



CAETS

International Council of
Academies of Engineering
& Technological Sciences

CAETS Working Group: Engineering for Sustainability

CAETS Annual Conference
September 2025

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Professor Peter Guthrie CBE FREng

Director of Research in Sustainable Development, Department of Engineering, University of Cambridge



Peter Guthrie seeks to articulate sustainable development for engineers, and to pursue research that enables engineers to deliver more sustainable outcomes.

The research he leads is focused on the integration of sustainable development into decision-making in large infrastructure projects such as large-scale civil engineering projects, environmental restoration projects, regeneration schemes, and buildings worldwide.

Recent research has focused on the development of improved understanding of energy efficiency in buildings and the challenges (financial, social and environmental) faced in delivering significantly lower carbon emissions from building stock. The other main strand of research is into decision-making in infrastructure looking at stakeholder networks, the impacts of delay, post-disaster reconstruction, urban development, and heritage value.

Engineering for Sustainability working group focus 25/26

- Intensive drives to meet net zero commitments are taking place in many countries, including the UK. But not enough thinking has been done on how the trade offs against other aspects of sustainability- food security, biodiversity, equitable economic growth- should be managed and mitigated. And when this thinking is done, it tends not to be shared across sectors and geographies.
- The CAETS Engineering for Sustainability working group is addressing this problem by producing a resource for policymakers showcasing engineering case studies on how trade-offs emerge and how they can be managed.
- Case studies will be collected from working group members and other networks and published as a pack for dissemination to national and multinational policy stakeholders.
- Collection began in mid 2025, with a December 2026 timeline for publication.

Progress to date

- **Four Expressions of Interest** submitted by member academies: Argentina, India, Pakistan, China. These will be worked up into case studies by Academy staff.
- **May WG meeting:** proposal's delivery plan was discussed, and feedback was gathered from member academies. In response to the input received, a more structured EOI form was developed and circulated.
- **July WG meeting:** progress check-in, reviewed gaps and shaped vision for the final case study product and discussed engagement strategy and priority stakeholder links.
- **August drop-in sessions:** Shaped agenda for Brisbane 2025 meeting, engaged new fellows, provided Q&A and feedback on Expressions of Interest to refine case study themes.

Update on September working group meeting



Dr. Shaun Fitzgerald FREng, OBE – talk on critical issues in geo-engineering

Meeting attendees since the last convocation

Academy	Lead contributor(s)
Acatech (Germany)	Karen Wagner
ATSE (Australia)	John McGagh
CAE (China)	Kejun Jiang, Jiang Jiang
INAE (India)	Pradeep Chaturvedi, Shobhit Rai
NAE (Argentina)	Dario Gomez
NAE (Netherlands)	Jenny Dankelman
NAE (US)	David Butler
NATF (France)	Claude Nahon
PAE (Pakistan)	Nasim A Khan
RAEng (UK)	Peter Guthrie (Chair)
SAAE (South Africa)	Felix Reinders, Heleen Duffey, Pilate Moyo

Next steps

- **Begin discussions with CAETS Communications and Energy working groups:**
 - Discuss engagement strategy together and ensure aligned communications impact of working group reports and assets on global stakeholders
- **Ask to other CAETS Academies to join the EfS working group and share case studies** from academy and wider networks