

Central Lincolnshire Policy S8 Reducing Energy Consumption – Non-Residential Buildings Evidence Report

Formerly Policy S7

March 2022



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1. Introduction

- 1.1. The Central Lincolnshire Local Plan is being updated since the first Local Plan for Central Lincolnshire, an area covering the districts of City of Lincoln, North Kesteven and West Lindsey, was adopted in April 2017.
- 1.2. This Evidence Report (which is one of a collection) provides background information and justification for Policy S8, which relates to reducing energy consumption in non-residential buildings.

2. Policy Context

National Policy and Guidance

- 2.1. Since the Central Lincolnshire Plan was adopted the National Planning Policy Framework (NPPF) was updated in July 2018 with subsequent additional changes being published in February 2019 and again in July 2021.
- 2.2. Chapter 2 of the NPPF sets out national policy for achieving sustainable development, which separates it out into three objectives – economic, social and environmental. Within the environmental objective, “mitigating and adapting to climate change, including moving to a low carbon economy” forms a key part of achieving sustainable development – a key goal of the planning system.
- 2.3. Paragraph 20 of the NPPF sets out the strategic matters that should be addressed through strategic policies, including “planning measures to address climate change mitigation and adaptation.”
- 2.4. Chapter 14 of the NPPF provides national planning policy relating to climate change. It provides some clarity for the expectations of how Local Plans should address the challenges of climate change in paragraph 148 where it says:

“The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.”
- 2.5. In paragraph 154, the NPPF goes on to state that development “should be planned for in ways that...can help to reduce greenhouse gas emissions, such as through its location, orientation and design...”
- 2.6. This all makes it quite clear that Local Plans should not be silent on climate change and in fact that they should proactively address the challenge as a key vehicle to achieving sustainable development.
- 2.7. The Planning Practice Guidance (PPG) was first introduced in 2014 and offers ‘live’ government guidance. The PPG provides guidance to help in the implementation of policy in the NPPF.
- 2.8. The PPG includes an entire section devoted to climate change including a subsection entitled “How can the challenges of climate change be addressed through the Local

Plan?”¹ Within this section it provides examples of mitigating climate change through the reduction of emissions, including “promoting low carbon design approaches to reduce energy consumption in buildings...”

2.9. The PPG goes on to provide some additional clarity for how Local Plans should address zero carbon buildings, it states:

“The National Planning Policy Framework expects local planning authorities when setting any local requirement for a building’s sustainability to do so in a way consistent with the government’s zero carbon buildings policy and adopt nationally described standards. Local requirements should form part of a Local Plan following engagement with appropriate partners, and will need to be based on robust and credible evidence and pay careful attention to viability. In this respect, planning authorities will need to take account of government decisions on the Housing Standards Review when considering a local requirement relating to new homes.”²

2.10. It also goes on to state:

“Different rules apply to residential and non-residential premises. In their development plan policies, local planning authorities:

- *Can set energy performance standards for new housing or the adaptation of buildings to provide dwellings, that are higher than the building regulations, but only up to the equivalent of Level 4 of the Code for Sustainable Homes.*
- *Are not restricted or limited in setting energy performance standards above the building regulations for non-housing developments.*

The Planning and Energy Act 2008 allows local planning authorities to set energy efficiency standards in their development plan policies that exceed the energy efficiency requirements of the building regulations. Such policies must not be inconsistent with relevant national policies for England. Section 43 of the Deregulation Act 2015 would amend this provision, but is not yet in force.

The Written Ministerial Statement on Plan Making dated 25 March 2015 clarified the use of plan policies and conditions on energy performance standards for new housing developments. The statement sets out the government’s expectation that such policies should not be used to set conditions on planning permissions with requirements above the equivalent of the energy requirement of Level 4 of the Code for Sustainable Homes (this is approximately 20% above current Building Regulations across the build mix).

Provisions in the Planning and Energy Act 2008 also allow development plan policies to impose reasonable requirements for a proportion of energy used in development in their area to be energy from renewable sources and/or to be low carbon energy from sources in the locality of the development.”³

2.11. As such, flexibility is provided for requiring higher energy efficiency standards than stipulated in building regulations. Furthermore, since this guidance was last updated The Climate Change Act 2008 (2050 Target Amendment) Order 2019 (S.I. 2019/1056) has been issued which has increased the required carbon reduction on 1990 levels from 80%

¹ PPG Reference ID: 6-003-20140612

² PPG Reference ID: 6-009-20150327

³ PPG Reference ID: 6-012-20190315

to 100% - bringing the commitment to the Paris Agreement into UK law. This commitment needs to be taken into account in planning decisions.

- 2.12. The Government has started the process of introducing a Future Buildings Standard which aligns with the previously announced Future Homes Standard. Each standard sets out the proposals, with the technical detail reserved for Part L; volume one covers homes and volume two non-domestic buildings. The Future Buildings Standard follows the same structure as the Future Homes Standard and also has an interim standard for 2021. The main difference is the Future Buildings Standard consultation does not include a target or any detail for 2025.
- 2.13. The first consultation on the Future Buildings standard was held October 2019 to February 2020, and the second held January 2021 to April 2021. The second consultation built on the Future Homes Standard consultation by setting out energy and ventilation standards for non-domestic buildings, existing homes and includes proposals to mitigate against overheating in residential buildings. It set out proposals for a Future Buildings Standard, which provides a pathway to highly efficient non-domestic buildings which are zero carbon ready, better for the environment and fit for the future.
- 2.14. Government has announced that the interim outcomes of this consultation and the previous one, will now be implemented through a statutory instrument and new approved documents which will deliver an uplift in energy efficiency standards for new homes and buildings, improved ventilation and a requirement to mitigate any overheating in residential buildings.
- 2.15. Both *Approved Document L, Conservation of fuel and power, Volume 1: Dwellings* and *Approved Document L, Conservation of fuel and power, Volume 2: Buildings other than dwellings* were published on 15 December 2021 take effect from 15 June 2022. Transitional arrangements are in place in relation to building work where a building notice or an initial notice has been given to, or full plans deposited with, a local authority before 15 June 2022 provided that the building work is started before 15 June 2023.
- 2.16. In addition, Approved Document F, Volume 1 which applies to dwellings, and Volume 2 which applies to buildings other than dwellings, were also published on 15 December 2021, and take effect from 22 June 2022. The same transitional arrangements apply as for Document L.
- 2.17. Thus, many of the measures needed to deliver net zero carbon buildings will be implemented through Building Regulations in the near future (which will likely help to drive down the cost of construction to such standards). However, as the evidence shows in section 3 of this evidence report, greater urgency is needed to ensure we stay within our carbon budget.
- 2.18. Aside from climate change, national policy and guidance specifically in the NPPF and PPG also provide clarity over the expectations for what local plans should achieve in more general terms. Chapter 3 of the NPPF addresses the expectations for plan-making and in paragraph 16 it states that plans should “be prepared positively, in a way that is aspirational but deliverable.”
- 2.19. The PPG provides additional detail over the expectations relating to the cost of policies in a local plan, their impact on viability and therefore the delivery of the plan. It requires local authorities to “prepare a viability assessment in accordance with guidance to ensure that

policies are realistic, and the total cost of all relevant policies is not of a scale that will make the plan undeliverable.”⁴

- 2.20. It also provides detailed guidance about the expectations for how the whole plan viability assessment should be undertaken and the inputs to be used – <https://www.gov.uk/guidance/viability>.

Local Policy

- 2.21. The 2017 Local Plan includes Policy LP18 which addresses climate change and low carbon living. This policy provides a supportive position for development which reduces demand for energy usage; uses sustainable materials and minimises construction waste; provides site-based renewable energy generation; or offsets carbon used in new development.
- 2.22. Policy LP18 does not go as far as to make any requirements of new development, but the world has moved on since the last plan was written and the context around climate change has particularly accelerated with new evidence providing greater clarity as to the challenge we face and our responsibilities in addressing this.

3. Context and Evidence

- 3.1. The Paris Agreement 2015, which the UK signed up to, committed to taking action to limit global warming to +2°C and a subsequent Intergovernmental Panel on Climate Change (IPCC) report in 2018 identified that a +1.5°C change should be our limit which will require reaching net zero emissions by 2050.
- 3.2. In May 2019 the UK Parliament declared a climate emergency, and in doing so Parliament also amended the 2008 Climate Change Act in order to set a legally binding target for emissions in the UK to become net zero by 2050.
- 3.3. Locally, each of the four Central Lincolnshire authorities have established a variety of corporate targets and commitments, specifically:
- **City of Lincoln:** The City of Lincoln Council declared a Climate Change Emergency on 23 July 2019. The Climate Change declaration adopted is made up of eight resolutions that the Council will abide by, one of which is to commit to the vision of a carbon neutral Lincoln by 2030 at the latest. The declaration also calls on the districts and county council to work with the City Council on critical areas such as highways, energy, waste, health and wellbeing. Since declaring the Climate Change emergency, the City Council has helped to establish the Lincoln Climate Commission which is a body comprising of public, private and voluntary sector organisations who wish to work together to provide a forum for setting and championing Lincoln’s transition to a zero carbon and climate resilient future. The Commission is currently developing a City-wide roadmap to achieve zero carbon by 2030.
 - **West Lindsey:** West Lindsey District Council has engaged with this subject matter for over 10 years and has worked through two Carbon Management Plans (CMP), with a third currently under production. More recently, the Council passed a motion in Nov 2019 to develop a Sustainability, Climate Change and Environment Strategy to be adopted by Full Council in May 2021, with the aim of the Council and wider District achieving a net-zero carbon position by 2050. A draft version of the Strategy was recently issued for consultation/review and received positive feedback, with a final

⁴ PPG Reference ID: 61-039-20190315

version due in May. As work has progressed thinking has changed with regards to the 2050 timeframe and although not as yet formally adopted, it is likely that a revised date nearer 2041 will be pursued. Thoughts are turning to how the action plan is overseen and delivered internally and how best the Council can lead and influence individuals and other stakeholders from across the wider District to take positive actions that will aggregate and help the District to achieve a carbon zero position.

- **North Kesteven:** North Kesteven District Council unanimously declared a 'Climate Emergency' on 15 July 2019 with four key elements: committing to work with residents, business and other partners to tackle climate change, lobbying support to address the emergency by 2030; recognising the Council's own achievements in reducing greenhouse gas emissions; supporting the development of new policy and strategy as part of the 'Our Environment' priority; and, supporting the development of pilot programmes to advance sustainable development goals. On 24 September 2020 the Council approved the Climate Emergency Strategy and Action Plan to set out the action the authority will take to achieve net zero emissions by identifying immediate steps to be taken but to also act as a starting point in tackling the wider climate agenda. The strategic aims are to become a carbon neutral Council by 2030 and also to support partners, residents and local businesses to achieve carbon neutrality with an aspirational timeframe of 2030. The accompanying Action Plan identifies nine thematic categories against which specific actions and those responsible for delivery and implementation are identified.
- **Lincolnshire County Council:** In 2019, the County Council committed to reach carbon net zero by 2050 and has recently published a strategy to achieve its target. The strategy, called the Green Masterplan, lays out guiding principles to influence future council activity and act as a prompt for everyone wanting to be more sustainable in the way they live and work. The Green Masterplan highlights the council's wider ambitions of supporting our partners, businesses and communities to enable the whole county area to reach net zero in the same timeframe. The Green Masterplan will be continually updated to ensure national policy is reflected at a local level and we remain on track to meet our targets. An initial action plan sets the scene for future work and will be regularly updated with a new plan released every 5 years.

3.4. The evidence behind these declarations is clear – action against climate change is needed now to avoid catastrophic resultant impacts.

3.5. Planning has a limited, but important, role to play in delivering net zero carbon in the UK. In its response to the responses received on The Future Homes Standard in January 2021 the Government stated that:

“All levels of Government have a role to play in meeting the net zero target and local councils have been excellent advocates of the importance of taking action to tackle climate change. Local authorities have a unique combination of powers, assets, access to funding, local knowledge, relationships with key stakeholders and democratic accountability. This enables them to drive local progress towards our national climate change commitments in a way that maximises the benefits to the communities they serve. As part of this, the Government wishes to ensure that we have a planning system in place that enables the creation of beautiful places that will stand the test of time, protects and enhances our precious environment, and

supports our efforts to combat climate change and bring greenhouse gas emissions to net zero by 2050.⁵

- 3.6. This demonstrates quite clearly how Government expects local planning authorities to be at the forefront of delivering progress towards achieving net zero carbon.

Climate Change Evidence

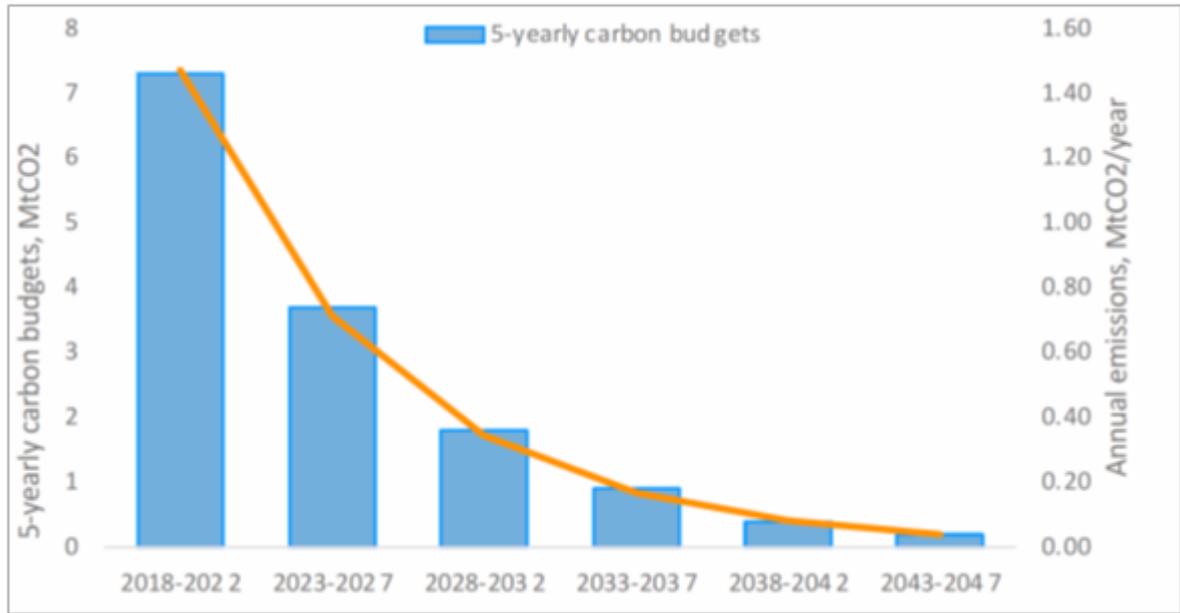
- 3.7. Consultants were appointed in July 2020 to investigate the scale of Central Lincolnshire's contribution to greenhouse gas emissions and climate change, and the opportunities that exist to tackle these problems locally, including through the Local Plan.
- 3.8. This work set out the overarching context for Central Lincolnshire identifying what would need to be done in order to achieve a carbon neutral Central Lincolnshire by 2050 (and 2041 to align to the science-based approach) to accord with the Paris Agreement. This research painted a very challenging picture to achieve these goals.
- 3.9. This work was broken down into a number of distinct tasks which combine together to provide a holistic picture for the area. Of particular relevance for Policy S8 were Task C: Carbon Reduction Targets, Task G: Technical Feasibility Assessment, and Task H: Cost Implications.
- 3.10. Task C establishes what a carbon neutral Central Lincolnshire would look like and what has to be done to achieve this, both in terms of the Local Plan and through other means. Using the Tyndall Centre's carbon budget model, it establishes that Central Lincolnshire must emit no more than 9 MtCO₂ between 2020 and 2100. It then highlights that if emissions continue at 2017 levels, then this entire budget will be used up by 2027.⁶
- 3.11. The Task C Report also clarifies that in order to deliver on the Paris Agreement carbon budget, an annual reduction of 13.4% in emissions is needed. This is shown in Figure 2.4.2 of the Task C Report (replicated as figure 1 below). This is a stark reminder of the extent of the challenge that Central Lincolnshire faces if we are to do 'our bit' to address this global ticking clock.

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/956094/Government_response_to_Future_Homes_Standard_consultation.pdf

⁶ Central Lincolnshire Local Plan: Climate Change Evidence Base: Task C – Carbon Reductions Targets February 2021; Bioregional, Etude and Currie & Brown – page 9, paragraph 2.4.3.

Figure 1: Replicated Figure 2.4.2 of Task C Report showing 5 yearly carbon budgets and annual CO2 emissions for Central Lincolnshire staying within a 1.5°C temperature rise.

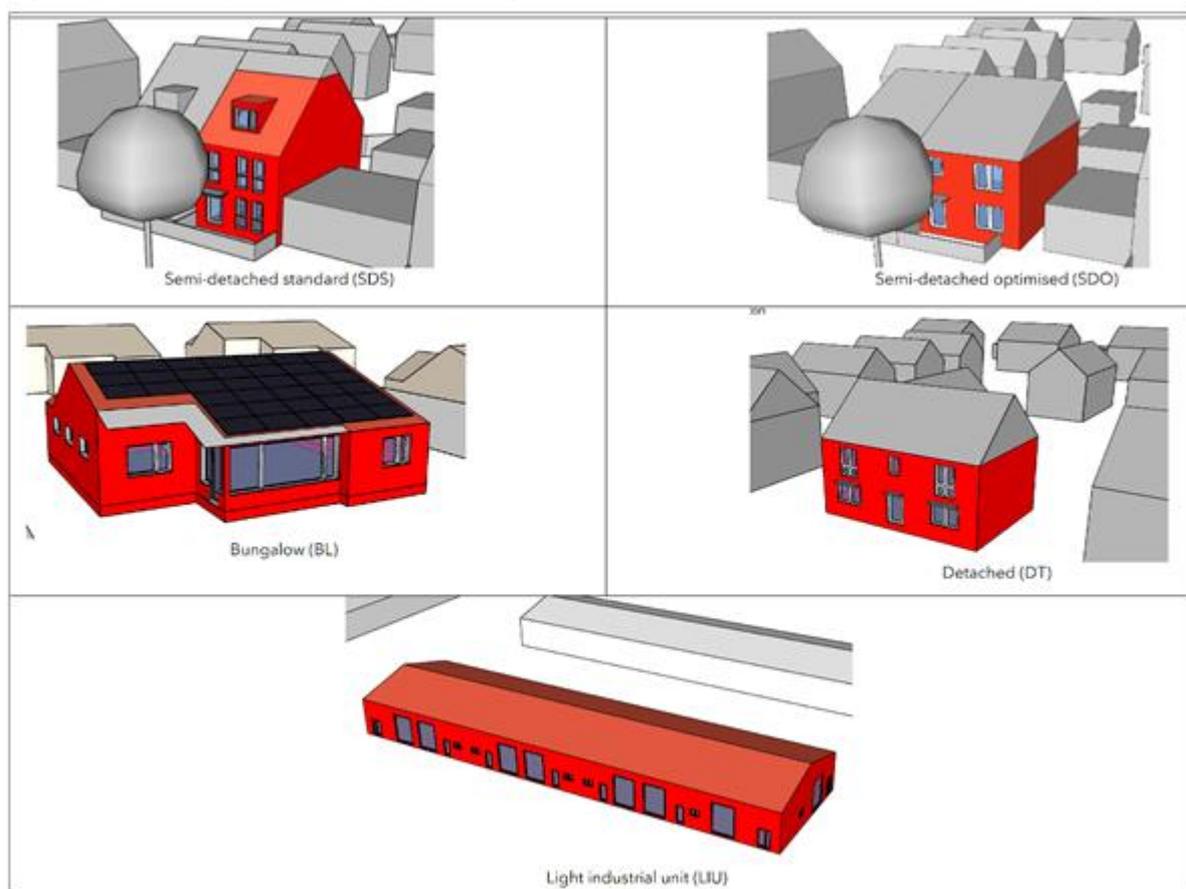


- 3.12. The report goes onto look at the ways in which the Central Lincolnshire Authorities might address the challenge, but it concludes that it cannot be achieved through offsetting and that a multi-faceted approach will be needed, targeting both energy being used and renewable energy being generated. These interventions include making new buildings net zero carbon as soon as possible, with a suggested target of 2022 to avoid exponentially increasing the scale of the challenge.⁷
- 3.13. Task G looks in depth at defining what is needed to be considered a net zero carbon building and then the technical feasibility of achieving this. This report breaks down the topic into a number of categories – namely energy efficiency, low carbon heating, and renewable energy – looking in depth at what goes into establishing an efficient building that is net zero carbon.
- 3.14. It also assesses how design and built form can affect achieving these goals and tests the impacts and effectiveness of achieving net zero in a number of types of property through energy modelling scenarios.⁸ These modelled scenarios demonstrate the variety of ways in which net zero carbon buildings can be achieved through a number of means, with some having a greater impact than others. This includes simple, cost-neutral measures such as orientation to maximise solar gain and opportunities for PV panels to be installed in the future through to other more costly measures such as enhanced built fabric, efficient heating methods and the actual installation of PV panels. These scenarios are shown in Figure 2 below:

⁷ Central Lincolnshire Local Plan: Climate Change Evidence Base: Task C – Carbon Reductions Targets February 2021; Bioregional, Etude and Currie & Brown – page 11, paragraphs 2.6.3. and 2.6.5.

⁸ Central Lincolnshire Local Plan: Climate Change Evidence Base: Task G – Feasibility Assessment, February 2021; Bioregional, Etude and Currie & Brown – pages 14-35.

Figure 2: Task G Report - House type modelling scenarios



- 3.15. The findings of the Task G report are set out in section 6.1 of the report with a number of recommendations for how the requirements to achieve net zero carbon homes relates to policy including:
- Options for space heating target (page 48);
 - Options for Energy Use Intensity levels (page 49); and
 - Options for PV generation (page 50).
- 3.16. These options are in addition to the assumption that design is optimised to allow for maximum gains to be achieved⁹ through new policy requirements.
- 3.17. These options then produce four combinations of measures for how net zero carbon can be achieved using space heating targets, Energy Use Intensity levels and PV generation (pages 52 and 53). These options are replicated in Figures 3 and 4 below for ease of reference. This demonstrates that it is feasible to achieve net zero carbon in new development in Central Lincolnshire, as well as setting out the most efficient ways of achieving net zero and it also goes onto look in detail at how assured performance measures can be put in place to ensure that any performance gap is monitored and minimised.¹⁰

⁹ Central Lincolnshire Local Plan: Climate Change Evidence Base: Task G – Feasibility Assessment, February 2021; Bioregional, Etude and Currie & Brown – page 46, paragraph 6.1.11.

¹⁰ Central Lincolnshire Local Plan: Climate Change Evidence Base: Task G – Feasibility Assessment, February 2021; Bioregional, Etude and Currie & Brown – pages 57-58.

- 3.18. Option 1, the most ambitious of the options presented, suggests that for optimum efficiency between 15 and 20 kWh/m²/yr space heating demand should be sought, with not more than 35 kWh/m²/yr Energy Use Intensity and with enough PV energy generation on site to match the Energy Use Intensity. The report highlights that this would involve an uplift in costs of 8-11% and would represent 80% reduction in operational costs against the baseline.

Figure 3: Task G Report - Option 1 energy efficiency standard policy recommendation

Space heating demand	Energy Use Intensity Resi non-resi*		PV generation	Performance gap**
Ensures that space heating is reduced and that inefficiency is not 'masked' by the heat pump, helping to reduce the risk of high heating costs.	Covers all energy uses, reduces the risk of high energy heating system. It also provides the 'energy use' number for Net Zero and a simple metric for users post completion.		Addresses the need for greater PV deployment in an obvious location for them: the roof of new buildings.	Helps to ensure that the estimated energy/carbon performance is not only theoretical and that it is delivered, which is what matters.
No requirement	No requirement		No requirement	No requirement
30 kWh/m ² /yr	60 kWh/m ² /yr	100 kWh/m ² /yr	Enough to match EUI	Uplift to SAP / SBEM requirements
20 kWh/m ² /yr	45 kWh/m ² /yr	65 kWh/m ² /yr	120 kWh/m ² /yr	Bespoke Central Lincolnshire process
15 kWh/m ² /yr	35 kWh/m ² /yr	55 kWh/m ² /yr	Other (e.g. renewable requirement of Passivhaus premium)	Passivhaus

*relaxation or a bespoke target is likely necessary for certain typologies

**the options to address this are discussed in detail in the next section

Figure 4: Task G Report - Options 2 and 3 approaches to achieving net zero carbon

Space heating demand	Energy Use Intensity Resi non-resi*		PV generation	Performance gap
No requirement	No requirement		No requirement	No requirement
30 kWh/m ² /yr	60 kWh/m ² /yr	100 kWh/m ² /yr	Enough to match EUI	Uplift to SAP / SBEM requirements
20 kWh/m ² /yr	45 kWh/m ² /yr	65 kWh/m ² /yr	120 kWh/m ² /yr	Bespoke Central Lincolnshire process
15 kWh/m ² /yr	35 kWh/m ² /yr	55 kWh/m ² /yr	Other (e.g. renewable requirement of Passivhaus premium)	Passivhaus

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15 kWh/m ² /yr	35 kWh/m ² /yr	55 kWh/m ² /yr	Other (e.g. renewable requirement of Passivhaus premium)	Passivhaus

- 3.19. Task G also sets out the broad cost uplift of each of these options both for upfront capital costs and ongoing operational costs. For option 2 the uplift in cost would be 4.5-9% and the operational costs would be between 20 and 80% less than the baseline depending on building form. Option 2 would also require additional renewable energy to be generated off-site to meet the increased Energy Use Intensity. For option 3 the uplift in costs would be 5-8% with operational costs only being 20% less than the baseline, primarily down to the reduced efficiency of the building.
- 3.20. Task H then provides the detail of the costs involved in achieving net zero in new buildings (also replicated and summarised in Appendix E to the Task G Report). It sets out the individual capital costs of each element of the recommendations in the Task G report (pages 11-23). Assuming improved fabric of buildings it provides the capital cost of achieving two different heating requirements (15 kWh/m²/yr and 30 kWh/m²/yr) with options for direct electric and a heat pump to deliver heating requirements and then

adequate PV panel coverage to offset the electricity needed to heat the building. These options are set out in Tables 5 of the report.

- 3.21. This identifies in Table 10 of the Task H report that the additional costs of achieving net zero in light industrial units ranges between approximately £67,620 and £77,310 per unit.
- 3.22. It also goes on to set out the running costs associated with the measures (figure 29 on page 26 of the Task G report for light industrial units). The graph on page 26 shows that for light industrial units the annual running costs of an efficient unit can be between £6,000 and almost £16,000 cheaper when using an 'improved scenario' to meet electricity needs when compared to a baseline using gas boiler and no PV.
- 3.23. This suite of evidence clearly sets out the scale of the challenge and the importance of acting now to ensure that legally binding commitments in the Paris Agreement can be achieved. It also sets out the means needed to achieve these goals which include ensuring that new homes being built are net zero carbon as soon as possible. This is shown to be feasible on a range of house types and with a number of means to achieve the goal, with varying capital cost to developers and whole life savings to future occupiers.

Viability Evidence

- 3.24. Consultants, Aspinall Verdi, were appointed in 2019 to undertake a Whole Plan Viability Assessment (WPV) to ensure that the policies in the local plan are realistic and that the total cost of policies will not make the plan undeliverable.
- 3.25. This assessment, consistent with the guidance set out in the PPG, looks into all of the inputs and costs of the development process and the eventual sales values achieved throughout the area. Put simply, it seeks to demonstrate that the costs of development do not exceed the sales values that can reasonably be expected to be achieved.
- 3.26. Chapter 6 of the WPV sets out the details of the inputs and assumptions that have gone into the assessment. Firstly, this looks at yields and rental values based on an assessment of the market across Central Lincolnshire, set out in Table 6-3 of the WPV. It then clarifies the build costs and other associated assumptions in Table 6-4, separating out the non-residential uses tests within the table.
- 3.27. Combining these elements forms the basic costs and anticipated yields of developing sites in Central Lincolnshire. Chapter 7 of the WPV provides the test results of the viability assessment for the non-residential uses tested. These can be found in Tables 7-11 to 7-17. These findings indicate that industrial and convenience shopping development is viable when taking into account the assumptions of the study. But it also identifies that, based on the assumptions of the study, GDV will need to increase for office development and for comparison retail to be considered viable.
- 3.28. The report concludes that non-residential uses are often impacted by changing values and conditions that do not affect residential uses in the same way. It recommends taking a cautious and flexible approach to requirements placed on such uses.

Summary of evidence

- 3.29. The climate change evidence is clear – if we do not act now, Central Lincolnshire's carbon budget will be used up by 2026/27. It is not just for the Local Plan to react to this position, but the wider functions of the Central Lincolnshire Authorities and the wider community, but the Local Plan has an important role to play.

- 3.30. Delivering a net zero carbon Central Lincolnshire is also not just the responsibility of developers of new homes with many other challenges needing to be addressed. However, every new property being built to a lower energy efficiency standard will increase the burden for retrofit. The Climate Change evidence also highlights the most efficient means of delivering net zero carbon amongst a suite of methods that can achieve the goal, all with different costs to the builder and to the future occupant.
- 3.31. The WPV assessment identifies challenges with adding requirements which have a cost associated with it to non-residential uses. But the complexities associated with markets for different uses and the speed at which things can change means that it is challenging to make a robust assumption that will remain true over a long period.
- 3.32. Clearly there is a fine balance to be found between ensuring that new employment and retail developments are not contributing further to the climate crisis and on the other side not place unrealistic requirements in place that will harm delivery of development. But the evidence suggest that energy efficiency can be required in many cases in Central Lincolnshire.

4. Issues and Options Consultation

- 4.1. In the Issues and Options Consultation in June and July 2019 Proposal 20 related to climate change and energy performance standards:

PROPOSAL 20 – Energy Performance Standards

Your views are being sought on whether the new Local Plan should require (rather than just encourage) higher energy performance standards for housing and/or non-residential development in accordance with the Planning Practice Guidance.

- 4.2. This was followed up with three questions, two of which directly link into policy S8:

Q20b- Energy Performance Standards in Non-Residential Development

Do you think that the new Local Plan should require higher energy performance standards in non-residential development and if so what standards should be required?

Q20c – Viability Implications of Higher Energy Performance Standards

If you think the Plan should do either of the above, do you have any evidence to demonstrate that requiring higher energy performance standards would or would not be viable? If so please provide this evidence. Alternatively, do you have any suggestions whereby other developer contributions might appropriately be reduced, in order to ensure development remains viable?

- 4.3. There were 95 responses to question 20b, with 76 supporting the proposal for the Local Plan to require higher energy performance standards in non-residential development, and 19 respondents disagreeing with the proposal. There were various comments made, in summary:

- Roof spaces could be used for solar energy panels, higher insulation, include decommissioning in planning applications;
- This is not required 'MEES' cover this;

- It should be up to each employer to determine what energy performance level they wish to have in their buildings;
- Various expressions of objection to Duplication of building regulations legislation. Including because inclusion in the planning process would add unnecessary and unwelcome complexity and confusion;
- Various expressions of support;
- A complete ban on fossil fuels and high-carbon products, such as concrete, is critical;
- Higher standards may be off-putting to potential development;
- As with residential, particularly ensuring that as much electricity as possible is generated to make the unit self sufficient (i.e. Solar PV to run office lighting, ASHPs and computers) so that industry develops close to carbon neutral;
- Aim for Passivhaus standard;
- Energy performance is critical to sustainability. This should not be compromised and should be weighted towards the maximum possible achievements;
- We should be encouraging/ requiring developers to use other methods of providing heat than gas/oil. There are enough existing properties that will require retrofitting, that we should not be allowing developers to build properties, that although meet current regulations, would then need retrofitting in the future;
- Current Building Regulations standards should be used, unless there is a clear opportunity to improve efficiency and the developer is willing to incur the additional cost or alternatively the Council are willing to reduce developer contributions;
- There may be concerns in relation to the conversion of existing buildings (Historic England);
- Linking any requirement to a specific measure could become quickly outdated, should new measures be introduced by Central Government or advances in technology;
- Non-residential is particularly varied: PPG/LP19: for factory emissions comply with EEC standards; Farms with livestock already generate their own power. Largely through solar panels; Many manufacturing processes require special environment i.e. humidity controlled printing works.

4.4. In relation to question 20c, this question provided an opportunity for respondents to provide evidence to underpin their support or objection to a policy seeking higher energy performance standards. 23 responses were received to this question, and these can be summarised as follows:

- Not always about new properties – relates massively to existing housing stock too;
- Look into the ‘Sullivan Report’ used by the Scottish;
- Encourage house builders to install underfloor heating run on solar. Prices of house could reflect this, with proof of efficiency, domestic solar cost is falling and an additional £3 – 5000 on a house of £200,000 is acceptable;
- Benefits of lower running costs should be included and built-to-rent not disadvantaged;
- Include various options including: solar power, micro-generation, solar panels with heat exchange for water, Air source heat pumps (for rural building sites),
- Expert advice should be sought;
- How do you measure viability when the climate is breaking down?
- The profit made by big house builder shows there is room within margins to accommodate greater energy performance standards. Market leaders in this area should be consulted to understand how greater performance doesn’t require viability to be sacrificed;

- Other countries are showing that sustainable development can be not only viable, but actually cheaper to build;
- Long term benefits should be considered;
- Developer viability is a balance of numerous items;
- CSHL4 and ND EPC rating A is readily achieved at minimal life-cycle cost increase (i.e. initial costs may be higher, but running costs are lower);
- Concern over viability cannot be the criterion for the imposition of higher sustainability standards;
- Could higher energy performance standards be recognised in the Community Infrastructure Levy payment?
- Consult the Carbon Trust;
Improved energy efficiency has to become the 'norm';
- Cutting carbon emissions has to be enforceable, however, this should not allow developers to cut their other contributions;
- Examples of manufacturing plants incorporating renewable energy technology include Coca-Cola at Wakefield;
- For non-residential development please note the substantive technical documentation that will be required with any planning application;
- Some developers have been building extremely energy efficient homes for a considerable time, and have managed to remain competitive;
- The introduction of higher energy performance standards could harm the ability to deliver viable economic growth. Such standards will remove the flexible approach in delivering sites to meet market conditions and potentially stifle inward investment within the District;
- The recognition of the effect on viability on deliverability of schemes is welcomed. Any revised policy should recognise such standards are subject to viability;
- It is important to understand and test the influence of all inputs on viability, through a whole plan viability assessment. The Local Plan should set out the contributions expected from development. Such requirements should not undermine the deliverability of the Plan. Viability testing is highly sensitive to changes in inputs, therefore the cumulative burden of infrastructure and other contributions should be set so most sites are deliverable without further viability negotiations;
- Do not know of any energy standard relating to manufacture and distribution of building components. Many also cannot be recycled and are only fit for hardcore.

4.5. These responses provided some useful sources of information used elsewhere to inform decisions on energy efficiency in building. Responses from the development industry repeated comments relating to harming viability and deliverability but no evidence was submitted to underpin these comments.

5. Regulation 18 Consultation

5.1. A Consultation Draft of the Local Plan was published for consultation between 30 June and 24 August 2021. During this eight week consultation comments were received on the plan, the policies within the plan, and supporting information and evidence.

5.2. Numerous comments were made in relation to the Reducing Energy Consumption in Non-Residential Development policy. Overall, the response was mixed. Details of the responses can be found in the *Central Lincolnshire Consultation Draft Local Plan: Report on Key Issues Raised (Jan 2022)*. In summary:

Responses in support

- Support for policies that will deliver net zero Local Plan.
- Implementation of Future Home Standard may be delayed / Government approach too slow.

Various concerns, queries and objections

- Deliverability, viability, enforceability concerns.
- Cross over with building regulations.
- Evidence lacking focuses on technical feasibility and not practicality of sourcing materials and equipment. Potential for delay and uncertainty as a result.
- Unsound, not in conformity with NPPF.
- Policy needs flexibility.
- Queries in relation to 5 year monitoring of major applications: resource implications; how will speculative employment units be dealt with; will Section 106 be used to secure monitoring reports?
- Concern regarding exemption of projects which achieve BREEAM: deemed 'incredibly easy' for projects to obtain without having any measurable effect on climate change.
- Policy comparable to blanket ban on fossil fuels: not consistent with central government's agenda.
- Concern that policy could potentially stifle innovation and use of new technologies.
- Suggestion that policy is excessive in its application to all development and should instead apply only to new major development.

Other suggestions/ comments

- Template and guidance essential for implementation
- The methodology to predict a building's actual energy performance should be more tightly controlled and acceptable methods be defined (e.g., ASHRAE 90.1, CIBSE TM54, PHPP etc).

5.3. Several amendments have been made to the proposed policy following consideration of the comments received. The key changes are summarised below.

Amendment	Reason for amendment
Exception clause 1 has been amended to remove the reference to lack of financial viability not being deemed a technical or policy reason to trigger the exception clause.	To account for the fact that some building uses will require an abnormally high amount of energy, and it may not be financially viable to provide the level of renewables required to operate the building.
Criteria '1' deleted	Reference to draft Future Buildings Standard deleted in recognition of the fact that the timetable for the publication of draft and final standards is uncertain and it could be problematic to expect developers to respond to draft standards that may differ to the final standards that are eventually published.
Criteria '2' deleted	Incorporated into new policy- S6 Design Principles for Efficient Buildings

Former criteria '3' and '4' become criteria '1' and '2' and have been retained largely as per the Regulation 18 Draft	No amendment: policy requirements based on viability evidence. National policy is clear that the planning system should support the transition to a low carbon future in a changing climate.
Requirement for monitoring, verification and reporting on energy performance for major proposals for 5 years from completion removed.	In recognition of the fact that this would be difficult to monitor and enforce.
Requirements in relation to Energy Statement amended.	To improve clarity and be less burdensome on applicants/ developers.
Template to support policy	The Central Lincolnshire Authorities have committed to preparing a template that will assist the delivery of policies S6, S7 and S8. This will not form part of the Local Plan itself as its development does not fit with the Local Plan timetable and we do not want to cause delay to the progression of the Local Plan. It will instead be developed and released as shortly as possible after the adoption of the Local Plan.

- 5.4. Some matters raised have not resulted in amendments. The reasons for this are summarised below.

Suggestions not actioned	Reason amendment not actioned
Exception clauses retained largely as per the Regulation 18 Draft, but exception clause 1 amended to remove reference to lack of financial viability not being deemed a technical/policy reason to trigger the exception clause.	To provide sufficient flexibility on various grounds to ensure the policy (and Local Plan as a whole) is realistic, achievable and deliverable, in line with national policy.
Examples/ recommended methodologies for calculating building performance have not been added	Different methodologies may emerge over the lifetime of the Local Plan. The Central Lincolnshire Authorities may issue further guidance on relation to this policy, including recommended methodology/ methodologies.
Reference to BREEAM retained	BREEAM is well established and recognised: use of Clause 2 may be beneficial to small and medium sized builders in particular. The inclusion of this Clause is to assist and speed up the development of proposals, and the decision-making process.
Concerns that innovation and use of new technologies could be stifled	The Central Lincolnshire Authorities see no reason (and have not been provided with any evidence) as to why the policy would stifle innovation and use of new technologies.
Policy should only apply to major applications	Cumulatively, and individually, minor applications can make significant contributions to carbon emissions.

6. Proposed Approach in Proposed Submission Local Plan

- 6.1. The proposed policy approach, as taken forward in the Local Plan, is a policy requiring all non-residential development (except that meeting an exception clause) to provide an Energy Statement confirming all units achieve certain energy standards. Specifically:
 - Generate the same amount of renewable electricity on-site to meet demand across the year;
 - A target of a space heating demand of 15-20 kWh/m²/yr and a total energy demand of 70 kWh/m²/yr; and
 - No unit to have a total energy demand in excess of 90 kWh/m²/yr
- 6.2. As set out in the Local Plan, by the point of adopting the Local Plan, or shortly after, the Central Lincolnshire authorities will publish a series of guidance notes and templates so that the policy requirements can be demonstrated efficiently, effectively and consistently.
- 6.3. Achievement of the above will be demonstrated through the submission of an Energy Statement, as required by the policy.
- 6.4. The policy also proposes some occasions where full adherence to the policy requirements may not be required. These 'exceptional basis clauses' include where technical or other constraints to meeting the standards exist, where delivery of the requirements would either be impossible to achieve or would have other unwanted impacts (such as impacts on a heritage asset, where a site is overshadowed, or where MOD operations would be impacted for example).
- 6.5. The policy also proposes a clause for instances where an accredited certification scheme is used.
- 6.6. This policy approach ensures that new buildings being built do not add to the number of under-performing buildings that will require retro-fitting if the Paris Agreement is to be met. However, it also provides flexibility for occasions where local, site-specific constraints mean that strict adherence of the policy is not achievable, and so provides alternative measures to ensure that the new buildings being built still contribute to delivering a net zero carbon Central Lincolnshire.
- 6.7. Whilst it is clear from the Whole Plan Viability Assessment that viability is challenging in some areas, in much of Central Lincolnshire there is adequate capacity for energy efficiency standards to be required as well as other policy requirements when using industry standard inputs and calculations of viability.

7. Reasonable Alternative Options

- 7.1. At the previous Regulation 18 Draft stage, three policy options were considered:
 - Option 1: A policy requiring all non-residential development to provide an Energy Statement confirming all units achieve certain energy standards, or that the proposal meets one of 2 exception clauses. Policy sets additional requirements for major developments, including annual monitoring for 5 years post occupation, and requirements in instances where the completed development is under performing.
 - Option 2: A policy setting optional standards relating to energy consumption.

- Option 3: No local policy, rely on national policy and guidance as set out in the NPPF and NPPG.

- 7.2. Option 1- the policy approach taken forward in the Draft Local Plan- was preferable over the other two alternatives because it offers more certainty that building will be built to higher environmental standards. While there are some exception clauses, these clauses are relatively stringent, and should ensure that proposals meet the policy requirements other than in exceptional circumstances. While options 2 and 3 may result in positive impacts, this is uncertain given the onus would be on the applicant / developer. The lack of specific policy requirement would mean that the impact of both of these options is likely to result in far fewer numbers of buildings being built to higher standards, and that the standards achieved may not be as high as those required by policy option 1.
- 7.3. Following consideration of the comments received during the Regulation 18 consultation, another policy option was introduced, and considered- Option 4. This option has been appraised, alongside the previous 3 policy options considered- as part of the Sustainability Appraisal process. Following sustainability appraisal, it is this option (as detailed in section 6 of this report) that is included in the Proposed Submission Local Plan.
- 7.4. The outcome of the sustainability appraisal saw policy option 4 score the same as policy option 1, which was the preferred policy option taken forward in the regulation 18 Draft Local Plan.
- 7.5. The preferred policy (option 4) and policy option 1 are both likely to have notably more positive sustainability outcomes in relation to several of the SA Objectives compared to options 2 and 3, both of which perform the same. Minor positive effects are expected in relation to SA7 Natural Resources – Water. Mixed minor positive major positive effects are predicted against SA8 Pollution, SA11 Climate Change Effects and Energy and SA12 Climate Change Adaptation and Flood Risk. Policy options 1 and 4 are predicted to have major positive effects in relation to SA6 Built and Historic Environment.
- 7.6. Options 1 and 4 both require achievement of certain standards and offer more certainty that buildings will be built to higher environmental standards. While there are some exception clauses, these clauses are relatively stringent, and should ensure that proposals meet the policy requirements other than in exceptional circumstances.
- 7.7. While options 2 and 3 may result in positive impacts, this is uncertain given the onus would be on the applicant / developer. The lack of specific policy requirement would mean that the impact of both of these options is likely to result in far fewer numbers of buildings being built to higher standards, and that the standards achieved may not be as high as those required by policy options 1 or 4.
- 7.8. While both policy options 1 and 4 score the same, option 4 has been selected as the preferred option to take forward because:
- The requirement for monitoring, verification and reporting on energy performance for major proposals for 5 years from completion (option 1) would be difficult to monitor and enforce.
 - The requirements in relation to the Energy Statement in option 4 provide improved clarity and will be less burdensome on applicants/ developers.

8. Conclusion

- 8.1. This Evidence Report demonstrates rationale for the proposed policy as contained in the Proposed Submission Central Lincolnshire Local Plan. This helps bring together relevant evidence that has informed this policy and how we have responded to comments received during the plan making process, as well as how the latest evidence and national guidance has been taken into account.