



DLUHC Round table on Planning for Net Zero - 11th November 2021

Three proposals from the Edge

“The role of the planning system in supporting the Government’s Net Zero Emissions Target.”

Proposal for enhancing planning’s contribution to driving carbon reductions.

Please prepare a brief pitch (no longer than 2mins in total) on achieving net zero in the planning system.

Robin Nicholson - architect with Cullinan Studio and convenor of the Edge think tank but, more importantly for this discussion, chair of the Cambridgeshire Quality Panel

What can work is design review and what’s missing is verification

- I want to suggest that given the very real resource constraints that our Planning system is under, Design Review can help the local planning team raise the standard of design and place making and be a key to explaining the impact of the climate and biodiversity emergency. This is easier if there is a vibrant local economy like Cambridge although there is fuel poverty there too. However, the key is that the Quality Panel is multi-disciplinary and not dominated by architects.
- The Cambridgeshire Quality Panel was appointed to operate the Quality Charter, which identified the 4 C’s of Community, Connectivity, Climate and Character, Character being two thirds landscape one third architecture. To do this properly, our relatively small panel of 21 has landscape architects, sustainability experts, client advisers, traffic engineers and, yes, some architects.

What’s missing is verification

As for change, we need planning to become proactive, in addition to stronger development control, since avoiding floodplains and sites without good public transport is essential.

We have all heard the promoters and their architects make optimistic promises but what is missing is a process of verification that what is built is what was offered and consented in a process that links building regulation and planning.

Delivering net zero is going to be seriously difficult as we all have to change how we work and how we behave. Checking performance will help but most challenging of all is how to monitor net bio-diversity gain which includes both the visible trees, landscape and wildlife and the invisible, that is the quality of the soil which captures more carbon than the trees.



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Sue James, Convenor of the Trees and Design Action Group and the Edge

My focus is on the need for what I am calling 'climate-based planning'.

There is a lot of talk about 'trees and green infrastructure' and these deliver many benefits including a contribution to achieving net zero carbon. This last needs to be factored into planning requirements and therefore development design/master planning.

In this context it is important to better understand the role that trees can play in, for example:

1. Improving the environmental performance of buildings especially low - rise buildings (up to 6 storeys) by reducing over-heating in summer and also the need for air conditioning or other mechanical cooling.
2. Improving the spaces between buildings by reducing reflections from the buildings and lowering the temperature in outdoor spaces – reducing urban heat.

Trees and green infrastructure improve the environmental performance of buildings and place. The requirement for 'climate-based design' should be included in the NPPF and illustrated in the National Model Design Code.

In addition, the planning system needs to respond to number of consequences that man-made global heating have exposed, for example, increased heavy rain events and consequential flooding.

Properly planted trees have been proven to reduce peak flow, so in urban areas they need to be included (and retrofitted) with SuDS as the most effective way to manage surface water and the planning of trees needs to extend to the wider catchment (as for example in Leeds, Liverpool)...and all this leads to the need for a land use framework for England so that we can intelligently layer the various factors that need to be taken into account in all our planning and development decisions.

For further information see www.tdag.org.uk

One thing that works well

Most Local authorities have declared climate and ecological emergencies so that is a first step to taking action and the planning system is an obvious route for this.

One thing to change

Resources to ensure compliance and enforcement



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Simon Foxell - architect with The Architects Practice and member of the Edge

The planning system needs to do two important things:

1. Record and make available data on aspirations to achieve net-zero, against which built outcomes can be judged
2. Support professionals who actively try to promote net-zero (or even net-positive) outcomes on projects

To this end it is proposed that all appropriate planning applications, including refurbishments and retrofits, should require a declaration of the level (in hard numbers) that it is proposed to achieve against a number of key standard sustainability metrics and a positive pledge to deliver them. At the outset, at least, delivery against pledges will be a matter of trust, but they should be measurable using POE and could be used by building owners, designers and contractors to monitor and publicise their own performance.

Several of the metrics can usefully be drawn from published guidance including the UKGBC's Net Zero Framework, RICS Whole Life Carbon Assessment, RIBA 2030 Challenge and CIBSE Guides, and might include:

- Operational energy – kWh/m²/y
- Embodied energy – KgCO_{2e}/m²
- Transport energy - kWh/m²/y
- Re-use of existing structure and components - % by embodied energy
- Overheating - % of occupied hours between 25-28°C maximum
- Daylight levels - % average daylight factor
- Potable water use - l/person/day
- Biodiversity - % of species greater (or less) than at project commencement

DLUHC might usefully develop a calculator for assisting in preparing declarations and publish relevant benchmarks associated with achieving net zero carbon emissions.

The data would be made available alongside individual applications, but it should also be collated into readily available and regularly updated tables, referencing building types, size (m² of GIFA) bands, regions etc.

The proposal is intended to help design, construction and maintenance teams uphold the original design ambition throughout the delivery of projects, during their in-use life and beyond, by making a public statement about that ambition and allowing it to be compared to real life outcomes. It will also have the significant benefit of making these standard metrics familiar and readily comparable from project to project.

the Edge 11/11/21

the Edge is a multi-disciplinary, campaigning built and natural environment think tank, working on issues that cut across the many disciplines in the construction industry.