

Editorial

Emergency measures



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Guest Editorial

It has been an important couple of months. The state of our climate is being referred to as an emergency, the UK government has pledged that the country will be net zero carbon by 2050, and the UN has declared that loss of biodiversity now threatens our future. Structural engineers are uniting with other built environment professionals to declare that change must happen.

We're witnessing something pivotal – the most important campaign in a generation, on which our future depends.

Tackling climate change feels like a massive task. Buildings and construction account for nearly 40% of the world's energy-related CO₂ emissions. And progress this century on passive design and energy-efficient systems means that embodied carbon now makes up the majority of a typical building's whole-life carbon footprint.

The scale of the challenge may seem daunting to the practising engineer who, in addition to designing a safe and durable structure, must worry about clients' demands, meeting programme deadlines, paying staff on time, and delivering within budget. It will require ingenuity, creativity and technology – but it is doable.

A recent C40 Cities report, *The Future of Urban Consumption in a 1.5° World*, outlines that emission reductions as high as 44% are achievable through improvements in material efficiency, building utilisation, alternative materials and building reuse.

We take inspiration from other forms too. This month's issue features the work of Pier Luigi Nervi (page 8), who is famous for doing more with less, out of necessity. Maybe today's engineers

could learn a thing or two from Nervi, whose structures have carbon footprints that would put many of our designs to shame.

Structural Engineers Declare (www.structuralengineersdeclare.com) and comparable movements by other professions are at last putting sustainability in the spotlight as an equal to life safety, rather than an optional extra. We require systemic change as well as individual responsibility, and the Institution's role in leading progress in this area was at the centre of discussions at its Council away day in July.

Clearly, if we're going to cut our emissions in half, we need to do all these things and more. Above all else, we need to work together to stand any chance of hitting our targets. No more holding back information in the hope of gaining a commercial advantage; this is too big and too important.

We believe that most engineers want to change the world for the better; that's why we chose this profession. A revolution is here, change is imminent. Now is the time to rally together and make ourselves count.

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