



Warwick District Council NZC DPD Examination Matter 7: Embodied carbon

Warwick District Council
February 2023

Prepared by: Amy Powell
Checked by: Paul Slater and Marina
Goodyear
Authorised by: Andrew Cornfoot

Issue: Final



Contents

1	Question 7.1.....	3
2	Question 7.2.....	4
3	Question 7.3.....	5
4	Question 7.4.....	6
5	Question 7.5.....	8

1 Question 7.1

Is the approach of Policy NZC3 – Embodied Carbon justified, effective and consistent with national policy?

- 1.1 The justification for Policy NZC3 is provided within the supporting text of the policy within the DPD 9.1-9.2 and within the Warwick DC Zero Carbon DPD Energy and Sustainability Policy Review [SUB 5, page 17].
- 1.2 This identifies that embodied carbon emissions can be up as much as 50% of total emissions over a new building's lifetime. This proportion will increase as Building Regulations and the DPD policies reduce operational emissions over time. The Committee on Climate Change has also identified that decarbonisation of the manufacturing & construction sector (including through resource efficiency and production fuel switching) is an essential component in the future scenarios for the UK's 6th carbon budget (part of the Climate Change Act). Addressing embodied carbon was accordingly identified through consultation as a matter for the DPD to address as part of the transition towards net zero. The inclusion of a policy on embodied carbon is accordingly justified and effective.
- 1.3 Given the significant contribution of embodied carbon to overall carbon emissions, the approach of Policy NZC3 to require consideration and reduction of embodied carbon where possible is considered with national policy as part of a proactive approach to mitigating and adapting to climate change in line with the objectives and provisions of the Climate Change Act 2008 (NPPF paragraph 153).
- 1.4 The Council further identifies that policies concerning embodied carbon assessments have recently been demonstrated to be justified, effective and consistent with national policy within the Bath & North East Somerset Local Plan Partial Review [EXAM 6].

2 Question 7.2

Are the thresholds set out in Policy NZC3 for development with regard to whole-life carbon assessments appropriate and justified?

- 2.1 The threshold for NZC3 was carefully considered in the formation of the policy, the Warwick DC Net Zero Carbon DPD Energy and Sustainability Policy Review [SUB5, page 17] outlines the considerations.
- 2.2 The DPD 9.2 and the Warwick DC Zero Carbon DPD Energy and Sustainability Policy Review [SUB 5, page 17] identifies that due to the complexities of embodied carbon assessment it was not reasonable to require for minor developments. The policy accordingly requires consideration of embodied carbon for major developments (through the energy statement or a design statement). The 'super-major' category of 50 or more dwelling and 5,000sqm or more threshold for whole life embodied carbon assessment further recognises the complexity and cost of such an assessment along with the greater opportunity that larger developments have to reduce embodied carbon through alternative materials and material efficiencies gained through standardised repeated building types/elements (leading to reduced wastage) and economies of scale.
- 2.3 A cost of £10,000 was allowed for in the viability assessment for whole life carbon assessments [SUB 6, paragraph 4.24].
- 2.4 It is considered that the threshold in NZC3 for whole-life carbon assessments is justified and sound.

3 Question 7.3

Does the approach of Policy NZC3 sit comfortably with the adopted Warwick Local Plan and its policies?

- 3.1 The Warwick Local Plan does not make any direct reference to embodied carbon. As outlined through Matter 2, the Local Plan includes Objective B to address climate change and a strategic policy DS3 to deliver a low carbon economy, lifestyles and environmental sustainability. Policy CC3 requires major non-residential development over 1,000sqm to achieve BREEAM 'Very Good. Embodied carbon is a consideration within BREEAM and as such the proposed threshold of policy NZC3 is consistent with this policy. It is therefore considered that policy NZC3 is consistent with the strategic objectives and policies of the Warwick Local Plan.

4 Question 7.4

Are the impositions on developers through Policy NZC3 reasonable and justified?

- 4.1 Policy NZC3 requires major development to consider, within the Energy Statement or a Design Statement, the embodied carbon of proposed materials and reduce this where possible having regard to the type, life cycle and source of the materials. Paragraph 9.3 of the DPD refers to environmental assessment methods such as BREEAM or HQM pre-assessments with reference to the BRE Green Guide as suitable to address the materials used in development.
- 4.2 Warwick Local Plan Policy CC3 requires major non-residential development over 1,000sqm to achieve BREEAM 'Very Good'. Embodied carbon is a consideration within BREEAM across several credits and would contribute to the targeted threshold for 'Very Good', as such, the proposed threshold of policy NZC3 is consistent with this policy.
- 4.3 Super-major developments (50+ dwellings and/or 5,000m² of non-residential floorspace) would most likely use the industry's standard method to report on embodied carbon. That is the RICS Whole-Life Carbon Assessment for the Built Environment which is based on BS 15978. This is the method that has been used for several years to fulfil whole-life carbon reporting requirements in other local plans such as the GLA London Plan. The RICS method breaks the development's life into a series of 'modules': A1 – A5 (material production through to completion), B1 – B7 (in use – e.g. refurbishment and maintenance), and C1 – C4 (end of life).
- 4.4 Developments that do not meet the size threshold for a full whole-life carbon analysis could instead, for example, choose to report only on RICS stages A1 – A5 only, as this will still capture the majority of the development's embodied carbon impacts. It may be suitable to simply provide narrative on the materials choices and design efficiencies that were made in order to reduce embodied carbon.
- 4.5 If sufficient information is reported through whole-life carbon assessments submitted by developers in support of the policy expectations described above, these could be collated to set a baseline and/or inform demonstrably feasible and viable embodied carbon targets to be set in future iterations of the local plan. This process will also grow the carbon literacy both of developers and the Council, enabling better and more informed practice to emerge as needed for the net zero carbon transition.
- 4.6 The Council will develop further guidance on embodied carbon assessments alongside further guidance on energy statements. This will also identify the level of information expected for outline, full and reserved matters applications.
- 4.7 Policy NZC3 identifies appropriate thresholds and methods for embodied carbon assessment and having regard to the significance of embodied carbon, this is considered reasonable and justified.

4.8 Embodied carbon assessment now features in several local plans including the London Plan and more recently Bath and North East Somerset.

5 Question 7.5

Does Policy NZC3 have any unacceptable impact on development delivery, including housing?

- 5.1 Policy NZC3 does not have any unacceptable impact on development delivery. The policy requires the consideration and assessment of embodied carbon of new development to enable the reduction of embodied carbon where possible. The policy does not set targets for embodied carbon reduction. The costs of whole life assessment have been factored into the viability assessment. The policy makes reference to existing assessment methods and the Council will produce further supplementary guidance to assist developers to implement the policy.