

Conference programme



Sustainable Structures of the Future Conference

Thursday 5 November 2026 | 10:00 – 17:10 GMT

IStructE London HQ and online

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10:00	Conference opening
10:05	Welcome address Brian Uy, President, Institution of Structural Engineers
10:15	The Interdisciplinary Future of the Built Environment Dr Wei Yang OBE, CEO, Digital Task Force for Planning The future of the built environment will be shaped not only by what we design and build, but by how we connect ideas, disciplines and decisions to create better places. This presentation will explore how interdisciplinary collaboration, people-centred and nature-first approaches, supported by digital innovation and AI, can better connect planning, design, engineering and delivery to create sustainable, resilient and thriving places.

Session 1: Materials innovation Chaired by Niamh McCloskey, Associate (Sustainability), Curtins	
10:35	Advance market commitments: de-risking material innovation Natasha Watson, UK+ Climate Emergency Change Manager Sustainability Co-Lead for UK, Buro Happold • This presentation will introduce the Advance Market Commitment (AMC) for low-carbon concrete, which was launched recently by Innovate UK, Department for Energy Security and Net Zero and partners to convert concrete innovations from use on pilot studies to larger scale deployment. • The problems the AMC addresses to accelerate the adoption of low-carbon concrete innovations. • Practical application and real-world project delivery

10:50	Scaling mass timber: North American growth, trends, and sourcing innovation Alexis Feitel, Senior Manager of Mass Timber Strategy & Execution, Cambium • The structural, schedule, and carbon performance factors accelerating mass timber adoption across North America, supported by updated building codes and policy. • Primary adoption trends across building typologies, highlighting structural systems, design-assist collaboration, and regional accelerator programs. • Practical strategies for accelerating regional supply ecosystems. Connecting mass timber procurement directly with forest stewardship, underutilized wood fiber, and community impact to maximize embodied carbon benefits.
11:05	Structural stone innovation Alex Lynes, Associate Director, Webb Yates Engineers • Exploring the benefits of using structural stone as a low-carbon solution for contemporary buildings. • Examining real-world examples and applications of structural stone in modern construction projects. • Applying specification guidance to support the effective use of structural stone in building design and delivery
11:20	Session 1 Q&A
11:35	Morning break, networking and exhibition

Session 2: Digital innovation Chaired by Jay Arehart, Associate Teaching Professor, University of Colorado Boulder	
12:00	Physical AI, local timber: robotic manufacture for sustainable housing Sophie Collier, Building Systems Engineering Lead, AUAR Automated Architecture • An introduction to AUAR's portable robotic MicroFactory network as a solution to delivering sustainable timber housing affordably at scale. • How physical AI can enable the use of more local timber of variable quality in construction • The human/AI split in automated design, and how to produce truly optimised timber frame buildings without sacrificing engineering rigour

12:15	Scaling Steel Reuse with the HTS Stockmatcher Laura Batty, Senior Associate, Research & Innovation, Heyne Tillett Steel Liam Ross, Senior Associate, Heyne Tillett Steel Structural and Civil Engineer • What the HTS Stockmatcher is, how it works • The reasons behind the creation of the Stockmatcher • The impact it has had in advancing steel reuse
12:30	Collecting embodied carbon data for the SE2050 Database: lessons learned and next steps Dan Bergsagel, Sustainability Lead, schlaich bergermann partner • An introduction to the database content and collection process • A description of how the information is stored and used • Current analysis results from the data • Next steps for the SE 2050 database • Opportunities for other compatible database efforts
12:45	Session 2 Q&A
13:00	Lunch, networking and exhibition

Session 3: Driving embodied carbon reductions

Chaired by Brian Uy, President, IStructE

14:00	Structural efficiency and embodied carbon panel discussion This international panel brings together leading practitioners, researchers and industry advocates to share practical insights into the decisions, methodologies and innovations that can unlock substantial embodied carbon savings across both buildings and infrastructure. • Bridge engineering and design standards – Steve Denton, Managing Director, Civil, WSP • Academic perspective – Stephen Hicks, Professor in Civil Engineering, University of Warwick • Multidisciplinary perspective – Hanif Kara OBE, Co-Founder and Design Director, AKT II • Adopting a carbon-driven mindset to decarbonise at scale – Maggie Smith, Engineer, TYLin
15:10	Afternoon break, networking and exhibition

Session 4: Circularity and reuse innovation

Chaired by Mark Webster, Structural Engineer, Simpson Gumpertz & Heger

15:35	Circular concrete: from building retention to reimagining waste Andrea Charlson, Head of Sustainability, UK Concrete & The Concrete Centre • Providing an overview of circular approaches for concrete structures, spanning design strategies through to specification. • Showcasing case studies and innovative material solutions to demonstrate practical applications. • Presenting the concrete sector's Circular Economy Action Plan to highlight industry direction and best practice.
15:50	Steel reuse: the current state of play, the challenges, and ways to overcome them Kath Hannigan, Associate, Engenuiti • The benefits of steel reuse and where it currently stands in the UK's construction industry. • The challenges of steel reuse and why it often gets dropped along the way. • Ways to come overcome steel reuse challenges, including the importance of collaboration, with insight from a project nearing design completion.
16:05	All retrofit can be innovative... it just requires us to be bold! Stephen Fernandez, Director, Arup • Retaining existing structures, frames and foundations to unlock the greatest embodied carbon savings while finding new value in what already exists. • Transforming the built environment through innovative retrofit and reuse - bold engineering can deliver change without relying on revolutionary technologies. From waste to wealth: reimagining construction through ReVault & NuBau Labs Kerry Greeves, Director, Arup • How to transform waste into value by treating existing buildings and demolition materials as resources for future construction. • Accelerating circular construction through material recovery, remanufacturing and reuse, supported by the infrastructure and logistics needed to scale solutions such as ReVault and NuBau Labs.
16:20	Session 4 Q&A

16:35	Closing keynote: Toward Net Zero – contradictions, choices, leadership Don Davies, Leadership Team, Building Transparency Co-Founder and Principal, Davies-Crooks Associates Net zero is no longer just an ambition or slogan – it now requires difficult, evidence-based choices, consistent reporting, and industry leadership.
16:55	Closing comments Edwin T. Huston, Past President, Structural Engineering Institute
17:05	Conference closing
17:10	Conference ends

This programme is subject to change

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