



Introduction

Climate breakdown and biodiversity collapse are the most serious issues of our time and transformational action is required in all engineering sectors and disciplines. Engineers have a critical role, and an ethical obligation to play this role, in the transition to a more sustainable society. Engineers Ireland has made a strategic commitment to sustainability through our vision, mission and core organisational purpose.

Our approach to sustainability includes the resilience of our built and natural environment in the face of extreme weather (climate adaptation), the need to reduce emissions related to our buildings, vehicles and infrastructure (climate mitigation), biodiversity protection and enhancement, and achieving the UN Sustainable Development Goals.

Engineers Ireland champions the principles and practices of sustainable development and enables our engineering community to make a sustainable impact on society. In this most important of missions, we collaborate with international engineering organisations, scientists, environmentalists, government, their advisors, public service, colleagues across the built environment supply chain, other professions and civil society.

Engineers Ireland is directly involved in a large amount of sustainability-related work and can educate, regulate and inspire a large audience, particularly our 25,000 members. In 2020, we adopted a **Sustainability Framework** to align sustainability actions with our core objectives under the headings: Learn (professional formation and development), Live (operations), Lead (advocacy and regulation) and Link (collaboration). An initial set of 16 actions was developed for the period July 2020 to December 2021 and significant progress has been achieved under each of the four headings, see **Sustainability Framework Progress Report 2020-21**.

This Sustainability Plan 2022-23 retains the Learn-Live-Lead-Link framework and includes a new set of 20 actions, developed in consultation with members and staff. The Plan was approved by the Council of Engineers Ireland on 5th February 2022 and will be delivered alongside the Engineers Ireland Statement of Strategic Intent 2021-23, based on a detailed implementation plan, and progress will be reported quarterly to the Executive Board.

Engineering and the UN Sustainable Development Goals

Engineers Ireland is committed to the UN Sustainable Development Goals (SDGs), which act as a useful framework to tackle societal challenges. One of our international partners, the World Federation of Engineering Organisations has specifically highlighted the need for engineers to lead the way on the goals for clean water and sanitation, reliable energy, sustainable infrastructure, manufacturing, innovation and education.



The World Engineering Day Logo

“The 17 colours of the UN Sustainable Development Goals are included in the logo and represent the commitment to the UN 2030 Agenda. The colours at the centre of the image are for the Sustainable Development Goals for Water, Energy, Sustainable Infrastructure and Innovation. These are the main areas where engineers are needed most. The goal for Engineering Education is also central as the world needs more engineers with the right engineering skills for sustainable development. The image of the world is incorporated in the logo to show that this is a global day for everyone. The gears of the logo show that engineers are driving the world forward and that engineering is essential for sustainable development.”

www.worldengineeringday.net



Declaration of a Climate and Biodiversity Emergency

On the 22nd of February, the Council of Engineers Ireland – which includes representatives of our engineering divisions and regional branches – passed a motion to declare a Climate and Biodiversity Emergency, publicly recognising that climate breakdown and biodiversity collapse are the most serious issues of our time. The Council of Engineers Ireland acknowledges the considered opinion of the scientific community that transformational action is required to achieve meaningful outcomes.

The planet has ecological limits and a finite biocapacity, a paradigm shift is required to realign humanity's ecological footprint within this capacity. Indeed, with our existing technologies and fossil fuel dependence, we will fail to achieve our existing commitments. Engineers Ireland is adding our voice to those of professional bodies and other organisations around the world by declaring a Climate and Biodiversity Emergency.

Engineers Ireland members will take action to address the impact of the Climate and Biodiversity Emergency. In this most important of missions, we will collaborate with scientists, environmentalists, government, their advisors, public service, other professions and civil society.

As a professional body with 25,000 members, we will act as a leading voice for sustainability. Under the environmental and social obligations of our Code of Ethics, our members shall for example:

- promote the principles and practices of sustainable development and the needs of present and future generations.
- strive to accomplish the objectives of their work with the most efficient consumption of natural resources which is practicable economically, including the maximum reduction in energy usage, waste and pollution.
- promote the importance of social and environmental factors to professional Colleagues, employers and clients with whom they share responsibility and collaborate with other professions to mitigate the adverse impacts of their common endeavours.
- foster environmental awareness within the profession and among the public.

The above Declaration was made on 4th March 2020, World Engineering Day for Sustainable Development. This UNESCO-WFEO international day aims to highlight the achievements of engineers and engineering in our modern world and improve public understanding of how engineering and technology is central to modern life and sustainable development.

Learn Live Lead Link

We will embed sustainability throughout engineering education, from primary school STEPS projects to accredited degrees and supporting members to upskill in sustainability.

We will take measures to reduce our carbon footprint as an institution and embrace new technologies to drive sustainability and inclusion.

We will co-design the role of the engineer in delivering sustainable solutions and commit to these attributes in our professional titles and policies.

We will educate, communicate, and campaign on sustainability in collaboration with scientists, environmentalists, government, and other professions.



Learn

Professional formation and development

Engineers Ireland promotes the lifelong learning of engineering. The Engineers Ireland STEPS programme promotes engineering and the importance of the profession to children, engaging students, parents, teachers and volunteers. At third level, Engineers Ireland accredits more than 200 engineering programmes to equip graduates and to ensure international recognition. Meanwhile, our extensive CPD training programme along with events by our Regions, Divisions and Societies reach thousands of members and other delegates each year. We will embed sustainability throughout engineering education.

The Engineers Ireland STEPS Young Engineers Award winners 2021 - Beckie Kennedy, Rosie Rogers, Grace Kelly, Rían Murphy and Patrick O'Neill from Arles National School, Co. Laois. These third- and fourth-class pupils developed the 'Smart Windmills' project which aims to help livestock farmers harness clean wind energy to generate heat for heat mats needed by new-born piglets and for the sterilisation of milking machines and bulk tanks.

Actions

- 1 } Support third level institutions in embedding sustainability in engineering programmes, and sharing best practice, in fulfilment of the new Accreditation Criteria.
- 2 } Continue to expand CPD training programmes, aligned with the UN SDGs, to drive upskilling on a range of areas related to climate mitigation, adaptation, biodiversity and sustainability.
- 3 } Develop a multi-module CPD programme to provide essential environmental upskilling for engineers, drawing on best-practice case studies from trainers across industry, academia and state agencies.
- 4 } Highlight national and international case studies through our Regional branches, Engineering divisions and Societies, including new and recently relaunched sectors.
- 5 } Further embed sustainability in the STEPS portfolio of projects: Engineers Week, Engineering Your Future, Young Engineers Award and Girl Guides badge.



Live

Operations

22 Clyde Road welcomes thousands of members and visitors in a typical year, while Engineers Ireland also runs many regional events, featured events and visits hundreds of workplaces, colleges and schools. These activities would not be possible without our dedicated volunteers and staff. Increasingly, we are offering services and activities online with benefits for sustainability, accessibility and inclusion. We will take measures to reduce our carbon footprint as an institution and embrace new technologies.

The L12 Heat Pump is the world's largest solid state, zero emission heat pump, developed by Exergyn, a Dublin-based creative clean-tech company. The heat pump is currently the only refrigerant free, and carbon neutral alternative to vapour compression technologies and is putting Ireland to the forefront of the heating, ventilation, and air conditioning (HVAC) industry.

Actions

- 6 - Establish the carbon footprint of Engineers Ireland's operations by capturing data on Clyde Road's water, waste, travel, energy, biodiversity, establish carbon reduction targets, and explore the potential to become a living lab.
- 7 - Implement the recommendations of the energy audit of 22 Clyde Road.
- 8 - Evolve the sustainable events policy and revise travel policies to promote sustainable travel.
- 9 - Introduce a remote working policy in line with legislation.
- 10 - Continue to expand member services, events/ meetings and training available online in an inclusive and sustainable manner.
- 11 - Carry out a digital clean-up by deleting unnecessary emails, files, apps, duplicates of photos and videos, thereby reducing our carbon footprint.



Lead

Advocacy and Regulation

Engineers Ireland is a leader for the engineering profession and broader Irish society through our advocacy, campaigns, communications and regulation. As a community of creative professionals delivering sustainable solutions for society, Engineers Ireland's leadership will be pivotal to the success of national climate action policies and the transition to carbon neutrality. We will co-design the role of the engineer in delivering sustainable solutions and commit to these attributes in our professional titles and policies.

The Dunderrow Solar Farm is the largest solar farm in the Republic of Ireland, developed by Eli Lilly Kinsale and Enerpower. The annual power generated by this solar farm is equivalent to the power consumption of Kinsale town. This will allow Lilly to reduce its annual use of electricity from carbon sources by almost 6GWH and its carbon footprint by 2,350 tonnes. Source: Eli Lilly.

Actions

- 12 } Develop a shared vision for the critical role of engineers and Engineers Ireland in delivering urgent sustainable solutions to the climate and biodiversity emergency and the achievement of the Sustainable Development Goals.
- 13 } Establish a member's declaration/commitment based on this vision and communicate widely across our diverse membership.
- 14 } Revise the regulations for the Chartered Engineer, Associate Engineer and Engineering Technician titles to include sustainability as a core competence.
- 15 } Become licensed to award the Chartered Environmentalist (CEnv) title and explore European alignment for sustainability in engineering qualifications.
- 16 } Advocate, campaign and communicate on sustainable engineering solutions, including focused engagement with government.



Link

Actions

Collaboration

The solutions to our sustainability challenges will require collaboration with other sectors of society and a shared understanding of sustainability. We will educate, communicate, and campaign on sustainability in collaboration with scientists, environmentalists, government, their advisors, public service, other professions and civil society. Within Engineers Ireland, we will promote inclusion, diversity and collaboration between members working in different sectors.

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Link our sustainability actions to our work on inclusion and diversity, building awareness of the need for an inclusive institute where every member feels a sense of belonging, and where diversity is embraced, supporting innovation and engineering excellence.

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Bring third level institutions together for a student-focused event or competition on sustainable engineering solutions.

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Promote inter-disciplinary champions, case studies and networking opportunities across the Regional branches, Engineering divisions and Societies of Engineers Ireland.

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Collaborate with other professional bodies, State agencies and organisations on campaigns, training and communications.

Aisling Hahessy, a Senior Structural Engineer with Arup, was awarded Engineers Ireland's Engineer of the Year 2021 title in recognition of the impact and contribution of her work on communities in Ireland and overseas. She has worked on numerous humanitarian and development projects in countries including Rwanda, Peru, Uganda and Bangladesh. Aisling is pictured at Uwimpfizi Bridge, Rwanda – completed as part of a Bridges-to-Prosperity volunteer project.



Learn
Live
Lead
Link





Engineers are people who design, create, explore and innovate, working to solve some of the world's greatest challenges.

Supporting our organisations

- Engineers Ireland Jobs Desk
- Corporate Partner membership
- CPD accreditation
- Registered training providers
- Policy development representation
- Professional registers
- School and college programmes

Supporting our professionals

- Knowledge
- Recognition
- Community
- Professional development
- Career guidance
- Advocacy
- Networking

Further details at www.engineersireland.ie

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