

# eTool Global comments

Page: [Policy SI2 Minimising greenhouse gas emissions](#)

Section: [N/A](#)

Although the zero carbon aspirations should be applauded the scope of the emissions assessment is too limiting.

Embodied or capital carbon represents approximately 20% of total UK building emissions. Measuring embodied carbon through LCA will therefore need to form a vital role in tackling climate change and meeting the Paris commitments.

We think there is an excellent opportunity for the London Plan to provide greater flexibility to design teams whilst also increasing opportunities for reducing carbon. A full LCA including embodied carbon, operational energy and water could achieve so much more than the current siloed energy approach.

Without a holistic whole of life approach not only are opportunities to save carbon reduced but perverse outcomes can arise. Do the savings in heating energy arising from thermal mass or triple glazed windows make up for their embodied carbon impacts? Would more carbon be saved by spending \$1k on solar PV or \$1k on a timber roof, or £1k on offsets, or £1k on insulation?

Under the current proposals, a Cross Laminated timber structured building with the same energy performance as a concrete framed building would have to offset the same amount to get to zero carbon. However, the timber frame is carbon neutral and the concrete is responsible for over 300 kgCO<sub>2</sub>e/m<sup>3</sup>. A joined up LCA analysis will always deliver the most efficient route to zero carbon and reduce the need for costly and controversial offsets.

The construction industry is recognising this and moving to LCA for environment decision makings. Examples below:

- - In standards development: CEN was directed by the EU to produce standards for voluntary rating of sustainable buildings. They developed "EN 15978: Sustainability of Construction Works, Assessment of Environmental Performance of Buildings, Calculation Method" which provides a standardised method for completing LCA work that is easily adoptable. Further support on delivering to this standard is provided through RICS professional statements

- - In regulation: Laws such as the 2011 French Grenelle regulation require mandatory LCA-based environmental product labelling.
- - In Green Building Rating Schemes: DGNB, the majority of the environmental points are achieved through an LCA (quantifying water, energy, materials holistically through their life cycle metrics). Under Breeam 2018 there is heavy emphasis on an LCA approach
- - Land owners such as Crown Estate and British Land require embodied carbon analysis on major projects.
- - Infrastructure projects such as HS2 require LCA

The industry is already very ready and by providing more flexibility to design teams through an LCA approach the industry will achieve greater innovation in carbon reductions and a faster route to true zero carbon.