

Central Lincolnshire Policy S11 Embodied Carbon Evidence Report

Formerly Policy S10

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 S11, which relates to embodied carbon.

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 in July 2021.
- 2.2. The NPPF does not contain any specific policy in relation to embodied carbon. However, Chapter 2 of the NPPF sets out national policy for achieving sustainable development, and 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”, while paragraph 152 provides that:

“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.”
- 2.4. 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.
- 2.5. Like the NPPF, at present the NPPG offers no specific guidance in relation to embodied carbon.

Local Policy

- 2.6. Policy LP18, Climate Change and Low Carbon Living, of the current Local Plan (2017) states that proposals will be considered ‘more favourably’ if the scheme would make a positive and significant contribution to a number of matters, including resource efficiency. Specifically, the policy states that schemes which ‘take opportunities to use sustainable materials in the construction process, avoiding products with high embodied energy content’ will be considered ‘more favourably’.
- 2.7. The current Local Plan (2017) therefore does not contain a specific *requirement* in relation to embodied carbon: rather, it expressly supports proposals which address this matter positively and significantly.

3. Context and Evidence

- 3.1. The introduction of policy S11 in the new Local Plan is needed because it presents a real opportunity in terms of reducing resource and energy consumption, and minimising waste and emissions.
- 3.2. A significant proportion of a building's lifetime carbon is locked into the fabric and systems. Embodied carbon means all the carbon dioxide emitted in producing materials, so in the case of buildings means all the emissions from the construction of building materials, the construction of the building itself, all the fixtures and fittings inside and finally the deconstruction and disposal at the end of a building's lifetime. Embodied carbon figures have been calculated for different dwelling types across Central Lincolnshire with the average embodied carbon figure of 45 tonnes of CO₂ per dwelling. Addressing the embodied carbon can provide cost-effective potential for carbon savings and cost savings over and above those traditionally targeted through operational savings. Much of the low hanging fruit of embodied carbon abatement is yet to be taken advantage of. It therefore provides a significant opportunity to reduce the carbon impact of the business and increase organisational carbon savings.
- 3.3. Reduction in embodied carbon is not subject to ongoing building user behaviour in the way that operational carbon savings are. As a result, embodied carbon benefits can be more accurate and identifiable than predicted operational carbon reductions, particularly as the final occupant of the building is not known at the time.
- 3.4. Embodied carbon savings made during the design and construction stage are also delivered today. This contrasts with operational emissions savings which are delivered over time in the future. Indeed, a Kg of CO₂ saved over the next 5 years has a greater environmental value than a kg saved in say 10 or more years' time.
- 3.5. Embodied carbon assessment can also contribute to other sustainability targets and priorities beside carbon. For example, use of recycled content, recyclability of building materials, and reduced waste materials to landfill can all result from a focus on embodied carbon and also contribute to waste targets. Similarly, benefits to the local community can accrue from reduced on-site energy generation and cleaner fabrication processes which mitigate the impact of the development site on the local area; the use of more local sourcing and local supply chains can also support jobs and the economy in the locale (or if not local, at regional or national level).

4. Issues and Options Consultation

- 4.1. The topic of embodied carbon was not specifically consulted on at the Issues and Options Consultation.
- 4.2. However, the policy was introduced because of the decision taken by the CLJSPC to deliver a Local Plan that makes significant efforts to deliver a net zero carbon Central Lincolnshire and because of the positive impacts addressing embodied carbon can have, as highlighted in section 3 above.

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. A number of comments were received in relation to the Embodied Carbon policy. The response to the policy was mixed: while there was some support for the proposed policy, others felt that it could go further. Some commentators felt that the policy was too vague, and lacking specific detail, and the issue of whether the policy is justified was raised. Other concerns included viability, with some concerned that the viability implications could deter developers to outside the Central Lincolnshire area. There was also particular concern that the evidence supporting the Local Plan focuses on technical feasibility, and that the practicality of sourcing materials and equipment had not been duly considered and could result in delay and uncertainty.
- 5.3. Due consideration has been given to the comments received, in light of national policy and the overarching objectives of the emerging Central Lincolnshire Local Plan: the proposed policy wording in relation to major development proposals has been retained as per the draft wording presented in the earlier draft.
- 5.4. The reasons that this proposed policy in respect of major development proposals has not been altered are:
 - The ambition to deliver a net zero carbon Central Lincolnshire and the role embodied carbon can play in this.
 - The policy wording offers a degree of flexibility, in that no *requirement* to minimise embodied carbon exists until January 2025 (prior to this, proposals must set out what opportunities to lower a building's embodied carbon content have been considered, and which opportunities, if any, are to be taken forward- there is no requirement for action).
 - The local authorities intend to issue further guidance on this aspect of the policy prior to 2025, thus concern's regarding lack of clarity will be addressed.

6. Proposed Approach in Proposed Submission Local Plan

- 6.1. As discussed above, the proposed policy approach to be taken forward in the Local Plan includes a specific requirement for major development proposals to minimise embodied carbon (from 2025) and a requirement for all other development to consider the opportunities that exist to reduce embodied carbon content.
- 6.2. As explained at paragraphs 5.3 and 5.4 above, the wording in relation to major development proposals remains unaltered from the earlier Draft Local Plan.
- 6.3. The first paragraph of the policy also remains unaltered, again, given the important contribution reduction embodied carbon can make towards a net zero carbon Central Lincolnshire.
- 6.4. However, following the Regulation 18 consultation, additional criteria have been added to the policy relating to a presumption against demolition.

- 6.5. This new section of the policy seeks to avoid the embodied carbon in existing buildings being 'wasted' via demolition and avoid the creation of new embodied carbon through replacement development on demolition sites. The additional section establishes that proposals involving demolition must be accompanied by full justification for said demolition, and that demolition will only be permitted in certain specific circumstances, as set out in criteria 1 to 4.
- 6.6. The 'presumption against demolition' section of policy S11 was added in light of:
- Recognition of the potential embodied carbon that could be 'wasted' through demolition, and the potential embodied carbon that could be 'saved' by repairing, re-using, refurbishing or repurposing compared to construction of a replacement building or buildings.
 - Comments made during the Regulation 18 consultation that the Local Plan should 'go further' in respect of addressing the impact of development on climate change.
 - NPPF paragraph 152: "the planning system should...encourage the reuse of existing resources, including the conversion of existing buildings..."

7. Reasonable Alternative Options

- 7.1. The alternative policy options explored initially, as detailed in the Interim Sustainability Appraisal Report for the Draft Central Lincolnshire Local Plan (June 2021), were a policy setting specific requirements for minimising embodied carbon for both major and minor development proposals (option 2) or, option 3, have no local policy and instead rely on national policy and guidance as set out in the NPPF and NPPG.
- 7.2. Policy option 2 was discounted because, while it set specific requirements for both major and minor proposals, compared to the preferred policy approach which set a specific requirement only for major proposals and a general requirement for all other proposals, the effects are anticipated to be similar, with both policy option 1 and policy option 2 scoring the same in the sustainability appraisal. A lack of specific criteria in relation to minor development was deemed to allow applicants' flexibility in how they achieve the policy requirements and provide balance in terms of what is expected from applicants and developers when considering the Local Plan requirements as a whole.
- 7.3. Policy option 3 was discounted because it was likely to have neutral or negligible effects in relation to all 15 of the Sustainability Appraisal objectives.
- 7.4. Following the Regulation 18 consultation, an additional policy option was considered- option 4. Option 4 is as per option 1 (a policy setting a requirement for minimising embodied carbon for major development proposals), but also includes a presumption against demolition, and establishes the limited circumstances in which demolition will be permitted.
- 7.5. Appraisal of the 4 policy options as part of the development of the Proposed Submission Local Plan saw option 4 score the same as policy option 1.
- 7.6. The decision to take option 4 forward as the preferred policy in the Proposed Submission Local Plan was made because the presumption against demolition is likely to bring notable benefits in terms of reduced carbon emissions as a result of reduced demolition waste and preventing emissions from the construction of replacement new buildings.

8. Conclusion

- 8.1. This Evidence Report demonstrates the 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.