

The Institution of Structural Engineers declare climate and biodiversity emergency

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<https://www.istructe.org/structural-engineers-declare/>

An open letter from Martin Powell, Chief Executive.

The realities of climate change and the impact of buildings and construction has been recognised for some considerable time.

An announcement by UK Government that legislation will be brought forward to set a Net Zero Carbon target in law is a considerable wake-up call to all those who work in the built environment and will place tremendous responsibilities on structural engineers to grasp the challenges and opportunities head on.

IStructE welcomes and supports the initiative that is being taken by a number of leading structural engineers to promote a “Structural Engineers Declaration” encouraging Companies to change the way they work. Via a separate and independent Construction Declares website which can be accessed via the IStructE website we invite you to consider the impacts of the declaration and to reflect on the impact this will have for you.

In the months to come, the Institution will look to accelerate the [guidance and support](#) it provides to individual members through the sharing of best practice and opportunities for cross-disciplinary CPD.

The declaration is a starting point and IStructE now has an increasingly important role supporting and understanding the implications of a mindset shift from designing for today.

Our Engineering Futures Group is bringing renewed focus on reducing climate impact including a new panel on Design Life, in conjunction with the already excellent work undertaken by our sustainability panel and all of this builds on [The future of our profession](#) compiled following a meeting of the Institution’s Council in 2018.

Please take time to follow the links to the [Structural Engineers Declare](#) campaign site and consider the challenges that are laid bare. What can you do as an individual and what support will you require from your Institution?

Sign the Structural Engineers declaration

[Sign up](#)

Structural Engineers declare climate and biodiversity emergency

The crises of climate breakdown and biodiversity loss are two of the most serious issues of our time. Buildings and construction play a major part, accounting for nearly 40% of energy-related carbon dioxide (CO₂) emissions whilst also having a significant impact on our natural habitats.

For everyone working in the construction industry, meeting the needs of our society without breaching the earth’s ecological boundaries will demand a paradigm shift in our behaviour. Together with our clients, we will need to commission and design buildings, cities and infrastructures as indivisible components of a larger, constantly regenerating and self-sustaining system in balance with the natural world.

The research and technology exist for us to begin that transformation now, but what has been lacking is collective will. Recognising this, we are committing to strengthen our working practices to create structural engineering outcomes that have more positive impact on the world around us.

We will seek to:

- Raise awareness of the climate and biodiversity emergencies and the urgent need for action amongst our clients, collaborators and supply chains
- Advocate for faster change in our industry towards regenerative design practices and a higher Governmental funding priority to support this
- Establish climate and biodiversity mitigation principles as a key measure of our industry’s success: demonstrated through awards, prizes and listings
- Share knowledge and research to that end on an open source basis
- Evaluate all new projects against the aspiration to contribute positively to mitigating climate breakdown, and encourage our clients to adopt this approach
- Upgrade existing buildings for extended use as a more carbon efficient alternative to demolition and new build whenever there is a viable choice

- Include life cycle costing, whole life carbon modelling and post occupancy evaluation as part of the basic scope of work, to reduce both embodied and operational resource use
- Adopt more regenerative design principles in practice, with the aim of providing structural engineering design that achieves the standard of net zero carbon
- Collaborate with clients, architects, engineers and contractors to further reduce construction waste
- Accelerate the shift to low embodied carbon materials in all our work
- Minimise wasteful use of resources in our structural engineering design, both in quantum and in detail

We hope that every structural engineering practice in the UK will join us in making this commitment.

To do this, please go to <https://structuralengineersdeclare.com/>.

Practices should sign through their CEO or Chairperson on behalf of the firm to indicate Board approval.

Climate change resources

To assist our members and the wider industry the Institution produces guidance to support built environment professionals.

View resources

The climate emergency is the greatest threat to our planet. Structural engineers have a responsibility to help mitigate its effects by changing the way buildings and infrastructure are designed, commissioned and constructed.

UK engineering consultancies declared a Climate and Biodiversity Emergency in 2019, recognising the need to show leadership and drive real improvements.

The Institution supports these vital efforts through its role as an international centre of knowledge, sharing information and opinion with its membership and beyond.

Our Climate Emergency Task Group has grouped guidance, training and other useful resources under six key actions which should be priorities for all structural engineering professionals.

Browse our resources, gathered under each action, below.

1. Get informed [<https://www.istructe.org/resources/climate-emergency/#1.%20Get%20informed>]
2. Low carbon [<https://www.istructe.org/resources/climate-emergency/#2.%20Low%20carbon>]
3. Lean design [<https://www.istructe.org/resources/climate-emergency/#3.%20Lean%20design>]
4. Zero waste [<https://www.istructe.org/resources/climate-emergency/#4.%20Zero%20waste>]
5. Influence the brief [<https://www.istructe.org/resources/climate-emergency/#5.%20Influence%20the%20brief>]
6. Get involved [<https://www.istructe.org/resources/climate-emergency/#6.%20Get%20involved>]

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Stuart Matthews

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