



Roughan & O'Donovan
Consulting Engineers

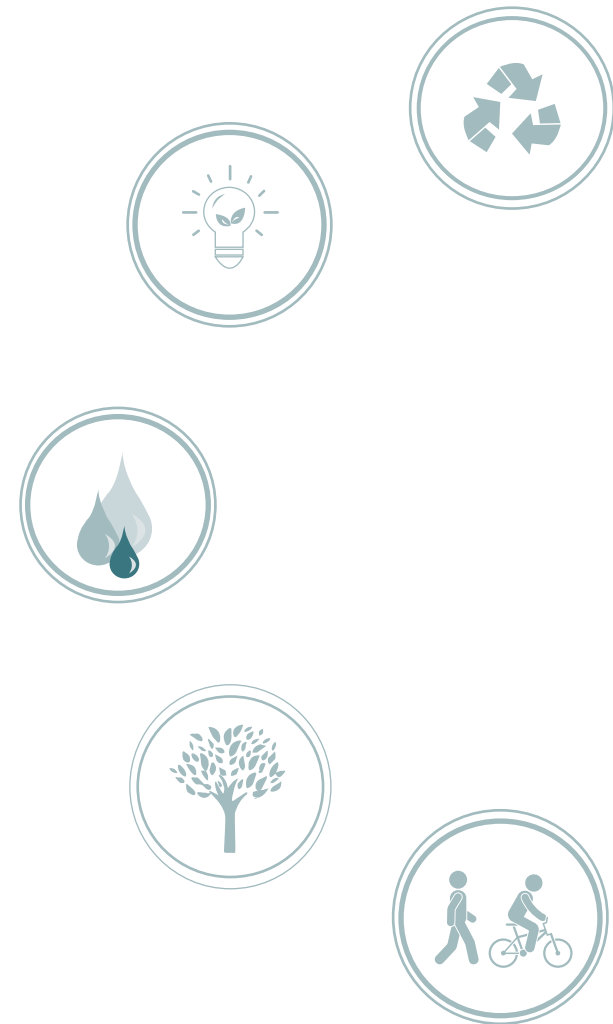
Sustainability Plan





Contents

FOREWORD	3
1. EXECUTIVE SUMMARY	4
2. CONTEXT	6
2.1 Introduction	6
2.2 Ireland	7
2.3 United Kingdom	8
2.4 Our vision for sustainability	8
2.5 Our Sustainability Policy	9
2.6 Company strategic objective and sustainability	9
2.7 Corporate Social Responsibility	10
3. COMPANY BACKGROUND	12
3.1 Organisational structure	13
3.2 Integrated Management System	14
3.3 GRI Standards	14
3.4 Alignment of SDGs, GRI Standards and our Sustainability Plan	14
4. SUSTAINABILITY PLAN	16
4.1 Energy and carbon	18
4.2 Travel and transport	22
4.3 Biodiversity	25
4.4 Water and effluents	28
4.5 Materials and waste	31
4.6 Training and education	34
5. IMPLEMENTATION	36
APPENDIX A Sustainability plan targets and actions	37
APPENDIX B Determining the scope of sustainability reporting	41



Foreword

Jim Thorpe
Managing Director
Roughan & O'Donovan



The escalating climate crisis is the defining issue of our lifetime. The threat posed by rising temperatures, changes in biodiversity and growing cycles, and more frequent and extreme weather events is becoming more real with every passing year. Governments and companies around the world are committing to reducing greenhouse gas emissions. The EU and UK have pledged to achieve carbon neutrality by 2050. It is clear that far-reaching systemic and social change is needed to avert climate breakdown. To safeguard future generations, we must all learn how to be better ancestors, to prioritise the environment and to promote sustainable development.

The environment has been at the heart of our work at Roughan and O'Donovan (ROD) for over 20 years. We are proud of our involvement in several nationally significant public transport and active travel initiatives, including Ireland's first bus lanes, cycle lanes and light rail systems; the Greater Dublin Area Cycle Network Plan; Dublin's suburban rail system; and BusConnects, a programme aimed at improving public transport in the Dublin Region.

Our team has demonstrated its commitment to reducing the impact infrastructure development has on the environment by:

- promoting the avoidance of negative environmental impacts through robust options assessments and/or advocating for the build nothing scenario;
- developing mitigation strategies through integrated environmental assessments and robust design;
- implementing construction environmental management plans;
- advising clients on sustainability solutions aimed at reducing the material demands of construction;
- encouraging the re-use of site won and waste materials;
- developing probabilistic assessment protocols to extend the life of existing infrastructure; and
- introducing low-energy alternatives.

In our role as advisor to clients, we actively promote sustainability measures, such as earthworks optimisation; Ground Granulated Blast-furnace Slag (GGBS) in concretes; insitu rubblizing of defunct concrete pavements; and developing design standards for low-energy pavements.

Notwithstanding these efforts, we know we can do more to accelerate the development and implementation of sustainable infrastructure solutions for our clients and communities. We also know that, as an organisation committed to transparency and accountability, we should highlight not just our achievements, but also the areas in which we need to improve.

Our sustainability plan sets out our commitment to:

- achieving net zero emissions and becoming a climate-neutral company by 2050;
- measuring and reducing our carbon footprint to reach our net zero emissions goal;
- making financial and operational decisions to reduce our broader environmental impact;
- investing in new ways of working and new technologies and systems to help our clients and people meet the required emissions reductions; and
- working with staff, clients and industry partners to maximise our impact.

Our plan identifies our emissions targets, the actions required to reach them and a timeline for their delivery, across the short, medium and longer-term, to 2050. It provides a blueprint for action and a monitoring framework that will be used to measure our progress towards achieving our sustainability goals – the results of which will be reported in our annual sustainability report.

By taking action now, we hope to play our part in enabling society to adapt and become more resilient in the face of climate change, capitalising on the opportunities of the climate transition and the green economy while ensuring we remain competitive in the design and construction sector.



Jim Thorpe
Managing Director

1. EXECUTIVE SUMMARY



Our understanding of the effects of anthropogenic climate change has improved significantly in recent decades. The ongoing human contribution to global warming is now manifestly clear. Individually and collectively, we must take immediate and decisive action to:

- limit global warming in line with the 1.5°C target of the Paris Agreement;
- future-proof and adapt to the climate change impacts already locked in; and
- put people at the heart of climate action to create a fair, just and equitable future for all.

Global leaders are committed to tackling the climate crisis by reducing greenhouse gas emissions, creating a biodiversity rich and climate resilient society and ensuring a fair and just transition. In those countries where these commitments have been enshrined in domestic law, there has been a fundamental shift in how companies operate, with greater transparency and accountability now required. It is against this background that ROD has decided to communicate the actions we, as a company, are taking to:

- improve our environmental sustainability;
- ensure the resilience of the projects we are engaged in;
- reduce the impact infrastructure development has on the environment; and
- make a positive impact on our employees, clients, partners and wider community.

Our sustainability plan has been prepared and published using Global Reporting Initiative (GRI) Standards, which reflect global best practice for sustainability reporting.

Our Sustainability Plan:

- sets out our commitment to achieving net zero emissions and becoming a climate-neutral company by 2050;
- identifies how we can help tackle the climate crisis and the impact infrastructure development has on the environment;
- allows us to take stock of where we are now and define the short, medium and long-term priorities/actions to ensure we continue to improve and contribute towards sustainability;

- supports our existing Integrated Management System (IMS), which is accredited to the Environmental Standard ISO14001:2015;
- creates a framework for continued action and measuring our progress towards achieving our sustainability goals, the results of which will be reported in our annual sustainability report;
- facilitates greater transparency around our sustainability efforts; and
- allows us to communicate our performance over time to our clients and the general public.

Our aim is to demonstrate continuous improvement against the UN Sustainable Development Goals (SDGs) and the GRI Standards relevant to our work, namely:

- Energy and carbon;
- Travel and transport;
- Biodiversity;
- Water and effluents;
- Materials and waste; and
- Training and education.

The plan contains actions that promote:

- a more considered response to consumption;
- the use and re-use of materials to support the circular economy;
- the design of infrastructure that facilitates more sustainable operations and maintenance;
- good conservation status of all water bodies; and
- staff training and education in sustainability.

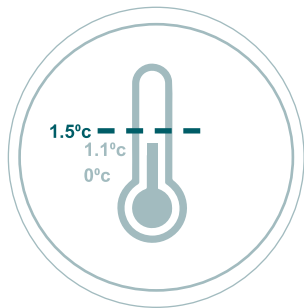
Our plan will help us maintain our focus on the high impact actions critical to working towards the UN SDGs and current intergovernmental targets while still being flexible enough to enable us respond to changing climate commitments. It provides for a coordinated response across our buildings, bridges, transport, environmental, water and research teams thereby ensuring high levels of employee engagement in actions aimed at delivering a more sustainable, safer, healthier, climate resilient society and environment.


Table 1-1 Key targets for implementation

Targets	Actions	Timelines
Integrate sustainability across the company.	<ul style="list-style-type: none"> Identify sustainability champions across each of our teams. 	<ul style="list-style-type: none"> Short-term
Develop a Net-Zero Standard/Science Based Target (SBT) for the company to reach net-zero by 2050.	<ul style="list-style-type: none"> Use the Science Based Targets Net-Zero Standard (or similar) to develop our corporate climate risk disclosures. Reduce greenhouse gas (GHG) emissions in transport and travel by 51% by 2030 and achieve net zero by 2050. Work towards reducing GHG emissions of office operations by 51% by 2030 and net zero by 2050. 	<ul style="list-style-type: none"> Long-term Long-term Long-term
Develop a Carbon Reduction Plan that addresses the project requirements necessary to reduce carbon emissions and to record and reduce company emissions.	<ul style="list-style-type: none"> Sign up to carbon reduction code¹ developed by Cambridge University (or equivalent) and develop a plan to achieve net zero by 2050. Incorporate ISO 14001 targets, as appropriate, into our carbon reduction plan. 	<ul style="list-style-type: none"> Short, medium and long-term Short-term
Support training, development and / or research initiatives aimed at reducing emissions and supporting climate resilience and the decarbonisation of the economy.	<ul style="list-style-type: none"> Identify sustainability gaps through annual performance reviews and training reviews. Support and encourage further education / part-time education related to sustainability and carbon reductions. 	<ul style="list-style-type: none"> Annual Annual

¹Cambridge Centre for Smart Infrastructure and Construction

2. CONTEXT



2.1 Introduction

Climate change is one of the most substantial threats to civilisation in modern times. Rising temperatures, changes in biodiversity and growing cycles and more frequent and extreme weather events are among the effects of climate change already being felt around the world.

The latest United Nations (UN) Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report states that climate change is unequivocal and there is at least 95% certainty that human activities are the principal cause. It argues that “rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems” are needed to address unsustainable development trends.

In 2022, the 27th Conference of Parties to the United Nations Framework Convention on Climate Change (COP27) brought more than 100 world leaders together in Sharm El Sheikh to focus on three areas: climate adaptation, climate finance and ensuring a just transition that takes into account the development needs of countries, communities and groups most affected by the climate crisis. The conference resulted in countries reaffirming their commitment to limit global temperature rise to 1.5°C above pre-industrial levels. This involves:

- future-proofing and adapting to the climate change impacts already locked in; and
- putting people at the heart of climate action to create a fair, just and equitable future for all.

A commitment was made to strengthen actions aimed at reducing greenhouse gas emissions and adapting to the impacts of climate change, as well as boosting the support of finance, technology and capacity building required by developing countries.

Limiting the increase in global temperature to 1.5°C is a huge challenge that will require serious commitment and transformational action from organisations and citizens across the globe. The EU and UK have committed to reducing greenhouse gas emissions by 51% by 2030 and becoming carbon neutral by 2050.

Addressing the biodiversity crisis will also play a major role in tackling climate change. Restoring and promoting the sustainable use of terrestrial ecosystems will combat desertification, reverse land degradation and halt biodiversity loss. Protecting aquatic ecosystems will help us to conserve and sustainably use the oceans, seas and marine resources for sustainable development.

European Climate Law supports the goals set out in the European Green Deal – key among which is the aim for Europe’s economy and society to be climate neutral by 2050. An intermediate target of reducing net greenhouse gas emissions by at least 55% by 2030 (when compared to 1990 levels) has been set.

ROD is committed to playing our part in limiting global warming in line with the 1.5°C target of the Paris Agreement. We acknowledge that our systems and processes must adapt and become more resilient not just to the known impacts of climate change but to those we have yet to experience.

The design of buildings and public infrastructure / spaces influences society and the environment. Good design promotes health and well-being and makes our communities inclusive, safe, resilient and sustainable. Winston Churchill once said, “We shape our buildings and thereafter they shape us.” This knowledge informed our decision to develop an in-house environmental services team at ROD over 20 years ago. We continually strive to integrate the principles of sustainable development into our work, and our sustainability plan is another tool to further embed sustainability into everything we do.

2.2 Ireland

The Climate Action and Low Carbon Development (Amendment) Act 2021 (hereafter referred to as the 'Climate Act') sets the foundation for Ireland to deliver a carbon neutral society. The Act sets a hard deadline of achieving the 'national climate objective' to create "a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy" by 2050 and a legally binding commitment to reduce emissions by 51% by 2030 (relative to 2018 levels) and reach net zero emissions no later than 2050.

The Climate Action Plan 2023 (CAP), published in December 2022, is the second annual update to Ireland's CAP 2019. It sets out a roadmap of actions in six vital, high-impact sectors, including transport, electricity/energy, built environment, agriculture, enterprise and land use to achieve the Climate Act commitments. CAP23 is the first plan to align with the economy-wide carbon budgets and sectoral emissions ceilings, approved by the Irish Government in 2022. Ireland has developed and approved the initial two carbon budgets. Government recognises that transformational and unprecedented systems and behavioural change are required to deliver these emissions reductions. For example, CAP supports policies and actions aimed at transforming how citizens travel and reducing

transport emissions by adopting the Avoid-Shift-Improve approach i.e., reducing or avoiding the need to travel, shifting to sustainable modes of travel and improving the energy efficiency of vehicles.

Project Ireland 2040's National Planning Framework (NPF) is a strategic plan for shaping the future growth and development of Ireland to 2040. It includes National Strategic Outcomes (NSOs) that are aligned with the UN SDGs and the NDP investment plans.

The Department of Transport published the National Investment Framework for Transport in Ireland (NIFTI), a strategic framework for prioritising future investment in the land transport network in Ireland. The investment priorities identified in NIFTI are as follows: decarbonisation, protection and renewal, mobility of people and goods in urban areas and enhanced regional and rural connectivity.

NIFTI sets out a modal hierarchy for infrastructure investment that gives active travel the highest priority, followed by public transport, followed by private vehicles. NIFTI also sets out an intervention hierarchy that prioritises maintenance, followed by optimisation (e.g., demand management), followed by improvement, followed by new (infrastructure).

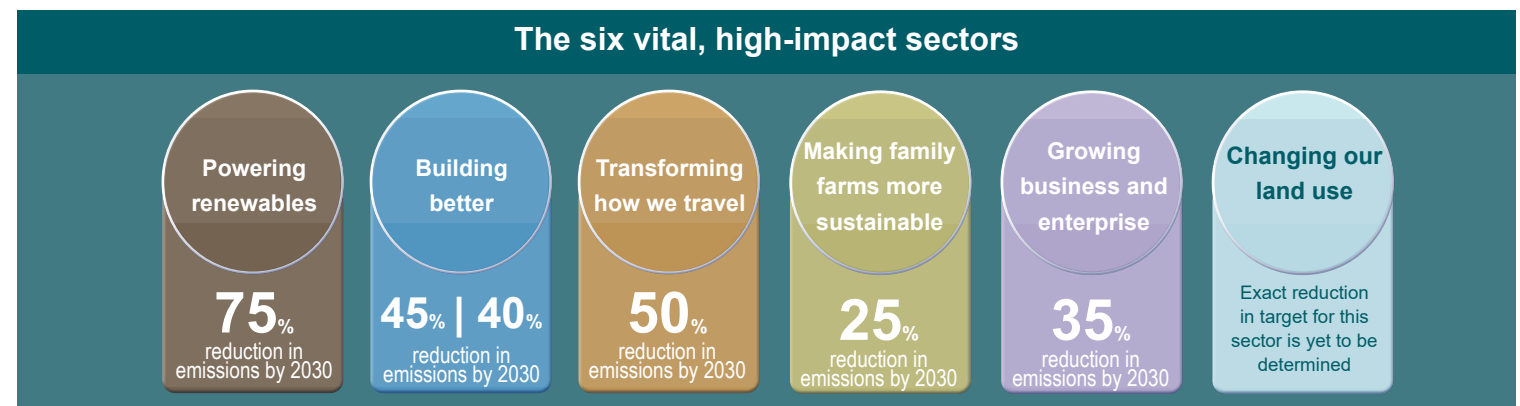


Figure 2:1 Source: Climate Action Plan 2023: Changing Ireland for the Better.

2.3 United Kingdom

In 2008, the UK adopted The Climate Change Act, which aimed to reduce greenhouse gas emissions by 80% by 2050, compared to 1990 levels. In 2019, the Act was amended to reflect net zero ambitions, and a 100% reduction is now the main target.

As part of the UK's Net Zero Strategy, which was developed by the Climate Change Committee (CCC), the UK government has pledged to cut emissions by 78% by 2035, compared with 1990 levels. The strategy includes comprehensive targets covering all greenhouse gases and all sectors, including international aviation and shipping. It is intended to be delivered entirely in the UK, without recourse to international carbon credits.

For example, in the transport sector, the Department for Transport has published 'Decarbonising Transport: A Better Greener Britain', which outlines commitments up until 2050. It includes, 'A Path to Net Zero Transport' comprising:

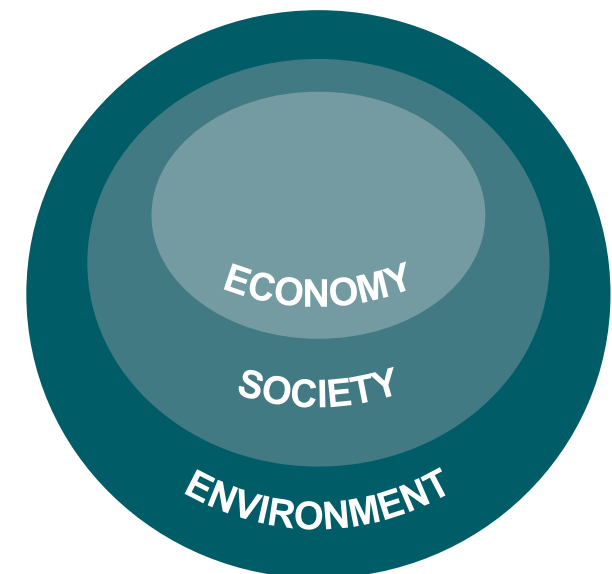
- the vision for clean transport;
- definitions of methods of delivery and themes to be worked on to 2050;
- impacts on transport emissions; and
- commitments, actions and timings for decarbonising all forms of transport and multi-modal decarbonisation.

The UK government requires all public sector organisations and their suppliers to look beyond the financial cost of a contract and consider how the services they commission and procure can improve the economic, social and environmental well-being of an area. This is referred to as 'social value' and is defined through the Public Services (Social Value) Act (2013).

2.4 Our Vision for Sustainability

ROD's vision is to be a leader on sustainability within the engineering industry. We understand sustainable development to mean "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".² The concept of sustainability may be visualised as three spheres: economy, society, and environment.

This conceptualisation acknowledges that societies and economies are reliant on the proper functioning of the myriad of ecosystem services provided by the natural environment for their survival. It is understood that the natural environment has biological, chemical and physical limits within which environmental conditions support a "safe operating space for humanity".³



²World Commission on Environment and Development. (1987). Report of the World Commission on Environment and Development: Our Common Future.

³Rockström, J. (2009). A safe operating space for humanity, Nature, 461, 472 – 475.

2.5 Our Sustainability Policy

In October 2020, we adopted a sustainability policy to establish a framework for our ongoing corporate sustainability efforts. The policy builds on and formalises several measures already in place to promote sustainable development, including our Integrated Management System accredited to the ISO:14001 Environmental Standard.

Our Sustainability Goals

Our sustainability plan is informed by the Seventeen United Nations (UN) Sustainable Development Goals (SDGs), which provide a framework for assessing our performance in terms of environmental, social and economic sustainability. The SDGs constitute the core of the 2030 Agenda for Sustainable Development. ROD is continually working towards achieving all SDGs while prioritising those of greatest relevance to our work.

Figure 2.2: Seventeen UN Sustainable Development Goals



Our Aim

Our aim is to publish a sustainability report annually. We will use the report to communicate our performance against our short, medium and long-term priorities to our employees, clients, partners and wider community.

2.6 Company Strategic Objective and Sustainability

In 2022, we incorporated a new company strategic objective to specifically address the ongoing climate crisis and deliver on sustainability across our company operations.

Strategic Objective No. 6

Deliver design and environmental solutions that support the transition to climate resilient, biodiversity rich and climate neutral economies.

This strategic objective is being advanced through the implementation of the following actions:

- Development and publication of our sustainability plan;
- Reduction of greenhouse gas emissions relating to office operations by 51% by 2030 and net zero by 2050;
- Roll-out of training, development and/or research initiatives aimed at supporting climate resilience, adaptation, the decarbonisation of the economy and reducing emissions; and
- Seek suggestions from staff on how our systems and/or procedures can be adapted so our operations and activities become more sustainable.

2.7 Corporate Social Responsibility

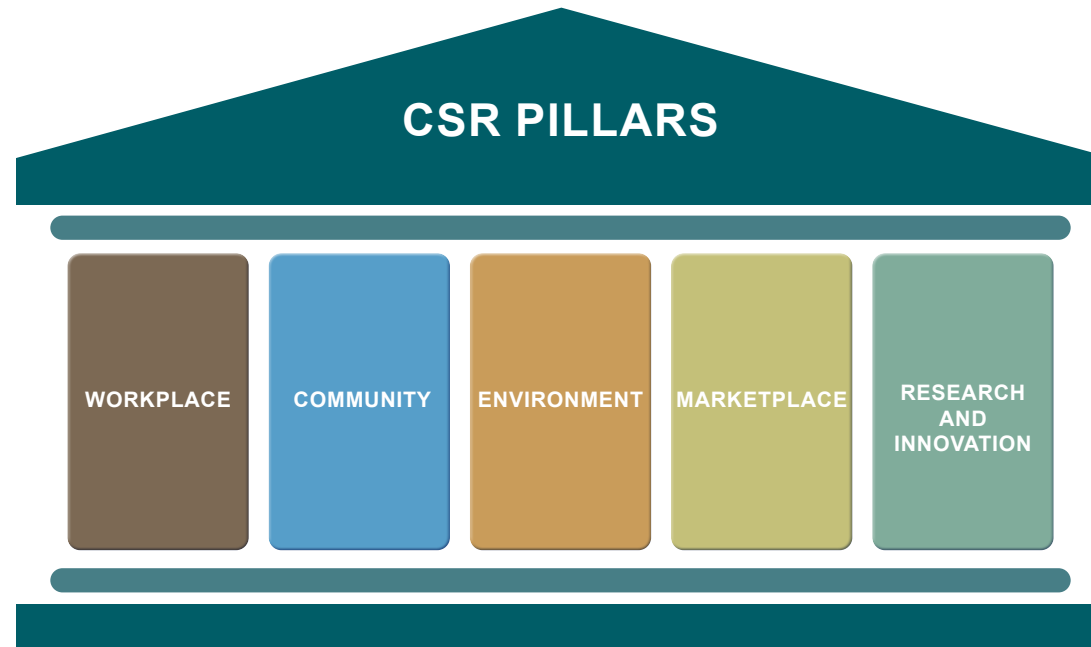
Corporate Social Responsibility (CSR) is a type of business self-regulation aimed at enabling companies, large and small, to integrate economic, social and environmental concerns into their mainstream business operations. Due to the inherent crossover between CSR and sustainability, CSR has been incorporated into our sustainability plan and vice versa.

Our CSR activities are designed to maximise the creation of shared value through collaboration and ensure the interests of the company and our wider society are mutually supportive.

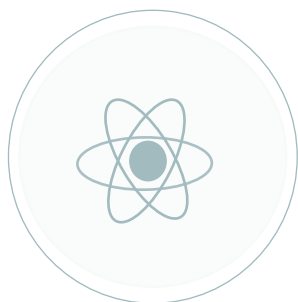
The CSR pillars illustrated below are aligned with our role as a consultancy service provider and our sustainability plan.

Benefits of CSR:

- Improved client engagement;
- Brand improvement, separation and loyalty;
- Improved sustainability and innovation;
- Greater employee engagement;
- Talent attraction; and
- Employee retention.



3. COMPANY BACKGROUND



Founded in 1974, Roughan & O'Donovan is a leading civil, environmental and structural engineering consultancy. We employ a multidisciplinary team of over 200 staff across our offices in Dublin and Leeds. Our key markets are transportation, bridges, buildings, geotechnics, research and environmental. Our key services are asset management, contract procurement, engineering design, project management, planning and environmental. Our clients include international public private partnership (PPP) consortia, design-build contractors, developers, government departments and agencies and city and county councils.

Our projects fall into the following categories:

- Bridges;
- Buildings;
- Transportation;
- Environmental; and
- Research.

We have the experience and skills to cover the full lifecycle of infrastructure assets - from feasibility studies, option selection, environmental assessment and planning services through detailed design and construction procurement and supervision to contract administration and maintenance.

We are fully aware of the impact that the design, construction and operation of our infrastructural projects has on society and the environment. To avoid contributing to the ongoing climate crisis, we aim to:

- reduce emissions at source;
- adopt new ways of working and designing, including considering the reduction of embodied and operational carbon during design development; and
- commit to net zero emissions by 2050.

Buildings

Our buildings team delivers high-quality, cost-effective and sustainable building projects across Ireland. Our key sectors are: commercial, residential, healthcare, community, education, and refurbishment. Our expertise is derived from almost 50 years of engagement on building projects as standalone consultants or as members of integrated design teams for both traditionally procured developments and design and build or PPP projects. We provide client consultancy services and project management services throughout any building process and use computer aided techniques to bring building designs to life, ensuring that decisions and changes can be implemented and assessed before the actual construction starts.

Bridges

We are a technical leader in the planning, design and asset management of bridges. We have delivered award-winning bridges for bridge owners and contractors in Ireland, the UK and overseas. Our bridges team works closely with our transport and infrastructure teams to provide a full suite of integrated services specific to each project. We undertake extensive consultations with planning authorities, statutory bodies and local interest groups to enable delivery of bridges that secure regulatory approval, are safe, cost effective and sustainable.



Northern Spire Bridge, Sunderland, UK.



Transportation

We are one of the leading transport consultancies in the Irish market and, with an office in Leeds, our portfolio in the UK is growing steadily. We provide integrated transportation planning and design services for road, rail, bus rapid transit, cycleway and pedestrian schemes. We have the experience and skills to cover the full life cycle of transport assets - from initial investigations and modelling, through construction management, to the maintenance of transport networks.

Environment

The environmental market is the fastest growing area of our business. Our environmental team consists of environmental scientists, planners, ecologists, drainage engineers, hydrologists, geotechnical engineers, hydrogeologists and GIS technicians. We deliver the full range of environmental services required on projects, helping clients across the water, buildings, transportation, and bridges markets address their environmental challenges and improve efficiency and business performance.

Our services include:

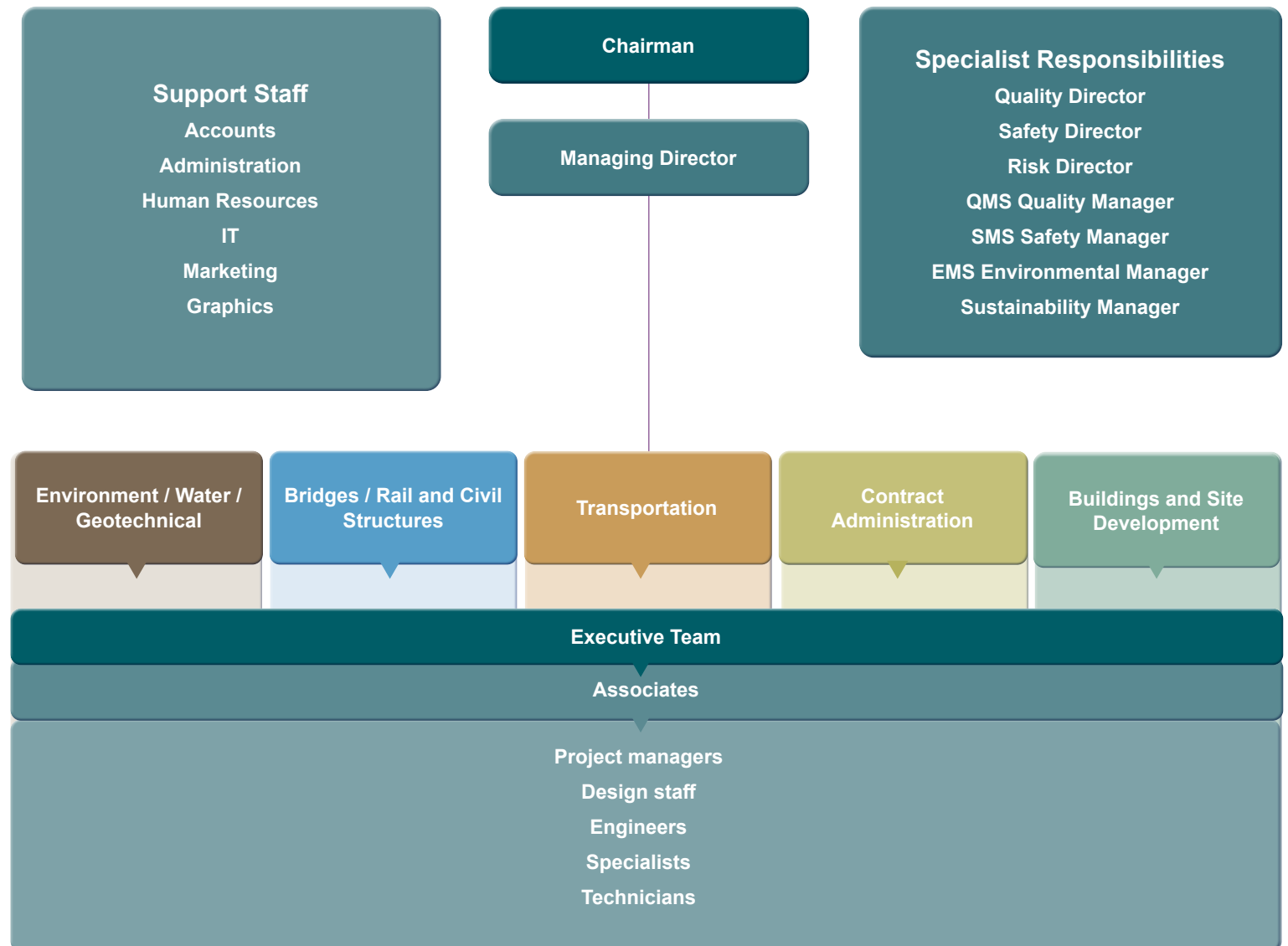
- Option development and assessments;
- Environmental Impact Assessment (EIA) process;
- Strategic Environmental Impact Assessment (SEA) process;
- Appropriate Assessment (AA);
- Ecological Impact Assessment (EclA);
- Flood Risk Assessment (FRA);
- Construction environmental management plans;
- Operational and maintenance plans; and
- Carbon sequestration through, for example, sustainable urban drainage systems (SuDs), including tree planting / landscaping and the implementation of appropriate nature-based solutions (NbS).



West Clare Railway Greenway.



3.1 Organisational Structure





3.2 Integrated Management System

Our Integrated Management System (IMS) affirms our commitment to:

- providing sustainable solutions;
- complying with all relevant legislation and best practice guidance; and
- eliminating environmental impacts in both the design and construction phases of projects.

Our IMS aims to:

- minimise the environmental impact of the organisation's operation;
- ensure compliance with applicable legal requirements and with other requirements related to ROD's environmental work
- provide a system of continuous improvement in environmental performance; and
- provide a means of achieving the targets set out in the organisation's environmental policy.

Our IMS is accredited to the ISO14001:2015 Environmental Standard. It contains all the appropriate processes, procedures and recording forms necessary to support the smooth running of the system. The strategic objectives and targets within our IMS are reviewed on an annual basis.

3.3 GRI Standards

The GRI Standards outlined in Appendix B informed the development of our sustainability plan and will inform our annual sustainability report. While all GRI standards are applicable in some form or another, the standards directly relevant to our company work have been addressed. The supporting GRIs form part of our general company reporting standards but will not be addressed in our annual sustainability report.

3.4 Alignment between the SDGs, GRI Standards and our Sustainability Plan

Following the launch of our sustainability policy, the Sustainability Task Group identified the UN SDGs of greatest relevance to our work / services and cross-referenced them against the relevant GRI Standards. The Group then identified the relevant GRI Standards and aligned them with the UN SDGs. This work informed our priorities for action, namely:

1. Energy and carbon;
2. Travel and transport;
3. Biodiversity;
4. Water and effluents;
5. Material and waste; and
6. Training and education.

Some projects or company activities are applicable to all GRI Standards, for example, Environmental Impact Assessments (EIAs), Environmental and Quality Management Systems (EMS and QMS), Environmental and Occupational Health & Safety Management Systems (ISO).

Continuous Professional Development (CPD) and volunteering work are not identified as specific action areas. However, they are recognised as important in arming our people with the knowledge and skills to address sustainability issues.



























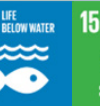





Action areas	GRI Standards	United Nations Sustainable Development Goals
Energy and carbon	<ul style="list-style-type: none"> GRI 302: Energy GRI 305: Emissions 	    
Travel and transport	<ul style="list-style-type: none"> GRI 302: Energy GRI 305: Emissions 	    
Biodiversity	<ul style="list-style-type: none"> GRI 304: Biodiversity 	    
Water and effluents	<ul style="list-style-type: none"> GRI 303: Water and effluents 	     
Materials and waste	<ul style="list-style-type: none"> GRI 301: Materials GRI 306: Waste 	      
Training and education	<ul style="list-style-type: none"> GRI 404: Training and education 	   

Table 3.1
Action areas and alignment with GRI Standards and SDGs

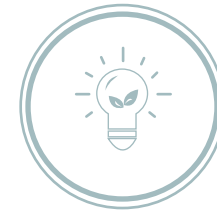
4. SUSTAINABILITY PLAN

Our plan identifies our emissions targets, the actions required to reach them and a timeline for their delivery. The actions have been broken down into short-term (one to two years); medium-term (two to three years) and long-term (three to five plus year) deliverables. They will be reviewed annually.

Our target and actions provide a blueprint for action and a monitoring framework that will be used to measure our progress towards achieving our sustainability goals – the results of which will be reported in our annual sustainability report.

Our sustainability targets and actions are organised under the following headings:

- Energy and carbon;
- Travel and transport;
- Biodiversity;
- Water and effluents;
- Materials and waste; and
- Training and education.



A top-down photograph of a white surface covered with green moss. The moss is arranged to form the letters 'CO2'. The 'C' is on the left, the 'O' is in the middle-left, and the '2' is on the right. There are also several smaller, scattered clumps of moss across the surface.

4.1

Energy and carbon



4.1 Energy and carbon

GOAL: DEVELOP ROBUST DESIGN AND ENVIRONMENTAL SOLUTIONS THAT SUPPORT THE TRANSITION TO A CLIMATE NEUTRAL AND RESILIENT ECONOMY.

Relevant GRI Standards	Relevant UN SDGs
GRI 302: Energy GRI 305: Emissions	<div>6 CLEAN WATER AND SANITATION</div> <div>7 AFFORDABLE AND CLEAN ENERGY</div> <div>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</div> <div>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</div> <div>13 CLIMATE ACTION</div>

Under the European Green Deal, the EU is striving to be the world's first climate-neutral continent by 2050.

Irish Context: The Irish government declared a climate and biodiversity emergency in 2019. The Climate Action and Low Carbon Development (Amendment) Act 2021⁴ commits Ireland to a framework and legally binding path to net-zero emissions by no later than 2050 and a 51% reduction in emissions by 2030 (compared to 2018 levels). Ireland's first carbon budget⁵ programme has been approved by government, it comprises of three five-year budgets (2021-2025; 2026-2030; and 2031-2035), came into effect on the 6th April 2022.

What was agreed?

Carbon budgets⁶ for the five-year terms are set out as follows:

- **2021-2025:** 295 million tonnes of carbon dioxide equivalent (Mt CO₂ eq.) represents an average reduction of 4.8% for the first budget period;
- **2026-2030:** 200 Mt CO₂ eq. represents an average reduction of 8.3% for the second budget period; and
- **2031-2035:** 151 Mt CO₂ eq. represents an average of 3.5% for the third provisional budget.

Budget Period	2021-2025	2026-2030	2031-2035 (provisional)
MtCO ₂ eq.	295	200	151
Average annual reduction	4.8%	8.3%	3.5%

Table 4.1 Ireland's carbon budgets

The budgets support the delivery of the Climate Action Plan (CAP) 2023. The plan identifies a set of actions for each sector and will be reviewed and updated annually. Government ministers are required to account for their performance against the targets. Public bodies, including local authorities, are required to take account of CAP and carbon budgets in the performance of their functions.

⁴Amending the Climate Action and Low Carbon Development Act 2015

⁵A carbon budget represents the total amount of emissions, measured in tonnes of CO₂ equivalent, that may be emitted by a country, region, etc. during a specific time period.

⁶Climate Change Advisory Council, Carbon Budget Technical Report (2021)



Sheskin Windfram grid connections.

Table 4.2 Ireland's sectoral carbon budgets sectoral⁷

Sector	Reduction	2018 Emissions	2030 Ceiling
Electricity	75%	10.5 MtCO ₂ eq.	3 MtCO ₂ eq.
Transport	50%	12 MtCO ₂ eq.	6 MtCO ₂ eq.
Commercial and public buildings	45%	2 MtCO ₂ eq.	1 MtCO ₂ eq.
Residential buildings	40%	7 MtCO ₂ eq.	4 MtCO ₂ eq.
Industry	35%	7 MtCO ₂ eq.	4 MtCO ₂ eq.
Agriculture	25%	23 MtCO ₂ eq.	17.25 MtCO ₂ eq.

Under the Climate Change Act, the UK has committed to reducing its greenhouse-gas emissions to net zero by 2050. As part of the UK's Net Zero Strategy, developed by the Climate Change Committee (CCC), the UK government has pledged to cut emissions by 78% by 2035, compared with 1990 levels. This strategy includes comprehensive targets covering all greenhouse gases and all sectors, including international aviation and shipping. It is intended to be delivered entirely in the UK, without recourse to international carbon credits. The path proposed by the UK government aligns with the CCC pathway, which formed the basis of the UK's NDC and Sixth Carbon Budget.⁸

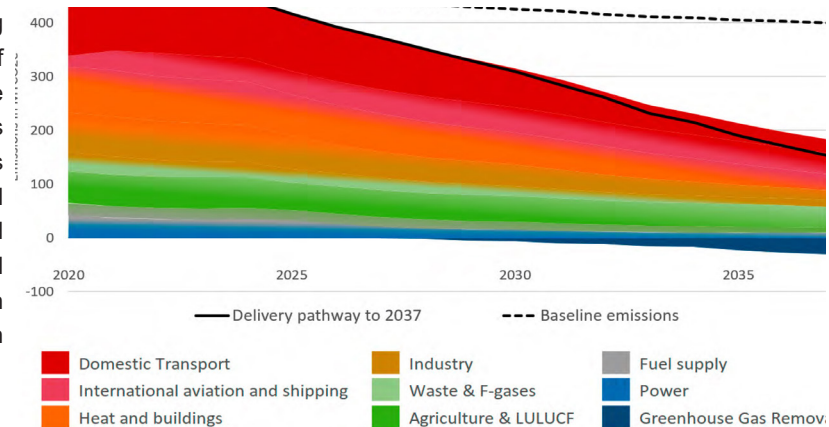


Figure 4.1 Net Zero Strategy (UK Government 2021)⁹

⁷Climate Action Plan 2023, Changing Ireland for the Better

⁸Independent Assessment: The UK's Net Zero Strategy (2021)

⁹Net Zero Strategy: Build Back Greener, UK Government (2021)



Energy and carbon: company targets, actions and timelines

Targets	Actions	Timelines
Develop a Carbon Reduction Plan.	<ul style="list-style-type: none"> • Sign up to the Cambridge University Carbon Reduction Code. • Develop a Carbon Reduction Plan to achieve net zero by 2050 on projects and company activities. • Develop a Net-Zero Standard / Science Based Target (SBT) for the company. 	Short-term Short-term Medium-term
Promote the use of tools to understand and reduce operational carbon and embodied carbon on projects.	Use the following tools as part of the design and environmental assessments: <ul style="list-style-type: none"> • TII Carbon Tool; • PAS 2080 Guidance; • IStructE – Structural Carbon Tool; • Concrete Centre; and • One Click LCA. 	Short and medium-term
Share knowledge and create systems change.	<ul style="list-style-type: none"> • Develop an embodied carbon design checklist for projects and use this to track embodied carbon and or areas for improvement. • Hold knowledge-sharing workshops on reducing operational and embodied carbon to inform the development of projects. • Amend project plan and project review processes / IMS to explicitly address energy and carbon. 	Medium-term Short-term Short-term
Increase energy efficiency and renewable energy in projects and business activities.	<ul style="list-style-type: none"> • Integrate energy efficiency into designs as appropriate. • Reduce energy requirements of offices to net-zero by 2050. • Promote and support individual awareness and behavioural change. 	Short-term Long-term Short-term/ongoing
Design to reduce energy and carbon impacts of projects.	<ul style="list-style-type: none"> • Avoid, reduce and, if necessary, mitigate the environmental and climate impacts of projects during the EIA and design stages on projects. 	Short-term and ongoing

4.2

Travel and transport





An artist's impression of the Clontarf to City Centre project.

4.2 Travel and transport

GOAL: DESIGN AND PROMOTE CLEANER, SAFER AND SUSTAINABLE MOBILITY

Relevant GRI Standards	Relevant UN SDGs
GRI 302: Energy GRI 305: Emissions	<div>3 GOOD HEALTH AND WELL-BEING</div> <div>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</div> <div>13 CLIMATE ACTION</div> <div>15 LIFE ON LAND</div>

EU Context

The EU is aiming to be the world's first climate-neutral continent by 2050. The EU transport policy aims to ensure the smooth, efficient, safe and free movement of people and goods throughout the EU by means of integrated networks and using all modes of transport (road, rail, water and air). It aims to provide efficient, safe and environmentally friendly mobility solutions within the EU and create the conditions for a competitive industry generating growth and jobs. EU transport policy also deals with issues as wide-ranging as climate change, passenger rights, clean fuels and all other transport-related issues. EU transport policy helps keep the European economy moving by working to develop a modern infrastructure network that makes journeys quicker and safer, while promoting sustainable and digital solutions.



Irish Context

The decarbonisation of the transport sector is an urgent priority in the context of climate change targets. The National Planning Framework includes 10 National Strategic Outcomes (NSOs) that work towards a long-term strategy for accommodating growth in a sustainable manner. The National Investment Framework for Transport in Ireland (NIFTI) has signified its intent to invest in transport infrastructure that promotes sustainable mobility, compact growth, the decarbonisation of transport and facilitates safe, accessible, reliable, and efficient travel on the network.



UK Context

The UK has committed to reducing its greenhouse-gas emissions to net zero by 2050. As part of this commitment, the UK government aims to cut emissions by 78% by 2035, compared with 1990 levels. The Department for Transport has developed a plan for Decarbonising Transport "A Better Greener Britain" which outlines its commitments up until 2050. It includes, 'A Path to Net Zero Transport'.



Travel and transport: company targets, actions and timelines

Targets	Actions	Timelines
Support Government's target to decarbonise.	<ul style="list-style-type: none"> Design solutions that promote the use of safe, sustainable and active modes of transport. Integrate biodiversity gain and carbon sequestration into design where possible. 	Immediate / Short-term
Reach net zero by 2050.	<ul style="list-style-type: none"> Design to support positive behavioural change and future technological advances e.g., electric vehicles, autonomous vehicles, car sharing, ICT, ITS, etc. Continue to use TII's Carbon Tool and PAS/UK equivalent (and subsequent updates) on all major transportation projects to ensure that operational carbon is properly considered. 	Started and ongoing
Reduce emissions from company transport and travel activities.	<ul style="list-style-type: none"> Continue to promote the use of walking, cycling, public transport, carpooling, EVs, hybrid/remote working e.g., TaxSaver, Cycle to Work scheme, Workplace Smarter Travel initiatives. Undertake a staff survey to inform efforts to reduce staff members' travel emissions. Quantify emissions from business travel and continue to hold virtual meetings, where possible. Replace the company pool car with an electric vehicle. 	<p>Annually</p> <p>Annually</p> <p>Short-term</p>

4.3

Biodiversity





4.3 Biodiversity

GOAL: DELIVER DESIGN AND ENVIRONMENTAL SOLUTIONS THAT SUPPORT A BIODIVERSITY RICH ENVIRONMENT

Relevant GRI Standards	Relevant UN SDGs
GRI 304: Biodiversity	<div>7 AFFORDABLE AND CLEAN ENERGY</div> <div>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</div> <div>13 CLIMATE ACTION</div> <div>14 LIFE BELOW WATER</div> <div>15 LIFE ON LAND</div>

Biodiversity or 'biological diversity' refers to the variety of living organisms in all ecosystems, including terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part. This includes the diversity within and between species and of ecosystems.¹⁰

Biodiversity is declining globally at an accelerating rate, with one million species facing extinction as a result of land use change, climate change, pollution, over-exploitation and the spread of invasive species. Healthy, well-functioning ecosystems provide us with important ecosystem services, such as nutrient cycling, climate regulation, a place for recreation, alongside many other benefits.¹¹

Over the past 50 years, urbanisation, agriculture, pollution and climate change have resulted in biodiversity decline, a trend that has continued unabated within the last decade despite efforts to reverse these losses.¹² For example, Ireland has approximately 31,500 species,

of which 17% are threatened with extinction.¹³ The UK has around 70,000 species, of which 41% have declined since the 1970s.¹⁴

All organisms, including humans, are deeply connected to the environment, and biodiversity explores the inter-dependencies between animals, plants and humans. At ROD, we are working to protect, maintain and enhance ecosystems and ensure the benefits they provide can be realised for future generations.

We provide a range of ecological services across the lifecycle of projects, including ecological surveys, options assessments, Appropriate Assessment (AA), Ecological Impact Assessment (EclA), Environmental Impact Assessment (EIA), invasive alien species risk assessment and management, pre-construction surveys, as well as ecological clerk of works (ECOW) or monitoring / supervision during construction. Our services are aimed at avoiding, reducing and mitigating impacts on the environment including biodiversity.

¹⁰UN Convention on biological diversity 1992

¹¹National Biodiversity Data Centre, 2022

¹²Natural History Museum, UK, 2022

¹³National Biodiversity Data Centre, 2022

¹⁴State of Nature Report, UK, 2019



Biodiversity: company targets, actions and timelines

Targets	Actions	Timelines
Deliver solutions that support a biodiversity rich environment.	<ul style="list-style-type: none"> Where ROD is appointed as environmental consultant, we will promote the implementation of No Net Loss (NNL) and / or biodiversity net gain (BNG –UK) for all major projects. 	Immediate / short-term
Continue to use our integrated, multidisciplinary design approach to protect and enhance ecosystems services on projects.	<ul style="list-style-type: none"> Amend project plan and project review processes / IMS to integrate biodiversity into decision-making on projects. Avoid, reduce and, where necessary, mitigate impacts on biodiversity during EIA and design stages on all projects. 	Ongoing
Promote and raise awareness of benefits of ecological design and nature-based solutions during the design, construction and operation phases.	<ul style="list-style-type: none"> Review and update project data sheets to communicate how nature-based solutions (NbS) were applied on projects and their benefits. Consider and apply nature-based solutions into all designs, where appropriate. Deliver biodiversity and NbS lunchtime CPD presentations, demonstrating, where possible, practical solutions and lessons learned by drawing on project examples. 	Ongoing Ongoing

4.4

Water and effluents





Typical urban swale detail.

4.4 Water and effluents

GOAL: PROTECT AND IMPROVE WATER QUALITY AND ENSURE PROJECTS ARE RESILIENT TO CLIMATE CHANGE

Relevant GRI Standards	Relevant UN SDGs
GRI 303: Water and effluents	<div> <div>6 CLEAN WATER AND SANITATION</div> <div>7 AFFORDABLE AND CLEAN ENERGY</div> <div>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</div> <div>13 CLIMATE ACTION</div> <div>14 LIFE BELOW WATER</div> <div>15 LIFE ON LAND</div> </div>

Fresh, clean water is vital for all life on earth. According to new analysis, rising global temperatures have shifted at least twice the amount of freshwater from warm regions towards the earth's poles than previously thought. Research suggests climate change has intensified the global water cycle by up to 7.4%, as compared with previous modelling estimates of 2% to 4%.¹⁵

The IPCC Sixth Assessment Report concluded that climate change will cause long-term changes to the water cycle, resulting in stronger and more frequent droughts and extreme rainfall events.

International Context

According to the World Health Organization, an estimated 55 million people globally are affected by droughts every year. They state that water scarcity impacts 40% of the world's population, and as many as 700 million people are at-risk of being displaced as a result of drought by 2030.

EU and Irish Context

The EU Water Framework Directive consolidates existing European water policy. It requires member states to protect and improve their water bodies to achieve good water quality status for all water bodies

by 2027 at the latest. Almost half of surface waters in Ireland do not meet the water quality objectives of the EU Water Framework Directive. This is a result of human disturbance and pollution.

Ireland's water quality and beaches are among the best in Europe. In comparison with other European jurisdictions, Ireland's water reserves are relatively low and, as such, they are susceptible to drought exacerbated by climate change.

The Water Framework Directive (WFD) (2000/60/EC) seeks to protect and improve water bodies, including rivers, lakes, groundwater and coastal water. The WFD objectives are implemented in member states through River Basin Management Plans (RBMPs). The RBMPs are reviewed and updated every six years. Ireland's is on its third RBMP cycle, which will run from 2022-2027. The third cycle is informed by two key principles: integrated catchment management and an holistic approach that recognises synergies with other environmental challenges such as climate change, biodiversity loss, and environmental degradation.

¹⁵Nature Journal Vol 602, Observed poleward freshwater transport since 1970



To achieve at least good status in Irish waterbodies by 2027, the third RBMP will increase the scale of action to include:

- 2,500km of riverside interception measures (e.g., 12,500 hectares of native woodlands). This is a cumulative length representing 3% of all river channels;
- Minimum of 20,000 hectares of organic soil rewetting to deliver water, climate, and biodiversity benefits;
- At least a 50% reduction in nitrogen losses to waters from agriculture;
- Further detailed examination of 2,000 to 7,000 structures/barriers on rivers that potentially require removal or modification;
- A sustained high level of investment by Irish Water in wastewater infrastructure to address deficits and future growth needs; and
- Additional work to prevent the further deterioration of water bodies. This includes a focus on increased compliance and greater and smarter investment.

UK Context

Water quality has become a significant priority in the UK. The UK government has a 25-year plan to improve the environment, including providing clean and plentiful water, within a generation. The plan aims to reduce the risk of flooding, reform the approach to water abstraction and minimise chemical contamination.¹⁶

The Environment Agency is seeking to achieve a water environment that is cleaner, healthier, more resilient to floods and droughts and more supportive of people, wildlife and the economy. It has developed a Water Industry National Environment Programme (WINEP) that provides information to water companies on additional actions they need to take to meet environmental legislative requirements. The Water Industry Strategic Environmental Requirements (WISER) document provides a strategic steer to companies. Alternative supply solutions to ensure sustainable abstraction are also investigated through the Water Resource Management Plan (WRMP) process.

Water and effluents: company targets, actions and timelines

Targets	Actions	Timelines
Promote sustainable water use, avoid pollution, and improve water quality and aquatic ecosystems.	<ul style="list-style-type: none"> • Use Nature-based solutions (NbS) (including SuDS) as the default drainage design and/or flood management approach when designing infrastructure projects, public spaces, etc. 	Ongoing
Reduce flood risk and design resilient infrastructure that takes account of the effects of climate change.	<ul style="list-style-type: none"> • Integrate Flood Risk Assessments (FRAs) into design considerations and continue to design climate resilient infrastructure. 	Ongoing
Promote water conservation across the company.	<ul style="list-style-type: none"> • Continue to encourage staff to conserve water. • Procure appliances with lower water demand when upgrades are required. 	Ongoing

¹⁶ A Green Future: Our 25 Year Plan to Improve the Environment, Dept. for Environment, Food & Rural Affairs, UK

4.5

Materials and waste





Typical mobile stone crushing machine on site.

4.5 Materials and waste

GOAL: EMBED PRINCIPLES OF THE CIRCULAR ECONOMY INTO OUR SYSTEMS AND SERVICES

Relevant GRI Standards	Relevant UN SDGs					
GRI 301: Materials GRI 306: Waste	7 AFFORDABLE AND CLEAN ENERGY 	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	11 SUSTAINABLE CITIES AND COMMUNITIES 	12 RESPONSIBLE CONSUMPTION AND PRODUCTION 	13 CLIMATE ACTION 	14 LIFE BELOW WATER
					15 LIFE ON LAND 	

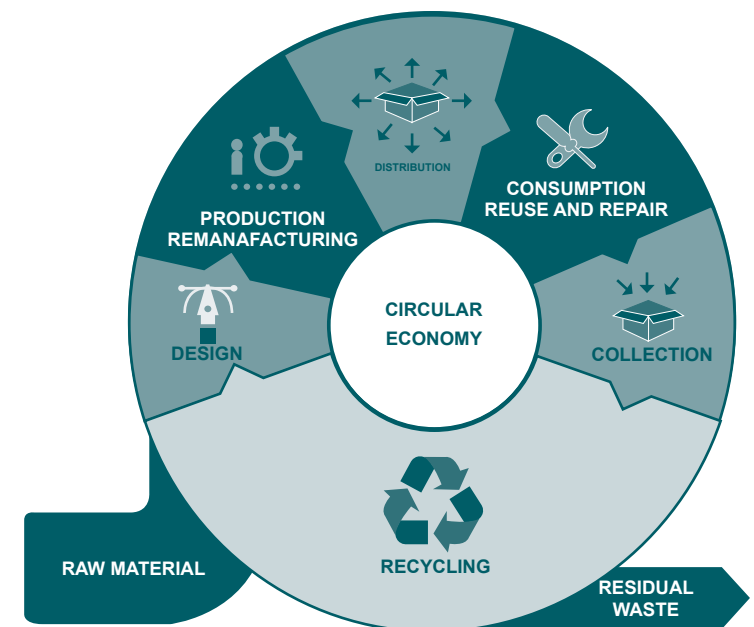
Policy Context

The European Commission's 'New Circular Economy Action Plan For a cleaner and more competitive Europe' reports that the built environment accounts for 50% of all extracted material and over 35% of total waste generation. The construction and demolition sector in Ireland generated an estimated 8.2 million tonnes of waste in 2020. In its 'Whole of Government Circular Economy Strategy 2022 – 2023', the Irish government has identified a need to reduce emissions coming from manufacturing and construction by 45%.

While the construction industry is responsible for significant raw material and energy consumption and carbon production, there is growing awareness of the need to make current industry practices more sustainable to avoid depleting or exhausting our finite resources. For example, when Ireland introduced the BER (Building Energy Rating) certificate and NZEB (Nearly Zero Energy Building) Directive and associated building regulations, subsequent designs were improved to reduce the net energy use of buildings during their operational phase. Parts of the supply chain have also responded by taking steps to improve their operational processes in terms of sustainability and energy reduction.

In July 2022, the Irish government introduced the Circular Economy and Miscellaneous Provisions Act 2022 which places the reuse and reduced consumption of resources at the heart of the Irish economy. This act provides a statutory basis for the Irish government's Waste Action Plan for a Circular Economy.

The UK government is committed to moving towards a more circular economy. It aims to keep resources in use as long as possible, extracting maximum value from them, minimizing waste and promoting resource efficiency. The Circular Economy Package (CEP) introduces a revised legislative framework, identifying steps for the reduction of waste and establishing an ambitious and credible long-term path for waste management and recycling.





Materials and waste: company targets, actions and timelines

Targets	Actions	Timelines
Reduce resource requirements on projects.	<ul style="list-style-type: none"> Promote use of recycled materials on projects (e.g., recycled aggregates in concrete, road pavement, GGBS etc). Create awareness of our use of these recycled materials on projects by sharing information in our company newsletter, website articles and on social media. 	<p>Ongoing</p> <p>Ongoing</p>
Design for circularity.	<ul style="list-style-type: none"> Develop a concrete specification that incorporates recycled aggregates. Develop a checklist of circular design measures that could reduce or prevent future waste/material usage. 	<p>Short-term</p> <p>Medium-term</p>
Influence downstream activities through contract documents.	<ul style="list-style-type: none"> Integrate circularity principles on projects through construction environmental management plans and waste management plans, as appropriate. Integrate circularity into construction activities through procurement-contract documents. 	<p>Short-term and ongoing</p> <p>Immediate / short-term</p>
Continue contribution and membership of Europengineers.	<ul style="list-style-type: none"> Continue to contribute to the Europengineers (SEED) database https://seed.europengineers.com/ 	Ongoing
Reduce company waste.	<ul style="list-style-type: none"> Continue to reduce, reuse and recycle all waste streams in all offices. 	Ongoing

A group of four professionals (three men and one woman) are gathered around a large table in a modern office, reviewing architectural plans. The woman, standing, is pointing at a specific detail on the blueprint. The three men are seated, looking intently at the plans. The office environment includes a large window on the left, framed certificates on the wall, and a power strip and smartphone on the table.

4.6

Training and education



4.6 Training and education

GOAL: SUPPORT TRAINING AND INNOVATION BY COMBINING PEOPLE, PROCESS AND TECHNOLOGY

Relevant GRI Standards

GRI 404: Training and education

Relevant UN SDGs



Continuous Professional Development

ROD has secured approval from the Institution of Civil Engineers (ICE) to operate an ICE training scheme. The scheme will enable us to support our technicians and engineers through their initial professional development and on to a professional qualification: incorporated or chartered engineer status, IEng or CEng MICE.



In October 2022, our status as an Engineers Ireland Continuing Professional Development (CPD) Accredited Employer was extended for the maximum reaccreditation period of three years. The Engineers Ireland CPD Accredited Employer standard is recognised as the national benchmark for organisations across all sectors of engineering and recognises employers that adopt and commit to best practices in their choice of learning and development initiatives.

Our Graduate Programme

Our two-year graduate programme offers graduates an opportunity to:

- gain valuable experience working on high-profile projects;
- receive one-to-one support from dedicated mentors;
- experience four challenging rotations across a range of discipline areas; and
- develop their technical and professional skills through formal and informal training.

Technician Development Programme

Our Trainee Technician Programme was established in 2001 with the aim of helping school-leavers gain an engineering qualification while working on live projects with experienced and supportive colleagues. ROD pays the trainees' fees to undertake a part-time Bachelor of Engineering degree at Technological University Dublin (TUD). After completing three years of part-time study, the technicians earn a Higher Certificate in Engineering and then transfer to a Level 7 Bachelor of Engineering Ordinary Degree, which can be achieved with an additional two years of part-time study. The trainees attend college one full-day and one evening per week, with the remainder of their working week spent in one of our Dublin offices.



Chartership Support

Our Pathway to Chartership Support Programme is designed for engineers and scientists who have successfully completed the graduate phase of their career. It provides our staff with the right combination of project experience, formal training, and mentoring support to achieve the chartership title.

Annual Performance and Training Reviews

Every staff member has an annual performance review, carried out by their director / line manager. It provides an opportunity to:

- examine whether the goals and objectives set at the previous review meeting have been met;
- discuss current workload;
- discuss current performance; and
- agree future goals and objectives, in line with work requirements and the career path identified for the individual staff member.

Every staff member also has an annual training review with their dedicated mentor to address their individual training needs.

Training and education: company targets, actions and timelines

Targets	Actions	Timelines
Continue to invest in our people to become leaders in climate action and sustainability.	<ul style="list-style-type: none"> • Identify sustainability champions across all groups to learn, lead and link. • Support training, development and / or research initiatives aimed at reducing emissions, promoting climate resilience and adaptation. • Identify sustainability gaps through annual performance reviews and training reviews. • Support and encourage further education in sustainability, including embodied and operational carbon activities. • Support advances in design, software and technological innovation. • Encourage think tanks and smaller counsels to address current challenges and potential future obstacles. 	<p>Immediate/ ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>
Maintain and improve affiliations with professional bodies.	<ul style="list-style-type: none"> • Maintain our Engineers Ireland (EI) CPD Accreditation and our approval to operate the Institution of Civil Engineers (ICE) training scheme. • Maintain links with professional institutions through memberships, such as EI, ICE, ACEI, IABSE, IEMA, CIEEM, RTPi and CIWEM. • Pathway to Chartership – support staff aiming to achieve professional memberships. • Continue our involvement in the Engineers Ireland STEPS programme. 	<p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>
Share knowledge and build capacity.	<ul style="list-style-type: none"> • Continue to hold in-house CPD sessions. • Raise awareness of sustainability and climate action. 	<p>Ongoing</p> <p>Ongoing</p>

5. IMPLEMENTATION



This sustainability plan describes our vision and the actions we need to take to deliver our short, medium and long-term targets. The actions will be reviewed annually, giving due regard to progress made, changes in Government policy, incentives, advancements in technology, systems and practical ideas from our people on how projects could be delivered more efficiently and sustainably.

Continued staff and management engagement will be key to the success of the plan, ensuring buy-in from all levels to our shared sustainability vision and to help generate practical solutions to addressing the challenge. Unprecedented levels of government investment and accountability are required to deliver 'climate action' over the next decade and beyond. ROD recognises that we too must invest and become more accountable in delivering on the challenge if we are to become a leader in the delivery of design and environmental solutions that support the transition to a climate resilient, biodiversity rich and climate neutral economy.

Implementation will be achieved and monitored through:

- Setting up a variety of implementation groups. The individual groups will be responsible for creating detailed plans of action, as appropriate.
- Preparing and publishing an annual company sustainability report to demonstrate progress against our targets and the associated actions across the company. The annual report will provide for ongoing monitoring and review of the plan to ensure its effectiveness.



Whitegates to Athlone Castle Cycle Scheme.

Appendix A

Sustainability plan: targets and actions



Energy and carbon targets	Actions	Timelines
Develop a Carbon Reduction Plan.	<ul style="list-style-type: none"> Sign up to Cambridge University Carbon Reduction Code. Develop a Carbon Reduction Plan to achieve net zero by 2050 on projects and company activities. Develop a Net-Zero Standard / Science Based Target (SBT) for the company. 	<p>Short-term</p> <p>Short-term</p> <p>Medium-term</p>
Promote the use of tools to understand and reduce operational carbon and embodied carbon on projects.	<ul style="list-style-type: none"> Use the following tools as part of the design and environmental assessments: <ul style="list-style-type: none"> TII Carbon Tool; PAS 2080 Guidance; IStructE – Structural Carbon Tool; Concrete Centre; and One Click LCA. 	<p>Short and medium-term</p>
Share knowledge and create systems change.	<ul style="list-style-type: none"> Develop an embodied carbon design checklist for projects and use this to track embodied carbon and areas for improvement. Hold knowledge-sharing workshops on reducing operational and embodied carbon to inform the development of projects. Amend project plan and project review processes / IMS to explicitly address energy and carbon. 	<p>Medium-term</p> <p>Short-medium term</p> <p>Short-term</p>
Increase energy efficiency and renewable energy in projects and business activities.	<ul style="list-style-type: none"> Integrate energy efficiency into designs as appropriate. Reduce energy requirements of offices to net-zero by 2050. Promote and support individual awareness and behaviour change. 	<p>Short-term</p> <p>Long-term</p> <p>Short-term and ongoing</p>
Design to reduce energy and carbon impacts of projects.	<ul style="list-style-type: none"> Avoid, reduce and, if necessary, mitigate the environmental and climate impacts of projects during the EIA and design stages on projects. 	<p>Short-term and ongoing</p>



Travel and Transport Targets	Actions	Timelines
Support the target to decarbonise transport and reach net zero by 2050.	<ul style="list-style-type: none"> Design solutions that promote the use of safe, sustainable and active modes of transport. Integrate biodiversity gain and carbon sequestration into design where possible. Design to support positive behavioural change and future technological advances e.g., electric vehicles, autonomous vehicles, car sharing, ICT, ITS, etc. Continue to use TII's Carbon Tool and PAS/UK equivalent (and subsequent updates) on all major transportation projects to ensure that operational carbon is properly considered. 	<p>Immediate / short-term</p> <p>Immediate and long-term</p> <p>Started and ongoing</p>
Reduce emissions from company transport and travel activities.	<ul style="list-style-type: none"> Continue to promote the use of walking, cycling, public transport, carpooling, EVs, hybrid/remote working e.g., TaxSaver, Cycle to Work scheme, Workplace Smarter Travel initiatives. Undertake a staff survey to inform efforts to reduce staff members' travel emissions. Quantify emissions from business travel and continue to hold virtual meetings, where possible. Replace the company pool car with an electric vehicle. 	<p>Annually</p> <p>Annually</p> <p>Short-term</p>



Biodiversity targets	Actions	Timelines
Deliver solutions that support a biodiversity rich environment.	<ul style="list-style-type: none"> Where ROD is appointed as environmental consultant, we will promote the implementation of No Net Loss (NNL) and / or biodiversity net gain (BNG –UK) for all major projects. 	<p>Immediate / short-term</p>
Continue to use our integrated, multidisciplinary design approach to protect and enhance ecosystems services on projects.	<ul style="list-style-type: none"> Amend project plan and project review processes / IMS to integrate biodiversity into decision-making on projects. Avoid, reduce and, where necessary, mitigate impacts on biodiversity during EIA and design stages on all projects. 	<p>Ongoing</p> <p>Ongoing</p>
Promote and raise awareness of benefits of ecological design and nature-based solutions during the design, construction and operation phases.	<ul style="list-style-type: none"> Review and update project data sheets to communicate how nature-based solutions (NbS) were applied on projects and their benefits. Consider and apply nature-based solutions into all designs, where appropriate. Deliver biodiversity and NbS lunchtime CPD presentations, demonstrating, where possible, practical solutions and lessons learned by drawing on project examples. 	<p>Short-term</p> <p>Short-term</p> <p>Short-term</p>



Water and effluent targets	Actions	Timelines
Promote sustainable water use, avoid pollution, and improve water quality and aquatic eco-systems.	<ul style="list-style-type: none"> Integrate the requirements of the Water Framework Directive on projects where we are involved in drainage design. Continue to undertake hydrology and hydrogeology assessments (EIA) on projects and work with multi-disciplinary teams to avoid, reduce and if not possible and mitigate impacts. Use Nature-based solutions (NbS) (including SuDS) as the default drainage design and/or flood management approach when designing infrastructure projects, public spaces, etc. 	<p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>
Reduce flood risk and designre-silient infrastructure that takes account of the effects of climate change.	<ul style="list-style-type: none"> Integrate Flood Risk Assessments (FRAs) into design considerations and continue to design climate resilient infrastructure. 	Ongoing
Promote water conservation across the company activities.	<ul style="list-style-type: none"> Continue to encourage staff to conserve use of water. Procure appliances with lower water demand when upgrades are required. 	<p>Ongoing</p> <p>Ongoing</p>



Materials and waste targets	Actions	Timelines
Reduce resource requirments on projects.	<ul style="list-style-type: none"> Promote use of recycled materials on projects e.g., recycled aggregates in concrete, road pavement, GGBS etc. Create awareness of our use of these recycled materials on projects by sharing information in our company newsletter, website articles and on social media. 	<p>Ongoing</p> <p>Ongoing</p>
Design for circularity.	<ul style="list-style-type: none"> Develop a concrete specification that incorporates recycled aggregates. Develop a checklist of circular design measures that could reduce or prevent future waste/ material usage. 	<p>Short-term</p> <p>Medium-term</p>
Influence downstream activities through contract documents.	<ul style="list-style-type: none"> Integrate circularity principles on projects through construction environmental management plans and waste management plans, as appropriate. Integrate circularity into construction activities through procurement-contract documents. 	<p>Short-medium term</p> <p>Short-term</p>
Continue contribution and membership of Europengineers.	<ul style="list-style-type: none"> Continue to contribute to the Europengineers (SEED) database: https://seed.europengineers.com/ 	Ongoing



Training and education targets	Actions	Timelines
Reduce company waste.	<ul style="list-style-type: none"> Continue to reduce, reuse and recycle all waste streams in all offices. 	Ongoing
Continue to invest in our people to become leaders in climate action and sustainability.	<ul style="list-style-type: none"> Identify sustainability champions across all groups to learn, lead and link. Support training, development and / or research initiatives aimed at reducing emissions, promoting climate resilience and adaptation. Identify sustainability gaps through annual performance reviews and training reviews. Support and encourage further education in sustainability including embodied and operational carbon activities. Support advances in design, software and technological innovation. Encourage think tanks and smaller counsels to address challenges and potential future obstacles. 	<p>Immediate & ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>
Maintain and improve affiliations with professional bodies.	<ul style="list-style-type: none"> Maintain our CPD Accreditation with Engineers Ireland (EI) and our approval to operate the Institution of Civil Engineers (ICE) training scheme. Maintain links with professional institutions through memberships such as EI, ICE, ACEI, IABSE, IEMA, CIEEM, RTPI and CIWEM. Pathway to Chartership – support staff aiming to achieve professional memberships. Continue involvement in the Engineers Ireland STEPS programme. 	<p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>
Share knowledge and build capacity across the company.	<ul style="list-style-type: none"> Continue to hold in-house CPD sessions. Raise awareness of sustainability and climate action. 	<p>Short-term</p> <p>Short-term</p>

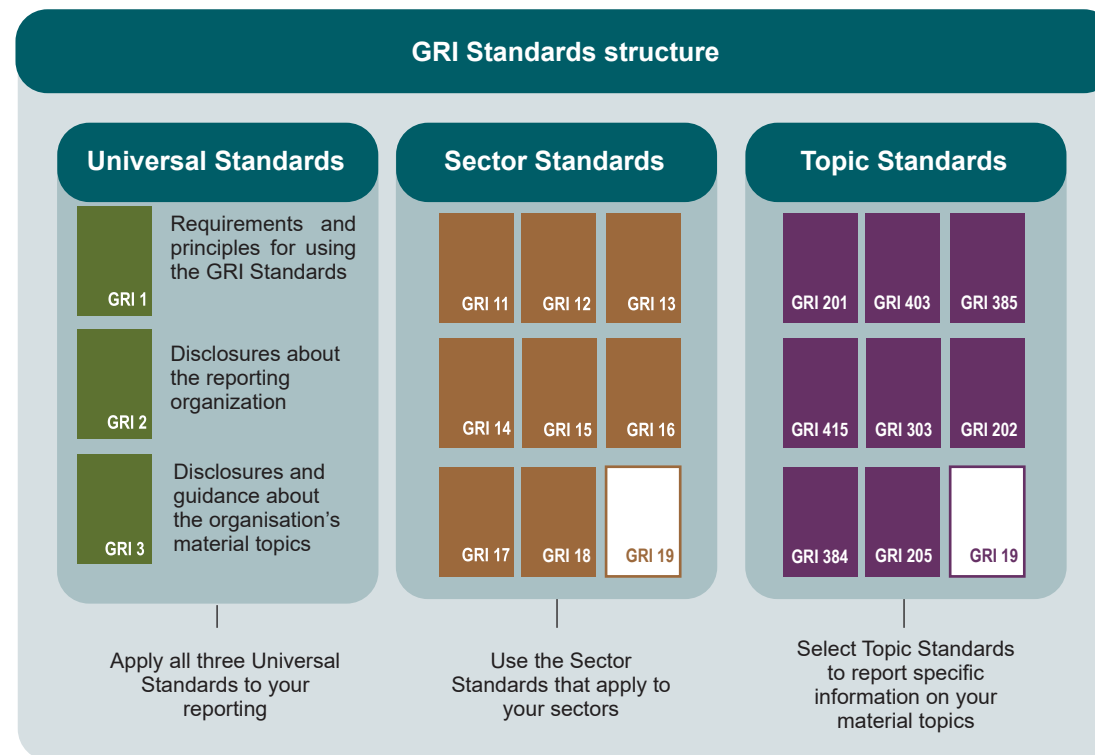
Appendix B

Determining The Scope Of Sustainability Reporting

Sustainability reporting, as promoted by the Global Reporting Initiative (GRI) Standards, is an organisation's practice of reporting publicly on its economic, environmental and social impacts, and hence its contributions – positive and/or negative – towards the goal of sustainable development. It allows internal and external stakeholders to make informed decisions about an organisation's contribution to sustainable development and thereby enables greater transparency and accountability.

The GRI Standards provide a common language for organisations and stakeholders to communicate their economic, environmental and social impacts. Sustainability reporting based on the GRI Standards provides a balanced and reasonable representation of an organisation's positive and negative contributions to sustainability including the UN SDGs.

The GRI standards are listed in this Appendix which have informed the development of this plan and will inform our annual sustainability report.



GRI Standards: Universal, Sector and Topic Specific

Universal Standards	GRI 400 Social
GRI 1 Requirements and principles for using the GRI Standards	GRI 401 Employment
GRI 2 Disclosures about the reporting organisation	GRI 402 Labour management relations
GRI 3 Disclosures and guidance about the organisation's material topics	GRI 403 Occupational health and safety
GRI 200 Economic	GRI 404 Training and education
GRI 201 Economic performance	GRI 405 Diversity and equal opportunity inclusivity
GRI 202 Market presence	GRI 406 Non-discrimination inclusivity
GRI 203 Indirect economic impacts	GRI 407 Freedom of association and collective bargaining
GRI 204 Procurement practices	GRI 408 Child labour
GRI 205 Anti-corruption	GRI 409 Forced or compulsory labour
GRI 206 Anti-competitive behaviour	GRI 410 Security practices
GRI 300 Environmental	GRI 411 Rights of indigenous peoples
GRI 301 Materials	GRI 413 Local communities
GRI 302 Energy	GRI 414 Supplier social assessment
GRI 303 Water and effluents	GRI 415 Public policy
GRI 304 Biodiversity	GRI 416 Customer health and safety
GRI 305 Emissions	GRI 417 Marketing and labelling
GRI 306 Effluents and waste	GRI 418 Customer privacy
GRI 308 Supplier environmental assessment	

