

5. Influence the brief

Nothing is better than something

Tim Ibell, James Norman and Oliver Broadbent challenge structural engineers to steer their clients away from a presumption of a new building.

WHAT IS THE BEST WAY

to reduce the carbon footprint of construction? Easy – build nothing. This approach isn't necessarily as daft or as apocalyptic for our profession as it might seem at first glance.

To start with, do we need more buildings? To repeat, do we *need* more buildings? We certainly *want* more, but that is a different concept.

In the developed world, the majority of us have a building footprint of at least two, made up of a building in which we live and one in which we work or study. It is probably higher than two, if one includes shops, hotels, restaurants and cinemas, as examples.

Imagine if we decided that a footprint of two was too high, and that we needed to reduce it to, say, 1.8. We have all been living through the huge challenges of Covid-19, and our building footprint is temporarily far closer to one. It's not pretty, but it can be done. It's a choice we have under normal circumstances, even if currently it is temporarily forced upon us.

Either way, if we were to embrace both 'work where you live', as we have been doing under Covid-19, together with the possibilities of 'live where you work' as a nuanced alternative in future, we would have a means to reduce our need for new buildings, and to have spare space available for needs we know we have.

Redefining the brief

A brief to *provide housing* for more people is not necessarily the same as a brief to *physically construct new houses* for people. Imagine the architectural and engineering challenges associated with redefining living and working space under such a scenario. Is there an opportunity for our expertise in this reimagination of our existing buildings?

In everyday professional practice, might our design expertise be gainfully used to redefine clients' briefs away from the presumption that a new building is required at the outset, towards helping the client to achieve what they actually need,

“ SHOULD WE EVER AGAIN DEMOLISH BUILDINGS WHICH ARE STRUCTURALLY SOUND BUT WHICH DON'T FIT A NEW BRIEF? ”

which might not include a new building at all? Very few professions have the skills to be able to see to the core of what a brief really is trying to achieve. At its best, our one does. Is there an opportunity for our expertise to be applied in reimagining client briefs?

Should we ever again demolish buildings which are structurally sound but which don't fit a new brief? Surely, if we are serious about the zero-carbon targets, the answer must be no. Clients might well want to demolish and build again, but do they need to do so? Is there a much wider scope of opportunity than at present for our expertise to embrace #nomoredemolition, and show how a sound building can be repurposed with intelligent engineering?

Celebrating 'nothing'

Finally, for those in the profession who

choose to embrace the idea of no, or minimal, construction being needed to nonetheless satisfy the brief, we need transparent recognition and celebration.

The Institution's Structural Awards now have a category devoted exactly to doing nothing, other than relying squarely on using the enormous expertise, experience and ingenuity of our profession. Is there an opportunity for our profession to be rewarded at similar levels overall for advising clients to do little or nothing, but to still achieve their aspirations?

It is worth trying to conceive of new types of business model for our profession. Ones in which our extraordinary expertise is exploited in imaginative, impactful and high-value ways, making the most of the resources we already have. After all, what could be more profoundly low-carbon in outlook and beneficial to our environment than building nothing?

Tim Ibell
PhD, CEng, FEng, FStructE, FICE, FHEA

Tim Ibell is Professor of Structural Engineering at the University of Bath and a Past President of the Institution.

James Norman
MEng, PhD, CEng, MICE, FHEA

James Norman has designed a number of unusual, award-winning and sustainable buildings and is now Associate Professor of Sustainable Design at the University of Bristol.

Oliver Broadbent

Oliver Broadbent is an education design consultant with a specialism in creating practical and hands-on interventions for teaching around the theme of sustainability.



tse@istructe.org



@IStructE
#TheStructuralEngineer



Will demolition become a thing of the past?