

# Welcome to your CDP Climate Change Questionnaire 2019

## C0. Introduction

### C0.1

#### (C0.1) Give a general description and introduction to your organization.

##### **Our Sustainability Strategy**

Launched during 2017, our 'We are Weir' strategy states our vision "**To be the most admired engineering business in our markets**"; with all stakeholders regarding Weir as a truly outstanding business to be associated with. Our mission is "**To enable our customers to sustainably and efficiently deliver the energy and natural resources needed by a growing world**". To achieve this, we have chosen four areas of distinct competence – People, Customers, Technology and Performance - with sustainability cutting across all four. As an energy and carbon intensive business operating several foundries, we recognise the importance of managing emissions arising from our operations. Our customers also want their operations to become increasingly efficient, smarter and more sustainable. These are the big themes that will help shape our industry in the years to come and we intend to play our part in helping our customers deliver solutions to these global challenges - partnering to develop the mine and frac of the future. Our Board is fully committed to building a sustainable business where this purpose, culture and values are fully aligned and lived every day.

##### **Our 2018 progress**

In 2018 a new Group Sustainability Reporting Manager position was created to support the delivery of our sustainability strategy. We rebuilt our environmental sustainability data collation and analysis processes on a new global reporting software system. With enhanced data quality and analysis functionality, this will enable more informed and effective decision making. In our 2018 Annual Report sustainability review we set out key focus areas regarding our People, Communities, Ethics and the Environment, to balance the broad environmental and societal benefits of our business with potential impacts arising from our operations, including climate change issues. We are working to improve our position in relation to climate change mitigation and resilience and have taken several actions to enable us to do so. Our CEO outlined that as technology leaders we are well placed to help our customers solve their sustainability challenges - highlighting our products and solutions which help our customers to use less water and energy, reduce waste, improve energy efficiency and protect local water supplies. We're excited about the strength of the technology pipeline our engineers are working - a range of innovations from incremental product improvements to solutions that have the potential to disrupt our markets. In 2018, our Group Exec bonus remuneration was dependent, in part, to achievement of two sustainability KPIs under the Performance competency on our balanced scorecard. This continued commitment was demonstrated through inclusion of 2019 KPI to develop 'a sustainability roadmap to deliver tangible value across the Group' during 2019'. A full materiality assessment has already been completed in 1H 2019 looking at all components of ESG.

### Our Business Portfolio

Weir is a global engineering company listed on the London Stock Exchange and a constituent of the FTSE250 Index. We currently have 14,000 people around the world who design, manufacture and service highly engineered solutions that make our customers more efficient. During 2018, the group comprised the following divisions serving global customers:

- 1) Weir Minerals: A global leader in mill circuit technology and service provision, and market leader in slurry handling equipment and associated aftermarket support for abrasive high wear applications in mining, oil and gas and general industrial markets around the world
- 2) Weir Oil and Gas: Provides superior products and service solutions to upstream markets. Products include pressure pumping equipment and services and pressure control products and rental services. Equipment repairs, upgrades, certification and asset management and field services are delivered globally
- 3) Weir Flow Control: Designs and manufactures valves and pumps and provides specialist support services to the global power generation, industrial, oil and gas and other process industries
- 4) ESCO: The world's leading provider of ground engaging tools (GET) used on large mining machines.

In 2018 our CEO announced two major structural changes to our portfolio: acquisition of ESCO and the intended sale of Flow Control. The ESCO acquisition was completed in July 2018. A broad estimate of ESCO's GHG emissions profile was included in our 2018 Annual Report but ESCO energy consumption and GHG emissions figures are not included in this CDP submission as we do not hold sufficiently granular data. We are focused on implementing the systems and processes to allow more accurate reporting of ESCO's first full year as part of Weir Group in 2019. The sale of Flow Control was completed in February 2019; its GHG emissions have been included in our 2018 Annual Report and this CDP submission, and will be included up to the point of sale in 2019 reporting.

## C0.2

**(C0.2) State the start and end date of the year for which you are reporting data.**

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1, 2018	December 31, 2018	Yes	1 year

## C0.3

**(C0.3) Select the countries/regions for which you will be supplying data.**

Argentina  
Australia  
Azerbaijan  
Botswana  
Brazil  
Canada  
Chile  
China  
Czechia  
Dominican Republic  
Finland  
France  
Ghana  
Hungary  
India  
Indonesia  
Iraq  
Italy  
Malaysia  
Mexico  
Morocco  
Namibia  
Netherlands  
Peru  
Philippines  
Poland  
Republic of Korea  
Romania  
Russian Federation  
South Africa  
Spain  
Sweden  
Turkey  
United Arab Emirates  
United Kingdom of Great Britain and Northern Ireland  
United States of America  
Zambia

## C0.4

**(C0.4) Select the currency used for all financial information disclosed throughout your response.**

GBP

## C0.5

**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.**

Operational control

## C1. Governance

### C1.1

**(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

### C1.1a

**(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	Appointed with Board-level oversight and responsibility, the CEO has the highest direct responsibility for sustainability strategy including climate-related issues. He recognises tackling climate change is a clear priority (see Annual Report) as it helps customers to improve performance e.g. through energy and water efficiency and reduces environmental impacts of our own operations and the potential risks and opportunities presented to Weir through market response to climate change e.g. changing energy mixes. Strategic and financial understanding of climate-related risks and opportunities inform and support the selection of our CEO for the overall leadership position on climate-related matters on behalf of the Board. Informed by the Group Executive and CEO, the Board approve the strategy regarding how the company responds and adapts to climate-related risks and opportunities (e.g. increased solar energy use and electric vehicle adoption driving an increased demand for certain metals).

### C1.1b

**(C1.1b) Provide further details on the board's oversight of climate-related issues.**

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain

Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding risk management policies	<p>Reviewing and guiding strategy -</p> <p>The Board develops and promotes the collective vision of Weir's: purpose, culture, values and behaviours, sets Weir's strategic aims and provides leadership and guidance to senior management to ensure the necessary resources are in place to achieve our vision. For our long-term strategy and objectives, the Board considers its duties and responsibilities to all stakeholders, including those regarding climate-related issues. We can identify and seek to capture opportunities through our strategic review process which includes mega trend and scenario analysis. An extensive review of our strategic planning process was conducted in 1H 2018 - a revised process resulted with best practice embedded throughout</p> <p>Reviewing and guiding risk management policies - We can identify and seek to mitigate potentially substantive risks and uncertainties for Weir through our Risk Management and Assurance Framework, including those regarding climate-related issues. The Board reviewed the effectiveness of internal controls and systems for risk management in 2018 and conducted a robust assessment of the principal risks affecting Weir. The Directors reviewed our risk register, reassessed validity of the principal risks identified in 2016, including those that were no longer considered a principal risk and the emergence of new ones. Detailed assessment was conducted on identified principal risks based on: i) Severity of each risk; ii) Existence and effectiveness of actions and internal controls which serve to mitigate the risk; iii) Overall effectiveness of the Group's control environment, including assurance and any identified control weaknesses or failings; and, iv) The extent to which each principal risk could impact upon the Group's viability, in financial or operational terms, due to their potential effects on the business plan, solvency or liquidity.</p> <p>As per the UK Corporate Governance Code 2014, the Directors assessed the viability of the Group over a 3-year period, considering Weir's current position and potential impact of principal risks – including SHE issues (e.g. compliance with climate-related legislation) and Technology and Innovation (e.g. influenced by climate-driven market changes).</p> <p>The Board is responsible for the Group's risk and</p>
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		internal control framework; has set out the decisions, and the level of risk, which can be delegated to the Group Executive, divisional and operational company management without requiring escalation. This is articulated in Group policies and delegated authority matrices, and the parameters in the approved Risk Appetite Statement. Each of the principal risks is assigned an owner from amongst the Board or Group senior management team and is either a standing agenda item at each Board meeting or subject to formal periodic review by the Board, including those with more direct linkages to sustainability and climate-related issues (such as Technology & Innovation, and SHE).
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## C1.2

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Other, please specify Group Executive ( Directed to individual GE member based on subject matter expertise)	Managing climate-related risks and opportunities	More frequently than quarterly
Risk committee	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Safety, Health, Environment and Quality committee	Managing climate-related risks and opportunities	Annually
Other, please specify Head of Sustainability and Strategy	Both assessing and managing climate-related risks and opportunities	Half-yearly

## C1.2a

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

Group Executive: The CEO (who has overall responsibility for climate related matters) sits on the Group Exec. who have overall responsibility for managing the Group to ensure it achieves its strategic objectives, with due consideration of opportunities and risks such as those posed by climate-related issues. The Group Executive is responsible for ensuring that each of the Group's businesses is managed effectively and that the key performance indicators of the

Group, as approved by the Board, are achieved including those related to climate change. The Group Executive's role includes Management of business performance, establishing and maintaining reporting systems which provide clear and consistent information on all aspects of business performance - both identifying and capturing opportunities and managing and minimising corporate risk, ensuring that the necessary mechanisms are in place to achieve effective inter-divisional co-ordination.

Excellence Committees ('EC'): The Group Executive has established several management committees to assist in discharging its responsibilities, including those relating to climate change opportunities and risks. The Excellence Committees have clearly defined remits and work across the Group to promote best practice and information sharing. EC's comprise representatives from across the Group in their respective focus areas. EC's govern activities and performance in individual functional areas, e.g. SHE EC is responsible for monitoring SHE performance and compliance with Group objectives, policies and standards. Specific performance indicators include, amongst others, management of ozone depleting substances (ODS), site-level GHG emissions quantification and reduction, energy management plans, and energy / emissions reduction projects.

Through the Value Chain Excellence EC we focus on improving the operational performance of our facilities. To continue to improve the groups operational excellence, in 2018 we undertook 80 value chain excellence covering engineering, lean and procurement. Developing strategic partnerships is key to our operational success and our ability to satisfy customers. One of the largest potential supply disruptions is that associated with manufacturing facility loss/damage through natural disasters or extreme weather events for example.

Group Head of Strategy and Sustainability: In 2017 the Weir Group reorganised its structure regarding sustainability, with Group Head of Strategy now also taking on the role of Head of Sustainability. In this expanded role, during 2018 our Group Head of Strategy and Sustainability was tasked with driving forward our sustainability strategy (including climate-related issues), adding to the momentum of improved operational efficiency, resilience and environmental performance. Reports directly to the CEO monthly discussing all relevant operational topics including energy, water and waste at a minimum plus wider ESG issues and attends all Group Exec. meetings which then reports to the board.

Risk Committee: Review and oversee design/operation of Risk Management Policy and Framework; Identify and assess principal risks facing the Group, including climate-related issues; Identify key mitigation controls and any further actions required; Review quarterly risk dashboard reports from divisions including responses to identified risks and assess any gaps; Oversee the Group Risk Dashboard and review key controls identified and sources of controls assurance; Provide update on Group and Divisional Risk Dashboards to the Board at each Board meeting

Divisional/OpCo Management: Identify and assess principal risks facing area of responsibility; Identify and regularly assess management controls in place; Respond to material risk incidents/issues as they occur, take appropriate action to escalate issues; Report risk dashboards to the Risk Committee on a quarterly basis; Promote and encourage a risk aware culture

## C1.3

**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

Yes

### C1.3a

**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

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**Who is entitled to benefit from these incentives?**

Board/Executive board

**Types of incentives**

Monetary reward

**Activity incentivized**

Energy reduction project

**Comment**

Group Executive bonus remuneration for 2018 was aligned in part to the achievement of two specific Sustainability KPIs. These initiatives are centrally funded and include prioritising the implementation of new group wide sustainability software and the delivery of a targeted pilot programme of advanced metering projects at high energy consuming sites.

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**Who is entitled to benefit from these incentives?**

Other, please specify

Group Head of Strategy & Sustainability

**Types of incentives**

Monetary reward

**Activity incentivized**

Energy reduction project

**Comment**

The personal component of annual bonus in 2018 is linked to specific annual sustainability objectives relating to, for example, the implementation of new group wide sustainability software and the delivery of a targeted pilot programme of advanced metering projects at high energy consuming sites.

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**Who is entitled to benefit from these incentives?**



Facilities manager

**Types of incentives**

Recognition (non-monetary)

**Activity incentivized**

Emissions reduction project

**Comment**

The Weir SHE Management System establishes a common set of SHE standards and expectations for addressing the risks that our operations face, including climate change.

Specific performance indicators relating to climate change mitigation include, amongst others, the management of ozone depleting substances (ODS), GHG emissions quantification and reduction, and site-level energy management plans and usage reduction projects. The SHE assessment tool used during internal performance audits contains a target score and rating system through which good performance is quantified and recognised.

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**Who is entitled to benefit from these incentives?**

All employees

**Types of incentives**

Recognition (non-monetary)

**Activity incentivized**

Efficiency project

**Comment**

The Weir SHE Management System establishes a common set of SHE standards and expectations for addressing the risks that our operations face, including climate change. The Duty of Care System provides an unbroken chain of accountability from the Chief Executive to our newest apprentice and details individual responsibilities for managing SHE risks.

Mention of specific projects and notable achievements that have been delivered by our employees are presented in:

- The Annual Report and corporate website as case studies;
- The Weir Bulletin, our online magazine which provides news features and information from across the Group and is published every two months; and
- the Weir Global Intranet, which provides news, blogs, videos and a forum for employees to interact with each other on business-related matters on a regular basis, as well as policies, procedures and documentation.

Weir has an annual SHE Recognition Programme to recognize the efforts of the SHE community.

## C2. Risks and opportunities

### C2.1

**(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.**

	From (years)	To (years)	Comment
Short-term	0	1	
Medium-term	1	5	
Long-term	5	15	

### C2.2

**(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.**

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

### C2.2a

**(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.**

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	1 to 3 years	Risk management – including that regarding climate-related issues - takes place at many levels in the business from grassroots at individual sites and projects all the way up to Group-level assessments that consider all regions in which we operate. This approach enables an integrated bottom-up and top-down approach to risk management across the countries in which we currently operate. Results are reported to the Risk Committee that also monitors quarterly risk dashboard reports from the operating companies and divisions. The Risk Committee meets before the Board, approximately nine times per year. The output from the risk dashboard is included within the CEO board reports. Additionally, each Board meeting includes a deep dive exercise to look in depth at one or two of the principal risks. Weir's Risk Appetite Statement is reviewed annually in accordance with this process, during which relevant climate-related issues are considered.

## C2.2b

### **(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.**

As with any business, climate-related risks and uncertainties may affect our future ability to achieve our business objectives. Our risk management policy defines the process to be followed across the group to identify, assess and manage risks (including those related to climate issues). Central to this is the mandated use of the Group's risk management and assurance framework for consistent, robust and timely risk identification, assessment and mitigation.

Risks are assessed, and quantified, in terms of impact and likelihood of occurrence, both before and after control mitigation. Assessing the gross risk before control mitigation allows the business to review the relative impact of the existing controls by comparing the gross and net risk assessment. This also allows the business to avoid wasting resources on mitigating controls and actions which have a negligible impact on the risk assessment.

The impact of climate-related risks is quantified across a range of factors including: financial; strategy; reputation; people and property; ability to perform services; regulation; safety, health and environment; and investors and funding. The business defines substantive financial impact or strategic impact through the use of formal Impact Scoring Criteria, which forms part of the Risk Management and Assurance Framework. For example, where greater >10% of profit may be affected by the realisation of a specific risk, the Financial impact would be considered as 'Critical' in terms of the Group achieving its business objectives.

The risk management policy includes defined criteria for each risk impact factor, supporting a consistent measurement approach. Risk management takes place at the grassroots level, for example in individual projects, all the way up to Group level assessments that consider all of the regions in which we operate, thereby providing an integrated bottom-up and top-down approach to risk management, including relevant climate related matters across the countries in which we currently operate. The management process also considers external factors that could potentially affect other regions, for instance, those in which we have existing major contracts

Ultimately, the Board is responsible for Weir's risk and internal control framework. It has set out the decisions, and hence the level of risk, which can be delegated to the Group Executive, divisional and operational company management without requiring escalation. This is articulated in a series of Group policies and delegated authority matrices, as well as the parameters within the approved Risk

Appetite Statement - the bottom-up risk reporting approach requires key risks identified, and reported, at project level to be escalated to the operating company management, which in turn may be escalated to divisional management, and ultimately to the Risk Committee and the Board. This is achieved through risk dashboard reports, which are maintained at operating company, divisional and Group levels. The dashboards provide a summary of the major net risks, including climate-related risks at each respective level, as well as a summary of the key

mitigating controls and actions, and further control actions required. The Risk Committee monitors quarterly risk dashboard reports from the divisions. In addition, the Risk Committee has oversight of the Group Risk Dashboard, along with a routine review of key controls identified to manage each risk and the sources of controls assurance, providing an update to the Board at each Board meeting. The Board obtains assurance over risks and risk management through the internal control framework.

Principal risks, including any climate-related risks are presented in every CEO report. On a bi-annual basis, the Board also receive a report from the Risk Committee which sets out the current assessment of each principal risk, the effect of mitigating controls on each risk, the direction of travel of each risk versus the prior year, the extent to which each could potentially impact Weir's strategic goals and any relevant findings relating to significant control failings or weaknesses which have been identified. At each board meeting a deep dive exercise takes place to look in depth at one or two of the principal risks. Functional deep dive reports on each principal risk are summarised in the biannual report.

In 2017 the Board reviewed system effectiveness for risk management and internal control, conducting a robust assessment of principal risks affecting the Group in line with the Risk Appetite Statement. These activities meet the Board's responsibilities in connection with Risk Management and Internal Control set out in the UK Corporate Governance Code. In seeking to create a strategic sustainability roadmap to inform business planning and decision making, we have completed a full multi-stakeholder materiality assessment to define our strategic sustainability priorities, including those related to climate change.

## C2.2c

**(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?**

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	<p>Our SHE standards set the requirements to meet and exceed legal requirements regarding the environment. One of our principal risks across the group is the failure to adequately protect stakeholders from harm related to a breach in our SHE standards. The bottom-up risk reporting approach requires key risks - including that related to legislative compliance – to be identified, and reported, at project level to be escalated to the operating company management, which in turn may be escalated to divisional management, and ultimately to the Risk Committee and the Board. This is achieved through risk dashboard reports, which are maintained and considered at operating company, divisional and Group levels.</p> <p>The Weir Group recognises that our business is directly affected by climate related regulations aimed at reducing energy use and GHG emissions in our direct operations and by our products. Legislative frameworks for climate change mitigation (e.g. for energy management, emissions reporting etc.) already exist in several regions</p>

		<p>in which we operate, including the UK (ESOS, CRC Scheme, Climate Change Levy, Mandatory Carbon Reporting), Canada (Alberta Carbon Tax scheme), the US (Mandatory Reporting Regulation – California) and in Europe (EU EED). We are currently captured under the ESOS in the UK and the Alberta Carbon Tax in Canada.</p> <p>How we are affected by potential risk from current regulation depends on the nature of the facilities operating in the jurisdictions. For example, if current regulation changes to become more extensive or have a higher cost associated in a region where we have a large manufacturing presence this would have a greater implication than in a location where we only have sales.</p> <p>The key method we use to minimise risks related to regulation is reducing energy use and associated emissions across the Group. Meaning that, as and when any new legislation is introduced, our level of exposure is lessened.</p>
Emerging regulation	Relevant, always included	<p>Our SHE standards set the requirements to meet and exceed legal requirements regarding the environment. One of our principal risks across the group is the failure to adequately protect stakeholders from harm related to a breach in our SHE standards. Through the standards we ensure that each of our divisions keeps a register of legal requirements and action taken to meet these requirements. The Weir Group recognises that our business could be directly or indirectly affected by additional future climate related regulations and voluntary agreements aimed at further reducing emerging energy use and GHG emissions in our direct operations, by our products and by our supply chain. As a UK listed company, we will be required to comply with the Streamlined Energy and Carbon Reporting requirements and from 2020 report on energy usage and energy efficiency actions taken, in addition to ongoing GHG reporting under the Mandatory Carbon Reporting Regulations. We have identified a potential issue associated with the robustness of the current process used to collate energy efficiency actions so plan to improve this process by utilising the project management function of our new global sustainability software. It is anticipated that further legislative frameworks for climate change mitigation are expected in the next 1-2 years in other regions in which we operate, such as South Africa and China, this will be managed through our risk management process. The key method we use to manage risks related to carbon management regulation is reducing emissions across the Group. Then, as and when any new legislation is introduced, our level of exposure is lower. The principles of Lean manufacturing are well embedded within our business; applying Value Chain Excellence (VCE) to eliminate waste and deliver improved efficiencies for our customers and drive change across our own operations (e.g. reducing energy consumption through increased machine efficiency). Energy, water and waste reduction at our own facilities has been identified as one of our strategic sustainability</p>

		priorities from our recent multi-stakeholder materiality assessment, and will therefore be included in our sustainability roadmap, currently under develop.
Technology	Relevant, always included	<p>Failure to innovate or react to emerging technology which results in a failure of the business to deliver sustainable solutions for our customers is listed as a principal risk across the group that is tracked by our risk dashboards and monitored by the Risk Committee. During 2018, the Group continued to implement a new technology road map launched in 2017, within which there is a specific Energy and Water theme. To enhance the sustainability of our main markets such as mining we are examining how we can help our customers to reduce their energy and water consumption using our products designed through our engineering and material science expertise. By this mechanism we will reduce our customers contribution to climate change and reduce their exposure to water related climate risks. We are exploring the use of new IT technology such as Internet of Things (IoT), sensors and smart factories technology which will improve the efficiency of our operating processes. We manage this risk by having dedicated staff working on technology development through for example our Weir Advanced Research Centre and across divisional and group innovation teams. Sustainable products and services to support our mission "To enable our customers to sustainably and efficiently deliver the energy and natural resources needed by a growing world" has been identified as one of our strategic sustainability priorities from our recent multi-stakeholder materiality assessment. As such it will be included in our sustainability roadmap, which we will develop in 2019. An example of sustainable product development is our development of Electric FRAC equipment which will have 90% reduction in fuel use, eliminates flares &amp; hot fueling compared to the conventional process.</p>
Legal	Relevant, always included	<p>Our SHE standards set obligations to meet and exceed legal environmental requirements. A principal risk across Weir is failure to adequately protect stakeholders from harm related to a breach in our SHE standards. The SHE committee monitor performance and compliance to the standards, and regularly report to the Board. In 2017 a global SHE incident reporting software system was put in place. Weir recognises that if we fail to meet requirements of climate related legislation or stakeholder expectations, we could potentially be exposed to unfavourable publicity, litigation and financial obligations which could have adverse effect on profitability, cash flow and stock price. Major regulatory shocks are considered within our viability statement model, under the modelling assumption of US\$100m liability claim.</p> <p>Climate related regulation/legislative frameworks (e.g. for energy management, emissions reporting) already exist in a number of regions in which we operate, e.g. the UK (ESOS, CRC Scheme,</p>

		<p>Climate Change Levy, Mandatory Carbon Reporting), New Zealand (NZ Emissions Trading Scheme), Canada (Alberta Carbon Tax scheme), US (Mandatory Reporting Regulation – California) and Europe (EU EED). We are currently captured under the UK ESOS and the Alberta Carbon Tax in Canada.</p> <p>Similar legislation is expected in 1-2 years in other operational regions, e.g. South Africa and China. As a global company we operate in a large number of countries, and without a single global scheme, we are required to manage our legislative burden on a country-by-country basis. The bottom-up risk reporting approach requires key risks - including that related to legislative compliance – to be identified, and reported, at project level to be escalated to the operating company management, which in turn may be escalated to divisional management, and ultimately to the Risk Committee and the Board. This is achieved through risk dashboard reports, maintained and considered at operating company, divisional and Group levels. Recently there has been an increase in climate-related litigation claims brought by property owners, municipalities, states, insurers, shareholders, and public interest organisations. Reasons for such litigation include failure of organisations to mitigate impacts of climate change, failure to adapt to climate change and insufficient disclosure around material financial risks.</p>
Market	Relevant, always included	<p>Market volatility is described as Weir group principal risk; we recognise that our business could be affected by climate related market changes. Moves to reduce emissions and increase the use of electric vehicles is likely to have a long-term impact on oil, while also increasing demand on other sources of energy, from natural gas to wind and solar. Minerals commodity demand will be strengthened to support global electrification, transport and battery technology.</p> <p>The Weir Group operates in a diverse range of markets that have the potential to be impacted in different ways by the growth in electric transportation and efforts to tackle climate change. Natural gas, which produces significantly lower emissions of carbon dioxide than coal, is becoming an increasingly popular source of energy in both advanced and emerging markets. Increased use of solar energy and electric vehicle adoption will also increase demand for metals such as copper, with solar energy and electric vehicles requiring significantly more copper, lithium and cobalt than traditional alternatives. As Weir operates in all of these markets (i.e. oil, power, minerals) these external market changes are tracked at a divisional as well as overall group level as specific aspects within our risk dashboards.</p>
Reputation	Relevant, always included	<p>A principal risk is that our interactions with our people, customers, suppliers and other stakeholders are not conducted with the highest standards of integrity which devalues our reputation. We also recognise that sustainability issues, particularly climate change issues</p>



		are on the radar of investors, customers and wider stakeholders and those expectations are increasing. We include reputation as a key factor used to quantify the potential impact of risks during our ongoing risk assessment and monitoring processes, including those relating to climate change. Having a poor reputation in relation to climate change management could potentially affect access to finance or even our share price. For example, in the financial sector, a material business impact is considered to be $\pm 5\%$ change in our share price or business value. For example, a -5% variation in Weir's share price would equate to approximately £170m, based on an end-2018 market capitalisation of £3.4bn. To maintain and enhance our reputation as a market leader and to respond to client needs in a changing environment, we focus on innovation of products with low carbon R and D forming part of this programme.
Acute physical	Relevant, always included	As a business with global reach we recognise that our business could be directly and indirectly affected by acute physical impacts of climate change such as more frequent severe weather events (e.g. cyclones, hurricanes, or floods) in locations where we operate. In 2018 we were exposed to flooding in China and wild fires in Europe and the USA. Fortunately, employees were unharmed and very little disruption occurred at our sites due to these events. However,, in 2017 'Hurricane Harvey' landed in the US, the most powerful hurricane to hit the state of Texas in more than 50 years, and one of the country's costliest natural disasters with damage estimated at \$125 billion (£90 billion). Seven sites within our Oil and Gas division were affected to varying degrees. Fortunately, our employees were unharmed and our sites only suffered temporary closures. Thanks to asset resilience and a robust response from the division, eventual business interruption was minimised and the financial impact was contained to £545k (\$750k). Such risks are captured at an operating level and fed into our business wide risk assessment through the bottom up reporting route. We are working with our Insurance broker to identify potential Catastrophic Natural Incidents which may occur across the regions within our own operational portfolio.
Chronic physical	Relevant, always included	As a business with global reach we recognise that we could be directly and indirectly affected by longer term physical impacts of climate change. For example, in regions where water is in short supply it is important that we continue to develop equipment and technology to ensure that the water drawn out by dewatering systems becomes a resource for mining or even for other uses by communities surrounding the mine sites. Technology is allowing manufacturers to produce equipment which not only dewater mines to allow safe extraction of ore, but which can then be recycled and re-used either within the mining process or if necessary, by the wider community after necessary processing for commercial or domestic use. This helps to reduce the negative impact on the environment.



		<p>The quality of surface and groundwater from a mine is monitored and treatment processes utilised to ensure it meets the correct standards before being discharged either for disposal to waterways or for use by the wider community. Rather than it going to waste, it is increasingly important to manage and reuse the water effectively, improving the resilience of mine site processes and activities in increasingly harsh environments. Such risks are captured at an operating level and fed into the business wide risk network through the bottom up process.</p>
Upstream	Relevant, always included	<p>Weir recognises that our suppliers will be directly and indirectly affected by climate change. We assess supplier risks as the point of procurement using our Supplier Risk Evaluation Management Manual and Assessment Template. Weir considers within this process the risk identification, risk assessment / re-assessment, risk control and risk monitoring. One of the largest potential disruptions to supply is that associated with loss or damage to their manufacturing facilities. This can be caused by natural disasters/extreme weather events. Our assessment considers the potential disruption to supply associated with loss of facilities due to damage. The supplier should therefore have a business continuity or disaster recovery plan detailing how potential loss of production can be mitigated. The Group has insurance coverage in the event of loss of revenue from a supplier being affected by an insured peril (such as flood) to mitigate losses from such events. Such risks are captured at an operating level and fed into the business wide risk network through the bottom up process.</p>
Downstream	Relevant, always included	<p>One of our principal risks is the failure to innovate or to react to emerging technology developments, and therefore failure to ensure the business continues to deliver sustainable and attractive solutions for our customers. As such, technology innovation and use is tracked via our risk dashboard. We understand that the physical impact of climate change will affect customer activities; we seek to work with customers to identify business challenges and opportunities. Within the mining sector, we engage with customers through energy and environmental forums. For example, we took part in the Anglo American future smart mining and energy forums and are taking the lead on energy and water related packages. We support some of our largest customers to discuss not only what we can do to improve our products' efficiency and durability but also support the efficiency and resilience of customers' operational sites. In 2018 we launched Synertrex, an advanced industrial Internet of Things technology, using cloud computing and smart sensors on our products to gather critical operating data for advanced interrogation and analysis. Helping to identify potential issues before they become critical, reduce downtime and optimise equipment performance.</p> <p>Products embody carbon through the energy involved in their design, production, distribution, use, maintenance and disposal. By</p>

		addressing carbon 'hotspots' we help to lower emissions over the whole lifecycle (e.g. extend product lifespan to reduce replacement frequency, increase component resilience to reduce maintenance activity). In 2018 we introduced the Cerasmooth™ compound as a wear life solution for the Flue Gas Desulphurisation market. In-house testing has shown up to a 60% improvement over the previous polymer ceramic material can be obtained, meaning that operators can significantly improve the service life of their pump compared to metal and rubber liners. Our Simplified Frac System reduces by 88% potential emissions leaks paths, making the customer's frac site safer and more efficient. Our Intelligent System for Flowback Operations offers more accurate emissions measurement from the eco tank to enable reduced emissions and waste.
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## C2.2d

### (C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

The Board reviews and updates the Risk Appetite Statement annually, which highlights acceptable and unacceptable risks and includes strategy-aligned risk assertions and risk parameters within which we expect our people to work. It is used across the Group with risk assessment to define actions for mitigating, transferring, accepting or controlling a particular risk type; compliance is monitored through functional and frontline controls e.g. oversight/reporting mechanisms.

The Board sets Risk Policy and obtains assurance over risks and risk management through an internal control framework that it has overall responsibility for, which sets out risk levels delegated to Group Exec, Divisional management and operational companies (OpCo) through specific policies and delegated authority matrices.

Our Risk Management Policy and Framework define how risks should be managed. The Group level Risk Committee (RC) is responsible for its governance (e.g. efficacy, principal risk identification/assessment and management controls). RC monitors quarterly Divisional risk dashboard reports, oversees the Group Risk Dashboard, reviews management controls and sources of control assurance, and shares updates at all Board meetings.

Divisional and OpCo management are responsible for managing asset level risks that could impact business objective delivery, escalating as needed via regular reporting mechanisms (e.g. Risk Dashboards). RC gives feedback on response adequacy. SHE Excellence Committee monitors SHE risk management across the Group. In 2018 our businesses maintained 78% compliance with environmental standards, which require carbon/energy reduction activities and monitoring of emerging environmental law (e.g. WM Africa monitors the Carbon Tax Bill in South Africa, evaluates actions for compliance).

We work with an insurance broker to identify potential Natural Catastrophic Incidents facing our portfolio, enabling physical risk management at site level to reduce risk of operational disruption and harm to our people and assets. External insurance audits consider climatic event risks and inform Crisis Management Plans with clear accountability. With asset resilience plans and robust response from Division, employees were unharmed and business interruption minimised when Hurricane Harvey hit in 2017; financial impact was contained to £545k. In 2018, again employees unharmed and very little site disruption from flooding in China and wild fires in Europe and USA.

Strategy Planning Process with the Board identified climate change as a mega-trend with opportunities to proactively manage, e.g. material excavation for increased demand for electric vehicle. Head of Strategy and Sustainability manages the planning process and annual strategy plan review for Board sign off.

Product Managers develop, communicate and execute detailed strategy for each product specialism, with market potential insight to maximise market share across industry segments/geographies. PMs manage market assessments and product development activities (e.g. monitoring product performance to meet targets) to maximize opportunities and coordinate product development in new/existing markets. We target 2% of annual revenue on R&D initiatives for innovative products, processes and technologies (e.g. enhanced product durability with reduced rebuilds/replacements for avoided emissions). Our top-down opportunity management process originates from a review of our innovation design process and development of an innovation framework with strategic arenas, e.g. Customer Digital Experience (CDE). Working with Accenture on CDE opportunities, we plan to focus on Internet of Things, Field Services and Frictionless Interactions with customers. Our bottom up process invites all our people to innovate. Several open innovation programs encourage ideas to flow, e.g. development of an induction heating system at a Malaysian site with a replicable £70k saving. We are exponents of the circular economy - buying back scrap to re-cycle into new components, in 2018 17,400 tonnes of scrap metal was reused- 46% of all metal poured.

External opportunities are managed through Technology, R&D, Innovation, and Weir Advance Research Centre (WARC) – giving Weir immediate and dynamic access to a network of subject matter experts and enables rapid research project development and delivery. We employ a WARC Technology Scout to evaluate and communicate relevant technology advancements and support new technology acquisition and development. To support the established product development process, we launched a new technology strategy to continue market leadership and build on our innovative engineering legacy. Increased solution and operational digitisation, advanced manufacturing within facilities, and materials science leadership to reduce customers' energy/water consumption will improve end market sustainability. In 2018 our CTO continued to manage delivery of the technology strategy.

## C2.3

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

## C2.3a

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

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### Identifier

Risk 1

### Where in the value chain does the risk driver occur?

Direct operations

### Risk type

Transition risk

### Primary climate-related risk driver

Policy and legal: Mandates on and regulation of existing products and services

### Type of financial impact

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

### Company- specific description

Regulation and legislative frameworks for climate change mitigation (e.g. for energy management, emissions reporting etc.) already exist in several regions in which we operate, e.g. the UK (ESOS, CRC Scheme, Climate Change Levy, Mandatory Carbon Reporting), Canada (Alberta Carbon Tax scheme), the US (Mandatory Reporting Regulation – California) and in Europe (EU EED). We are currently captured by UK ESOS, EU EED and the Alberta Carbon Tax.

The Weir Group recognises that our business could be directly or indirectly affected by additional future climate related regulations and voluntary agreements aimed at further reducing emerging energy use and GHG emissions in our direct operations, by our products and by our supply chain. As a UK listed company, we will be required to comply with the Streamlined Energy and Carbon Reporting requirements from 2020 onwards to report on energy usage and energy efficiency actions, in addition to existing reporting requirements around GHG emissions under the Mandatory Carbon Reporting Regulations. It is anticipated that further legislative frameworks for climate change mitigation are expected in the next 1-2 years in other regions in which we operate, such as South Africa and China.

As a global company we operate in many countries, and without a single global scheme, we are required to manage our legislative burden on a country-by-country basis. The extent to which we are obligated and thus affected by any associated potential risk will depend on the nature of the facilities operating in these jurisdictions. For example, if new regulation were to come into force in a location where we have foundries this would have potentially greater implications for our business than if it were a service centre.

The key method we use to manage risks related to carbon management regulation is reducing emissions across the Group. Then, as and when any new legislation is introduced, our level of exposure is lower. The principles of Lean manufacturing are well embedded within our business; applying Value Chain Excellence (VCE) to eliminate wastage and deliver improved efficiencies for our customers and drive change across our own operations (e.g. reducing energy consumption through increased machine efficiency).

**Time horizon**

Medium-term

**Likelihood**

Very likely

**Magnitude of impact**

Low

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

153,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

Where schemes obligate carbon allowance purchase or tax payment, Weir may be exposed to financial liabilities. For example, compliance with Phase 1 of the Energy Saving Opportunity Scheme had a financial impact for Weir of c. £60,000 including CAPEX for energy reduction projects, and for Phase 2 of c.£15,000 to date (CAPEX projects being investigated), and the Alberta Carbon Tax in Canada cost the business c.£ 76,485 during 2018. We are reviewing implications of the Carbon Tax Bill which came into force in June 2019 in South Africa, continue to monitor such legislation as it develops in China and are preparing processes for SECR reporting. For illustrative purposes, using the financial impact of the Alberta Carbon Tax as a conservative proxy, one could estimate the cumulative potential financial impact for Weir as an additional c.£153,000 per annum for compliance with emerging carbon tax legislation in two additional jurisdictions.

**Management method**

The key method we use to manage risks related to carbon management regulation is reducing GHG emissions and energy consumption across the Group. Then, as and when any new legislation is introduced, our level of exposure is less. At a strategic level the concept of Lean manufacturing is well embedded within our business. Our SHE Management Standards require all operating companies to identify and implement energy/GHG emissions reduction projects on a rolling basis, adding new projects as

each project is completed. Compliance with EHS standards is tracked through internal audits, with good performance recognised through, for example, our annual SHE Recognition Programme. The 2017 introduction of an incident reporting system for SHE enables us to more efficiently track, manage and resolve any environmental related incidents (e.g. accidental release of ozone depleting substances). In 2018 we procured and implemented a new global GHG inventory software, to help meet specific reporting needs under the UK Mandatory Carbon Reporting Regulations. It also enables increased data validation and checking for increased confidence in the performance figures produced. If additional facilities or geographic regions were to be affected by new regulation, we should be well placed to comply with reporting requirements using the flexible software platform, with the confidence of accurate emissions calculation.

### **Cost of management**

5,000

### **Comment**

Additional management costs for complying with new regulation will depend on the nature of the facilities affected and the complexity of the requirements. For illustrative purposes, using the additional cost of management for compliance with ESOS Phase 1 was £2,500 as a proxy, one could estimate the cumulative potential financial impact for Weir as an additional c.£5,000 per annum for management of compliance with emerging carbon tax legislation in two additional jurisdictions – China and South Africa.

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### **Identifier**

Risk 2

### **Where in the value chain does the risk driver occur?**

Direct operations

### **Risk type**

Physical risk

### **Primary climate-related risk driver**

Acute: Increased severity of extreme weather events such as cyclones and floods

### **Type of financial impact**

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

### **Company- specific description**

We would describe the financial impact more broadly than the above as -Increased operating costs (e.g., higher compliance costs, increased insurance premiums), loss of manufacturing capabilities, displacement of workforce, loss of key customers and suppliers. As a business with global reach we can be exposed to a wide range of extreme weather events in different geographic locations. In 2018 we were exposed to flooding in China and wild fires in Europe and the USA. Fortunately, no employees were harmed and very little disruption occurred at our sites due to these events.

We do recognise that the predicted increase in frequency and severity of extreme weather events is likely to impact upon our business. In 2018 we conducted a Natural Catastrophe study for certain strategically important locations.

Due to the range of activities across our operations, the length of, and any potential impact from, environmental incidents can vary widely. For example, the time associated with getting one of our specialised test centres operational following an extreme weather event would be likely more significant than one of our service centres.

**Time horizon**

Short-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

545,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

As a global business, we are exposed to a wide range of extreme weather events in different geographic locations. With the wide range of operational activity the scale and length of any impact can also vary. By way of illustration, the potential financial impact provided reflects costs arising from a recent extreme weather event in Texas.

**Management method**

We conduct an annual loss prevention survey programme with deployment of specialist risk assessors to locations across the Group. The specific objective of this programme is to define risk mitigation measures for the avoidance of, for example, potential property losses/damage due to natural catastrophes.

These audits inform the Crisis Management Plans of our operating sites, which are routinely reviewed following significant events for effectiveness. In the case of extreme weather events, we have controls in place to reduce the risk of harm to our people, as well as response planning protocols with clear accountability to minimise disruption to operations and our customers. We have also invested in CAPEX projects that act as physical defence measures (e.g. enhanced flood defences, seismic building pads and enhanced windstorm bracing). Careful capacity planning, an ability to redirect manufacturing to locations out with the affected zone and insurance protection to fund reinstatement expenses all provide financial protection against potential loss of revenue.



**Cost of management**

30,000

**Comment**

The loss prevention survey programme and associated costs are administered at the Group level for the benefit of the company portfolio. The exact cost of insurance coverage and administration are commercially sensitive; an indicative figure for insurance related administration is provided as £30,000.

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**Identifier**

Risk 3

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type**

Transition risk

**Primary climate-related risk driver**

Reputation: Increased stakeholder concern or negative stakeholder feedback

**Type of financial impact**

Other, please specify

Reduced share price-stakeholder concern

**Company- specific description**

Our CEO, Group Executive and Board all recognise that tackling potential risks and opportunities posed climate change is a clear priority to achieve our strategic business goals, and therefore of great interest to stakeholders, including the financial community. Climate change can expose businesses to an array of risks and opportunities; the recent United Nations Intergovernmental Panel on Climate Change (UN IPCC) report served to highlight this fact and reported that the world is already experiencing the impacts of climate change as it continues to endanger vulnerable populations, industries and ecosystems. Having a clear and robust approach to define and address the business risks, threats and consequences of climate change is ever more critical to maintain a positive reputation within the investment community. A reputation or governance perceived to be inadequate could potentially affect our access to capital or even the Group's share price. To deliver an ambitious growth strategy, reduced access to capital could have major implications.

We must be able to demonstrate a proactive and robust response for investor enquiries regarding our management of climate change risks and opportunities.

**Time horizon**

Short-term

**Likelihood**

Unlikely



**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

170,000,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

Having a poor reputation in relation to climate change management could potentially affect access to finance or even our share price. In the financial sector, a material business impact is considered to be  $\pm 5\%$  change in our share price or business value. For example, a  $-5\%$  variation in the share price would equate to approximately £170m, based on an end-2018 market capitalisation of £3.4bn.

**Management method**

Our management method is to have a clear and robust approach to address the business risks, threats and consequences of climate change whilst ensuring that our operations and products meet the needs of a changing environment. Our Risk Management Framework provide a consistent Group-wide approach to risk management. Risk impact is quantified across a range of factors. Our risk management framework includes criteria for each factor, supporting a consistent measurement approach from grassroots level, e.g. in individual projects, up to Group level assessments by the Risk Committee. The diversity of our end markets means we are well positioned to benefit from certain climate driven changes in the global economy. We have established management committees with remits to deal with these, e.g. the Engineering Excellence, SHE Excellence and Risk Committees. They promote best practice and report to the Group Executive and Board for timely and effective decision-making. Innovation is key to climate related long-term strategy; developing new products and technologies to provide us and our customers with competitive advantage. We continue to examine how to help customers further reduce energy and water consumption during product use by applying our engineering and material science expertise. We use new IT technology e.g. Internet of Things, sensors and smart factories technology to improve operational efficiency and gather data to support future innovation in a changing climate.

**Cost of management**

5,250,000

**Comment**

To maintain and enhance our reputation as a market leader and to respond to client needs in a changing environment, we focus on innovation of products with low carbon

research and development forming a key part of this programme. It is difficult to differentiate between management and operational costs for internal innovation processes as they are so integral; however, the first step in our process is research and development, on which c. £42m was spent during 2018. This was spent across four focus areas (c.£10.5m per area), climate change being one; on which we estimate half the research and development budget was spent on product development (i.e. £5.25m). Weir continues to increase its expenditure on research and development in line with the corporate strategy

## C2.4

**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

## C2.4a

**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**

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### Identifier

Opp1

### Where in the value chain does the opportunity occur?

Customer

### Opportunity type

Products and services

### Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

### Type of financial impact

Increased revenue through demand for lower emissions products and services

### Company-specific description

Climate change regulations could have significant implications for our customers' businesses. Many of our customers have increasingly material corporate sustainability goals, and to meet these goals they are looking to reduce emissions, energy use and waste whilst maintaining levels of performance. This driver presents an opportunity for us to develop new products to meet their needs and requirements and use different materials (alloys and rubbers) and manufacturing techniques (near net shape, additive manufacturing and smart factory technology) to make our products last longer and creating less waste in the process. These are the big themes that will help shape our industry in the years to come and we intend to play our part in helping our customers deliver solutions to these global challenges - partnering to develop the mine and frac of the future. We're excited about the strength of the technology pipeline our engineers

are working - a range of innovations from incremental product improvements to solutions that have the potential to disrupt our markets.

There is also a growing demand for commodities such as copper needed to enable electrification which will support the transition to a low carbon economy. Innovation is key to climate related long-term strategy; developing new products and technologies to provide us and our customers with competitive advantage. We continue to examine how to help customers further reduce energy and water consumption during product use by applying our engineering and material science expertise. We are exploring use of new IT technology e.g. Internet of Things, sensors and smart factories technology to improve operational efficiency and gather valuable data to support future innovation in a changing climate. Failure to innovate or react to emerging technology which results in a failure of the business to deliver sustainable solutions for our customers is listed as a principal risk across the group that is tracked by our risk dashboards and monitored by the Risk Committee.

**Time horizon**

Short-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

8,270,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

There is potential opportunity to increase our market capitalisation and revenue in parts of our business which serve high energy users/carbon emitters. The revenue from the group in 2018 (excluding ESCO) products classed as green products via FTSE green revenues methodology in 2018 was £165.4m . For illustration purposes, should this revenue increase by 5%, e.g. through sales of low-carbon technologies/ products to clients who may be seeking to minimise carbon tax/energy costs, this would equate to an additional £8.27m in annual revenue.

### Strategy to realize opportunity

We work in partnership with our customers to ensure our products and services help solve their sustainability challenges; reducing energy/water/waste usage and extending lifecycle through design and material science. Our EEC requires new product design to deliver improved energy efficiency in design, manufacturing process and customer operations. In 2018 we launched products and services which have a lower environmental impact such as R67, Cerasmooth and Envirotech through increased wear life. The new Vulco® R67 rubber compound delivers an increase in wear life of 20%. The WTC has enhanced the company's global tailings offering by developing and testing pipeline and tailings solutions as well as manufacturing specific tailings-based products. In 2018 Weir and Andritz announced a strategic cooperation agreement to support the sustainable management of tailings in the mining sector. Weir offers sustainable management that sees tailings converted into effective products. In 2018 Weir launched Synertrex, an advanced IIOT technology. Utilising smart sensors on Weir products which gather critical operating data, it can identify potential issues before they become critical and optimise performance. Weir Minerals equipment dewater mine sites and enables water recycling back through the plant. Our technology road map includes an Energy and Water theme and our forthcoming sustainability roadmap will consider sustainable products and services as a strategic priority.

### Cost to realize opportunity

5,250,000

### Comment

Weir continues to target 2% of revenues on research and development in line with the corporate strategy to bring new and amended products and technologies to market (e.g. increasing product durability, with avoided emissions through a reduced number of product rebuilds and component replacement). During 2018, the Group spent c. £42m on research and development, a key part of internal product innovation processes. This was spent across 4 arenas, climate change falls within one of our strategic arenas and we anticipate that half of this arenas budget could be related to product development. Weir continues to increase its expenditure on research and development in line with the corporate strategy, with low carbon R and D forming part of this programme.

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### Identifier

Opp2

### Where in the value chain does the opportunity occur?

Customer

### Opportunity type

Markets

### Primary climate-related opportunity driver

Access to new markets

**Type of financial impact**

Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)

**Company-specific description**

We are constantly exploring new markets for many of our existing technologies. The increasing incidence of extreme weather events and other physical climate change impacts provides an opportunity in finding new markets for our existing technologies (such as dewatering pumps used in flood control). It also presents an opportunity for us to develop new products that meet the needs of existing and potential customers who may operate within regions (such as the Philippines and other Asia-Pacific countries) that are increasingly subjected to physical climate change effects such as extreme weather events.

Mega trend and technology trend scenario planning helps us identify emerging markets and adjacencies.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

14,000,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

There is potential to maintain market leadership and increase revenue through serving customers in regions increasingly impacted by the physical effects of climate change. For example, Weir Minerals division has specialist equipment, such as dewatering pumps which can be used for flood water control, as well as water pumping during drought conditions, and electric pontoons used for flood mitigation purposes. The Weir Minerals division achieved annual revenue of £1,417m in 2018. For illustrative purposes, if the division's revenue increases by 1% due to increased sales of such products, this would equate to an additional +£14m in revenue.

**Strategy to realize opportunity**

The key method to manage this opportunity is through our commitment to innovation. Weir Minerals is the global leader in the provision of equipment for the mining and minerals sector. Products include pumps and dewatering equipment, which can be used as mitigation measures against physical climate change impacts. Our R and D and engineering teams are constantly exploring new applications and markets for our products. For example, providing solutions via existing technology to the water challenges posed by flooding and water scarcity.

Using the data generated at the Weir Technical Centre (WTC), Weir Minerals tailings' specialists can specify tailings handling products and processes to suit operators' site specific environmental and operational conditions. This helps mine operators to minimise power and water consumption as well as the risk associated with design.

**Cost to realize opportunity**

5,250,000

**Comment**

During 2018, the Group spent c. £42m on research and development, a key part of internal product innovation processes. This was spent across 4 arenas, climate change falls within one of our strategic arenas and we anticipate that half of this arenas budget could be related to access to new markets. Weir continues to increase its expenditure on research and development in line with the corporate strategy, with low carbon R and D forming part of this programme.

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**Identifier**

Opp3

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Resource efficiency

**Primary climate-related opportunity driver**

Use of more efficient production and distribution processes

**Type of financial impact**

Reduced operating costs (e.g., through efficiency gains and cost reductions)

**Company-specific description**

In taking action to reduce our environmental impact we are able to identify actions which not only reduce GHG emissions but also have significant associated cost savings or revenue generation potential. We can implement projects that are developed in one part of our business to other sites of a similar nature enabling larger cumulative savings to be achieved. Savings made can be directed into, for example, R and D and product innovation.

We also seek out opportunities to embed circularity into our processes and products - buying back scrap from mines to recycle into new components, using manufacturing technology to minimise waste (near net shape and additive manufacturing and smart factory technology), maximising reprocessing/recycling of waste streams.

**Time horizon**

Short-term

**Likelihood**

Likely

**Magnitude of impact**

Low

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

737,471

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The financial impact represents the amount of monetary savings per year in reduced energy/fuel costs expected from emission reduction initiatives implemented during 2018, as reported in Section 4.3 of this CDP submission. These are not just one-off savings and will occur per annum for the lifetime depending on the different technologies. Project planning and implementation illustrates our commitment to reducing emissions beyond the business-as-usual scenario (i.e. beyond standard maintenance/replacement).

**Strategy to realize opportunity**

Our SHE Management System establishes a common set of SHE standards and expectations for addressing climate-related risks. Specific performance indicators include the management of ozone depleting substances (ODS), GHG emissions quantification and reduction, and site-level energy management plans and usage reduction projects.

The SHE assessment tool used during internal performance audits contains a target score and rating system through which good performance is quantified and recognised. Projects and achievements delivered by our employees are presented in the Annual Report and corporate website; our online magazine, Weir Bulletin, with news features and information from across Weir published every two months; and the Weir Global Intranet, which provides news, blogs, videos and best practice forums. Our Group Head of Strategy and Sustainability is driving a tactical emissions reduction programme, with

pilots commencing in 2018 for advanced meter at three of our most energy intensive sites. During 2018 we recruited a Group Sustainability Reporting Manager, who has been implementing our new global sustainability software to drive more ambitious GHG emissions reduction projects. The cost to realise opportunity represents the amount of investment required for emission reduction initiatives implemented during 2018, as reported in Section 4.3 of this CDP submission.

### Cost to realize opportunity

3,517,381

### Comment

Through a targeted pilot programme of advanced metering projects, we will work with certain foundries as our highest energy consuming sites during 2018 to further improve energy efficiency and reduce GHG emissions. Advanced metering will enable more detailed analysis of the foundry process and identify opportunities for cost-effective carbon savings.

## C2.5

**(C2.5) Describe where and how the identified risks and opportunities have impacted your business.**

	Impact	Description
Products and services	Impacted for some suppliers, facilities, or product lines	Many of our customers have corporate sustainability goals, and to meet these goals they are looking to reduce emissions and energy use whilst maintaining levels of performance. Coupled with an ever increasing need for our customers to operate higher efficiency products in meet business objectives, this driver presents an opportunity for us to develop new products to meet their needs and requirements. For example, Weir Mineral's new Vulco® R67 mill lining rubber compound increases product efficiency and delivers a 20% increase in wear life over comparable composite lifter bars. Operators using R67 lifter bars benefit from an increase in wear life and also a measurable reduction in required maintenance activities as a result of a longer run schedule. Products embody carbon due to the energy involved in their design, production, distribution, use, maintenance and disposal across their life cycle. Therefore, if we can extend the lifetimes of our products, the use of energy - embodied in carbon - can be reduced and associated GHG emissions avoided. We have identified an opportunity to access new markets where physical impacts of climate change are realised. For example, in regions where water is relatively scarce it is important that we continue to develop equipment and technology to ensure that water consumption is minimised, and that water drawn out by dewatering systems becomes a resource for mining or even local communities. Rather than going to waste, it is increasingly important to manage and reuse the water effectively,



		<p>improving the resilience of mine site processes and activities in increasingly harsh environments, and reducing potential impacts for local communities. There is potential opportunity to increase our market capitalisation and revenue in parts of our business which serve energy producers and high energy users/carbon emitters. The revenue from the group in 2018 (excluding ESCO) products classed as green products via FTSE green revenues methodology in 2018 was £165.4m . For illustration purposes, should this revenue increase by 5%, e.g. through sales of low-carbon technologies/ products to clients who may be seeking to minimise environmental impacts, this would equate to an additional £8.27m in annual revenue.</p>
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	<p>We understand that the physical impact of climate change will affect the activities of our customers; we work with our customers to identify business challenges and opportunities in an environment of collaboration and innovation.</p> <p>Within the mining sector, we have engaged with customers through energy and environmental forums. For example, we took part in the Anglo American future smart mining and energy forums, and are taking the lead on energy and water related packages. We are supporting some of our largest customers to discuss not only what we can do to improve our products efficiency and durability but also support the efficiency and resilience of the sites in which our customers operate.</p> <p>Our supplier risk management manual sets out the need to consider events which may affect our major suppliers. We have yet to experience a major climate related incident which has disrupted our supply chain.</p> <p>Many of our customers have corporate sustainability goals, and to meet these goals they are looking to reduce emissions and energy use whilst maintaining levels of performance. This driver presents an opportunity for us to develop new products to meet their needs and requirements. For example, collaborative research has been undertaken with one of our industrial engineering suppliers to develop an enhanced design for our new simplified frac iron system. In testing, the system lasted more than three times longer than similar applications, demonstrated approximately 70 per cent less pipe erosion compared to similar designs and dramatically reduced the volume of grease and amount of time needed to grease the valve between frac cycles. Products embody carbon due to the energy involved in their design, production, distribution, use, maintenance and disposal across their life cycle, Therefore, if we can extend the lifetimes of our products, the use of energy -</p>

		embodied in carbon - can be reduced and associated GHG emissions avoided. We are exponents of the circular economy - buying back scrap to re-cycle into new components, in 2018 17,400 tonnes of scrap metal was reused- 46% of all metal poured.
Adaptation and mitigation activities	Impacted for some suppliers, facilities, or product lines	As a business with global reach we can be exposed to a wide range of extreme weather events in different geographic locations. In 2018 we conducted a Natural Catastrophe study with our insurance broker to identify potentially catastrophic natural incidents which may occur within regions where our operations are located. This will inform adaptation activities in terms of minimising potential impact from climate-related issues such as flooding, to protect our assets from damage and our people from harm. Our businesses undertake mitigation activity as required under the SHE standards requirement to develop actions plans to reduce GHG and energy usage. Mitigation of emissions is one of our key methods for managing risks and is highlighted as an opportunity for the Group internally and externally to support clients to be able to reduce their GHG emissions.
Investment in R&D	Impacted for some suppliers, facilities, or product lines	Through market driver assessment we have identified climate-related opportunities. We actively invest in R and D through our central R and D hub and its network of academic research partners in some of the world's leading universities. This enables us to develop and exploit emerging technologies to create new products for our end markets and provide competitive advantages to our customers through leading edge technology, with improved operational efficiency and environmental management, reduced energy consumption, emissions, water use and waste production. Developing and enhancing our distinctive competencies, including those linked to climate related opportunities, is core to our strategy. We target 2% of annual revenue on internal and external RandD initiatives for innovative products, processes and technologies (e.g. enhanced product durability with avoided GHG emissions through reduced rebuilds and replacements). Alongside our established process of product development, we have developed a new technology strategy to ensure we continue to lead the change in our markets and build on our legacy of innovative engineering. It includes increasing the digitisation of our solutions and operations, integrating advanced manufacturing into our factories, reinforcing our materials science leadership and developing ways to reduce our customers' energy and water consumption; helping underpin the sustainability of our end markets. Recognising the strategic importance of technology and innovation we recruited a Chief Technology Officer during the year to define and manage delivery of the Group's Technology Vision and Strategy. Weir also identify and maximise RandD opportunities through

		<p>WARC, a partnership with the University of Strathclyde. WARC focuses on strategic arenas developed from the Technology Road Map including an Energy and Water Theme, projects include: Mechanical design reviews; Manufacture process reviews; Material testing and assessment programmes; New product mechanical/strength design projects; Structural integrity assessment; Product life optimization; and, Computational fluid dynamics investigation of design concepts. Weir employ a Technology Scout in WARC to evaluate potential opportunities for emerging technologies, technology advancements, communicate this to the organisation and support the acquisition and development of new technologies.</p>
Operations	Impacted for some suppliers, facilities, or product lines	<p>As a business with global reach we can be exposed to a wide range of extreme weather events in different geographic locations. In 2018 we were exposed to flooding in China and wild fires in Europe and the USA. Fortunately, no employees were harmed and very little disruption occurred at our sites due to these events. However, in 2017 Hurricane Harvey landed in the state of Texas as one of the USA's costliest natural disasters with damage estimated at \$125 billion (£90 billion). Seven sites within our Oil and Gas division were affected to varying degrees. Fortunately, our employees were unharmed and our sites only suffered temporary closures. Thanks to asset resilience and a robust response from the division, eventual business interruption was minimised and the financial impact was contained to £545k (\$750k).</p> <p>Our SHE standards set the requirements to meet and exceed legal requirements regarding the environment; each of our divisions keeps a register of legal requirements and action taken to meet these requirements, including that for long-term compliance and regulatory risk management strategy for carbon pricing systems such as the UK ESOS and the Alberta Carbon Tax scheme. Compliance with Phase 1 (2015-2018) of the EU EED in the UK known as Energy Saving Opportunity Scheme has cost Weir c. £60k including CAPEX for phase 1 and Phase 2 of c.£15k for phase 2, and during 2018 the Alberta Carbon Tax cost Weir c£75k.</p>
Other, please specify		n/a

## C2.6

**(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.**

Relevance	Description
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Revenues	Impacted for some suppliers, facilities, or product lines	<p>We recognise that we could see changes in market position due to climate related events and trends, for example the transition to electric vehicles driving demand for certain metals through strategic market review and trend analysis. Our increased focus on mining reflects our view of the market's prospects for long-term growth with demand supported by some of the biggest structural changes in the world from urbanisation to the electrification of transport and power infrastructure. These trends have for example seen demand for the Group's equipment increase among lithium miners. As technology leaders we are well placed to help our customers meet future demand with solutions that increase efficiency and sustainability. To take account of these (and other changing market trends) our financial planning includes modelling of 5-10% reductions in key financial metrics that underpin our strategic plan and viability statement. We also model impacts from hits to market share from other issues such as technology disruptions, loss of sales from major customers – in each case climate related issues could be the driver or contributing factor for the issue modelled. Opportunities for increased revenues have been witnessed through the ongoing delivery of our longer term technology aimed at continuing to lead the change in our markets through materials science, advanced manufacturing and design, digital platforms and increasing water and energy efficiency: areas where we can add the most value to the mine and frack sites of the future. As stated in our 2018 Annual Report, unallocated costs comprised £31m supporting the "We are Weir" initiative with increased investment in digital and advanced manufacturing technology. For example, The Group's Internet of Things (IoT) technology, Synertrex®, was successfully launched in 2018 and is being deployed to allow customers to easily monitor the performance of their equipment and giving Weir valuable data to support future innovation.</p>
Operating costs	Impacted for some suppliers, facilities, or product lines	<p>We recognise the opportunity for reduced OPEX through, for example, reduced energy/fuel use as well a transition to lower carbon sources reducing liabilities under carbon tax schemes (e.g. Alberta Carbon Tax). Increased utility costs is factored into our site level financial management process and sites are required through the Weir SHE Management Standards to track and monitor energy use and therefore operational costs associated. The GHG management system can be used to support projects to reduce emissions at the site level delivering operating cost savings. Costs and projections for the savings from such projects are used to budget for future operating costs. Climate change may affect our assets, productivity, the markets in which we sell our products, and the communities in which we</p>

		<p>operate. There are costs associated with managing the resulting risks and opportunities Our SHE standards set the requirements to meet and exceed legal requirements regarding the environment; each of our divisions keeps a register of legal requirements and action taken to meet these requirements, including that for long-term compliance and regulatory risk management strategy for carbon pricing systems such as the UK ESOS and the Alberta Carbon Tax scheme, which will impact operating costs and should be included in division / facility level financial planning. For illustration, using the additional cost of management for compliance with ESOS Phase 1 was £2,500 as a proxy, one could estimate the cumulative potential financial impact for Weir as an additional c.£5,000 per annum for management of compliance with emerging carbon tax legislation in two additional jurisdictions – China and South Africa. Environmental performance within our operations has been identified as a strategic sustainability priority from our recent multi-stakeholder materiality assessment and will therefore be included in our forthcoming sustainability roadmap to deliver tangible value across the Group.</p>
Capital expenditures / capital allocation	Impacted for some suppliers, facilities, or product lines	<p>Our financial capital expenditure (CAPEX) allocation process includes within it a requirement to determine the type of project being taken forward and this is used to denote where the project has an environmental impact, enabling assessment of potential impact of the capital project.</p> <p>Where schemes obligate carbon allowance purchase or tax payment within the group (e.g. the Alberta Carbon Tax in Canada cost the business c.£ 76,485 during 2018), capital projects may enable the reduction of ongoing financial liabilities under the scheme; making this consideration key in business case approvals and financial planning.</p>
Acquisitions and divestments	Impacted for some suppliers, facilities, or product lines	<p>Within mergers and acquisitions a due diligence and commercial approvals process is conducted to assess where material business risk or opportunity associated with a potential acquisition or divestment occurs.</p> <p>In July 2018 we acquired ESCO to complement existing strategic innovation priorities for our Minerals division (material science, digital transformation and advanced manufacturing). The purchase of ESCO brings with it the opportunity for ESCO and Weir to leverage capabilities in engineering and materials science enabling us to improve the lifetime and durability of the products we produce, with avoided GHG emissions from reduced maintenance, rebuild and replacements. This is supported by the business decision around digital transformation, the development of a new technology strategy to lead our changing markets and build on our engineering legacy.</p>

		The ESCO division produced revenues of £252m in 2018 (from 1st July).
Access to capital	Not yet impacted	<p>Access to capital has not been impacted by our climate change or broader sustainability performance.</p> <p>We acknowledge that continued access to capital requires disclosure on the action we take in relation to climate change and as such have put in place a governance structure and dedicated resource to support reporting and transparency around climate change. We are also working towards full disclosure with regard to the recently issued recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD).</p> <p>We actively engage and respond to shareholder concerns regarding climate change. Our Head of Investor Relations and our Sustainability team work closely to provide clear and consistent information to shareholders on all environmental matters. We also use processes such as the FTSE Green Revenues Model to share information about our efficient products and services with shareholders.</p>
Assets	Impacted for some suppliers, facilities, or product lines	<p>Access to capital has not been impacted by our climate change or broader sustainability performance.</p> <p>We acknowledge that continued access to capital requires disclosure on the action we take in relation to climate change and as such have put in place a governance structure and dedicated resource to support reporting and transparency around climate change. We are also working towards full disclosure with regard to the recently issued recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD).</p> <p>We actively engage and respond to shareholder concerns regarding climate change. Our Head of Investor Relations and our Sustainability team work closely to provide clear and consistent information to shareholders on all environmental matters. We also use processes such as the FTSE Green Revenues Model to share information about our efficient products and services with shareholders.</p>
Liabilities	Not yet impacted	Our liabilities - for example access to borrowing - rely on good reputation and sound forward planning in place. We acknowledge that continued access to borrowing will require disclosure on the action we take in relation to climate change and as such have put in place a governance structure and dedicated resource to support reporting and transparency

		around climate change, with the hire of a new Group Sustainability Reporting Manager during 2018.
Other		n/a

## C3. Business Strategy

### C3.1

**(C3.1) Are climate-related issues integrated into your business strategy?**

Yes

#### C3.1a

**(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?**

Yes, qualitative

#### C3.1c

**(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.**

Corporate sustainability underpins our strategic priorities and is intrinsic to our purpose and values. Acting in a sustainable way protects and creates long-term value, for all our stakeholders and the long-term future of Weir. Our CEO, Group Executive and Board recognise that tackling potential risks and opportunities posed by climate change is a priority to achieve our strategic business goals. Principal risks include compliance with environmental legislation, occurrence of natural disasters/major incidents (e.g. extreme weather events), market disruptions and changing customer requirements. Our mission is **“To enable our customers to sustainably and efficiently deliver the energy and natural resources needed by a growing world”**. Underpinning this we have 4 areas of distinctive competencies: People, Customers, Technology and Performance. We recognise we are on a journey to achieve our strategy but also the significant increase in awareness and action around climate change since putting it in place. We work to improve our position in relation to climate change and have taken several actions to enable us so far.

Sustainability cuts across our four distinct competencies but in 2018 was measured under the Performance competency. Implementing the new Sustainability Strategy was highlighted as a priority and associated Group-wide scorecard KPIs for 2018 included the implementation of advanced metering energy pilot projects, a global open innovation challenge focused on waste reduction and the launch of a new sustainability software tool to every one of our sites globally. For 2019 we have committed to create a strategic sustainability roadmap and have already completed stage 1 – a full multi-stakeholder materiality assessment.



In 2017 we reorganised our structure to reflect the importance of sustainability with the Group Head of Strategy role being expanded to Group Head of Strategy & Sustainability. In 2018 a Group Sustainability Reporting Manager (GRSM) position was recruited to support the delivery of our Sustainability Strategy. We have management committees with remits to deal with elements of climate change. Engineering Excellence Committee, SHE Excellence Committee and Risk Committee promote best practice across the Weir and report to the Group Executive and Board for timely and effective decision-making. Our SHE Management System establishes common standards and protocols for addressing risks faced by our facilities, including site-level GHG emissions quantification and reduction, with target setting. Overall compliance with environmental standards stayed static in 2018.

**Strategic Analysis** Our new sustainability software tool supports requirements to reduce GHG emissions, increase operational efficiency at facilities, and improve data collation and quality for corporate level reporting. In the next 12-18 months the GSRM will review the current position on climate-related target setting and performance tracking (currently done at site-level). In 2018 there was no enterprise-wide emissions reduction target. We have set expectations for Weir to increase efficiency and implement emission reduction projects but have purposely not set enterprise-wide targets given the rapidly changing composition of the business. Significant asset changes including the acquisition of ESCO in 2018 mean we will look to reassess and consider development of robust targets.

Climate-related issues influence market opportunities; our diverse markets mean we are positioned to benefit from certain climate driven structural changes in the global economy. Climate mitigation and adaptation present a revenue opportunity through collaboration with our customers to improve their operational efficiencies, decrease costs and respond to changing market demands. Climate change presents risks to profitability and business continuity, primarily the required compliance with existing and emerging legislation, and the direct physical impacts on our operations (e.g. damage to our assets, harm to our people). We conducted high level qualitative scenario analysis when developing our mission statement and strategic objectives, and when performing market and operational reviews. In line with TFCF principles, a number of diverging methodologies were referenced during our strategy reviews to form a view of the range of plausible outcomes, such as those published by Bloomberg New Energy Finance, IEA, Shell, IRENA, and BP Energy.

With our global reach in mine and fracking sites across the world, harnessing new technologies to develop innovative sustainable products, services and business practices is where we can have the biggest impact on climate influenced long-term strategy in a changing environment. To enhance the sustainability of our main markets, we are constantly examining how we can help customers reduce their water, energy and waste footprint by applying our engineering, material science and advanced manufacturing problem solving expertise. We are exploring the use of new IT technology such as Internet of Things, sensors and smart factories technology and breakthrough material science to improve operational efficiency and gather valuable data to support future innovation in a changing climate. We recently acquired ESCO to complement existing strategic innovation priorities for our Minerals division (material science, digital transformation and advanced manufacturing). This will support and progress us towards our mission stated above. By acquiring ESCO we can create operational synergies and share innovation to reduce emissions from individual units. This is supported by the business decision



around digital transformation, the development of a new technology strategy to lead our changing markets and build on our engineering legacy.

In addition, climate change has influenced our business strategy to reduce operational GHG emissions and ensure physical resilience of our own assets. Our operating companies identify and implement emissions reduction projects on a rolling basis. Weir has also adopted the lean philosophy to manufacturing which drives continuous efficiency improvements, including the reduction of energy and resource consumption. Projects at our operating companies tend to focus on activities to reduce energy use and carbon emissions over a 1-2 year period. We understand that we are an energy intensive business due to our requirement for electricity and gas for manufacturing and service operations. From a physical climate perspective, we review our management plans following key extreme weather events – such as Hurricane Harvey in 2017 which affected 7 sites within our Oil and Gas division- to ensure our management strategies are appropriate and our assets remain resilient.

## C3.1d

**(C3.1d) Provide details of your organization's use of climate-related scenario analysis.**

Climate-related scenarios	Details
2DS IRENA	<p>Mega trends analysis underpins our ongoing strategic decision making. An annual mega-trends review is conducted with the Board to identify potential changes from reference scenarios and new trends which may impact Weir in terms of timeframe, likelihood and magnitude for aspects with most significance for our business strategy and objectives (e.g. energy balance, renewables penetration, peak oil timeframe, specific technology developments, etc). Climate change has been identified as a mega trend; we consider this topic on the same basis as all other emerging global mega-trends when forming our business strategy. We focus resource and efforts on exploring these trends, incorporating a wide range of qualitative and quantitative information to form a view on the range of associated plausible future states. We have decided to avoid highly detailed (and resource intense) predictive modelling that some companies undertake with large dedicated sustainability teams. Instead, we establish a base case strategy using multiple divergent sources as input (such as IRENA, Bloomberg New Energy Finance, IEA, Shell Scenarios, BP Energy Outlook, advisors/consultants e.g. PWC, EY, McKinsey, and external reports e.g. EY 2050 Megatrends, REN21, EVIE) to debate the boundaries and how best to position ourselves strategically for a range of potential scenarios. Scenario analysis forms a component of the annual strategy review papers; debated at Group Executive and Board level, and used to drive strategic decisions – ambition and direction setting, corporate resource allocation and risk management.</p> <p>In 2018 we explored 6 strategic hypotheses in depth with the Group Exec and the Board as part of our annual strategic plan process. These included “articulating and incubating our future extraction technology vision to support our customers’ growing efficiency, energy and water challenge” and “the low carbon economy transition and its impact on both our existing and future markets”. We invited external experts to</p>

	<p>debate the subject of "The low carbon transition - risks and opportunities for Weir" with both our Group Exec and Board as part of our annual Strategy Review process. Full results and outcomes are shared with the Group Exec and Board, sub-sets are shared more widely as commercially sensitivity allows, with specific examples and case studies included in investor dialogues and customer discussions, in line with our Annual Report. Boundaries and time horizons: we use plausible extremes as per the referenced materials to form boundaries to best position Weir for a range of plausible scenarios. Our financial strategic plan is a 5 year horizon but the time horizon considered for mega trends considers up to 2030+, as a sufficient timeframe to see significant shifts. Scenario analysis outcomes have influenced the development of our new technology strategy that will ensure we continue to lead the change in our markets and build on our legacy of innovative engineering. It includes increasing the digitalisation of our solutions and operations, integrating advanced manufacturing into our factories, reinforcing our materials science leadership and developing ways to reduce our customers' energy and water consumption; helping underpin the sustainability of our end markets. Recognising the strategic importance of technology and innovation our Chief Technology Officer hosted a technology update for our Board to showcase our Technology and Innovation Vision and Strategy. Our new mission statement and sustainability governance changes have been informed by scenario analysis outcomes and forward planning. From 2018, specific sustainability KPI's will be linked to Group Exec performance and associated remuneration.</p>
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## C4. Targets and performance

### C4.1

**(C4.1) Did you have an emissions target that was active in the reporting year?**

No target

### C4.1c

**(C4.1c) Explain why you do not have emissions target and forecast how your emissions will change over the next five years.**

	Primary reason	Five-year forecast	Please explain
Row 1	We are planning to introduce a target in the next two years	Strategic momentum will continue to drive business growth over the next 5 years. For business as usual (i.e. without strategic carbon or energy reduction programs) this would have a likely increase of absolute GHG emissions; resulting in part, from the activity mix of our business, with high demand in the primary manufacturing	During the reporting year Weir Group did not have an active enterprise-wide emissions reduction target. In recent years, the business has undergone accelerated growth through acquisition, along with organic growth. Whilst we have set clear expectations for all our businesses to increase energy efficiency and implement

	<p>areas of foundry production and machining. Absolute emissions will be affected by our acquisition of ESCO, manufacturer of ground engaging tools for industrial processes, with 10 manufacturing facilities, 22 service centres and 6 foundries (carbon intensive by nature). Whilst ESCO integration will lead to an increase in our reported absolute emissions, the business was acquired as an ongoing concern and will not be additive to the global GHG inventory. Reported annual emissions will also be affected by the sale of Flow Control in 2019. For illustrative purposes – by extrapolating available energy/fuel data, we can estimate that the ESCO acquisition and Flow Control sale will lead to a cumulative increase of c.67,124tCO<sub>2</sub>e, this and other climate related impacts will be considered in business planning and strategy. Forecasting future relative emissions performance is not easily predicted as it will depend on the activity mix of future acquisitions. Our short-term business plans remain focused on growth, including in areas of the business that are more carbon intense. Foundries accounted for c.41.6% of our 2018 GHG emissions, with total GHG emissions for our 7 foundries (excluding ESCO) decreasing by 6.9% compared to 2017. Carbon intensity of the metals poured improved marginally with the use of lower carbon fuels, from 1.8tCO<sub>2</sub>e per tonne poured metal in 2017 to 1.6tCO<sub>2</sub>e per tonne poured metal in 2018. Through a targeted pilot programme of advanced metering projects planned during 2018, we will work with certain foundries as our highest energy consuming sites in 2019 to further improve energy efficiency and reduce GHG emissions. Advanced metering will enable more detailed</p>	<p>emission reduction projects, we have not felt it appropriate to set enterprise-wide targets given the rapidly changing composition of the organisation including the acquisition of ESCO and divestment of Flow Control.</p> <p>During 2018 our Group Head of Strategy and Sustainability was tasked with driving forward our sustainability strategy (including climate-related issues), adding to the momentum of improved operational efficiency, resilience and environmental performance. This has included appointing a new Group Sustainability Reporting Manager to support the delivery of Weir's Sustainability Strategy. During 2018 existing systems and procedures used to collate and report on environmental sustainability data were reviewed and a new global energy and emissions management system was procured. With enhanced data quality and analysis functionality, the new system will enable more informed and effective decision making – including that around enterprise wide target setting.</p> <p>Throughout 2019 we are developing our sustainability roadmap, which will include consideration of Group wide targets. In the meantime, compliance with our SHE Management Standards requires individual sites to quantify and reduce energy usage and GHG emissions. Overall compliance with the environmental standards stayed static in 2018 compared with 2017.</p> <p>In our 2018 Annual Report, our CEO Jon Stanton reiterated that our continued commitment in tackling climate change is a priority and highlighted ways in which we plan to</p>
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		analysis of the foundry process and identify opportunities for cost-effective GHG savings.	further reduce our own impacts alongside those to help our customers to do the same.
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## C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

## C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

## C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO<sub>2</sub>e savings.

	Number of initiatives	Total estimated annual CO <sub>2</sub> e savings in metric tonnes CO <sub>2</sub> e (only for rows marked *)
Under investigation	34	
To be implemented*	2	184.4
Implementation commenced*	4	101.7
Implemented*	14	1,803.8
Not to be implemented	0	

## C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

### Initiative type

Energy efficiency: Processes

### Description of initiative

Compressed air

### Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)

45.48

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

21,700

**Investment required (unit currency – as specified in C0.4)**

3,000

**Payback period**

<1 year

**Estimated lifetime of the initiative**

6-10 years

**Comment**

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**Initiative type**

Low-carbon energy installation

**Description of initiative**

Solar PV

**Estimated annual CO2e savings (metric tonnes CO2e)**

78.84

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

38,672

**Investment required (unit currency – as specified in C0.4)**

340,000

**Payback period**

4 - 10 years

**Estimated lifetime of the initiative**

21-30 years

**Comment**

---

**Initiative type**

Energy efficiency: Building services

**Description of initiative**

Lighting

**Estimated annual CO2e savings (metric tonnes CO2e)**

15.03

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

1,390

**Investment required (unit currency – as specified in C0.4)**

2,956

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Machine replacement

**Estimated annual CO2e savings (metric tonnes CO2e)**

365.93

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

43,645

**Investment required (unit currency – as specified in C0.4)**

1,189,984

**Payback period**

>25 years

**Estimated lifetime of the initiative**

21-30 years

**Comment**

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**Initiative type**

Energy efficiency: Building fabric

**Description of initiative**

Insulation

**Estimated annual CO2e savings (metric tonnes CO2e)**

223.7

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

3,650

**Investment required (unit currency – as specified in C0.4)**

53,348

**Payback period**

11-15 years

**Estimated lifetime of the initiative**

16-20 years

**Comment**

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**Initiative type**

Other, please specify  
Employee Engagement

**Description of initiative**

**Estimated annual CO2e savings (metric tonnes CO2e)**



1.06

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

204

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

<1 year

**Estimated lifetime of the initiative**

Ongoing

**Comment**

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**Initiative type**

Energy efficiency: Building services

**Description of initiative**

Lighting

**Estimated annual CO2e savings (metric tonnes CO2e)**

3.68

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

578

**Investment required (unit currency – as specified in C0.4)**

3,583

**Payback period**

4 - 10 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

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**Initiative type**

Energy efficiency: Building services

**Description of initiative**

Lighting

**Estimated annual CO2e savings (metric tonnes CO2e)**

5.35

**Scope**

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

1,075

**Investment required (unit currency – as specified in C0.4)**

6,665

**Payback period**

4 - 10 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Machine replacement

**Estimated annual CO2e savings (metric tonnes CO2e)**

4.13

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

814

**Investment required (unit currency – as specified in C0.4)**

10,345

**Payback period**

11-15 years

**Estimated lifetime of the initiative**

11-15 years

**Comment**

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Fuel switch

**Estimated annual CO2e savings (metric tonnes CO2e)**

2.52

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

3,287

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

<1 year

**Estimated lifetime of the initiative**

Ongoing

**Comment**

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Machine replacement

**Estimated annual CO2e savings (metric tonnes CO2e)**

4.18

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

5,342

**Investment required (unit currency – as specified in C0.4)**

2,000

**Payback period**

<1 year

**Estimated lifetime of the initiative**

6-10 years

**Comment**

---

**Initiative type**

Energy efficiency: Building services

**Description of initiative**

Lighting

**Estimated annual CO2e savings (metric tonnes CO2e)**

11.34

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

1,292

**Investment required (unit currency – as specified in C0.4)**

5,500

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

---

**Initiative type**

Energy efficiency: Building services

**Description of initiative**

Other, please specify  
Behaviour Change

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

1.51

**Scope**

Scope 3

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

172

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

<1 year

**Estimated lifetime of the initiative**

Ongoing

**Comment**

---

**Initiative type**

Process emissions reductions

**Description of initiative**

Other, please specify  
Use of telepresence system for meetings

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

1,041

**Scope**

Scope 3

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

615,650

**Investment required (unit currency – as specified in C0.4)**

1,900,000

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

Ongoing

**Comment****C4.3c****(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

Method	Comment
Compliance with regulatory requirements/standards	<p>The Weir Group recognises that our business is directly affected by climate related regulations aimed at reducing energy consumption and GHG emissions in our direct operations and during use of our products. Legislative frameworks for climate change mitigation (e.g. for energy management, emissions reporting etc.) already exist in a number of regions in which we operate, including the UK (ESOS, CRC Scheme, Climate Change Levy, Mandatory Carbon Reporting), Alberta Carbon Tax, the US (Mandatory Reporting Regulation – California) and in Europe (EU EED).</p> <p>The key method we use to manage risks related to regulation is to drive energy and emissions reductions projects and initiatives across the Group. Meaning that, as and when any new legislation is introduced, our level of exposure is lessened. At a strategic level the concept of Lean manufacturing is well embedded within our business through our Value Chain Excellence initiative.</p> <p>Our SHE Standards set out requirements for our operations to meet, and where commercially viable, exceed legal requirements regarding the environment. Overall compliance with the environmental standards in 2018 stayed static compared to 2017. Environmental standards include site-level GHG emissions quantification and reduction, with target setting.</p>
Employee engagement	The Weir SHE Management System establishes a common set of SHE standards and expectations for addressing the risks that our operations face, including climate-related issues. The Duty of Care System provides an unbroken chain of accountability from the Chief Executive

	<p>to our newest apprentice and details individual responsibilities for assessing and managing SHE risks, including climate-related issues.</p> <p>Specific performance indicators relating to climate change mitigation include, amongst others, the energy usage and GHG emissions reduction projects. The SHE assessment tool used during internal performance audits contains a target score and rating system through which good performance is quantified and recognised.</p> <p>Mention of specific projects and notable achievements that have been delivered by our employees are presented in:</p> <ul style="list-style-type: none"> <li>• Case studies presented in the Annual Report and corporate website;</li> <li>• The Weir Bulletin, our online magazine which provides news features and information from across the Group and is published every two months; and,</li> <li>• The Weir Global Intranet, which provides news, blogs, videos and a forum for employees to interact with each other on business-related matters on a regular basis, as well as policies, procedures and documentation. Yammer channels for environmental sustainability, social sustainability and best practice groups highlight environmental best practice across the sites.</li> </ul> <p>Weir also delivered a SHE Recognition Programme with an awards ceremony held in 2018 to recognize the efforts of the SHE community.</p>
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## C4.5

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?**

Yes

## C4.5a

**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.**

### Level of aggregation

Group of products

### Description of product/Group of products

Weir Minerals is a global leader in the provision of mill circuit technology. Weir Oil and Gas provides upstream markets with products such as pressure pumping and pressure control equipment. Weir Flow Control design and manufacturer valves and pumps.

The new Weir Minerals Cavex® 700CVX hydrocyclone is a device to classify and separate particles in mining operations. The Cavex® can achieve up to 50% higher



throughput in comparison with conventional cyclones with equivalent settings. This increased productivity effectively reduces the energy required to perform a given duty.

Our Simplified Frac System – Reduces 88% potential leaks paths on a frac site; making the frac site a safer more efficient site for customers Advances in reliability and durability with the product allows customers to run near full horsepower per trailer (versus around 50%). This results in greater efficiencies.

In testing, our new simplified frac iron system lasted more than three times longer than similar applications, demonstrated approximately 70 per cent less pipe erosion compared to similar designs and dramatically reduced the volume of grease and amount of time needed to grease the valve between frac cycles.

Our Intelligent System for Flowback Operation provides intelligent controls on containment systems; Weir is able to more accurately measure and therefore manage gas emissions from the eco tank.

Recognising that notable emissions occur outside our direct operations, we work with customers and others in our value chain to improve environmental performance and thus help to reduce potential climate change impacts of the products/services procured from our business.

We are committed to extending our capabilities in advanced manufacturing, materials science and increasing the sustainability of our markets through improving for example energy and water efficiency.

Our engineers work collaboratively with customers and suppliers at the early stages of product development, to create more valuable products through accelerated innovation.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Other, please specify

Life cycle assessment

**% revenue from low carbon product(s) in the reporting year**

1

**Comment**

We recognize that the need to mitigate against climate change and adapt to its impacts does present opportunities to our business; through assessment of our market drivers we have been able to identify specific opportunities related to climate change. We actively invest in research and development (R and D) through our central R and D hub as well as through its network of academic research partners in some of the world's leading universities. This enables us to develop and exploit emerging technologies to

create new products for our end markets and provide competitive advantages to our customers through leading edge technology, with improved operational efficiency and environmental management, reduced energy consumption, emissions, water use and waste production.

Developing and enhancing our distinctive competencies – including those linked to climate related opportunities - are at the heart of the Group's strategy. We continue to target 2% of annual revenue on internal and external R and D initiatives for innovative products, processes and technologies (e.g. enhanced product durability with avoided GHG emissions through reduced rebuilds and replacements).

Alongside our established process of product development, the Group has developed a new technology strategy that will ensure we continue to lead the change in our markets and build on our legacy of innovative engineering. It includes increasing the digitisation of our solutions and operations, integrating advanced manufacturing into our factories, reinforcing our materials science leadership and developing ways to reduce our customers' energy and water consumption; helping underpin the sustainability of our end markets.

Products embody carbon due to the energy involved in their design, production, distribution, use, maintenance and disposal across their life cycle. Therefore, if we can extend the lifetimes of our products, the use of energy - embodied in carbon - can be reduced and associated GHG emissions avoided.

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### **Level of aggregation**

Group of products

### **Description of product/Group of products**

We have calculated our 2018 product data for inclusion in the FTSE Russell's Green Revenues data model, which is designed to measure the revenue exposure of public companies engaged in the transition to the green economy.

With consideration of the FTSE Green Revenues Classification System, submitted information included the following products:

- Highly efficient mine dewatering products and systems, such as the Multiflo MH Highwall pumps capable of clearing 200 litres of water per second and designed to be as environmentally sensitive as possible with a dual pipe system to reduce the risk of hydraulic oils contaminating discharge water.
- Waste management equipment, such as the nuclear slurry pumps for handling high or low radioactive wastes/sludge.
- Water management equipment, such as butterfly valves, gate and globe valves used in water treatment processes.
- High performance hydro turbines and equipment upgrades that maximize renewable energy output and providing maintenance, process support and asset management to customers in hydro power generation
- Nuclear products for nuclear power generation plants, such as the Nuclear Tricentric

Metal Seated Triple Eccentric Butterfly valve or Main Feedwater Isolation Valve (MFIV).  
- Mechanical support and integrated solutions for rotating equipment used in biomass and waste to energy industries.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Low-carbon product and avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Other, please specify

FTSE Green Revenue Classification System

**% revenue from low carbon product(s) in the reporting year**

6.51

**Comment**

FTSE Russell's Green Revenues data model measures revenue exposure of more than 13,500 public companies engaged in the transition to the green economy across 48 developed and emerging markets.

Companies are analyzed and categorized using the unique FTSE Green Revenues Classification System (GRCS) across 8 green sectors and 60 sub-sectors.

A Green Revenues Factor is calculated for each company between zero and 100% of revenues. This unique factor represents the total of green revenues generated by the company from any of the 60 subsectors in any single fiscal year as a ratio of the company's overall revenues.

We are aware that we can improve upon these figures and will aim to do so now that our Group Sustainability Reporting Manager is in place from 2018.

## C5. Emissions methodology

### C5.1

**(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).**

**Scope 1**

---

**Base year start**

January 1, 2013

**Base year end**

December 31, 2013

**Base year emissions (metric tons CO<sub>2</sub>e)**

53,316

**Comment**

**Scope 2 (location-based)**

---

**Base year start**

January 1, 2013

**Base year end**

December 31, 2013

**Base year emissions (metric tons CO<sub>2</sub>e)**

107,581

**Comment**

**Scope 2 (market-based)**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

## C5.2

**(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.**

Defra Voluntary 2017 Reporting Guidelines

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

## C6. Emissions data

### C6.1

**(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO<sub>2</sub>e?**

**Reporting year**

---

**Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)**

38,586

**Start date**

January 1, 2018

**End date**

December 31, 2018

**Comment**

Please see note on page 66 of our 2018 Annual Report. We acquired ESCO in the second half of 2018. ESCO divisions estimated Scope 1 and 2 GHG emissions are 38212 tCO<sub>2</sub>e for the period July to Dec 2018. We have not included the ESCO division within our 2018 reporting as per our GHG Inventory Management Plan, which states new acquisitions will be accounted from the first full financial period onwards; this approach is in line with GHG Protocol principles.

**Past year 1**

---

**Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)**

36,728

**Start date**

January 1, 2017

**End date**

December 31, 2017

**Comment**

Please see note on page 66 of our annual report. Annual emissions figures for 2017 have been restated to reflect the collation of more accurate consumption data and the correction of emissions factors . The need to restate was identified in our annual review process.

## C6.2

**(C6.2) Describe your organization's approach to reporting Scope 2 emissions.**

**Row 1**

---

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

**Comment**

## C6.3

**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO<sub>2</sub>e?**

### Reporting year

#### Scope 2, location-based

103,493

#### Start date

January 1, 2018

#### End date

December 31, 2018

#### Comment

Please see note on page 66 of our 2018 Annual Report. We acquired ESCO in the second half of 2018. ESCO divisions estimated Scope 1 and 2 GHG emissions are 38212 tCO<sub>2</sub>e for the period July to Dec 2018. We have not included the ESCO division within our 2018 reporting due as per our GHG Inventory Management Plan, which states new acquisitions will be accounted from the first full financial period onwards; this approach is in line with GHG Protocol principles.

### Past year 1

#### Scope 2, location-based

107,869

#### Start date

January 1, 2017

#### End date

December 31, 2017

#### Comment

Please see note on page 66 of our annual report. Annual emissions figures for 2017 have been restated to reflect the collation of more accurate consumption data and the correction of emissions factors. The need to restate was identified in our annual review process.

## C6.4

**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

Yes

## C6.4a

**(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.**

### Source

In July 2018 we acquired ESCO - the world's leading provider of ground engaging tools (GET) used on large mining machines – to complement existing strategic innovation priorities for our Minerals division (material science, digital transformation and advanced manufacturing). The purchase of ESCO brings with it the opportunity for ESCO and Weir to leverage capabilities in engineering and materials science enabling us to improve the lifetime and durability of the products we produce, with avoided GHG emissions from reduced maintenance, rebuild and replacements. This is supported by the business decision around digital transformation, the development of a new technology strategy to lead our changing markets and build on our engineering legacy. The ESCO division produced revenues of \$252m in 2018 (from 1st July).

### Relevance of Scope 1 emissions from this source

Emissions excluded due to recent acquisition

### Relevance of location-based Scope 2 emissions from this source

Emissions excluded due to recent acquisition

### Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions excluded due to recent acquisition

### Explain why this source is excluded

We have excluded GHG emissions from the ESCO division from our reported 2018 emissions as per our GHG Inventory Management Plan, which states new acquisitions will be accounted from the first full financial period onwards; this approach is in line with GHG Protocol principles.

## C6.5

**(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.**

### Purchased goods and services

#### Evaluation status

Relevant, not yet calculated

#### Explanation

### Capital goods

#### Evaluation status



Not relevant, explanation provided

**Explanation**

With a relatively low turnover rate of capital equipment, our global annual footprint is driven primarily by operational GHG emissions rather than through the purchase of new capital goods and the import of associated embodied carbon. Embodied carbon relating to capital goods is therefore not considered relevant for total global GHG emissions calculation.

**Fuel-and-energy-related activities (not included in Scope 1 or 2)**

---

**Evaluation status**

Relevant, not yet calculated

**Explanation**

**Upstream transportation and distribution**

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**Evaluation status**

Relevant, not yet calculated

**Explanation**

**Waste generated in operations**

---

**Evaluation status**

Not relevant, explanation provided

**Explanation**

Weir produces waste through its operational processes and, in line with Lean principles, continually seeks to reduce the quantities generated. A high proportion of the waste generated is inert and therefore has low carbon emissions. Compared to the energy intensity of the operations, carbon emissions from waste are expected to be insignificant and therefore not relevant.

**Business travel**

---

**Evaluation status**

Not relevant, calculated

**Metric tonnes CO<sub>2</sub>e**

400.89

**Emissions calculation methodology**

Emissions from business travel have been calculated with regard to Group Executive and Board meetings during 2018.

The method used to calculate emissions was:

Activity data x GHG emissions factor = GHG emissions value.

Activity data comprises the estimated travel distance for attendees from the closest airport of their permanent office location to the closest airport of the meeting location. With the exception of journeys from Bath and Berkshire to London (due to the proximity), where it was assumed that attendees would travel by rail from the closest railway station of their permanent office location to the closest station of the meeting location.

Emissions factors used to calculate aviation and rail emissions are from the Defra/BEIS Greenhouse gas reporting: conversion factors 2018. Calculations assume that attendees on long haul flights (> 3,700km) travelled by business class, and that attendees on domestic and short haul flights (< 3,700km) travelled by economy class.

Relevance: The resulting emissions value equates to c. 0.3% of Weir's total annual 2018 Scope 1 and Scope 2 emissions. On this basis, emissions from business travel with to Group Executive and Board meetings are not considered relevant. We will be looking to widen the calculation through working with our travel booking provider in 2019.

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

### **Explanation**

### **Employee commuting**

#### **Evaluation status**

Relevant, calculated

#### **Metric tonnes CO<sub>2</sub>e**

13,888

#### **Emissions calculation methodology**

Following the 'average-data method' for estimating employee commuting as set out in GHG Protocol guidance - Technical Guidance for Calculating Scope Emissions (v1.): - CO<sub>2</sub>e emissions from employee commuting =  $\Sigma$  (total number of employees  $\times$  average commuting distance (passenger-km)  $\times$  average number of commuting trips per year  $\times$  emission factor of transport mode (kg CO<sub>2</sub> e/passenger-km)) - As company specific data is unavailable, average secondary activity data for the UK has been used to estimate distance travelled and mode of transport - Average commuting trip distance: 10 miles. - Breakdown of commuting mode of transport: 67% car/van; 10% rail; 7% bus; 5% other; and, 10% walk. - Average

number of commuting trips for FTEs: 333. Data source: UK Department for Transport 'National Travel Survey: England 2016'.

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

#### **Explanation**

Applying a conservative approach to calculation, we have estimated commuter travel for our workforce of 14,000 employees (excluding ESCO employees) to generate around 13,888 tCO<sub>2</sub>e per annum. This equates to 9.8% of global total GHG emissions reported for 2018.

### **Upstream leased assets**

#### **Evaluation status**

Not relevant, explanation provided

#### **Explanation**

Weir has chosen to follow the operational control approach to GHG emissions reporting, whereby it accounts for 100% of emissions from operations over which it has control. Therefore, emissions due to energy consumption in leased assets are included in the reported Scope 1 and 2 GHG emissions.

### **Downstream transportation and distribution**

#### **Evaluation status**

Relevant, not yet calculated

#### **Explanation**

### **Processing of sold products**

#### **Evaluation status**

Not relevant, explanation provided

#### **Explanation**

We provide clients with finished products and components, whereby no further processing is required. Zero sold products are therefore processed.

### **Use of sold products**

#### **Evaluation status**

Relevant, not yet calculated

#### **Explanation**

### **End of life treatment of sold products**

#### **Evaluation status**

Not evaluated

**Explanation**

**Downstream leased assets**

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**Evaluation status**

Not evaluated

**Explanation**

**Franchises**

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**Evaluation status**

Not relevant, explanation provided

**Explanation**

Weir does not operate any franchises to sell or distribute their products.

**Investments**

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**Evaluation status**

Not evaluated

**Explanation**

**Other (upstream)**

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**Evaluation status**

Not evaluated

**Explanation**

**Other (downstream)**

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**Evaluation status**

Not evaluated

**Explanation**

**C6.7**

**(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?**

No

## C6.10

**(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO<sub>2</sub>e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

---

**Intensity figure**

55.9

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**

142,080

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

2,540.8

**Scope 2 figure used**

Location-based

**% change from previous year**

9

**Direction of change**

Decreased

**Reason for change**

Decarbonisation of operations with e.g. lower emission fuels used and energy / emissions reduction projects implemented. More efficient operation of facilities, e.g. through process optimisation and a Lean manufacturing approach. Please see note on page 66 of our 2018 Annual Report. Annual GHG emissions figures for 2017 have been restated to reflect the collation of more accurate consumption data and the correction of emissions factors. The need to restate was identified in our annual GHG inventory review process.

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**Intensity figure**

10.1

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**

142,080

**Metric denominator**

full time equivalent (FTE) employee

**Metric denominator: Unit total**

14,000

**Scope 2 figure used**

Location-based

**% change from previous year**

2

**Direction of change**

Decreased

**Reason for change**

Decarbonisation of operations with e.g. lower emission fuels used and energy / emissions reduction projects implemented. More efficient operation of facilities, e.g. through process optimisation and a Lean manufacturing approach. Please see note on page 66 of our 2018 Annual Report. Annual GHG emissions figures for 2017 have been restated to reflect the collation of more accurate consumption data and the correction of emissions factors. The need to restate was identified in our annual GHG inventory review process

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**Intensity figure**

3.7

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**

142,080

**Metric denominator**

Other, please specify  
tonnes of metal poured

**Metric denominator: Unit total**

37,712

**Scope 2 figure used**

Location-based

**% change from previous year**

8

**Direction of change**

Decreased

**Reason for change**

Decarbonisation of operations with e.g. lower emission fuels used and energy / emissions reduction projects implemented. More efficient operation of facilities, e.g. through process optimisation and a Lean manufacturing approach. Please see note on page 66 of our 2018 Annual Report. Annual GHG emissions figures for 2017 have been restated to reflect the collation of more accurate

consumption data and the correction of emissions factors. The need to restate was identified in our annual GHG inventory review process

## C7. Emissions breakdowns

### C7.1

**(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**

Yes

### C7.1a

**(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).**

Greenhouse gas	Scope 1 emissions (metric tons of CO <sub>2</sub> e)	GWP Reference
CO <sub>2</sub>	38,399.74	IPCC Fourth Assessment Report (AR4 - 100 year)
CH <sub>4</sub>	24.67	IPCC Fourth Assessment Report (AR4 - 100 year)
N <sub>2</sub> O	104.22	IPCC Fourth Assessment Report (AR4 - 20 year)
HFCs	57.84	IPCC Fourth Assessment Report (AR4 - 100 year)

### C7.2

**(C7.2) Break down your total gross global Scope 1 emissions by country/region.**

Country/Region	Scope 1 emissions (metric tons CO <sub>2</sub> e)
Australia	2,804.09
Botswana	35.94
Brazil	1,463.86
Canada	3,515.83
Chile	1,243.84
France	385.61
Hungary	5.45
Ghana	145
India	136.45
Indonesia	102.95



Iraq	724.32
Namibia	53.28
Peru	184.32
Russian Federation	139.95
South Africa	3,927.38
Sweden	71.52
United Arab Emirates	46.2
United Kingdom of Great Britain and Northern Ireland	5,414.67
United States of America	17,042.46
Zambia	151.97
Azerbaijan	469.11
Czechia	3.9
Dominican Republic	3.52
Malaysia	384
Poland	5.21
Romania	15
Netherlands	104
Turkey	6.6

## C7.3

**(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.**

By business division

## C7.3a

**(C7.3a) Break down your total gross global Scope 1 emissions by business division.**

Business division	Scope 1 emissions (metric ton CO <sub>2</sub> e)
Group	115.72
Flow Control	3,246.01
Minerals	22,395.12
Oil and Gas	12,829.57

## C7.5

**(C7.5) Break down your total gross global Scope 2 emissions by country/region.**

Country/Region	Scope 2, location-	Scope 2, market-	Purchased and consumed	Purchased and consumed low-carbon
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	based (metric tons CO2e)	based (metric tons CO2e)	electricity, heat, steam or cooling (MWh)	electricity, heat, steam or cooling accounted in market-based approach (MWh)
Australia	20,761.2		25,449.3	
Botswana	62.9		46.4	
Brazil	754		6,275.8	
Canada	1,843.3		12,253.8	
Chile	7,504		16,872.4	
China	2,568.4		4,074.2	
Finland	5.1		43.6	
France	89.9		1,709.4	
Hungary	1.9		6.9	
Ghana	19.2		95.7	
India	2,813.4		3,853.3	
Indonesia	3,401.8		4,648.6	
Iraq	110.3		103.4	
Malaysia	7,505		11,412.9	
Mexico	402.6		866	
Morocco	7.1		10.3	
Namibia	0.6		9.8	
Netherlands	1,284		2,753.6	
Peru	242.6		916.7	
Russian Federation	71.4		199.1	
South Africa	18,809.7		19,802.8	
Other, please specify Republic of Korea	252		488.3	
Spain	10		40.5	
Sweden	8.8		715.9	
United Arab Emirates	3,637		5,495.4	
United Kingdom of Great Britain and Northern Ireland	6,228.1		21,870.5	
United States of America	23,658.4		49,935.1	
Zambia	3.8		72	
Argentina	75.6		201.7	

Czechia	3.1		5.8	
Dominican Republic	7		11.7	
Italy	1,299.9		3,910.9	
Philippines	7.8		12.8	
Poland	4.1		5.7	
Romania	0		0.2	
Turkey	39		84.7	

## C7.6

**(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.**

By business division

## C7.6a

**(C7.6a) Break down your total gross global Scope 2 emissions by business division.**

Business division	Scope 2, location-based emissions (metric tons CO <sub>2</sub> e)	Scope 2, market-based emissions (metric tons CO <sub>2</sub> e)
Flow Control	5,740.2	
Group	204.2	
Minerals	73,719.4	
Oil and Gas	19,939.6	
Weir China	2,186.4	
Weir India	1,703.4	

## C7.9

**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Decreased

## C7.9a

**(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year.**

	Change in emissions (metric tons CO <sub>2</sub> e)	Direction of change	Emissions value (percentage)	Please explain calculation
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Change in renewable energy consumption	2,595	Decreased	1.8	<p>The Weir SHE Management System establishes a common set of SHE standards and expectations for addressing the risks that our operations face, including those related to climate change. Specific performance indicators include, for example, the management of ozone depleting substances (ODS), GHG emissions quantification and reduction, and site level energy management plans and usage reduction projects. Prior to 2018 a number of our facilities had already implemented renewable energy technologies and projects onsite, taking a step toward low-carbon energy generation and on-site use. In 2018 Weir used 5918 MWH energy from of solar panels. This equates to 2595 tCO<sub>2</sub>e in avoided emissions compared with electricity purchased from the grid. This equates to <math>(2,595/142,080) \times 100 = 1.8\%</math> decrease in total Scope 1 and 2 combined.</p> <p>expectations for addressing the risks that our operations face, including those related to climate change. Specific performance indicators include, for example, the management of ozone depleting substances (ODS), GHG emissions quantification and reduction, and sitelevel energy management plans and usage reduction projects. Prior to 2018 a number of our facilities had already implemented renewable energy technologies and projects onsite, taking a step toward low-carbon energy generation and on-site use. In 2018 Weir used 5918 MWH energy from of solar panels. This equates to 2595 tCO<sub>2</sub>e in avoided emissions compared with electricity purchased from the grid. Please note that in 2018 our revenues increased by 7.8% (excluding</p>
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				ESCO) compared to 2017, greater energy use to achieve this will have impacted our overall footprint.
Other emissions reduction activities	1,803.8	Decreased	1.2	<p>Other emissions reduction projects reduced total global emissions by 1,803.8 tCO<sub>2</sub>e. This equates to <math>(1,803.8/142,080)*100 = 1.2\%</math> decrease total Scope 1 and 2 combined.</p> <p>2018 project examples include: Our Gabbioneta site repairing air leakages from compressor units for improved process energy efficiency (45.5 tCO<sub>2</sub>e) and one of our sites in Fort Worth implementing a HVAC improvement programme with motor replacement and controls upgrade also for improved process energy efficiency (365.93 tCO<sub>2</sub>e).</p> <p>compared to total emissions of 132,806 tCO<sub>2</sub>e in 2016. This equates to <math>(2,768/132,806)*100 = 2\%</math> reduction.</p> <p>Please note that in 2018 our revenues increased by 7.8% (excluding ESCO) compared to 2017, greater energy use to achieve this will have impacted our overall footprint.</p>
Divestment				
Acquisitions	0	No change	0	Emissions for our acquisition of ESCO in 2018 have not been included within our footprint. The first full year of operation will be accounted for in 2019.
Mergers				
Change in output				
Change in methodology				
Change in boundary				
Change in physical operating conditions				
Unidentified				

Other				
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## C7.9b

**(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Location-based

## C8. Energy

### C8.1

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

More than 0% but less than or equal to 5%

### C8.2

**(C8.2) Select which energy-related activities your organization has undertaken.**

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	No

### C8.2a

**(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh

Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	190,120.44	190,120.44
Consumption of purchased or acquired electricity		5,809.44	188,445.75	194,255.2
Total energy consumption		11,722.53	378,566.19	390,288.72

## C8.2b

**(C8.2b) Select the applications of your organization's consumption of fuel.**

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	Yes
Consumption of fuel for co-generation or tri-generation	No

## C8.2c

**(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

### Fuels (excluding feedstocks)

Diesel

### Heating value

HHV (higher heating value)

### Total fuel MWh consumed by the organization

42,104.8

### MWh fuel consumed for self-generation of electricity

0

### MWh fuel consumed for self-generation of heat

0

### MWh fuel consumed for self-generation of cooling

0

**Comment**

The sustainability reporting system used to collate 2018 energy/fuel data did not enable a breakdown for consumption by fuel type and activity

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**Fuels (excluding feedstocks)**

Petrol

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

15,757.2

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of cooling**

0

**Comment**

The sustainability reporting system used to collate 2018 energy/fuel data did not enable a breakdown for consumption by fuel type and activity

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**Fuels (excluding feedstocks)**

Kerosene

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

162.61

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of cooling**

0

**Comment**

The sustainability reporting system used to collate 2018 energy/fuel data did not enable a breakdown for consumption by fuel type and activity



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**Fuels (excluding feedstocks)**

Liquefied Petroleum Gas (LPG)

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

3,251.62

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of cooling**

0

**Comment**

The sustainability reporting system used to collate 2018 energy/fuel data did not enable a breakdown for consumption by fuel type and activity

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**Fuels (excluding feedstocks)**

Natural Gas

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

126,473.27

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of cooling**

0

**Comment**

The sustainability reporting system used to collate 2018 energy/fuel data did not enable a breakdown for consumption by fuel type and activity

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**Fuels (excluding feedstocks)**

Propane Gas

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

2,368.7

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of cooling**

0

**Comment**

The sustainability reporting system used to collate 2018 energy/fuel data did not enable a breakdown for consumption by fuel type and activity

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**Fuels (excluding feedstocks)**

Fuel Oil Number 1

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

226.99

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of cooling**

0

**Comment**

The sustainability reporting system used to collate 2018 energy/fuel data did not enable a breakdown for consumption by fuel type and activity

## C8.2d

**(C8.2d) List the average emission factors of the fuels reported in C8.2c.**

**Diesel**

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**Emission factor**

2.62694

**Unit**

kg CO2e per liter

**Emission factor source**

UK Government GHG Conversion Factors for Company Reporting, 2018 v1.0 (Activity:  
Liquid fuels; Fuel: Diesel (average biofuel blend ))

**Comment**

**Fuel Oil Number 1**

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**Emission factor**

3,228.84

**Unit**

kg CO2e per metric ton

**Emission factor source**

UK Government GHG Conversion Factors for Company Reporting, 2018 v1.0 (Activity:  
Liquid fuels; Fuel: Processed fuel oils - residual oil)

**Comment**

**Kerosene**

---

**Emission factor**

2.53627

**Unit**

kg CO2e per liter

**Emission factor source**

UK Government GHG Conversion Factors for Company Reporting, 2018 v1.0 (Activity:  
Liquid fuels; Fuel: Burning oil )

**Comment**

**Liquefied Petroleum Gas (LPG)**

---

**Emission factor**

1.51906

**Unit**

kg CO2e per liter

**Emission factor source**

UK Government GHG Conversion Factors for Company Reporting, 2018 v1.0 (Activity: Liquid fuels; Fuel: LPG)

**Comment**

**Natural Gas**

---

**Emission factor**

0.18411

**Unit**

metric tons CO<sub>2</sub>e per MWh

**Emission factor source**

Weighted Average For Australia: 'National Greenhouse Accounts Factors - August 2018', Australian Department of the Environment.

All other countries: UK Government GHG Conversion Factors for Company Reporting, 2018 v1.0 (Activity: Gaseous fuels; Fuel: Natural gas)

**Comment**

**Petrol**

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**Emission factor**

2.20307

**Unit**

kg CO<sub>2</sub>e per liter

**Emission factor source**

**Comment**

UK Government GHG Conversion Factors for Company Reporting, 2018 v1.0 (Activity: Liquid fuels; Fuel: Petrol)

**Propane Gas**

---

**Emission factor**

1.51906

**Unit**

kg CO<sub>2</sub>e per liter

**Emission factor source**

UK Government GHG Conversion Factors for Company Reporting, 2018 v1.0 (Activity: Liquid fuels; Fuel: LPG)

**Comment**

## C8.2f

**(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.**

### Basis for applying a low-carbon emission factor

No purchases or generation of low-carbon electricity, heat, steam or cooling accounted with a low-carbon emission factor

### Low-carbon technology type

### Region of consumption of low-carbon electricity, heat, steam or cooling

### MWh consumed associated with low-carbon electricity, heat, steam or cooling

### Emission factor (in units of metric tons CO<sub>2</sub>e per MWh)

### Comment

n/a

## C9. Additional metrics

### C9.1

**(C9.1) Provide any additional climate-related metrics relevant to your business.**

### Description

Other, please specify

Compliance with the Weir SHE Management Standards

### Metric value

78

### Metric numerator

### Metric denominator (intensity metric only)

### % change from previous year

0

**Direction of change**

No change

**Please explain**

The Weir SHE Management Standards set our expectations and provide a framework for environmental risk management, incorporating key elements such as regulatory compliance, risk assessment, self-audit, and employee engagement. Our continued commitment to robust environmental management – including that of climate-related issues - is well reflected in the performance of our facilities. Our overall compliance with environmental standards across our businesses during 2018, compared to that assessed in 2017 remained static with an average score of 78% for those sites which were peer assessed. Our environmental standards specific requirement and expectations relating to, for example, site level GHG emissions quantification, energy management plans, and a rolling programme of consumption and emissions reduction projects.

## C10. Verification

### C10.1

**(C10.1) Indicate the verification/assurance status that applies to your reported emissions.**

	Verification/assurance status
Scope 1	No third-party verification or assurance
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	No third-party verification or assurance

### C10.2

**(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**

No, we do not verify any other climate-related information reported in our CDP disclosure

## C11. Carbon pricing

### C11.1

**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

Yes

### C11.1a

**(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**

Alberta carbon tax

## C11.1c

**(C11.1c) Complete the following table for each of the tax systems in which you participate.**

### Alberta carbon tax

#### Period start date

January 1, 2018

#### Period end date

December 31, 2018

#### % of emissions covered by tax

1.21

#### Total cost of tax paid

76,484.71

#### Comment

The carbon levy applies to purchases of all fossil fuels that produce GHG emissions when combusted (including fuels used for transportation purposes and fuels used for heating, e.g. natural gas and propane). The levy does not apply directly to consumer purchases of electricity. For fuels such as gasoline and diesel, the levy is included in the price of the fuel paid by consumers, and administered through a structure similar to Alberta's fuel tax. For natural gas, the levy is collected and remitted by entities in the natural gas distribution system. The application of the levy to other fuels (e.g. propane) is fuel specific, reflecting how the product is produced, distributed, sold and used. The 2018 carbon price (\$30 per tonne) was applied to individual fuels based on the amount of GHG emissions released at the point of combustion. The rates of individual fuels are calculated using the carbon price. Generally, the levy is calculated based on the volume of fuel and the carbon levy rate for that specific type of fuel. As part of the province's Climate Leadership Plan, revenue from the levy will be used to pay for initiatives that reduce emissions and support adaptation and transition to a lower carbon economy.

## C11.1d

**(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?**

As a global company we operate in a large number of countries, and without a single enterprise-wide carbon pricing scheme, we are required to manage our legislative burden on a country-by-country basis. Our SHE standards set the requirements to meet and exceed legal requirements regarding the environment; one of our principal risks across the group comprises a breach in our SHE standards resulting in harm. Through the standards we ensure that each of our divisions keeps a register of legal requirements and action taken to meet these requirements, including that for long-term compliance and regulatory risk management strategy for carbon pricing systems such as the Alberta Carbon Tax scheme. The SHE committee monitor performance and compliance to the standards, and regularly report to the Board. In 2017 a global SHE incident reporting software system was put in place.

Weir has several facilities located in the Alberta province and are therefore captured under the Alberta Carbon Tax, effective from 1 January 2017. Weir recognises that our business could also be directly or indirectly affected by future / emerging climate related regulations and voluntary agreements aimed at further reducing emerging energy use and GHG emissions in our direct operations, during the life cycles of our products and within our supply chain. For example, the draft Carbon Tax Bill in South Africa and the proposed carbon trading scheme in China are expected to apply to our business in the next 1-2 years.

The specific long-term compliance and regulatory risk management strategies for any carbon pricing system will be defined and driven at facility level. Our bottom-up risk reporting approach requires key risks - including that related to legislative compliance – to be identified, and reported, at project level to be escalated to the operating company management, which in turn may be escalated to divisional management, and ultimately to the Risk Committee and the Board. This is achieved through risk dashboard reports, which are maintained and considered at operating company, divisional and Group levels.

The key method we use to manage financial liabilities related to carbon management regulation is to reduce emissions across the Group. Then, as and when any new legislation is introduced, our level of financial exposure is minimized through for example lower allowance purchases. Our SHE Standards set out specific performance indicators including legislative compliance, energy management strategies and a rolling programme of three emissions/energy reduction projects at each facility. For example, during 2017 one of our Canadian sites installed a new Building Management System (BMS), enabling greater control of non-process utility consumption, with an estimated saving of 46.5 tCO<sub>2</sub>e, which would equate to a c.£550 saving under the Alberta Carbon Tax scheme.

The SHE assessment tool used during internal performance audits contains a target score and rating system through which good performance is quantified and recognised. Projects and achievements delivered by our employees are presented in the Annual Report and corporate website; our online magazine, Weir Bulletin, with news features and information from across Weir published every two months; and the Weir Global Intranet, which provides news, blogs, videos and best practice forums. Weir delivered its first SHE Recognition Programme in 2017 with an awards ceremony held in 2018 to recognize the efforts of the SHE community.

In 2017 we created Group Head of Strategy and Sustainability role to drive major energy usage and emissions reduction projects. With a targeted pilot programme of advanced metering projects, we are working with three of our highest energy consuming sites. Advanced metering will enable more detailed analysis of the foundry process and identify opportunities for cost-effective carbon savings. Outcomes from the pilot will be shared with other high energy and



carbon intensive facilities, to further minimise exposure under carbon pricing systems like the current Alberta Carbon Tax scheme and the emerging schemes in South Africa and China.

## C11.2

**(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**

No

## C11.3

**(C11.3) Does your organization use an internal price on carbon?**

No, and we do not currently anticipate doing so in the next two years

## C12. Engagement

### C12.1

**(C12.1) Do you engage with your value chain on climate-related issues?**

Yes, our suppliers

Yes, our customers

Yes, other partners in the value chain

### C12.1a

**(C12.1a) Provide details of your climate-related supplier engagement strategy.**

---

#### Type of engagement

Compliance & onboarding

#### Details of engagement

Code of conduct featuring climate change KPIs

Climate change is integrated into supplier evaluation processes

#### % of suppliers by number

1

#### % total procurement spend (direct and indirect)

50

#### % Scope 3 emissions as reported in C6.5

#### Rationale for the coverage of your engagement

Weir recognises that our suppliers will be directly and indirectly affected by climate change. We assess supplier

risks at the point of procurement using our Supplier Risk Evaluation Management

#### Manual and Assessment

Template. Weir considers within this process the risk identification, risk assessment / re-assessment, risk control and risk monitoring. One of the largest potential disruptions to supply is that associated with loss or damage to the manufacturing facilities. This can be caused by natural disasters/extreme weather events.

#### **Impact of engagement, including measures of success**

Our assessment considers the potential disruption to supply associated with loss of facilities due to damage.

The supplier should therefore have a business continuity or disaster recovery plan detailing how potential loss of production can be mitigated. We have yet to experience a major climate related incident which has disrupted our supply chain. Within our procurement Supplier Evaluation Manual we state that suppliers shall protect the health and safety of their employees, and the environment to standards in keeping with expectations of good practice. Key supplier partners are expected to have an ISO 14001 accredited Environmental Management System in place or a defined plan to achieve it within a reasonable period of time. ISO 14001 standards set out climate related requirements such management of fugitive air emissions wastewater and solid waste, as well as impact assessment and target setting. These activities should have positive impact in terms of GHG emissions and/or embodied carbon.

#### **Comment**

Scope 3 emissions from upstream activities, including purchase of products and services, are considered relevant, but are not yet calculated. We have been unable to complete a supplier by supplier bottom up analysis so have reviewed our process and concluded that this is likely to cover our top suppliers (>£1m). We recognise that we can improve our accuracy on this data set.

---

#### **Type of engagement**

Innovation & collaboration (changing markets)

#### **Details of engagement**

Run a campaign to encourage innovation to reduce climate impacts on products and services

#### **% of suppliers by number**

1

**% total procurement spend (direct and indirect)**

10

**% Scope 3 emissions as reported in C6.5**

**Rationale for the coverage of your engagement**

Engaging with our suppliers to develop and improve our products and systems supports our ambition to improve the lifetime and efficiency of our products. Products embody carbon due to the energy involved in their design, production, distribution, use and disposal across their life cycle. If we can extend the lifetimes of our products and enhance their operational efficiency, the use of energy - embodied in carbon - can be reduced and associated GHG emissions avoided. We also engage with our suppliers through our Value Chain Excellence

programme; our supplier improvement projects purposefully aim to increase the quality of products.

Improvements made during to manufacturing processes not only help to extend product life spans but also

reduce maintenance requirements, raw material input, energy usage and waste generation at the production

stage. All of which contribute to an avoidance of GHG emissions and embodied carbon in our value chain

**Impact of engagement, including measures of success**

This enables us to build better relationships with suppliers and ensure that they truly understand how to meet

our needs. Measures of success include the number of products developed and efficiency savings they support

to realise. Collaborative research has been undertaken with suppliers. Weir Minerals announced in 2018 their long term strategic cooperation agreement with International technology group ANDRITZ thus enabling Weir Minerals to offer complete tailings solutions to its customers. As part of this agreement, ANDRITZ will supply proven separation and dewatering technologies, thus enabling Weir Minerals to offer complete tailings solutions to its customers

For a number of decades, Weir Minerals have been providing mines around the world with sustainable and cost-effective solutions for the management, disposal, and recycling of mine waste. The renowned GEHO® positive displacement pumps transport ores, minerals, and tailings under extreme conditions, while minimising both water and energy consumption at the same time. This latest agreement complements our overall tailings offering and enables weir to provide our customers with a complete tailings solution. Under the brand name IsoDry, we will now offer customers a range of mechanical separation technologies, such as thickeners, filter presses, centrifuges, and vacuum belt filters.

**Comment**

Scope 3 emissions from upstream activities, including purchase of products and services, are considered relevant, but are not yet calculated.

## C12.1b

**(C12.1b) Give details of your climate-related engagement strategy with your customers.**

---

### **Type of engagement**

Education/information sharing

### **Details of engagement**

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

### **% of customers by number**

1

### **% Scope 3 emissions as reported in C6.5**

### **Please explain the rationale for selecting this group of customers and scope of engagement**

In engaging with our customers on Climate Change we work with them to tackle a key issue that we both share and demonstrate that we understand their needs. We have shared information across our customer group through engagement with our engineers and the Weir Advanced Research Centre (WARC), a Weir funded research partnership with the University of Strathclyde. For example, Weir has taken part in the part in the Anglo American (AA) 'Future Smart' Open Forums on mining and energy for the past four years.

### **Impact of engagement, including measures of success**

This allows us to identify opportunities for collaborative working and development of our products to better meet customers' needs alongside supporting customers to achieve their sustainability ambitions. FutureSmart Open Forums is an open innovation platform that brings together experts from academia, the mining industry and other industries, to address global issues related to operational efficiency, energy, water and safety in the pursuit of more sustainable mining practices. A key measure of success in working with partners from the Open Forums is the incorporation of more sustainable products directly into the current AA project portfolio; helping to transform the way AA think about mining, through a step change value uplift and reduction of in physical environmental footprint. At the 2018 event we presented on a commercial model around additive manufacturing of spares for mine site, which demonstrated how additive manufacturing which produces less waste can bring real value to our customers. As well as specific project outcomes, measures of success include the award of competitive bids, repeat business from existing customers such as AA, winning

business from new customers, gaining market share and increased stakeholder confidence reflected by our share price.

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**Type of engagement**

Collaboration & innovation

**Details of engagement**

Other – please provide information in column 5

**% of customers by number**

6

**% Scope 3 emissions as reported in C6.5**

**Please explain the rationale for selecting this group of customers and scope of engagement**

Our engineers work collaboratively with customers at the early stages of product development, to create more valuable products through accelerated innovation. We work in partnership with customers and others in our value chain to provide distinctive solutions that deliver compelling value for money through our integrated solutions approach. We are committed to extending our capabilities in advanced manufacturing, materials science and increasing the sustainability of our markets through improving for example energy and water efficiency. Products embody carbon due to the energy involved in their design, production, distribution, use and disposal across their life cycle. If we can extend the lifetimes of our products and enhance their operational efficiency, the use of energy - embodied in carbon - can be reduced and associated GHG emissions avoided. Recognising that notable emissions occur outside our direct operations, we work with customers and others in our value chain to improve environmental performance and thus help to reduce potential climate change impacts of the products/services procured from our business. Scope 3 emissions from downstream activities, such as transportation and distribution, use of sold products and end of life treatment of sold products, are considered relevant, but are not yet calculated. Size of engagement is estimated based on our divisions' product development and integrated solutions development with customers.

**Impact of engagement, including measures of success**

Such collaboration typically focuses on reducing our customers' operational costs as well as supporting their corporate strategy goals for reducing climate-related impacts during product usage, for instance reducing use phase energy consumption, waste and associated GHG emissions. As well as specific project outcomes, measures of success include the award of competitive bids, repeat business from existing customers, winning business from new customers, gaining market share and increased stakeholder confidence reflected by our share price. Through global collaboration, we design, test and manufacture high quality, custom designed mill liners for our customer. Discrete Element Method (DEM) enables us to create simulations of the behaviour of particles within the mill. In 2018 we launched the Vulco® R67 premium rubber compound. During

the development stage, one of our key customers expressed a strong desire for a rubber compound which could last longer. Customers were more than happy to work with us to test the new compound and provide feedback to ensure we had the best possible compound for their application. Our trial partners reported great improvements in wear life (circa 20%). In 2018, Weir Engineering Services (WES) partnered with a UK based power station to convert their plant from a coal-fired to a biomass-fired power station which will allow the plant to supply the National Grid with up to 390 Megawatts of low-carbon electricity. The team completed and restored a variety of equipment including: 42 turbine valves, three lid assemblies, three in-situ seat replacements, 48 onsite overhauls of valves, seven condensate extraction pumps, seven booster pumps, two CW pumps; and one start and standby feed pump. In 2018 WARC carried out a project reducing gas permeability of elastomer seals by incorporating Graphene platelets. This was carried out at Herriot-Watt University and was partly funded by the Oil and Gas Innovation Centre (OGIC). For the industry the loss of methane to the environment is a big problem. WARC managed to achieve a reduction of over 40%. Weir has also been working with customers on the development of new technology, including Anglo American on ore transport efficiency and with Newcrest on alternative tailings usage, dewatering and disposal technologies.

## C12.1c

### **(C12.1c) Give details of your climate-related engagement strategy with other partners in the value chain.**

As well as customers and suppliers, partners in our value chain include, academic groups, other technology organisations, shareholders, ratings agencies and internal partners such as supporting functions within Weir such as Innovation, WARC, VCE, Weir Technical Centre and Weir Ensci who have their own value chain specialisms. Aside from our Annual Report and Financial Statements which align with the CDSB framework, the CDP Climate Change programme is one of the key strategic mechanisms through which we engage investors on climate related issues. We also engage the investment community on our strategy through formal investment analysis discussions and via response to ad hoc information requests. During 2018 we received several requests from ESG analysts on behalf of our shareholders for further information. Weir manages the process of engaging with our shareholders through our Head of Investor Relations and the Communications team. Engaging with investors helps to maintain and enhance our working relationships through greater transparency. We also engage the investment community through participation in several other sustainability rating agencies; our 2018 scores for both OEKOM and FTSE4GOOD increased comparatively to 2017 and we have again been included in the FTSE4GOOD series index.

In 2018, we committed to conduct a multi-stakeholder materiality assessment to identify our biggest sustainability risks/opportunities from all-stakeholder view (internal and external including investors, customers and NGOs). This assessment was completed in 1H 2019 and will form the foundation of our ongoing sustainability roadmap. At the end of 2018, we launched a new sustainability software tool to reduce GHG emissions, increase operational efficiency at facilities, and improve data collation and quality. We replaced a legacy top down focused system with a bottom up solution. We are continuing to develop the functionality of this tool as a

one-stop sustainability tool, to support actionable efforts to reduce GHG emissions across our 300+ sites.

The Weir Group team made it to the last 3 finalists in the 2019 Spark Leader in Energy & Sustainability award. In 2018 Weir received the Education category award for their dedication to advancing supply chain excellence internally and at large from APICS. Measures of success include: Positive response from investors and customers, for example, increased access to capital/quantity of sales; Increased shareholder confidence in the scope and quality of our GHG emissions and sustainability strategy; and, maintenance or improvement our annual CDP Climate Change rating.

WARC engages with several centres of excellence within the Minerals and Oil and Gas sectors including the Manufacturing Technology Centre, Oil and Gas Innovation Centre and the Institute of Materials, Minerals and Mining, Mining association of Canada, CSRIO AND American Institute of Petroleum Standards. This engagement allows Weir to be at the front line of technology advancements to improve our products and services. Weir works with over 20 Universities through the Weir Advanced Research Centre. As a project example WARC are working with the universities of Strathclyde and Edinburgh on a project on smart pumping, funded in part by the EPSRC Prosperity Partnership scheme. This is trying to control the pressure pulses (Pressure and frequency) to suit the subsurface geology. Outcomes are expected to be a better understanding of crack initiation and propagation, with improved energy efficiency of hydraulic fracturing and enhanced geothermal energy.

We have developed an open innovation process to provide a mechanism to capture and channel the good ideas generated within the global business. In 2018 we launched a waste related employee innovation challenge, over the course of which over 100 ideas were submitted and over 7000 votes were cast by employees engaging with the innovative waste reduction ideas for our sites and products. Weir Technical Centre focuses on the continuous development of solutions to utilise and manufacture tailings-based products, as well as the design of pipeline transport systems. Using the data generated at the WTC, Weir Minerals tailings' specialists can specify tailings handling products and processes to suit operators' site-specific conditions. This helps mine operators to minimise power and water consumption.

EnSci is a business unit providing tailored engineering and digital solutions support across the Group. Weir EnSci runs Value Analysis and Value Engineering programme focused on improving the value and benefits of the Weir products. Weir EnSci drives leads and supports this initiative through competitor benchmarking, product efficiency improvement and product functionality improvement. All of which support the partners in our value chain to deliver more efficient products and therefore progress towards more sustainable end markets

## C12.3

**(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?**

- Direct engagement with policy makers
- Funding research organizations



## C12.3a

**(C12.3a) On what issues have you been engaging directly with policy makers?**

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify Innovation	Support	Met with UK government officials to discuss support for Innovation within industry including the commercialisation of innovation. Our Innovation teams have been one of the primary mechanisms through which we have developed improvements within products, reducing emissions and increasing efficiency. We have used a number of mechanisms including open innovation challenges to enable innovation to develop within Weir one of the most notable success stories from this process has been out induction mould heating project which has saved £70k in one manufacturing facility alone.	No specific legislative remedy was discussed.
Other, please specify Other; Inward investment	Support	Met with elected and administration officials in the State of Mississippi to discuss our investment in our facilities including efficiency improvements, generation of employment and training opportunities.	No specific legislative remedy was discussed.
Other, please specify Other; international trade	Support	Met with senior UK officials to discuss government initiatives to support international expansion by UK-based companies including in mining markets where companies such as Weir have capability to support increased energy and water efficiency.	No specific legislative remedy was discussed.

## C12.3d

**(C12.3d) Do you publicly disclose a list of all research organizations that you fund?**

No

## C12.3f

**(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?**

A formal materiality assessment to identify and prioritise material sustainability issues at a Group level has been completed in line with the Global Reporting Initiative G4 guidelines. The opportunity was used to also review our existing sustainability priorities and examine their continued relevance for our business. The review found that our key priorities continue to encompass the most significant material issues for our business and stakeholders and, as a consequence, our sustainability strategy remains appropriate to our evolving business, that of



our critical suppliers and key customers, and the changing global climate in which we operate. The assessment involved functional representatives from: Communications, HR, Investor Relations, Risk, Operations and Development, Procurement, General Counsel, and Company Secretariat; with whom final outcomes were shared. In 2019 we reviewed this process and conducted a full multi stakeholder materiality assessment in 1H 2019 looking at all components of sustainability which engaged with internal and external stakeholders (including customers, suppliers and NGOs).

The Group's communications function has responsibility for all senior interactions with policy makers around the world, providing consistency in approach as well as in shared corporate information, including that related to climate change issues. Interactions take account of, for example, our defined sustainability priorities, SHE Standards (and related performance), Risk Management Policy and Framework, Risk Appetite Statement, Viability Statement, current and planned research and development activity, and key product and technology innovations. In 2017 Weir Group reorganised its structure regarding sustainability, with Group Head of Strategy now also taking on the role of Group Head of Sustainability. Our Head of Strategy and Sustainability and appointed Group Sustainability Reporting Manager (GSRM) in 2018 to help accelerate implementation of our sustainability strategy and add to the existing momentum of improved operational efficiency, resilience and environmental performance. Our GSRM and Group Head of Strategy and Sustainability liaise directly with the Communications team so that public policy engagement remains consistent with our overall strategy as it progresses and evolves (e.g. to account of the recent acquisition of ESCO).

## C12.4

**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

### Publication

In mainstream reports, in line with the CDSB framework (as amended to incorporate the TCFD recommendations)

### Status

Complete

### Attach the document

 weir-group-annual-report-2018-web.pdf

### Page/Section reference

Mentioned through out document but mainly within the Strategic Report Pages 1 -56

### Content elements

Governance

Strategy

Risks & opportunities  
 Emissions figures  
 Emission targets  
 Other metrics  
 Other, please specify

**Comment**

## C14. Signoff

### C-FI

**(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.**

### C14.1

**(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

	Job title	Corresponding job category
Row 1	Chief Executive Officer	Chief Executive Officer (CEO)

## Submit your response

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	Public or Non-Public Submission	I am submitting to
I am submitting my response	Public	Investors

**Please confirm below**

I have read and accept the applicable Terms