will pass through a material or product. In this indicator, a *reduction* would be an improvement.
 - Air permeability: A measure regularly used in the construction industry (including Building Regulations Part L) to express how much air leakage will occur between indoor and outdoor air. In this indicator, a *reduction* would be an improvement
 - Space heat demand in kWp per m² of floor area. In this indicator, a *reduction* would be an improvement.



- Energy demand in kWh per m² of floor area (this could be regulated energy, or total energy). In this indicator, a *reduction* would be an improvement.
- Heat system type: An improvement would be demonstrated where the proposal includes a switch from fossil-fuelled heating (such as gas or oil boilers) to electric, renewable or otherwise reduced-carbon heating (such as heat pumps or connection to a heat network).
- Energy storage: Battery size in kWh. In this indicator, an *increase* would be an improvement. Alternatively, if the existing building does not have any energy storage capacity beforehand, then any addition of such systems to the site would represent an improvement. Energy storage can help reduce stress on the electricity grid by storing renewable energy that was generated on-site for later use. This can reduce the building's peak demand on the grid, and can also reduce the peak export to the grid at times when on-site renewable energy generation systems are generating more than can be used on site.
- Renewable energy: Annual kWh generation from on-site renewable energy systems, or kWp capacity of on-site renewable energy generation systems. In this indicator, an *increase* would be an improvement. Alternatively, if the existing building does not have any renewable energy generation capacity beforehand, then any addition of such systems to the site would represent an improvement.
- Annual carbon emissions from operational energy, in kg/m² floor area: In this indicator, a *reduction* would be an improvement.
- Where such an improvement is claimed, these 'before' and 'after' figures could be calculated by the developer via any of the following methods, although this is not an exhaustive list and there may be alternative methods to demonstrate the figures:
 1. Building Regulations Part L compliance calculation methodologies (SAP, HEM or SBEM).
 2. PHPP (Passivhaus Planning Package).
 3. CIBSE TM54 (aforementioned)
 4. NABERS UK (an energy rating system that originally was developed in Australia but is now also available in the UK for office buildings, administrated by CIBSE).

4.41 Policy P5 along with the council's Climate Change Strategy 2022⁽⁴⁾ sets out the council's commitment to improve the sustainability and environmental performance of all new development by measures that reduce the impact on climate change, and mitigate and adapt to its effects. Much of the control over energy, water, and other sustainability aspects are matters for building regulations which are outside the scope of planning. Nevertheless, the local planning policies have the scope to influence the design, layout of new development along with a number of other matters.

4.42 The policy emphasis is on how the design and layout can provide mitigation and adaptation to the impacts of climate change. Development that incorporates renewable and zero to low carbon design and technologies, and improves energy efficiency will be supported. The Council is aware that Building Regulations Part L 2021 already includes a certain amount of solar PV provision in the baseline by which its targets are set, and that the incoming Future Homes Standard (Part L 2026) requires a certain amount of renewable energy provision on-site unless this is technically unfeasible or if a building has a storey above 18m in height. Part (a) of the policy expresses a preferred order in which improvements on Building Regulations Part L could be pursued, where the developer proposes to make any such improvements.

4.43 Similarly, the Council recognises that Building Regulations Part S 2021 already requires a certain level of EV charging. While the levels stipulated in Part S are the legal minimum requirement and should not be presented as a special benefit of a proposed scheme, the Council will recognise the benefits brought by proposals to include a greater level of provision than this where it would make it significantly easier for development users to switch to EV. Examples include EV charging in on-street parking, and wider or faster charging at non-residential developments, both of which are not so generously provisioned in Part S. Table 4.5 highlights some examples of EV charging provision that would usefully beyond that required by Part S.

4.44 These consideration of climate in design and layout should also include identifying no or low cost solutions to climate risks that also deliver other benefits, such as integrating in areas of green infrastructure and green design principles. In addition to addressing climate change adaptation, green infrastructure provides other benefits such as providing net increases in biodiversity and amenity spaces and increasing attractiveness of new development by improving place shaping characteristics.



- 4.45** The sustainability of new development needs to be fully considered as part its overall design. The council will therefore expect applicants to consider, at the outset of the development process, what measures could be incorporated into development proposals to reduce, mitigate and/or adapt to climate change. Where required through Policy P1, design and access statements or planning or sustainability statements submitted in support of applications should explain how they have addressed Policy P5.
- 4.46** It is important to note that major developments are likely to have the ability to achieve more of these aspects given the scale of development and greater opportunities to implement long term sustainable measures in their design than smaller scale developments. Smaller developments or those within or near to heritage assets (e.g. within conservation areas or listed buildings) may be more restricted in what measures the development can achieve.
- 4.47** The council will consider the need to prepare further guidance on achieving high quality design and mitigating climate change in the district. Table 4.5 sets out some examples of the types of measures which could be incorporated into proposals in order to positively reduce CO₂ emissions and energy costs, reduce reliance on fossil fuels and improve resilience to the impacts from climate change. Many of these measures not only help plan for the present but also help future-proof development by improving resilience to impacts from climate change and associated costs and looking to future demands in technology, such an increased uptake of electric cars.

[-]

Table 4.5 Sustainability measures and the design of new developments

What?	How?	Why?
Energy efficiency and consumption	Passive solar gain and maximising natural daylight	Passive solar design refers to the use of the sun’s energy for the heating and cooling of living spaces. In this approach, the building itself or some element of it takes advantage of natural energy characteristics in materials and air created by exposure to the sun. Development that maximises passive solar gain and natural daylight through the siting, orientation and layout of a development can reduce energy bills. The proposed layout can also increase the opportunities for solar panels (e.g. south facing roofs). Internal layouts can be designed so as to maximise solar gain to the most used rooms (this is shown in Figure 4.25).
	Building fabric	<u>The level of insulation values in the walls, floors, roofs, doors and windows of a building, and the level of airtightness achieved, define the thermal performance of that building. This is termed ‘space heat demand’. The Council is aware that the published Future Homes Standard (FHS; Building Regulations Part L 2026) does not make any improvement to the standard of insulation and glazing set by Part L 2021, although it does make a slight improvement to airtightness. The Council is also aware that the FHS fabric does not achieve the low space heat demand that is identified by the Climate Change Committee to be necessary in new homes from as part of the achievement of the UK’s legislated carbon targets under the Climate Change Act. Improved building fabric works both to keep heat in (reducing space heat demand in winter) and to keep excess heat out when the outdoor temperatures are too high, so long as the building also has effective ventilation.</u> <u>While this Local Plan Review does not set any particular standards for fabric and space heat demand, the benefits of these will be recognised as a benefit of the development where they are proposed and demonstrably quantified. Where proposed, these could be quantified in terms of space heat demand (kWh/m²floorspace/year), % reduction on Building Regulations Part L TFEE metric, or simply laid out as the U-values¹⁰ of each element of the building and/or air permeability of the building as a whole, in comparison to those of the Part L notional building.</u>

¹⁰ U-value is a number representing the amount of heat that will pass through a construction product or material. Improved U-values work both to keep heat in (reducing space heat demand) and to keep excess heat out when the outdoor temperatures are too high. A lower U-value means better performance.



		<i>[the row on green roofs has been moved to the ‘urban cooling’ row instead, as it is far more relevant to that topic]</i>
	Renewable and low carbon technologies	These can include solar power, solar water heating, wind turbines, biomass, combined heat and power, ground/air source heat pumps and electric charging points. These can be applied in varying degrees dependent upon the scale and nature of the development proposed and site characteristics. This also includes future proofing to allow for demands for future advancements in technologies, for example: ensuring appropriate wiring are in place to support the integration of electric charging points for home use, employment and retail areas and district and local centres. <u>Where a development proposes to provide on-site renewable energy in excess of the minimum standards set by the applicable version of Part L at the time of application (whether Part L 2021 notional building or Part L 2026 FHS ‘reasonable amount’ of provision), this will be treated as a benefit of development. However, applicants should not present the basic Part L minimum PV amount (or the Part L 2026 notional building heat pump) as if it were a special planning-related benefit, as these are a legal requirement for regulatory compliance.</u>
Water efficiency	Rain water harvesting	This can include grey water recycling systems such as supplying toilets and outside taps, and use of water butts to store water for use outdoors in gardens etc.
	Water consumption	A 110 litre per day water requirement for new residential development is encouraged. This <u>reflects the Building Regulations Part G ‘optional requirement’ that the Local Plan Review is empowered to seek, and reflects in an ambition set out in the National Framework for Water Resources which seeks to reduce average personal water consumption to this level by 2050. Mansfield is in a water supply area categorised as being in severe water stress (this designation applies to the entire Severn Trent water supply area except Chester zone¹¹).</u> <u>In non-residential developments, while this Local Plan Review does not set any specific required targets for water efficiency, it will be considered a benefit of the development where the application proposes to achieve any of the following:</u> <u>RIBA Climate Challenge 2030 water consumption limits (currently only available for residential, schools and offices)</u> <u>BREEAM credits in BREEAM topic Wat01</u> <u>In proposed data centres, comparison of the proposed development’s water use efficiency in relation to an evidenced industry standard.</u>
Urban cooling	Green infrastructure and landscaping	Careful thought should be given to maximising the potential for surrounding green infrastructure and landscaping to support no to low costs and passive energy gains with respect to cooling and reducing heat loss. For smaller developments, features such as the position of gardens and trees may be useful considerations. <u>Trees, thanks to their height, are particularly useful for shading buildings, especially deciduous trees which provide shade in summer but lose their leaves to allow daylight into buildings in winter. All vegetation also provides evapotranspirative cooling (cooling that results when water evaporates from soil and plants, absorbing heat).</u> For major development, the incorporation of open spaces and green corridors, in and around the development, should be considered alongside other needs, such as urban cooling and sustainable drainage systems, and also recreational/sustainable transport and biodiversity enhancements. Where possible, the inclusion of trees, hedgerows and woodland within the design of open space and streetscapes should be prioritised over intensely managed amenity grassland. This will help to maximise CO₂ <u>mitigationsequestration</u>, provide wind blocks and improve urban cooling. Native woodland and broad-leaved trees should be prioritised over conifers. Species mixes may also need to consider future resilience to climate change <u>(for example resistance to droughts which are projected to be more frequent and more severe in coming decades,</u>

¹¹ Environment Agency (2021), *Water stressed areas – final classification 2021*.

https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fmedia%2F60dd7f328fa8f50ab1d0128a%2FWater_stressed_areas___final_classification_2021.odt&wdOrigin=BROWSELINK



		<u>and/or resistance to the types of pests or diseases that are expected to become more prevalent as the UK gets warmer and wetter winters), but native species should be prioritised.</u>
	Green and brown roofs	These can help to regulate the temperature of a building, remove CO ₂ and other pollutants from the atmosphere, reduce any heat island effect and provide biodiversity benefits. These also improve the attractiveness of the area and can improve economic uptake.
	<u>Overheating risk mitigation assessment</u>	<u>The Council is aware that Building Regulations Part O requires a certain level of overheating risk mitigation in residential developments. There are two routes to Part O compliance: A simplified route, and a more in-depth route in certain situations.</u> <u>While the Council does not set any concrete requirement for enhanced overheating risk mitigation beyond what Part O already requires, the following steps would be seen as a benefit of a development where they are proposed:</u> <u>Following the more in-depth assessment route to Part O compliance, in cases where Part O would have permitted the simplified route</u> <u>Conducting a full CIBSE TM59 assessment of proposed residential buildings, especially where the building is anticipated to have vulnerable residents</u> <u>Conducting a CIBSE TM52 assessment of proposed non-residential buildings, especially when they will be used by groups likely to have higher vulnerability to overheating (e.g. care facilities; medical/hospitals, infant daycare, facilities likely to be frequented by those with physical disabilities)</u> <u>Utilising future climate scenarios (where at least 2°C global warming occurs by 2050) within the lifespan of the development. Future weather files can be obtained from CIBSE for use in their overheating risk assessments.</u>
Drainage	Sustainable drainage systems	Sustainable drainage systems (SuDS) can reduce the risks of flooding and can be used in all types and scales of development. Providing more permeable surfaces in development can also reduce surface water run-off or the need for drainage works to carry water off site. Trees, woodland and hedgerows play an important role in mitigating flooding, if planted in the right locations.
	<u>Adaptation to increased future rainfall intensity due to climate change</u>	<u>The projected level of global warming through to 2050 and 2100 is anticipated to bring more frequent intense rainfall to the UK. In line with the UK Climate Change Risk Assessment, applications are encouraged to have regard to the change in flood risk that will occur in the climate change scenario of at least 2°C global warming by 2050, when preparing their flood risk mitigation and drainage strategies. Future climate projections at the local level, including changes in peak rainfall, are available from the Met Office UKCP18 User Interface¹².</u> <u>Where development in a zone of existing or future flood risk is unavoidable, features that can assist in flood resilience (in addition to the SUDS features described above) could include:</u> <u>Use of water-resistant materials up to the design flood level</u> <u>Elevation of electrical equipment above flood level</u> <u>One-way valves on wastewater pipes,</u> <u>Flood doors and flood barriers.</u>
Waste re-use and recycling	Waste storage facilities	This can include the use of composting bins and convenient storage for recycling bins. <u>Well-designed waste storage provision would include not just physical space for the anticipated waste volumes, but also layouts that enable easy transfer from the storage point to the collection point.</u>
Transport and travel	Electric charging points and cycle storage	The incorporation of electric charging points and convenient cycle storage at new developments can assist with the shift to the use of more sustainable travel modes which cut down on CO ₂ , NO ₂ and particulate matter emissions [note: NO ₂ - nitrogen dioxide and particulate matter being the main pollutants of concern for motor vehicles which impact on human health].

¹² <https://ukclimateprojections-ui.metoffice.gov.uk/ui/home>



		<u>Building Regulations Part S already requires a certain level of EV charging provision at developments that have associated parking. With some exceptions, the broad requirement in Part S is understood to be at least 1 EV charging space per proposed dwelling that has associated parking, and 1 EV charging space at parking associated with non-residential development if there are more than 10 parking spaces associated with the proposed non-residential development, and that all chargers must have a speed of at least 7kW. Part S compliance will not be seen as a ‘benefit’ of development but is a basic legal requirement. However, while Part S provisions in residential-associated parking are suitable to enable residents to switch to EV, its provision requirements for non-residential are worded in a way that does not appear to scale up in proportion to the number of proposed spaces. Additionally, it only applies to ‘associated’ parking, which it defines in a way that may not assist residents of homes that are proposed to use on-street parking or parking that is otherwise separated from the property by a public highway. Finally, the charging speed of 7kW would represent a duration of circa 10 hours to charge a typical car, which may not be useful at non-residential premises where the duration of parking tends to be far lower. Therefore, the following optional enhanced EV charging provision is not <i>required</i> but will be considered as a benefit of developments where such enhancements are proposed:</u> <u>EV charger provision to proposed spaces that do not meet the Building Regulations Part S definition of ‘associated’ parking (e.g. where it is proposed that residents or building users would park on-street or in parking separated from the building by a public highway)</u> <u>EV charger provision in proposed non-residential parking that is provided as e.g. at least 10% of spaces, rather than simply a single EV charger regardless of how many non-residential spaces are proposed.</u> <u>In non-residential car parking where parking duration is likely to be shorter, the inclusion of some chargers faster than the 7kW standard set by Part S (although the provision should also include some chargers of 7kW as some EVs are not able to use faster chargers).</u>
Materials	Locally sourced and recycled materials Materials that can respond a changing climate and weather conditions	Using responsibly sourced and recycled materials can make a major contribution to sustainable development by slowing down the demand for non-renewable resources. The materials used also need to take account of climate change, including extreme weather conditions such that buildings last longer and repair and maintenance costs are minimised. <u>See also the point above about water-resistant building materials up to the anticipated flood level in a future climate scenario whereby 2°C of global warming occurs by 2050.</u>
	<u>Reducing embodied carbon</u>	<u>Up-front embodied carbon is greenhouse gas emissions associated with the extraction, manufacturing, transport and construction of materials/products up to the completion of the building. Whole-life embodied carbon is all of the above, plus maintenance/replacement and eventual end of life of building products. Embodied carbon can be 50% or more of a development’s total carbon emissions across its lifetime.</u> <u>Many common construction materials/products have very high embodied carbon, such as standard cement, standard concrete, and metals (steel, aluminium, copper and zinc) when not from recycled sources. Simple swaps can help reduce the embodied carbon of buildings, such as:</u> <u>Using mortar/concrete with a high proportion of cement replacement</u> <u>Using recycled aggregates in concrete, instead of virgin aggregates</u> <u>Using timber or other plant-origin materials, as these plants absorb carbon and lock it up for as long as the product is in use. Examples of easy swaps in many cases include timber frame instead of steel or concrete, or wood fibre/hemp insulation instead of phenolic foam.</u> <u>Avoiding unnecessary use of aluminium, zinc or other metals, or sourcing metal products from recycled origin or electric furnaces</u> <u>Sourcing products with EPDs (Environmental Product Declarations) which display many environmental attributes of the product, including greenhouse gas emissions, which you can compare to generic typical construction materials.</u> <u>The Building Materials Pyramid can help identify which materials typically have highest or lowest embodied carbon:</u> https://materialepyramiden.dk/



		<u>Simple narrative on material choices such as the above would fulfil Policy P5 point 1.h. However, if the developer wishes to demonstrate excellence in this topic, they could quantify their embodied carbon. The only appropriate industry methodology for quantifying embodied carbon is the RICS Whole Life Carbon Assessment for the Built Environment¹³ or successor document.</u>
--	--	--

¹³ <https://www.rics.org/profession-standards/rics-standards-and-guidance/sector-standards/construction-standards/whole-life-carbon-assessment>

References

ⁱ AECOM & Zero Carbon Hub (2012), *Fabric energy efficiency for Part L 2013*. https://www.zerocarbonhub.org/sites/default/files/resources/reports/Fabric_Standards_for_2013-Worked_Examples_and_Fabric_Specification.pdf

ⁱⁱ Environment Agency (2021), *Water stressed areas – final classification 2021*. https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fmedia%2F60dd7f328fa8f50ab1d0128a%2FWater_stressed_areas___final_classification_2021.odt&wdOrigin=BROWSELINK

ⁱⁱⁱ HM Government Ministry of Housing, Communities & Local Government (2025), *National Planning Policy Framework Plan-making and national decision-making policies December 2025*. [Part of 2025 NPPF consultation]. https://assets.publishing.service.gov.uk/media/697b71c52ff8d10a830d5d4a/Draft_NPPF_December_2025.pdf#page=20

^{iv} Climate Change Committee (2026), *A Well-Adapted UK: The Fourth Independent Assessment of UK Climate Risk (CCRA4-IA)*. <https://www.theccc.org.uk/publication/a-well-adapted-uk/>

^v HM Treasury / National Infrastructure & Service Transformation Authority [NISTA] (2025), *UK Infrastructure: A 10 Year Strategy*. https://assets.publishing.service.gov.uk/media/6853c5db99b009dcdcb73649/UK_Infrastructure_A_10_Year_Strategy_Web_Accessible.pdf

^{vi} Royal Institute of British Architects (2021), *RIBA 2030 Climate Challenge Version 2*. <https://www.riba.org/media/rqt35wb/riba-2030-climate-challenge.pdf>

^{vii} Nottinghamshire County Council (2025), *Local Nature Recovery Strategy for Nottinghamshire and Nottingham*. <https://www.nottinghamshire.gov.uk/planning-and-environment/countryside-and-green-spaces/local-nature-recovery-strategy-for-nottinghamshire>

^{viii} Mansfield District Council (no publication date stated), *Mansfield District Local Plan Review - Regulation 18 consultation: What People Said*. <https://mansfield-consult.objective.co.uk/kpse/event/1C1A0C3C-4041-4D2F-83C2-B7A61527498B/#peoplesubmissions?sm-hc=cid,consultationPoint.tags,type,respondentTotal,tags>

^{ix} Natural England (2020), *Climate Change Adaptation Manual (NE751)*. *Evidence to support nature conservation in a changing climate*. <https://publications.naturalengland.org.uk/publication/5679197848862720>

^x Natural England (2021), *Carbon Storage and Sequestration by Habitat 2021 (NERR094)*. *A review of the evidence (second edition)*. <https://publications.naturalengland.org.uk/publication/5419124441481216>

^{xi} RAC (2024) *Electric car charger types, connectors and speeds – a visual guide*. <https://www.rac.co.uk/drive/electric-cars/charging/charger-types-connectors-speed/>

^{xii} RAC (2024) *Electric car charger types, connectors and speeds – a visual guide*. <https://www.rac.co.uk/drive/electric-cars/charging/charger-types-connectors-speed/>