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Editorial

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Issue 2 of our 177th volume is a 'Themed Issue' devoted to Sustainability. Through papers focussing on two of the three pillars of sustainability we aim to promote more sustainable marine built environments. These pillars – environmental, social and economic – were first introduced in the Brundtland Report (United Nations World Commission on Environment and Development, 1987), which promoted a new era of economic growth, sustained by preservation and expansion of environmental resources, and pursuit of economic and social justice. The report further introduced a shared global responsibility and a long-term perspective on global development, through conceptualisation of sustainability as 'one that sustained human progress not just in a few pieces for a few years, but for the entire planet into the distant future. Thus 'sustainable development' becomes a goal not just for the 'developing' nations, but for industrial ones as well'.

Addressing the environmental pillar of sustainability, the first paper (Firth *et al*., 2024) presents the most comprehensive overview to date on the state of the art of Integrated greening of grey infrastructure (IGGI), thanks to contributions from an unusually high number of authors, all leading experts in the field (the paper has more than 50 authors). These techniques aim to promote environmental restoration in, on and around existing or future hard structures. The paper summarises an incredible wealth of information gathered from existing studies and ongoing research, discusses future research needs, and presents techniques available to counteract loss of biodiversity and negative effects on ecosystems, with a particular focus on coastal developments. This compendium complements and underpins the development of CIRIA's upcoming guidance 'Greening coastal infrastructure through eco-engineering', aiming to explore and advise on the role of Eco-Engineering in boosting biodiversity in the marine environment.

What makes this paper even more valuable is the original perspective it provides on the subtle relationship between the various degree of success of IGGI interventions, and the understanding behind and ultimate aim they are trying to achieve, in other words, the intention behind them. The article follows on from a thought-provoking paper (Firth *et al*., 2020), which raises ethical considerations in relation to responsibility and potential risk of misuse and 'greenwashing' in applying these techniques.

Following the same lines of shared responsibility, the second paper (in our journal's short 'Briefing Article' format), relates to the social pillar of sustainability by tackling the social implications of engineering work. Various authors have previously highlighted the need for recognising that in addition to a 'bigger picture', attention needs to be paid to the more specific impacts of engineering work on society, and in particular on those parts of society that are less visible, do not have a voice, or are marginalised. Karwat (2019) prompts engineers to grapple with questions such as: 'Why are we engineers? For whose benefit do we work? What is the full measure of our moral and social responsibility?' Here, Truslove and Kraus (2024), of Engineers without Borders, approach with these questions by addressing the skills gap in the engineering sector and the competencies that engineers need, to stay relevant and be able to tackle today's challenges. The paper also provides a specific focus on the role of engineering in coastal defence, and the challenges that engineers face when designing solutions that need be safe and sustainable, whilst providing value for coastal communities as well as nature.

These two papers in this Sustainability 'Themed Issue' will probably take us a little out of our 'technical' comfort zone. But they are a much-needed call to action, a reminder that the seventeen United Nations Sustainable Development Goals (SDGs) are not the sole responsibility of governments and international organizations, but a shared agenda that should be embedded in our engineering profession.

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