Ricardo plc
Annual Report and Accounts 2022/23

ACCELERATING OUR TRANSFORMATION TO ENABLE ENERGY TRANSITIONS

RICARDO'S ENVIRONMENTAL SCIENCE AND MOBILITY ENGINEERING EXPERTISE HELPS TO OPTIMISE AND NAVIGATE COMPLEXITY

WE ARE RICARDO

We are a global consultancy, delivering strategic, environmental and engineering solutions that are at the intersection of **transport, energy and global climate agendas.**

OUR VISION AND PURPOSE

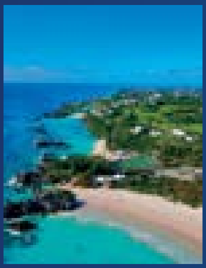
Our vision is to create a safe and sustainable world. We do this by enabling our clients to solve the most complex and dynamic challenges to achieve a safe and sustainable world.

OUR VALUES

Our shared values: create together, be innovative, aim high and be mindful, actively guide our behaviours and reflect how we work together.

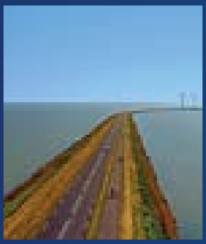
MEGATRENDS

Megatrends propel our long-term growth across energy decarbonisation, climate change and zero emission propulsion.



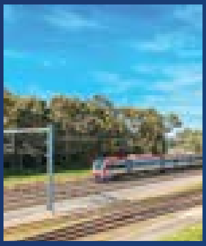
ACCELERATING ENERGY TRANSITION

PAGE 22



ACCELERATING CLIMATE CHANGE THROUGH POLICY

PAGE 24



ACCELERATING NET ZERO PROPULSION IN TRANSPORTATION

PAGE 26

STRATEGIC REPORT

GOVERNANCE REPORT

FINANCIAL STATEMENTS

Sustainability is embedded in everything we do. We advise clients on environmental, social and governance (ESG) services to support them in delivering sustainable strategies. For this reason, we ensure we clearly demonstrate our own environmental ambitions, climate change resilience and the social value we are delivering.

SUSTAINABILITY AT RICARDO PAGE 62

We deepen our client relationships by creating unique digital insights and repeatable and integrated solutions that demonstrate our capabilities across the value chain – from policy and strategy to the delivery and implementation of client programmes.

OUR CAPABILITIES PAGE 15

A purpose-driven global community, we are inspired by making a real difference. We have close to 3,000 engineers, economists, scientists and consultants, in 23 countries, whose passion is developing innovative and sustainable solutions to complex challenges.

SUSTAINABILITY/SOCIAL PAGES 73–80

FINANCIAL PERFORMANCE

+15%

Order book(1)(3)

2022/23	**£395.3m**
2021/22	£343.6m
2020/21	£293.5m
2019/20	£314.0m
2018/19	£314.0m

+15%

Revenue(3)

2022/23	**£446.0m**
2021/22	£387.3m
2020/21	£351.8m
2019/20	£352.0m
2018/19	£384.4m

+8%

Underlying(1) profit before tax(3)

2022/23	**£28.4m**
2021/22	£26.3m
2020/21	£18.0m
2019/20	£15.6m
2018/19	£37.0m

-101%

Statutory (loss)/profit before tax(3)

2022/23	**(£0.1m)**
2021/22	£13.2m
2020/21	£3.9m
2019/20	(£5.3m)
2018/19	£26.5m

+7%

Underlying(1) earnings per share(3)

2022/23	**33.4p**
2021/22	31.2p
2020/21	22.4p
2019/20	21.3p
2018/19	53.7p

-163%

Statutory (loss)/earnings per share

2022/23	**(8.7p)**
2021/22	13.8p
2020/21	2.9p
2019/20	(12.2p)
2018/19	37.1p

+15%

Dividend per share

2022/23	**11.96p**
2021/22	10.40p
2020/21	6.86p
2019/20	6.24p
2018/19	21.28p

-37PP

Underlying(1) cash conversion(3)

2022/23	**75.3%**
2021/22	112.1%
2020/21	87.0%
2019/20	102.1%
2018/19	75.3%

-58PP

Statutory cash conversion(3)

2022/23	**60.4%**
2021/22	118.5%
2020/21	93.8%
2019/20	112.9%
2018/19	74.4%

(1) Please see the glossary on page 283 for a definition of the above terms. These alternative performance measures (APMs) are described further, and where appropriate reconciled to GAAP measures in Note 2 to the Group financial statements.
(2) Comparative performance measures prior to FY 2019/20 have not been updated to reflect the adoption of IFRS 16.
(3) Including the results of Ricardo Software, which was classified as a discontinued operation at 30 June 2022 and 30 June 2023.

OPERATIONAL HIGHLIGHTS

BUILDING AN INCLUSIVE CULTURE

40%

of our Executive Committee are women

STRENGTHENING OUR ENGAGEMENT

3.9

overall employee engagement score (consistent with the last three years)

INCREASING SCALE IN CHOSEN MARKETS

Aither

acquisition strengthens our Australia footprint, gains global entry into water advisory and provides a foothold in the US market

CREATING VALUE THROUGH DIGITAL ADVANCEMENT

E3-Modelling

acquisition in January 2023 strengthens our digital modelling capabilities right across the markets that the Group serves

SUSTAINABILITY SPOTLIGHT

EUROPE'S CLIMATE LEADERS 2023

Ricardo was named as one of Europe's Climate Leaders in the Financial Times 2023 rankings.

This year, analysis of the top 500 companies in Europe, has considered not only the core emissions produced by the organisations (Scope 1 and 2), but also the emissions that arise through a company's value chain (Scope 3), which are much harder to decarbonise, and which demonstrate a greater level of climate leadership. Ricardo's ambitious commitment to demonstrating its own climate leadership, alongside the strategic and technical consultancy provided, meant that the company was within the top 10% of companies ranked.

READ MORE IN OUR SUSTAINABILITY SECTION, PAGE 62

UNIQUE DEPTH AND BREADTH IN ENVIRONMENTAL AND MOBILITY EXPERTISE

OUR BUSINESS AREAS

Our operating segments are grouped into two main portfolios: Environmental and Energy Transitions, and Established Mobility. These portfolios serve our clients in over 23 countries and at any one time support more than 2,500 live projects.

Environmental and Energy Transitions
Technical engineering and environmental consulting services that enable the energy transition through innovative and digital technology solutions

£244.3M
Revenue

OUR ENVIRONMENTAL AND ENERGY TRANSITION PORTFOLIO
See our operating segment for further information on:

Energy and Environment
A leader in sustainability consultancy, solving complex environmental challenges
PAGE 42

Rail and Mass Transit
Experts in solving complex rail systems through the delivery of independent assurance and consultancy services
PAGE 44

Emerging Automotive and Industrial
Trusted engineering services provider of energy-transition propulsion, driveline and controls design
PAGE 46

Established Mobility
Conventional propulsion and systems engineering services with niche manufacturing capability to deliver low-volume manufacturing of complex products and assemblies

£200.9M
Revenue

OUR ESTABLISHED MOBILITY PORTFOLIO
See our operating segment for further information on:

Performance Products
Engineering specialists in transmission design and niche-volume manufacturing
PAGE 50

Defense
Trusted expertise in delivering wide-ranging engineering programmes to drive efficiencies while optimising safety
PAGE 52

Established Automotive and Industrial
Trusted provider of conventional propulsion engineering services
PAGE 54

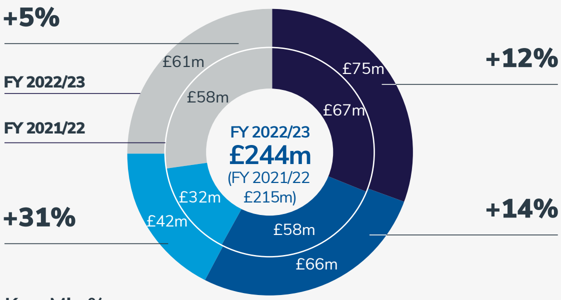
Ricardo is uniquely positioned with more than 100 years of engineering experience in improving mobility efficiency and over 60 years of leading-edge expertise in delivering environmental and energy solutions. Responding to complex global challenges, we deliver consulting services and solutions built on sustainable technological innovation.

OUR GLOBAL FOOTPRINT

We have a balanced geographic exposure, with worldwide expertise to serve our global clients.

REVENUE GROWTH ACROSS OUR KEY REGIONS

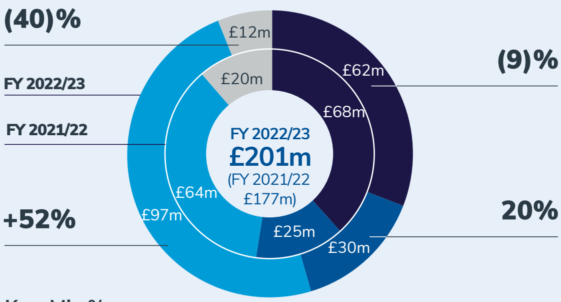
ENVIRONMENT & ENERGY-TRANSITION PORTFOLIO



Key: Mix %

- United Kingdom (31%)
- Europe & Middle East (27%)
- North America (17%)
- APAC & Rest of the World (25%)

ESTABLISHED MOBILITY



Key: Mix %

- United Kingdom (31%)
- Europe & Middle East (15%)
- North America (48%)
- APAC & Rest of the World (6%)

Figures presented on a Continuing Operations basis.
The prior results have been replaced at current period FX rates.

OUR EXPERT CAPABILITIES

Our capabilities span the entire value chain – from policy, strategy and the initial concept phase right up to the delivery of client programmes.

Strategic consulting and advisory services

Engineering services

Environmental consulting services

READ MORE IN OUR BUSINESS MODEL, PAGE 15

OUR GLOBAL TEAM

We have close to 3,000 employees worldwide who are motivated and driven every day by our strong purpose: to enable our clients to solve the most complex and dynamic challenges to achieve a safe and sustainable world.

Our values: ‘Create together’, ‘Be innovative’, ‘Aim high’ and ‘Be mindful’ are equally true to our rich heritage and DNA and reflect how we work with each other and our clients.

READ MORE ON OUR CULTURE AND VALUES, PAGE 73

CASE STUDY: REPUTATION

RANKING AND AWARDS

RICARDO PERSONNEL
Loreline Kerlidou

AWARD
Young Water Professional of the Year 2022

LOCATION
South Australia

Loreline Kerlidou, a Principal Consultant in our water team in Adelaide, Australia, was named Young Water Professional of the Year 2022 for South Australia.

Growing up in Paris, France, Loreline has lived in Adelaide for the past ten years. She has been making a significant impact on the water industry in her adopted country. Water management is one of Ricardo's key strategic growth solutions, particularly in the Australian market, with some key challenges being: prolonged droughts, water scarcity as well sustainable water management practices.

Each day, Loreline guides Ricardo's wide range of clients, from water utilities to mining companies and local governments providing advisory services for their water challenges. She supports these clients to better understand the condition and performance of their infrastructure, developing strategies to maximise the asset value and appropriately manage risks. Combining her experience in engineering consulting and operations with her ability to connect with people, she achieves optimal outcomes for any complex water challenges, with a focus on resources resilience.

Loreline's active volunteer role in the Australian Water Association (AWA), organising and promoting engaging and thought-provoking events for fellow industry professionals, has been key to developing a strong emerging community of leaders in South Australia to build the future of the water industry in the wider nation. She has been instrumental (as a key part of the committee) in fundraising events for WaterAid since 2016, to make a difference in people's lives by ensuring access to clean water, sanitation, and good hygiene.

Loreline is striving to provide opportunities for emerging leaders. She believes in fostering relationships among members of the water industry, to learn and collaborate across industries to ensure a sustainable, equitable water future in Australia. She further demonstrates a strong drive and passion for our natural environment and will be a key figure in its continued growth within South Australia into the future. She is a valuable asset for Ricardo, the committees with which she is involved, and for the wider water industry.

> "Fostering relationships among members of the water industry, to learn and collaborate across industries will ensure a sustainable, equitable water future in Australia."
>
> **LORELINE KERLIDOU**
> PRINCIPAL CONSULTANT


WATER AWARDS SA
YOUNG WATER PROFESSIONAL OF THE YEAR WINNER
xylem

EXECUTING OUR GROWTH STRATEGY TO DELIVER RICARDO'S FULL POTENTIAL

Dear Shareholders,

I am delighted to be presenting my first report as Chair of Ricardo plc. I have been in the role for just under a year now and have taken the opportunity to meet with as many colleagues as I could. I have been hugely impressed by the capability and expertise of those I have met and their enthusiasm to deliver the Company's growth strategy.

MARK CLARE
CHAIR

Group Performance

The financial performance of the Group this past year reflects good progress against our long-term objectives of doubling operating profit by FY 2026/27. Underlying operating profit from continuing operations grew by 21% versus the previous year. We have also seen strong order growth of 23% contributing to a record order book. This will support continued growth in FY 2023/24.

The actions taken to reposition the Automotive and Industrial business should stabilise its performance and position it for growth once again. We have also made real progress in acquiring new capability with the acquisition of both E3-Modelling and Aither Pty Ltd. We are already seeing some of the benefits coming through of having this capability within the Group.

Strategic ambitions firmly led by our strong purpose

The strategy that we set ourselves in May 2022 is suitably ambitious, designed to accelerate our growth and transformation to become a global leader in strategy and engineering consultancy for environmental, energy transition and mobility solutions.

The Board is pleased with the progress made over the course of the year, with Graham and the Executive team consistently executing according to our strategy.

There can be no doubt that Ricardo is in a unique position to address the fast growing opportunities that exist around environment, energy transition and mobility as well as delivering strong performances in Performance Products and Defense Inc. As a result the Board firmly believes that as the strategy is delivered, substantial shareholder value can be created.

The increasing focus on our key clients, on key technologies and the right geographies will help accelerate the rate of growth. Ricardo has an important role to play in supporting its clients by delivering innovative solutions that are creating a safe and sustainable world.

Developing an inclusive and engaged culture

Our people remain the Board's greatest focus, as the success of our business is directly linked to retaining and growing our talented teams across the Group. In this respect, we continue to focus on building a learning organisation that attracts, retains, develops, engages and inspires the very best people around the world.

Over the course of the year, the Board has continued to focus on listening to our people through face-to-face meetings in the business, reviewing engagement surveys and from the work done by Malin Persson as the lead non executive focused on culture and engagement.

I am pleased with the progress being made in increasing gender diversity at the executive level and the number of Group-wide activities and celebrations that are taking place to build an inclusive culture. Work is also ongoing to ensure we have the right reward structures across the organisation so that more of our people share in the success of the business.

Awards and recognition

I am pleased with the achievements of our talented teams and individuals who have been awarded accolades that demonstrate our commitment to delivering the best expertise for our clients. The most prominent achievements included Yansong Chen being named as a Top Woman in Electric Vehicles at the Electric Vehicle Summit 2023 and Loreline Kerlidou who was named in as the Young Water Professional of the Year for South Australia. Ricardo was also recently named as a Top Hydrogen Innovator for 2023 by Reuters, highlighted as the top 10 consultancy for green hydrogen. Furthermore, we were named in the prestigious *Financial Times* Europe Climate leaders listing for 2023 and recognised in position 32 out of 500 for the progress that we have made in environmental performance and addressing climate change.

Board succession

In November last year, I completed my handover with Sir Terry Morgan, who stepped down at the conclusion of the Annual General Meeting, having served as Chair for nine years. I thank him for his time leading the Board and the contribution that he made to the Company.

I was delighted to welcome Judith Cottrell to the Board on 1 July. On 13 September 2023, Judith will replace Ian Gibson as Chief Financial Officer. Ian is stepping down having served on the Board as Chief Financial Officer over the past ten years. The Board is deeply grateful for Ian's significant contributions and wish him the very best in his future endeavours.

Dividend

Given the financial performance of the Company, the Board is proposing a final dividend of 8.61p in line with our policy of distributing 2.5 to 3 times cover. This will take the total dividend for the year to 11.96p, an increase of 15% over the prior year.

Outlook

While there is still uncertainty affecting certain parts of our business, the overwhelming sense is that the opportunity for growth, especially in the areas of environment, energy transition and emerging mobility are significant.

Looking forward, the Board will continue to focus on ensuring the acquisitions made are integrated and that we achieve full value from them; continue to be disciplined in the way we invest in capital, technology solutions and further acquisition opportunities as they arise; work to support the executive team to deliver continued excellence in the execution of our strategy.

MARK CLARE
CHAIR
12 September 2023

DELIVERING GOOD MOMENTUM WHILE ACCELERATING OUR TRANSFORMATION

By combining our mobility engineering and environmental consulting capability, and creating end-to-end delivery throughout the value chain, I believe we truly offer unique value, which can optimise and accelerate energy transition for our clients.

GRAHAM RITCHIE
CHIEF EXECUTIVE OFFICER

A year of execution and transformation

This has been a year of notable achievements for Ricardo as we continue to demonstrate substantial progress in transforming our culture, talent, portfolio and performance. We have achieved key milestones in our strategic ambitions, while delivering results in line with our Board's expectations.

Since joining Ricardo in October 2021, I have now visited most of our sites. In each visit, I am reminded of how immensely privileged I am to lead such a talented team of people who are motivated each and every day to deliver innovative and sustainable solutions that support our clients in creating a safe and sustainable world. During these visits, I have also had the opportunity to meet some of our clients, to understand their pressing challenges and ensure that we continue to support their changing needs as they navigate complexities in the very dynamic markets in which they operate.

From a cultural perspective, we have focused on further aligning ourselves around our purpose and values to bring our teams closer together. Many of our successes have been about improving our communications and ways of working through the rollout of our shared values, rigorous performance management and, most importantly, celebrating and recognising the great work that our teams are doing.

Over the year, we have also made material shifts to our portfolio, delivering in line with our three growth priorities: portfolio prioritisation, market expansion and M&A acceleration. From a portfolio perspective we have created a focus on our Environmental and Energy Transition, and Established Mobility portfolios. We have also defined our target markets and geographies and are developing differentiated industry value propositions combining our growth solutions from across different business units.

This has led to the divestment of Ricardo Software and to acquiring and welcoming both E3-Modelling and Aither to our team, strengthening our digital, water and advisory capabilities.

By focusing on our transformational growth to deliver sustained market outperformance and world-class delivery, we are delivering real value for our clients, our people and our communities.

Delivering good financial performance

Overall, we have executed well in a constantly changing environment. Our financial performance for this year was in line with the Board's expectations and, with a record order book, the Group has good visibility of future revenue as we move into the next fiscal year.

This is the first year that we have reported in line with our two main portfolios: Environmental and Energy Transition, and Established Mobility.

Our Environmental and Energy Transition portfolio is where we see high growth and high margin over the long term. Across the portfolio, we have delivered good order intake and growth with continued strong performance in our Energy and Environment business unit. Rail's order book includes strategic wins in new territories and supports our expansion, specifically in North America. Within Emerging Automotive and Industrial we see stronger profitability compared to the prior year with a robust pipeline thanks to the strong interest in green propulsion solutions.

Our Established Mobility portfolio provides the Group with long-term visibility of revenue and profit, albeit at lower margins, from longer-term contracts. Performance Products increased its order intake reflecting significant contract extensions, including McLaren for a further seven years, and winning a significant new two-year transmission programme. Our Defense business in the US maintained good progress, delivering strong volumes in its ABS braking solution programme for the US Army and the development of new projects. We have delivered the restructuring of the Established Automotive and Industrial business unit in the second half in line with expectations, providing confidence of improved operating profit performance in FY 2023/24.

Energy transition megatrends underpin market demand for sustainable growth

The global trends on government policy, funding for climate change, energy decarbonisation and the shift to safe and sustainable mobility create an unconstrained market demand which underpins our long-term growth.

In January 2023 BloombergNEF announced that annual investment in the clean energy transition exceeded USD 1 trillion in 2022. Of this total spend, about half a trillion is in electrification of transport and a similar level in renewable energy. We therefore believe this supports our global environmental and mobility solution strategy.

We expect to benefit from an increased focus in global policy and funding on energy decarbonisation because of the ever-increasing complexities associated with the production, storage, distribution and regulation of multiple new sources of energy.

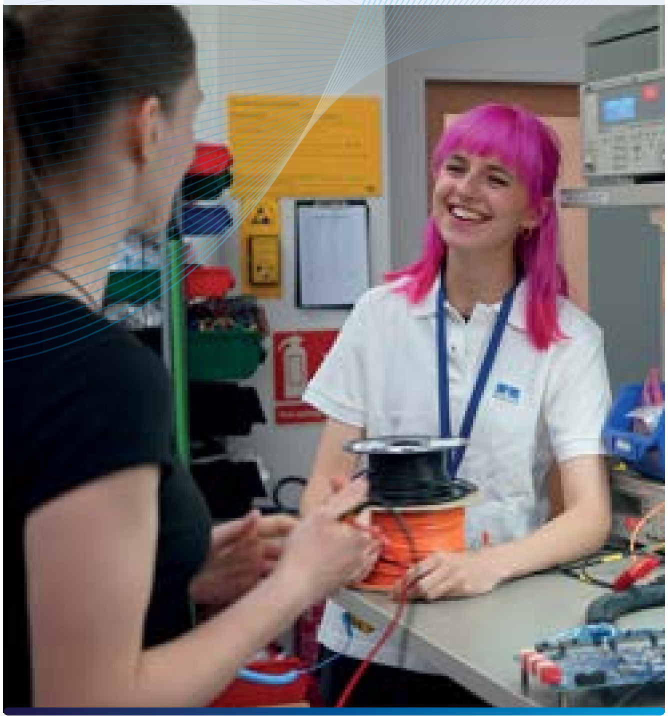
It is a similar picture in net zero propulsion, which is driving transformational change in all forms of transport. Again, the complexity that comes from the many competing propulsion technologies, the varying requirements of each industry, the supply chain and the speed of transition require technical and engineering expertise.

Our depth and breadth of capability in environmental, energy and mobility solutions combined with bringing digital capability to all our projects, ensures that we are well-positioned to create solutions to solve our clients' complex challenges.

CASE STUDY

BUILDING DIVERSE TEAMS: OUR CONVERSATIONS FOR CHANGE

To celebrate International Women in Engineering Day in June 2023, we facilitated conversations for change among our experienced and early career professionals across the entire Ricardo global community. By participating in, watching, or continuing these conversations in team meetings or on social media, our people contributed to building female technical networks and communities across the business, and demonstrated that everyone, no matter what stage of their career, can make a difference to creating high performing, collaborative, diverse teams.



Organisational and leadership changes to accelerate growth

During the year, we announced several leadership and organisational changes to support the effective execution of our strategy and allow us to accelerate our transformation.

Our leadership changes demonstrate our ongoing commitment to create a strong succession process, with the ability to attract and inspire the very best talent globally.

In December 2022, we welcomed Rachel White to the Executive Committee as President of Clean Energy and Environmental Solutions, overseeing our Rail and our Energy and Environment business units. We also announced the appointment of Judith Cottrell as Group Chief Financial Officer (CFO), who joined the Board in July 2023.

We continue to look at ways to deliver our growth ambition with an efficient indirect cost base. As part of this, we are aligning our functional teams such as Marketing, IT, HR and Finance across the Group to create additional scale and expertise through a shared operating model.

A sustainability framework to deliver our environmental, social and governance commitments

As a company, sustainability is at the heart of our purpose-led DNA. We deliver commercial solutions that support our clients in achieving their sustainable strategies and, therefore, we want to lead by example. We are passionate about creating a safe and sustainable world and delivering on our own environmental, social and governance (ESG) commitments is fundamental to each of our priorities.

Over the course of the year, we have refreshed our sustainability strategy to raise our performance across our ESG ambitions.

The strategy underpins our 2030 environmental targets, with additional clarity created this year on our Task Force on Climate-related Financial Disclosures (TCFD) reporting to ensure that we understand and address the risks and opportunities associated with climate change. We have reviewed the risks and opportunities in line with our overall Group strategy and Group risk register giving us confidence that we can take advantage of the global megatrends associated with energy transition while mitigating our own climate change risks.

We have also introduced our aligned social value plan, which is centred on the positive work we are doing across diversity, equity and inclusion (DEI) and our charitable commitments. Our DEI council and affinity groups provide support and insight to the business, and we have a full calendar of events and celebrations. I am also delighted to announce that we recently rolled out our global volunteering and funding programme, which is focused on promoting and supporting science, technology, engineering and maths (STEM) initiatives for our chosen charities across our geographic locations.

The establishment of our new Board responsible-business sub-committee ensures that we are intrinsically linking the Group strategy with our ESG strategy, and doing business the right way.

Looking forward

As we accelerate our transformation, I appreciate the level of change across the business and I am profoundly grateful to our teams across the globe for their commitment in continually delivering amazing work for our clients. Their hard work and dedication are delivering both short-term performance and creating our future growth potential.

With the continued transformation of our portfolio, the global market drivers of energy transition and climate change, and our clear focus on execution, Ricardo is confident of delivering significant value for all our stakeholders.

GRAHAM RITCHIE
CHIEF EXECUTIVE OFFICER
12 September 2023

BUILDING A SCALABLE BUSINESS THAT IS CLIENT-FOCUSED AND POSITIONED FOR SUCCESS

OUR PURPOSE

Ricardo is relied upon by our clients worldwide to deliver engineering, scientific and consulting capabilities supported by niche manufacturing. We operate in markets that offer long-term growth potential and, by leveraging our key expertise across the Group and continuing to focus on world-class delivery, we ensure high-quality outcomes for all our stakeholders.

WHAT WE DO AND HOW WE DO IT

We offer depth across the full value chain by combining our mobility engineering consulting and environmental science capabilities and creating end-to-end delivery, thus ensuring that we optimise and accelerate energy transition for our clients.

To achieve this, we are putting repeatable digital solutions at the heart of our value proposition to augment our consulting and engineering services and create deeper client relationships. We are making investments in our digital capability both organically, in platform and application development, and inorganically, as demonstrated by the acquisition of E3-Modelling earlier this year.

With this clarity on our differentiated value proposition, we target markets which have the most acute need for both environmental and mobility solutions. These include sectors such as automotive, rail and mass transit, maritime, aerospace and defence – all of which have different challenges in decarbonising.

At the same time, we are targeting specific locations where multiple forms of mobility come together – such as ports, airports, cities, heavy industry and manufacturing plants – as they will require the appropriate energy infrastructure to enable their use. This creates visibility of the energy supply, cost and resilience requirements at different locations.

For this reason, we have unique insight and expertise to align demand and vehicle performance with the cost and availability of alternative energy supply at each location.

OUR EXPERT CAPABILITIES

Our multi-industry knowledge and deep technical expertise uniquely positions us to handle our clients' toughest strategic and operational challenges. We provide engineering consulting services with specialisms in niche manufacturing and industrial engineering.

Our global advisory and consulting services range from operational improvement, cost reduction and new product introduction to technology strategy and scenario planning.

Through deep and broad expertise, Ricardo develops integrated solutions to complex environmental and sustainability issues.

WHY OUR CLIENTS CHOOSE US

OUR DEEP HERITAGE

Ricardo is uniquely positioned, with more than 100 years of engineering experience in improving mobility efficiency and over 60 years of leading-edge expertise in delivering environmental and energy solutions.

OUR DIVERSIFIED PORTFOLIO

We operate in market segments with increasing synergies. Through our diversified expertise, we support our clients through the implementation of technical solutions that will create a cleaner and safer tomorrow.

OUR EXCEPTIONAL EXPERTISE

Our teams across the globe are at the heart of who we are and what we do. We are a close-knit, purpose-driven global community, delivering world-class engineering, scientific, techno-economic and consulting capability.

OUR SUCCESSFUL INNOVATION

We truly embrace an innovation mindset in solving complex problems for our clients. We do this by always exploring alternative possibilities – based on facts, evidence and our experience – that really push the boundaries in order to reimagine the future.

SUSTAINABILITY AT OUR CORE

Sustainability is embedded in everything we do. We advise clients on environmental, social and governance (ESG) services to support them in delivering sustainable strategies. For this reason, we ensure that we clearly demonstrate our own environmental ambitions, our climate change resilience and the social value we are delivering.

MOTIVATED BY OUR STRONG PURPOSE AND INSPIRED BY MAKING A REAL DIFFERENCE

We are a people business. Our teams across the globe are inspired by making a real difference and motivated by a strong sense of purpose.

Our culture inspires and empowers our people, and we are bound together by our passion for developing innovative, cross-sector, sustainable and trusted solutions to help us solve our clients' most complex, strategic and operational challenges.

Ricardo's shared values actively guide our behaviours. They act as a 'manifesto' for everyone in the business. From the top down, we demonstrate through our actions and words that we understand and live by them – they are what binds us together and makes Ricardo not only a great place to work but also a company with which our clients want to do business.

OUR VALUES

CREATE TOGETHER

We achieve success for our business and for our clients by collaborating, connecting and always learning. By encouraging different perspectives we deliver the right solutions. In everything that we do, we are driven by purpose, our delivery-led approach and our ability to build lasting partnerships.

BE INNOVATIVE

We seek to foster debate, embrace possibilities and nurture the new ideas that will enable our clients to solve complex challenges. By being instinctively curious and responsive to the megatrends shaping our world, we have a meaningful role to play in reimagining the future.

AIM HIGH

We are rigorous and tenacious in our passion to find outcomes that best meet the long-term needs of our clients. By operating to the highest professional standards and having confidence in our collective ability, we strive for excellence in all that we do.

BE MINDFUL

We pride ourselves on our integrity and commitment to care – for each other, our clients, our communities, and the environment. By being mindful and respectful, we strive to embed equity, diversity, and inclusion within our culture.

ENERGY TRANSITION
MEGATRENDS UNDERPIN LONG-TERM GROWTH

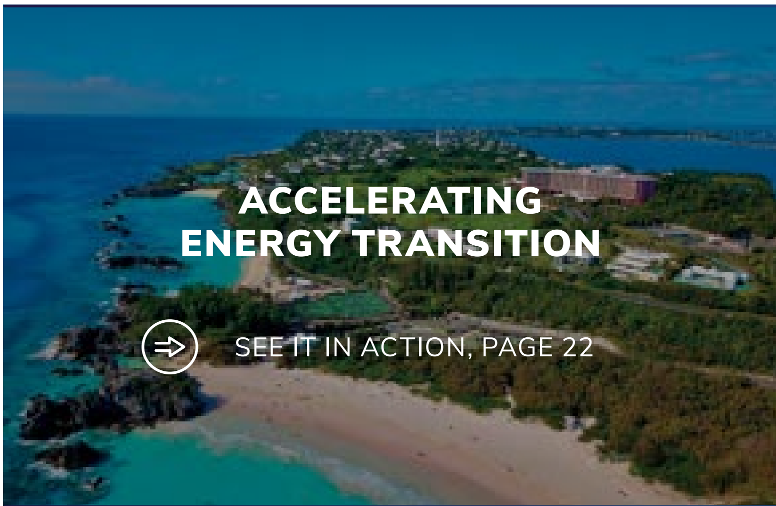
Global megatrends drive our long-term growth across energy decarbonisation, climate change and zero emission propulsion.

In January 2023, BloombergNEF announced that annual investment in the low carbon energy transition exceeded USD 1 trillion in 2022 – the first time that investment in this area has matched investment in fossil fuels. Of this investment, ninety percent focused on just two sectors: renewable energy and electric vehicles.

Alongside the energy transition, global investment in addressing environmental challenges is also continuing to increase year on year as governments, industry and society in general become more aware of the crucial and complex issues the world faces. The global environmental consulting market is expected to exceed USD 50 billion by 2028 growing at a compound annual growth rate (CAGR) of 6%.

As a Group, we are actively contributing to addressing energy transition, exploiting our expertise in environmental services and mobility to develop solutions that are constantly pushing boundaries. We are in a unique position of working across the value chain on key issues that are core to energy transition and global environmental challenges. By bringing our expertise together we differentiate ourselves from our competitors as we harness our expertise to adapt to and mitigate the impact of climate change.

MEGATREND



OUTLOOK	OPPORTUNITIES	HOW WE ARE RESPONDING
New policies are being developed to create an enabling environment for change, with all organisations requiring revised strategies to prepare themselves for increased regulation to support the transition to a low carbon future. Across all sectors, innovative engineering solutions will be needed to ensure that change takes place quickly on the ground.	Navigating global regulation and environmental considerations is becoming increasingly complex with increased reporting requirements and business change.	Our team of internationally recognised policy, economics and environmental experts has extensive experience in supporting the development of new and updated policies and transformational strategies. From policy and needs analysis, through in-depth modelling and evaluating policy impact to forecasting and cost-benefit analysis, we offer a range of consulting services to address global energy, mobility and environmental challenges.
Ensuring that the world meets the Paris climate change targets by 2050 will require rapid scaling of investment in energy transition over the next ten years.	Renewable energy and electrification are the backbone of the transition and must be accelerated immediately. The transition from using fossil fuels for generating electricity to the provision of low carbon heating and the decarbonisation of transport affect all areas of the energy market.	Leveraging policy insights and energy engineering to transition to a low carbon economy, we facilitate the implementation of a range of solutions around clean energy and heating, the reduction of consumption and the effective use of energy and resources.
Zero tailpipe emission propulsion is driving transformational change, with governments around the world committing to transitioning the transport industry through setting more stringent targets for CO_2 and NOx and future bans on the sale of vehicles powered by fossil fuels. In addition, we have seen government funding incentivising the transition – such as the US Inflation Reduction Act and EU Green Deal.	Across the transportation sector, there are many competing propulsion technologies, with different timelines and likely applications by industry and geography. The speed of transition varies by geography and transport mode as the industry looks to increase electrification, sustainable fuels – such as ‘green’ hydrogen – and to phasing out internal combustion engines.	We support the decarbonisation of all modes of transportation through the integration of propulsion, driveline and controls design, optimisation, and prototype development.

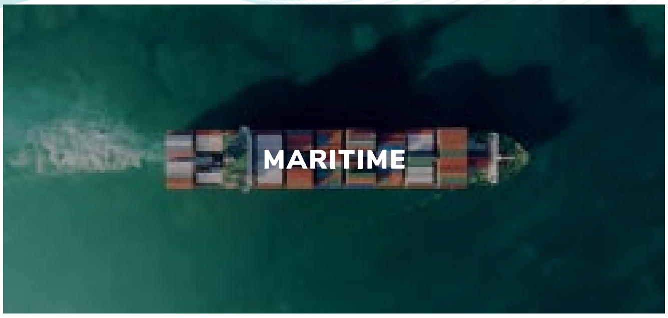
OUR KEY GLOBAL MARKETS

We focus on markets that offer long-term growth potential and work closely with our clients across eight key markets, harnessing our expertise to support them meet their business challenges and help mitigate and adapt to the impact of climate change. Our services are applicable across clear target mobility industries: automotive, rail and mass transit, aerospace, and defence – all of which create visibility of demand. At the same time, our other key industries – energy and utilities, government and public sector, financial services, and industrial and manufacturing – create enablers for supply and production.

> Ricardo has supported the development of an industry-leading footprint concept for BMW to demonstrate sustainability standards

> Ricardo developed evidence base to inform negotiations on reducing maritime greenhouse gas emissions

> Ricardo designed a future-proof and competitive market structure for public electric vehicle charging in Malta

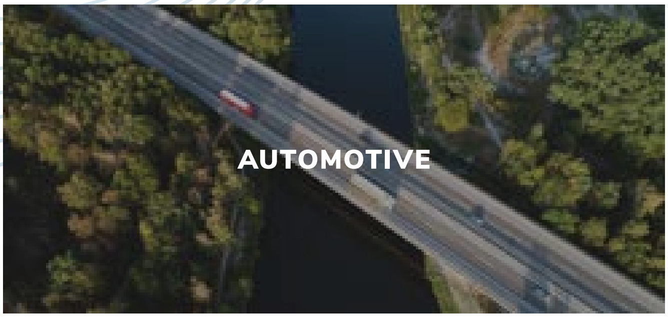


From policy through techno-economic analysis to deployment, our solutions help clients in the maritime industry to safely reduce both cost and risk through the introduction of new technology.

We provide assurance, certification, and specialist engineering services to help clients navigate the industry's operational, commercial and regulatory demands.

From policy analysis and the development of national commitments to evidence collection, modelling, design and the implementation of environmental measures to create a sustainable world.

Ricardo provides a wealth of policy, expertise and technical knowledge for the aerospace and defence industries. We are supporting the decarbonisation of global transport and energy sectors to deliver future-forward solutions for these markets.



From strategic planning, policy and concept to manufacture, we work with original equipment manufacturers and suppliers across the automotive industry to bring sustainable products to market more quickly, while enhancing vehicle performance.

For over 100 years, Ricardo has supported manufacturers across a wide variety of sectors in optimising operations, reducing waste, delivering innovation and managing their supply chains.

We help organisations with policy, investment and operational decisions and with practical implementation, adding value by enabling them to maximise impact and minimise risk.

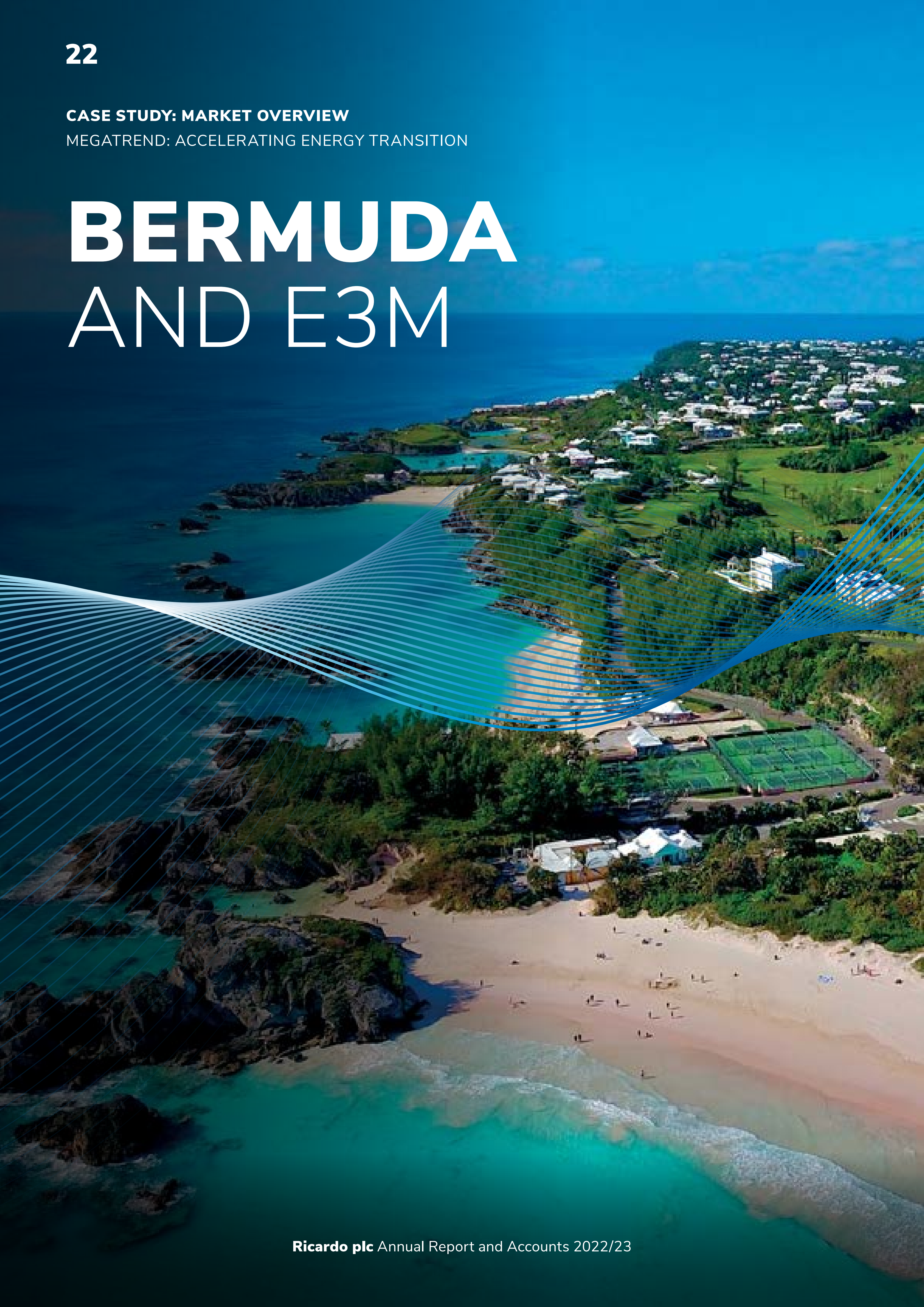
Providing robust insights and data to support sustainable investments to accelerate climate finance in order to help tackle global environmental challenges.

OUR OPERATING SEGMENT REVIEW, PAGES 40–55

CASE STUDY: MARKET OVERVIEW

MEGATREND: ACCELERATING ENERGY TRANSITION

BERMUDA AND E3M



CLIENT
Regulatory Authority of Bermuda

START AND END DATES
June 2023–March 2024

LOCATION
Bermuda

Ricardo's energy experts supported the Regulatory Authority of Bermuda, in 2019, with the development of its national Integrated Resource Plan, which enabled the Regulatory Authority to select the energy mix that would best meet Bermuda's ambitious consumer and climate-focused needs over the next 20 years.

The Integrated Resource Plan enabled Bermuda to use Ricardo's expertise and experience to demonstrate leadership among island nations through its ambition to reduce carbon emissions without compromising on the reliability and affordability of electricity for its citizens.

Since developing the Integrated Resource Plan for the Regulatory Authority of Bermuda, Ricardo has continued to deliver further strategic expertise to enable implementation of the plan and the realisation of Bermuda's renewable and secure energy generation. This year, Ricardo's support included strategic consultancy throughout the procurement life cycle for renewable energy technology on the island. Leveraging our technical expertise, we are empowering the government with the necessary understanding to make informed decisions regarding the selection of appropriate technologies, optimal locations, and effective implementation of renewable energy solutions.

In addition, Ricardo's experts are also currently supporting with an energy tariff review in collaboration with the Regulatory Authority of Bermuda. The focus of this project is to assist the regulator in thoroughly reviewing existing electricity rates, exploring, and modelling various pricing approaches and strategies. By conducting a comprehensive analysis of these different options, we aim to provide valuable insights and recommendations to support the regulatory authority in making informed decisions regarding energy tariffs. This work utilises the expertise and modelling tools of our recently acquired digital modelling team E3-Modelling (E3M).

As a trusted advisor, our experts continue to support the Regulatory Authority, to enable successful realisation of the country's clean energy plan, driving progress towards a greener and more sustainable future for Bermuda.

> "Ricardo's expertise and experience has enabled Bermuda to demonstrate leadership among island nations through its ambition to reduce carbon emissions while maintaining reliable and affordable electricity."

CASE STUDY: MARKET OVERVIEW

MEGATREND: ACCELERATING CLIMATE CHANGE ADAPTATION THROUGH POLICY

ACCELERATING EUROPE'S TRANSFORMATION TO A CLIMATE-RESILIENT FUTURE

CLIENT
MIP4Adapt

START AND END DATES
January 2023–2025

LOCATION
Europe

Building on its international expertise in climate adaptation, Ricardo is delivering adaptation planning and resilience support to Europe's regions and local authorities. Ricardo is leading the EU Mission Implementation Platform for Adaptation to Climate Change (MIP4Adapt), providing support to the European Commission and everyone delivering the EU Mission on Adaptation to Climate Change.

The Mission is focused on supporting European regions and local authorities to accelerate their adaptation to climate change and building climate resilience. This is of vital importance given the fact that the impacts of climate change are already happening, and more regularly. This is evidenced by extreme weather events already increasing in magnitude and frequency, which are having direct and indirect impacts on our environment, society and economy. In turn, these impacts may increasingly lead to transnational spill-over effects on international trade, resource competition, regional conflict, migration, and the spread of pests and diseases.

Ricardo's experts across Europe are working closely with the European Commission in delivering MIP4Adapt – which is the result of a public procurement process – with the work commitment starting in 2023 and running until 2025. MIP4Adapt's core team also includes experts from: Fresh Thoughts Consulting, Icatalist, the European Federation of Agencies and Regions for Energy and Environment – FEDARENE, and Joanneum Research, as well as experts from across Europe able to deliver technical assistance to the regional and local authorities in all 27 EU Member States.

In leading MIP4Adapt, Ricardo is facilitating the development of a community of practice to promote the exchange of knowledge and experiences and enable regional and local authorities across Europe to strengthen coordination and collaboration around climate adaptation.

The community includes the 308 regional and local authorities that are signatories to the Mission Charter, covers approximately 40% of Europe's land area and population, and is committed to striving towards climate resilience by 2030. In addition, it comprises relevant EU-funded research and innovation projects, the European Commission and other relevant European institutions, national authorities, and Friends of the Mission, including research institutions and businesses.

Through MIP4Adapt, Ricardo is also delivering technical assistance to the regional and local authorities that are Charter signatories. This includes helping them to: develop their climate adaptation plans; identify appropriate climate adaptation demonstration projects; identify and access suitable finance and funding for implementation of their plans and demonstration projects; and stimulate engagement and mobilisation of citizens and stakeholders in climate adaptation.

> "Ricardo's delivery of MIP4Adapt builds upon our support for the European Commission over the last decade regarding development and implementation of the EU Adaptation Strategy. It also draws on Ricardo's wide-ranging experience of supporting all aspects of climate adaptation planning at all scales in over 40 countries beyond Europe, and on the expertise of our wider team. Through our leadership of MIP4Adapt, our desire is to help to amplify the Mission's overall impact across mainland Europe, so it is greater than the sum of individual actions."

RICHARD SMITHERS
DIRECTOR OF MIP4ADAPT AND RICARDO'S INTERNATIONAL LEAD ON CLIMATE ADAPTATION

CASE STUDY: MARKET OVERVIEW

MEGATREND: ACCELERATING NET ZERO PROPULSION IN TRANSPORTATION

HELPING TO GET NET ZERO RAIL COMMUTER SERVICES ON TRACK IN SOUTH AUSTRALIA

CLIENT
Department for Infrastructure and Transport (DIT), Government of South Australia

START AND END DATES
June 2023–Q3 2023

LOCATION
Australia

Ricardo has been chosen by the Government of South Australia's Department for Infrastructure and Transport (DIT) to determine the most appropriate traction power technologies for routes on the Adelaide Metro rail network, the public transport rail system serving the city and its surrounding region.

Experts from Ricardo's renewable energy, sustainability and financial modelling practices are working alongside in-house rolling stock, signalling and electrification specialists to assess available and potential options for the DIT, ranging from infrastructure upgrades to new fleet procurement and the adoption of alternative signalling technologies.

The feasibility and technology study, to be submitted in Q3 2023, will underpin future investment decisions as the Department strives to ensure rail operations support the Government of South Australia's objective of net zero emissions by 2050.

Within the scope of the study are commuter routes including the Belair, Outer Harbor and Grange rail lines, each of which currently uses diesel-powered rolling stock that are expected to reach end of service life in the next decade.

Throughout the report, Ricardo's experts are undertaking assessments against key criteria such as whole-of-life costs, feasibility, technological maturity and, through operational modelling simulation tools, the impact on existing service levels.

The project adds to Ricardo's growing portfolio of work developing decarbonisation and energy-transition strategies in the transportation sector. Previous assignments have included undertaking similar assessments of low carbon traction options for routes in countries such as New Zealand, the Netherlands and the UK. In January 2023, Ricardo was appointed by the Latvian Ministry of Transport to develop the technical specifications for a zero emission rail fleet for Riga's metropolitan region.

> "The award of these contracts represents a great opportunity to assess the best options available globally and build a case for how these technologies can be best applied in South Australia, particularly as we transition away from diesel-powered services and explore other feasible possibilities."

TOM KOUTSANTONIS
MINISTER FOR INFRASTRUCTURE, TRANSPORT, ENERGY & MINING OF THE GOVERNMENT OF SOUTH AUSTRALIA

OUR STRATEGY IS TO FOCUS ON ENERGY TRANSITION AND ENVIRONMENTAL SOLUTIONS IN MARKETS WHERE WE SEE THE STRONGEST GROWTH

Since announcing our sharpened strategy in May 2022, we have focused on delivering sustainable growth in key markets where our core strategic and technical consulting, augmented by our digital capabilities, can have maximum impact.

Always keeping in mind the powerful megatrends that are driving change in the sectors we operate in, we are committed in accelerating our transformation to become a leader in strategy and engineering consultancy services for environmental and energy transition solutions. We achieve this by executing at pace to create enhanced value for the Group.

How we work together
We execute together through a clear operational model that has been optimised to provide a higher level of consistency, efficiency and collaboration across the Group.

Through our growth priorities and growth enablers, we are improving processes and functional alignment to ensure that our clients' expectations are consistently met.

STRATEGIC GROWTH LEVERS

We actively manage our two portfolios and enhance their performance through our three growth levers. These are focused on delivering our organic plan while utilising disciplined mergers and acquisitions to accelerate growth.

Portfolio prioritisation
The portfolio shift to Environmental & Energy Transition solutions targets high growth and high margin. With the refined definition of our value proposition – particularly with its emphasis on digital development – we can underpin our strategic financial commitments to achieving operating margins in the mid-teens with a target to more than double underlying operating profit over the five years to FY 2026/27.

STRATEGIC GROWTH ENABLERS

We are improving client experience and developing our talent and capabilities to ensure that we consistently create value for our clients and shape our market success.

Client experience
Ricardo is defined by its deep knowledge and technical expertise across it key markets. We are focused in delivering the very best client experience in each of our projects and ensuring consistently that our brand is relevant to our entire client base. Through the advances in our digital applications we will be able to improve both our business operations and strengthen our client offerings.

Market expansion
Our balanced portfolio across the markets and key industries provides us with a good foundation for further expansion. We are developing proactive industry and geographic sales plans focused on strong execution within each of our geographies and industries to maximise underlying market expansion.

M&A acceleration
Ricardo's approach to M&A is to focus investment on highly attractive environmentally and technologically-led areas that help accelerate our portfolio transition to a high-growth, high-margin, capital-light business that is a leader in environmental and energy-transition solutions. Over the past 16 months, we have divested Ricardo Software while acquiring three bolt-on companies (Inside Infrastructure, E3-Modelling and Aither).

Winning teams
Our people plan is developed around trust, accountability, inclusion and mobility. We aim to build a learning organisation, which attracts, retains, develops and inspires the very best people around the world. Sustainability pervades within our people plan and we ensure that we clearly demonstrate our environmental ambitions, our climate change resilience and the social value we are delivering.

Optimised operations
We continue to deliver operational rigour through the improvement of our processes across the whole value chain to ensure that our clients' expectations are consistently met. We want to make it easier to do business with us whilst accelerating strong profit margin and cash conversion, so that we can invest in growth to support our strategy.

STRATEGIC OBJECTIVES THAT SUPPORT EXECUTION

Our strategic objectives are driven by our purpose and how we maximise impact. We are focused on delivering sustainable growth by working together, executing at pace and empowering our teams to be thought leaders in everything that they do.

1. ENABLING MEANINGFUL AND FULFILLING WORK
2. BEING A TRUSTED PARTNER TO OUR CLIENTS
3. ACHIEVING HIGH GROWTH IN OUR CHOSEN MARKETS
4. DELIVERING OPERATIONAL EXCELLENCE AND EFFICIENCY
5. OPTIMISING CASH TO INVEST FOR GROWTH

FOR MORE ABOUT HOW WE HAVE MADE PROGRESS IN THE YEAR, SEE PAGE 30

MEASURING OUR PERFORMANCE

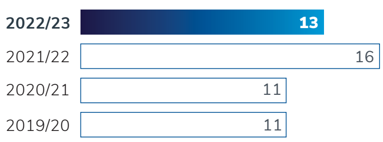
We monitor our performance through operational and financial key performance indicators (KPIs). They are regularly monitored by the Board to ensure that Ricardo's performance indicators are aligned with our strategic priorities.

Going forward, the Board has approved the revision of our KPIs which have been refined to ensure that we are delivering according to our strategic ambitions presented at our Capital Markets Day in May 2022 and sharpened accordingly in May 2023's Capital Markets update.

FY 2022/23 performance | **Comments** | **FY 2023/24 going forward**

1 ENABLING MEANINGFUL AND FULFILLING WORK

Employee knowledge and retention
Voluntary employee turnover % per annum



Attrition levels have decreased across the business from the peak experienced last spring. Voluntary turnover has also decreased with a focus on building a learning organisation.

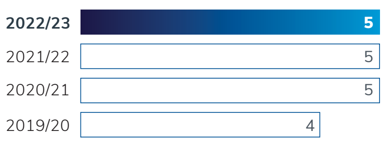
Further details of our approach to our people are given on pages 73 to 78.

Voluntary employee turnover continues to be the most appropriate indicator of performance

CO_2 per head/per unit
Reflecting the environmental impact carried out by our people

2 BEING A TRUSTED PARTNER TO OUR CLIENTS

Diversified end markets
Number of segments exceeding 10% of revenue

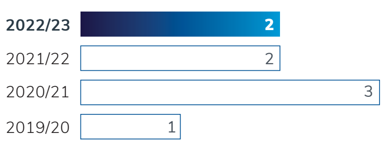


Five of our six operating segments exceeded 10% of external revenue, demonstrating that the Group is well diversified across all segments.

Performance by segment is discussed on pages 40 to 55.

Value added turnover per head
Reflects the Group's ability to drive revenue relative to its size

Client dependency
Number of clients exceeding 5% of revenue



Two clients accounted for more than 5% of the Group's revenue in FY 2022/23. Revenue for the largest client was 12% and the second largest client was 11%.

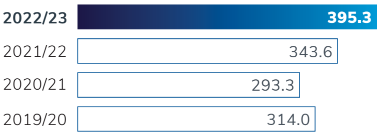
While we retain a small number of key relationships, we continue to have a diverse client base across segments and geographies.

Client engagement
Provides rich information about our engagement with our clients

FY 2022/23 performance | **Comments** | **FY 2023/24 going forward**

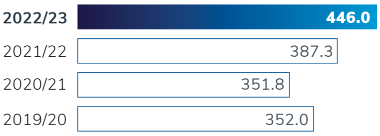
3 ACHIEVING HIGH GROWTH IN OUR CHOSEN MARKETS

Order book
Providing mid-term visibility
£m



We closed the year with a total order book of £395.3m, 15% above the prior year. The Group's order intake including the discontinued operation, increased by 21% to £522.0m in the year. Order intake increased across all continuing operating segments, except our Emerging Automotive and Industrial operating segment. Further details of the performance of each of the segments are provided on pages 40 to 55.

Revenue
Including discontinued operation
£m



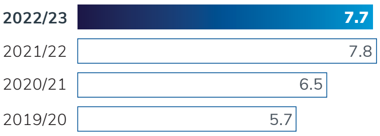
Total revenue, including the discontinued operation, increased by 15% year-on-year. Revenue from continuing operations was £445.2m, a 17% increase on the prior year. Emerging Automotive and Industrial, EE, Defense and PP delivered increased revenues compared to the prior year. Rail, and Established Automotive and Industrial revenue reduced.

Further details are provided in the Chief Financial Officer's review on pages 32 to 39 and in the Operating Segments Review on pages 40 to 55.

Order intake
Representing performance over time rather than a point in time position. Order book continues to be monitored as part of the financial results reported

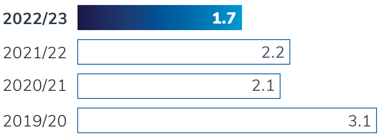
4 DELIVERING OPERATIONAL EXCELLENCE AND EFFICIENCY

Underlying operating profit margin
Including discontinued operation
%



The Group's underlying operating profit margin was 7.7% in FY 2022/23. The decrease compared to FY 2021/22 reflects decreased margins in our Rail, PP and Established Automotive and Industrial operating segments, offset by improved profitability in the EE, Emerging Automotive and Industrial, and Defense operating segments. Further details are described in the Chief Financial Officer's report on pages 32 to 39.

Environment
tCO_2e per employee for Scope 1 and Scope 2 emissions (location basis)



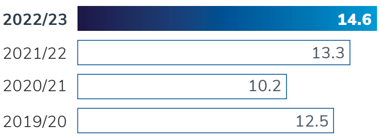
Scope 1 emissions vary year-on-year because of the mix in project work and production demand. Our Scope 2 emissions are reducing due to the change in demand for some activities and successful energy saving activity at the Shoreham Technical Centre, in the UK, which is the largest energy user in the business.

Further details of our carbon footprint and progress towards net zero are described in our ESG section on pages 62 to 101.

Underlying operating profit margin
Remains in place as it continues to be the most appropriate indicator of performance

5 INVESTING FOR GROWTH

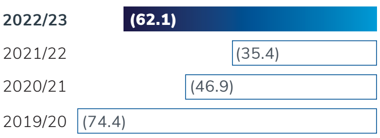
Research and development spend
£m



R&D spend was higher in the current year as the Group undertook a number of grant funded R&D programmes focused on the development of new tools and technologies.

Return on capital employed
Represents how effectively the Group is utilising its capital

Net debt
£m



The Group increased its net debt by £26.7m. £26.1m of cash was used in the acquisition of subsidiaries (net of fees) and £11.9m received from the disposal of the Software business (net of fees and cash acquired). Underlying EBITDA of £48.6m was offset by cash outflows relating to working capital (£12.8m), capital expenditure (£10.6m), interest payments (£7.5m) and other tax, pension and dividend outflows.

Leverage
Represents a more useful measure of how net debt relates to the performance of a business

SIGNIFICANT INCREASE IN ORDER INTAKE SUPPORTS FUTURE GROWTH

A good performance in the year with order intake up 23% to £522m and good growth in revenue and underlying operating profit supported by a strong performance in our Environmental and Energy Transition portfolio.

IAN GIBSON
CHIEF FINANCIAL OFFICER

Group results

Overall, Ricardo has performed in line with the board's expectations in FY 2022/23. Revenue from continuing operations, excluding Ricardo Software, which was sold in August 2022, was £445.2m, an increase of 17% on the prior period (14% on a constant-currency basis). Underlying operating profit from continuing operations was £34.0m and underlying profit before tax from continuing operations was £27.9m, representing growth of 21% and 15% on the prior period respectively (16% and 10% on a constant-currency basis). The underlying results are reflective of strong order intake in the year. The Group won £521.5m of new orders from continuing operations, up 23% on the prior period (19% on a constant-currency basis).

Reported operating loss from continuing operations, after taking specific adjusting items into consideration, was £1.9m (FY 2021/22: profit £16.2m) and reported loss before tax from continuing operations was £8.0m (FY 2021/22: profit £12.4m). FY 2022/23 reported operating profit and profit before tax included £23.4m of largely non-cash charges for the impairment of goodwill and other assets, including decommissioning costs, in the Automotive and Industrial Established Mobility (A&I Established) operating segment, stemming from a downturn in performance in this segment. Restructuring charges totalling £25.1m were booked in A&I Established, Rail and Group. In addition, £4.6m of amortisation on acquired intangibles and £6.2m of acquisition related expenditure were booked in the period. This was partially offset by a £7.4m gain on the disposal of Ricardo Software.

Net debt at 30 June 2023 was £62.1m, an increase of £26.7m on the 30 June 2022 position of £35.4m. The Group received £13.1m of proceeds (net of cash disposed) for the sale of Ricardo Software and paid £0.8m of fees in relation to the completion of the transaction in the period. Underlying working capital increased by £12.8m with underlying cash conversion of 75.3%. Reported cash conversion was 60.4%, after taking into account the cash impact of specific adjusting items.

Headline trading performance

	Underlying(1)			Reported	
	External revenue £m	Operating profit £m	Profit before tax £m	Operating profit/(loss) £m	(Loss)/profit before tax £m
2023					
Total	**446.0**	**34.5**	**28.4**	**6.0**	**(0.1)**
Less: discontinued operation	**(0.8)**	**(0.5)**	**(0.5)**	**(7.9)**	**(7.9)**
Continuing operations(2)	**445.2**	**34.0**	**27.9**	**(1.9)**	**(8.0)**
Less: performance of acquisitions	**(4.8)**	**(1.1)**	**(1.1)**	**4.4**	**4.4**
Continuing operations – organic(3)	**440.4**	**32.9**	**26.8**	**2.5**	**(3.6)**
2022					
Total	387.3	30.1	26.3	17.0	13.2
Less: discontinued operation	(7.1)	(2.1)	(2.1)	(0.8)	(0.8)
Continuing operations	380.2	28.0	24.2	16.2	12.4
Continuing operations at current year exchange rates	392.2	29.2	25.4	17.0	13.2
Growth (%) – Total	15	15	8	(65)	(101)
Growth (%) – Continuing operations	17	21	15	(112)	(165)
Growth (%) – Continuing organic	16	18	11	(85)	(129)
Constant-currency(4) growth (%) – Continuing operations	14	16	10	(111)	(161)

(1) Underlying measures exclude the impact on statutory measures of specific adjusting items as set out in Note 2 and Note 7 to the Group financial statements. Underlying measures are considered to provide a useful indication of underlying performance and trends over time.
(2) Growth from continuing operations excludes the results of Ricardo Software, which was sold on 1 August 2022.
(3) Organic growth excludes the performance of current year acquisitions (see **Note 14** to the Group financial statements) from the results of 2023.
(4) The Group generates revenues and profits in various territories and currencies because of its international footprint. Those results are translated on consolidation at the foreign exchange rates prevailing at the time. Constant currency growth/decline is calculated by translating the result for the current year using foreign currency exchange rates applicable to the prior year. This provides an indication of the growth/decline of the business, excluding the impact of foreign exchange (see Note 2 to the Group financial statements).

During the year Ricardo divested its Software business unit, Ricardo Software, which contributed £0.8m of revenue and £0.5m of underlying operating profit and profit before tax in the current period.

FY 2022/23 also includes the results of E3-Modelling S.A. (E3M) and Aither Pty Ltd (Aither) which were acquired in January 2023 and March 2023 respectively. In the current year E3M contributed £2.0m of revenue and £0.7m of operating profit. During FY 2022/23 Aither contributed £2.7m of revenue and £0.4m of operating profit.

Operating segments summary: Order intake and revenue

	2023		2022 Restated*		2022 at constant currency	
	Order intake £m	Revenue £m	Order intake £m	Revenue £m	Order intake £m	Revenue £m
EE	**111.5**	**88.5**	74.1	67.2	74.4	67.4
Rail	**89.2**	**73.5**	85.0	74.3	87.9	76.7
A&I – Emerging	**84.3**	**82.3**	101.3	69.1	104.6	71.1
Environmental and Energy Transition	**285.0**	**244.3**	260.4	210.6	266.9	215.2
Defense	**85.0**	**88.6**	55.1	45.0	60.9	49.8
PP	**115.3**	**84.7**	75.1	73.7	75.1	73.7
A&I – Established	**36.2**	**27.6**	34.7	50.9	37.0	53.5
Established Mobility	**236.5**	**200.9**	164.9	169.6	173.0	177.0
Total – continuing operations	**521.5**	**445.2**	425.3	380.2	439.9	392.2
Discontinued operation	**0.5**	**0.8**	6.9	7.1	7.6	7.7
Total	**522.0**	**446.0**	432.2	387.3	447.5	399.9

* The A&I Established and A&I Emerging operating segments were previously reported as the A&I operating segment. Comparative numbers have been restated. See also Note 5.

Operating segments summary: Operating profit

	2023		2022 Restated*		2022 at constant currency	
	Underlying operating profit/ (loss) £m	Underlying operating profit/ (loss) margin %	Underlying operating profit/ (loss) £m	Underlying operating profit/ (loss) margin %	Underlying operating profit/ (loss) £m	Underlying operating profit/ (loss) margin %
EE	**16.0**	**18.1**	11.0	16.4	11.0	16.3
Rail	**8.0**	**10.9**	9.4	12.7	9.7	12.6
A&I – Emerging	**10.6**	**12.9**	2.7	3.9	2.8	3.9
Environmental & Energy Transition	**34.6**	**14.2**	23.1	11.0	23.5	10.9
Defense	**13.4**	**15.1**	6.6	14.7	7.2	14.5
PP	**9.0**	**10.6**	8.8	11.9	8.8	11.9
A&I – Established	**(5.8)**	**(21.0)**	4.9	9.6	5.1	9.5
Established Mobility	**16.6**	**8.3**	20.3	12.0	21.1	11.9
Operating segments – continuing operations	**51.2**	**11.5**	43.4	11.4	44.6	11.4
Plc costs	**(17.2)**		(15.4)		(15.4)	
Total – continuing operations	**34.0**	**7.6**	28.0	7.4	29.2	7.4
Discontinued operation	**0.5**	**62.5**	2.1	29.6	2.1	27.3
Total	**34.5**	**7.7**	30.1	7.8	31.3	7.8

* Prior period results have been restated to reflect the fact that a share of central plc costs are no longer included in the operating profit measure for operating segments. This has increased the operating segment underlying operating profit shown above by £9.8m for FY 2021/22. There is no impact on the Group's operating profit.

Environmental and Energy Transition portfolio

- Order intake: up 9% (constant currency: up 7%)
- Revenue: up 16% (constant currency: up 14%)
- Underlying operating profit: up 50% (constant currency: up 47%)
- Underlying operating profit margin: 14.2% (FY 2021/22: 10.9% at constant currency)

Energy and Environment (EE) performed strongly, with order intake, revenue and underlying operating profit all increasing compared to the prior period. Growth has been driven by energy and carbon regulation, climate action planning and transparency, clean water and air quality services.

There was good growth in the Automotive and Industrial Emerging Mobility (A&I Emerging) business. Whilst order intake was 17% down on the prior period, revenue and underlying operating profit both increased, driven by demand for hydrogen and electrification applications.

Rail revenue and underlying operating profit both declined period-on-period, as expected, due to the timing of large projects ending and new project wins and extensions commencing. Order intake was 5% up on the prior year. £1.5m of restructuring costs were recognised in Rail and EE in the period relation to the ongoing restructuring of its operating structure, aimed at creating a more streamlined and client-focused business. These costs were recognised as specific adjusting items.

Established Mobility portfolio

- Order intake: up 43% (constant currency: up 37%)
- Revenue: up 18% (constant currency: up 14%)
- Underlying operating profit: down 18% (constant currency: down 21%)
- Underlying operating profit margin: 8.3% (FY 2021/22: 11.9% at constant currency)

Defense performed very strongly in the period, with significant growth in order intake (up 54%), revenue (up 97%) and underlying operating profit (up 103%). Revenues of £56.5m (USD72.4m) for anti-lock braking systems/electronic stability control (ABS/ESC) programme were delivered in the year. Defense delivered 8,707 kits in FY 2022/23 (FY 2021/22: 3,602 kits). In addition, there was good growth in the Technical Solutions consultancy business, including Field Support Services (the sustainment of ABS/ESC kits in the field).

Performance Products (PP), excluding the results of Ricardo Software, won £115.3m of orders in FY 2022/23, (up 54% on the prior period). This reflects a number of new long-term contract wins in the period. Revenue increased by 15% on the prior period and underlying operating profit increased by 2% driven by a combination of supply chain challenges, which led to some inefficiency, and higher energy and operating costs.

Whilst orders increased by 4%, revenue significantly declined in the A&I Established business, driven by increased economic uncertainty and the continuing shift in the technological landscape in the automotive sector. The business made an underlying operating loss of £5.8m in the period, compared to a £4.9m profit in FY 2021/22. Given the performance of the business and the accelerating technological changes facing the segment, a non-cash impairment charge of £18.7m was recognised in the period in respect of goodwill, intangible assets, and property, plant and equipment (see discussion of Specific Adjusting Items below). In addition, £4.7m of costs relating to restructuring were recognised during the period. A restructuring programme, including headcount reductions was completed during the year. These actions are focused on returning the business to profitability. On a reported basis, after including the impairment charge and restructuring costs, the operating loss in A&I Established was £29.2m.

Cash performance

Net debt: increased £26.7m to £62.1m (FY 2021/22: £35.4m). The Group had a net cash inflow for the disposal of Ricardo Software (after current and prior year fees) of £11.9m. In addition, £1.1m was paid to external advisors on other M&A and strategic projects. £5.1m was paid out in relation to the ongoing restructuring actions in A&I Established and £1.9m was paid in relation to the ongoing management restructuring in Rail and EE. Excluding these specific adjusting items, the Group had a cash outflow of £4.1m.

In January 2023 the Group acquired 93% of the issued share capital of E3M for an initial cash consideration of £19.2m (EUR 21.9m). In March 2023 the Group acquired 90% of the share capital of Aither for an initial consideration of £9.4m (AUD 17.2m) which included an adjustment for the cash and normalised net working capital of £0.1m (AUD 0.1m). The composition of net debt is defined in **Note 25** to the Group financial statements.

Basis of preparation

These consolidated financial statements of the Ricardo plc Group (Group) have been prepared in accordance with UK adopted international accounting standards. The Group's principal accounting policies are detailed in **Note 1** to the Group financial statements. Those accounting policies that have been identified as being particularly sensitive to complex or subjective judgements or estimates are disclosed in **Note 1(d)** to the Group financial statements.

Reported results represent the Group's overall performance in accordance with IFRS. The Group also uses a number of alternative performance measures (APMs) in addition to those reported under IFRS. Ricardo provides guidance to the investor community based on underlying results.

The underlying results and other APMs may be considered in addition to, but not as a substitute for or superior to, information presented in accordance with IFRS. Explanations of how they are calculated and how they are reconciled to an IFRS statutory measure are provided in **Note 2** to the financial statements.

Underlying results include the benefits of the results of acquisitions and major restructuring programmes but exclude significant costs (such as the amortisation of acquired intangibles, acquisition-related expenditure, reorganisation costs and other specific adjusting items). Ricardo believes that the underlying results, when considered together with the reported results, provide investors, analysts and other stakeholders with helpful complementary information to better understand the financial performance and position of the Group.

Specific adjusting items

As set out in more detail in **Note 7**, the Group's total underlying profit before tax excludes £35.9m of costs incurred during the period that have been charged to the income statement as specific adjusting items (FY 2021/22: £11.8m). In line with the Group's policy, these items have been recognised as specific adjusting items, due to their nature or significance of their amount, so as to provide further clarity over the financial performance.

	2023 £m	2022 £m
Underlying profit before tax from continuing operations	**27.9**	24.2
Amortisation of acquired intangibles	**(4.6)**	(4.5)
Acquisition-related expenditure	**(6.2)**	(0.8)
Restructuring costs		
– A&I: change in fair value of contingent consideration	**–**	(0.3)
– A&I: Impairment of non-financial assets	**(18.7)**	(2.0)
– A&I: restructuring costs	**(4.7)**	(2.9)
– Rail & EE: restructuring costs	**(1.5)**	(1.0)
– Group: restructuring costs	**(0.2)**	–
ERP implementation costs	**–**	(0.6)
Revaluation gain	**–**	0.3
Total specific adjusting items from continuing operations	**(35.9)**	(11.8)
Reported (loss)/profit before tax from continuing operations	**(8.0)**	12.4
Specific adjusting items from discontinued operation		
Gain on disposal and external fees relating to the disposal	**7.4**	(1.3)

Amortisation of acquired intangibles was £4.6m in the year, compared to £4.5m in FY 2021/22.

Acquisition-related costs of £6.2m were incurred in the year (FY 2021/22: £0.8m). These included £3.2m for deferred consideration and £0.4m of external fees and integration costs in relation to the acquisition of Aither pty (Aither), acquired in March 2023, and £0.9m for deferred consideration and £0.2m of external fees and integration costs in respect of the acquisition of E3-Modelling S.A. (E3M, acquired in January 2023), as well as £0.4m of deferred consideration and £0.4m of integration costs in relation to the acquisition of Inside Infrastructure pty (Inside Infrastructure), acquired March 2022 and £0.7m of external fees in relation to other M&A and strategic projects. Costs in the prior period reflected £0.4m of fees and integration costs for Inside Infrastructure and £0.3m of fees in relation to other strategic projects.

Restructuring costs

A&I: Change in fair value of contingent consideration: In the prior period a charge of £0.3m was recognised in relation to a reduction in the fair value of deferred consideration in respect of the sale of Ricardo's Detroit engine test business in June 2020. The reduction in the fair value reflects lower levels of traditional engine testing work than originally forecast at the time the business was sold.

A&I: Impairment of non-financial assets: Non-cash goodwill and asset impairment charges of £18.7m were recognised in the year within the A&I Established operating segment (FY 2021/22: £2.0m). As a result of the performance of this segment in the year to 30 June 2023, the impact of economic uncertainty and the continuing technological change in the automotive sector, the future projections and discounted cash flows for the operating segment were reassessed. The resulting value in use did not support the carrying value of the associated assets, resulting in an impairment of all of the goodwill associated with A&I Established segment (£5.2m), together with £1.8m of intangible assets and £11.7m of property, plant and equipment.

A&I: Restructuring costs: £4.7m of restructuring costs were booked in A&I Established in the period (FY 2021/22 £2.9m). Of this amount, £0.7m of loss on disposal was recognised during the period for under-utilised engine testing assets in the UK associated with the restructuring actions above. In addition to the loss on disposal, redundancy costs of £2.5m were incurred to further right-size the business.

Rail and EE: Restructuring costs: A charge of £1.5m was recognised in Rail and EE in respect of the restructuring of the senior management structure, which commenced in the second half of FY 2021/22.

Gain on sale of Ricardo Software (recognised within the discontinued operation): A net gain of £7.4m was recognised in the current year in relation to the disposal of Ricardo Software, completed on 1 August 2022. Total consideration for the sale was £14.9m (USD 17.5m), of which £14.8m was satisfied in cash in the current period. £7.5m of net assets were disposed of, and £0.9m of cumulative currency gains were reclassified to the income statement. £0.9m of costs directly attributable to the disposal were incurred in the current period. Per the terms of the sale, up to a further £2.4m (USD 3.0m) is receivable based on Ricardo Software achieving certain revenue targets in the 12-month period post-sale. The fair value of this contingent consideration has been assessed to be nil as it is unlikely that these revenue targets will be achieved.

Research and Development (R&D) and capital investment

The Group continues to invest in R&D and spent £14.6m (FY 2021/22: £13.3m) before government grant income of £6.8m (FY 2021/22: £2.2m). Development costs capitalised in this year were £5.4m (FY 2021/22: £7.3m, including development costs capitalised in Ricardo Software of £1.5m), reflecting continued investment in electrification and hydrogen solutions within the A&I Emerging segment, together with technology, tools and processes in the EE segment.

Capital expenditure on property, plant and equipment, excluding right-of-use assets, was £6.2m (FY 2021/22: £4.7m), reflecting targeted investment in our business operations, including hydrogen and electrical test capability in the A&I Emerging segment.

Net finance costs

Finance income was £1.0m (FY 2021/22: £0.6m) and finance costs were £7.1m (FY 2021/22: £4.4m) for the year, giving net finance costs of £6.1m (FY 2021/22: £3.8m). The increase in costs reflects an increase in the SONIA interest rate during the current year.

Taxation

The underlying effective tax rate for the year was 26.1% for the year (FY 2021/22: 26.0%). The reported effective tax rate was 5,100% (FY 2021/22: 35.3%). This unusually high reported effective rate reflects a number of non-deductible or non-taxable specific adjusting items, including impairments and the disposal of the Software business, resulting in a tax expense of £5.1m against a loss before tax of £0.1m.

Earnings per share

Basic loss per share was 8.7p (FY 2021/22: earnings 13.8p). The Directors consider that underlying earnings per share provides a useful indication of underlying performance and trends over time. Underlying basic earnings per share for the year was 33.4p (FY 2021/22: 31.2p). The calculation of basic earnings per share, with a reconciliation to an underlying basic earnings per share, which excludes the impact (net of tax) of specific adjusting items, is disclosed in Note 8 to the Group financial statements.

Dividend
As set out in more detail in **Note 9** to the Group financial statements, the Board has declared a final dividend of 8.61p per share (FY 2021/22: 7.49p). The dividend will be paid gross on 24 November 2023 to holders of ordinary shares on the Company's register of members on 3 November 2023.

Goodwill
At 30 June 2023, the Group had total goodwill of £96.1m (FY 2021/22: £90.6m). The acquisition of Aither and E3M added goodwill of £5.1m and £8.5m respectively to the Ricardo Energy and Environment cash generating unit (CGU) as synergies from the acquisition are expected to benefit EE operating segment. The carrying value of goodwill is fully supported by the value-in-use calculations for all other operating segments.

Net debt and banking facilities
Net debt at 30 June 2023 comprised cash and cash equivalents of £49.8m (FY 2021/22: £50.5m), and borrowing and overdrafts, including hire purchase liabilities and net of capitalised debt issuance costs, of £111.9m (FY 2021/22: £85.9m).

The Group funds its operations via a Revolving Credit Facility (RCF) of £150m, with a £50m uncommitted accordion, which provides funding through to August 2026, alongside the Group's uncommitted overdraft facilities of £16.1m. At 30 June 2023, the amount undrawn on the RCF was £50.0m. This, together with the net cash held of £37.2m, and £16.1m of unutilised overdraft facilities, provided the Group with total cash and liquidity of £103.3m.

The Group's Adjusted Leverage ratio (defined as net debt over EBITDA for the last 12 months, excluding the impact of specific adjusting items and IFRS 16 Leases) was 1.4x as at 30 June 2023. The Adjusted Leverage covenant is a maximum of 3.0x.

The Interest Cover ratio (defined as EBITDA for the last 12 months, excluding the impact of specific adjusting items and IFRS 16, over net finance costs), was 8.3x at 30 June 2023. The Interest Cover covenant limit is a minimum of 4.0x.

Further details are provided in **Note 25** to the Group financial statements.

Foreign exchange
On consolidation, revenue and costs are translated at the average exchange rates for the year. The Group is exposed to movements in the Pound Sterling exchange rate, principally from work carried out with clients that transact in Euros, US Dollars, Australian Dollars and Chinese Renminbi.

Had the prior year results been translated at current year exchange rates, revenue from continuing operations would have been £12.0m (3.2%) higher, underlying operating profit would have been £1.2m (4.9%) higher and underlying profit before tax would have been £0.8m (6.5%) higher.

Pensions
The Group's defined benefit pension scheme operates within the UK. The fair value of the scheme's assets at the end of the year was £104.6m (FY 2021/22: £127.1m) and the present value of the scheme's obligations was £92.0m (FY 2021/22: £111.9m). The value of the scheme's assets reduced over the year due to movements in the stock market. However, this was partially offset by a reduction in the scheme's liabilities, due to increases in the discount rate. The pre-tax surplus, measured in accordance with IAS 19, at 30 June 2023 was £12.6m (FY 2021/22: £15.2m). Ricardo paid £1.8m of cash contributions into the scheme during the year (FY 2021/22: £3.0m).

Acquisition of E3-Modelling

On 24 January 2023, the Group acquired a 93% shareholding in E3-Modelling S.A. (E3M), a consulting company, based in Greece, that provides advanced empirical modelling services. The maximum cash consideration is £24m, of which £19m was paid on completion. The deferred consideration of £5m is based on the business achieving certain performance targets for the 12 months ending 31 December 2023 and the retention of key management. There is a commitment to acquire the remaining 7% stake in January 2025. The minimum cash consideration for the remaining 7% stake is £2m, and is reduced by 50% if the owners are not retained in the business. Ricardo has acquired full control and voting rights in E3M.

E3M provides digital modelling capabilities right across the markets that Ricardo serves, making the acquisition highly complementary to Ricardo's unique position at the intersection of the energy, environment and mobility agendas.

Acquisition of Aither

On 13 March 2023, Ricardo acquired a 90% shareholding in Aither Pty Ltd (Aither) from the founders and co-directors Chris Olszak and Will Fargher, for a cash consideration of up to £17m of which £9m was paid on completion. The deferred consideration is based upon the achievement of certain performance targets for the 10 months ended 31 December 2023 and the retention of the former owners of the business. The deferred consideration can range from nil to a maximum of £8m at an annualised EBITDA multiple of under 11 times. The remaining 10% shareholding will be acquired on the second or third anniversary of the Acquisition Closure Date, using the same EBITDA multiple as the deferred consideration, subject to a maximum. Ricardo retains full control and voting rights in Aither.

GROWTH WITHIN OUR ENVIRONMENTAL AND ENERGY TRANSITION PORTFOLIO

Developing innovative solutions to energy transition and environmental challenges by building commercial opportunities from insight and strategy building, all the way through to implementation. For example, we are resolving complex engineering issues associated with the integration of renewables as well as playing a pivotal role in developing strategies across all modes of transportation to support low carbon transitions.

OUR OPERATING SEGMENTS

Energy and Environment
Governments, public agencies and businesses around the world trust Ricardo's expertise in solving the most complex environmental challenges. Our clients value our deep understanding of energy and environmental drivers, policy development and technical insights, and our ability to turn challenges into business opportunities.

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Rail and Mass Transit
We support our clients in navigating the rail industry's developmental, operational, commercial and regulatory demands. We work with governments, operators, infrastructure managers and manufacturers to ensure that railways deliver the highest possible value to their clients and to the wider community.

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Emerging Automotive and Industrial
Our strategic and technical experts define future technologies that are innovative and sustainable for all types of emerging mobility applications, from battery to fuel-cell technologies. We deliver solutions comprising energy-transition propulsion, driveline and controls design, optimisation and prototype development.

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PORTFOLIO HIGHLIGHTS

£244m
Total revenue

£285m
Total order intake

55%
Total %
Group turnover

ENERGY AND ENVIRONMENT (EE)

Energy and Environment (EE) works with clients across a wide variety of sectors and geographies to deliver robust data-driven solutions to solve complex energy-transition and environmental challenges. Ricardo's depth of environmental and energy expertise provides support across the value chain, from policy and strategy to implementing solutions.

> We work across the value chain to deliver solutions that support meaningful change to meet today's energy and environmental challenges.

HIGHLIGHTS*

+50%
Order intake

2022/23	£111.5m
2021/22 (CC)	£74.4m
2021/22	£74.1m

+45%
Underlying operating profit

2022/23	£16.0m
2021/22 (CC)	£11.0m
2021/22	£11.0m

+54%
Order book

2022/23	£87.6m
2021/22 (CC)	£56.7m
2021/22	£57.0m

+1.8pp
Underlying operating profit margin

2022/23	18.1%
2021/22 (CC)	16.3%
2021/22	16.4%

+31%
Revenue

2022/23	£88.5m
2021/22 (CC)	£67.4m
2021/22	£67.2m

+22%
Headcount

2022/23	971
2021/22	795

* Prior period results have been restated to reflect the fact that a share of central plc costs are no longer included in the operating profit measure for operating segments. See Note 5 to the Group Financial Statements.

Strong demand drivers are underpinning growth

Our EE business is in a strong market position which provides confidence in our ability to capitalise on favourable market trends in policy and funding for climate change and energy decarbonisation. We have focused our portfolio on market-facing growth solutions that include policy, strategy and economics; water management; corporate sustainability; air quality and environmental management; and digital modelling. These growth solutions include both strategic and technical consulting expertise and are combined with our data-science and software-development capability, delivering repeatable and scalable growth, while expanding across our markets and regions.

As an example, we advise governments around the world on developing and implementing the policy measures needed to reduce the environmental impacts of different sectors in the most efficient and effective manner. This policy insight provided to international governments is valued by the private sector, where we provide strategic support to help companies respond to new and emerging policy measures – such as using our digital modelling tools to forecast the impacts of policies and strategies on the demand for energy in both the near and long term.

The value and impact of our work

EE's work delivers significant improvements to the environment, helping to reduce the near and long-term impacts of climate change, as well as helping to substantially accelerate the energy transition, developing innovative solutions and deep technical insights needed to decarbonise energy generation, distribution and use. Critical to the value that our experts offer is the depth of expertise at each stage of the value chain, with our robust policy and strategy support enabling clients to undertake effective solution implementation.

For instance, Ricardo recently developed the evidence needed to inform negotiations and the subsequent strategy announcement by the International Maritime Organization on reducing maritime greenhouse gas emissions to zero by 2050. We also recently supported the update of the EU ITS Directive, which is targeting 1.1% annual CO_2 reductions and net benefits of EUR 158bn. This policy support will enable us to effectively support organisations around the world in implementing the solutions to meet these ambitions, which will include both technical consultancy and engineering.

Our performance in FY 2022/23

The continued demand for EE solutions has underpinned a very strong performance in FY 2022/23, with total revenue, including the results of businesses acquired in the year, up by 31%. Activity levels remained high throughout the year with a record order intake, resulting in an order book at 30 June 2023 of £88m, an increase of 54% on a constant currency basis, providing good visibility into the new financial year, which helps to underpin our growth strategy execution. On an organic basis, excluding the results of acquisitions, revenue and underlying operating profit grew by 20% and 30% (constant currency). The organic growth was driven by strong demand across multiple services, segments and geographies. In FY 2022/23 we secured multiple new contracts across our market-facing growth solutions, including the EU Mission Implementation Platform for Adaptation to Climate Change (MIP4Adapt), a significant contract for the European Commission. Through this contract, Ricardo's climate change experts are helping to accelerate Europe's transformation to a climate-resilient future. EE has continued to see substantial growth in the Middle East, with substantial demand for the environmentally focused development of digital solutions. This demand is driving high-value work for nationally critical environmental projects. Our reputation for managing air quality monitoring networks and modelling complex data sets also continues to be recognised by clients, with further substantive contracts.

EE's growth has also included E3-Modelling (E3M) and Aither Pty Ltd, having acquired the businesses in January and March 2023 respectively. E3M, which provides advanced empirical modelling services, focuses on the energy-environment nexus and is highly complementary to Ricardo's unique position at the intersection of the energy, environment and mobility agendas, providing digital modelling capabilities right across the Group. Aither Pty Ltd, an Australia-based natural-resources policy consultancy, strengthens our regional capabilities and significantly builds EE's global environmental portfolio in water and advisory services.

Building on the acquisition of Inside Infrastructure Pty Ltd in March 2022, these latest acquisitions demonstrate Ricardo's continued commitment to growing its global reach and extending its portfolio in Clean Energy and Environmental Solutions. Ricardo's existing water capabilities combined with Aither and Inside Infrastructure, have already started bidding together with a strong pipeline of opportunities domestically in Australia, as well as in the Middle East. E3M and Aither have contributed £4.8m of revenue and £1.1m of underlying operating profit in the period since their acquisitions. Inside Infrastructure contributed £3.9m of revenue (FY 2021/22: £0.9m on a constant currency basis) and £0.9m of underlying operating profit (FY 2021/22: £0.1m on a constant currency basis).

CASE STUDY

INNOVATIVE DIGITAL CLIMATE SOLUTION TO SUPPORT UAE CLIMATE COMMITMENTS

Ricardo is supporting the Government of the United Arab Emirates (UAE) with the development of an innovative solution for the monitoring, reporting and verification of Greenhouse gas emissions (GHG) across the region.

The project utilises Ricardo's world-leading expertise in GHG inventories, combined with its extensive experience in climate change policy and environmental software development. The advanced digital solution will provide critical insights across a range of industries, supporting the Government in proactively driving forward the regions ambitious climate change commitments, which includes implementing its Net Zero 2050 plan. The project continues to demonstrate the Government of UAE's regional leadership in tackling the worsening effects of climate change.

The innovative GHG emission monitoring, reporting and verification solution will be presented as part of the UNFCCC 28th Conference of the Parties being hosted in the UAE; and Ricardo's experts are already working with a number of additional countries who will benefit from advanced GHG inventory support.

RAIL AND MASS TRANSIT

Built on a unique foundation of strategic consultancy, complex engineering and safety assurance, we address critical challenges across every aspect of the rail industry.

> We support our clients in navigating the rail industry's developmental, operational, commercial and regulatory demands.

HIGHLIGHTS*

+1%
Order intake

2022/23	£89.2m
2021/22 (CC)	£87.9m
2021/22	£85.0m

-18%
Underlying operating profit

2022/23	£8.0m
2021/22 (CC)	£9.7m
2021/22	£9.4m

+5%
Order book

2022/23	£108.7m
2021/22 (CC)	£103.7m
2021/22	£109.1m

-1.7pp
Underlying operating profit margin

2022/23	10.9%
2021/22 (CC)	12.6%
2021/22	12.7%

-4%
Revenue

2022/23	£73.5m
2021/22 (CC)	£76.7m
2021/22	£74.3m

-9%
Headcount

2022/23	514
2021/22	563

* Prior period results have been restated to reflect the fact that a share of central plc costs are no longer included in the operating profit measure for operating segments. See Note 5 to the Group Financial Statements.

Capabilities across all disciplines

Ricardo's rail experts provide specialist engineering and assurance services to help clients navigate the industry's complex operational, commercial and regulatory demands. Our experts work across a rail project's life cycle to provide rail operators, infrastructure managers and original equipment manufacturers the highest safety, operational and environmental standards. Our rail expertise includes:

- **Railway systems engineering** – Systems engineering extends across technical activities that support our clients in realising the intended performance of a complete and integrated system
- **Operations and maintenance** – Disciplines that support operators in optimising day-to-day operations to deliver long-term efficiencies
- **Rail design and engineering** – From capturing requirements through to design, in-house manufacturing, and approvals, we provide end-to-end support that provides full project management
- **Independent assurance** – Undertaking a wide range of independent assurance and certification support, from assessing new products so that they meet industry standards to the assessment of the construction of entire railway systems

Supporting the future needs of the rail industry

In addition to strong demand for Ricardo's core engineering and safety expertise across the global rail sector, we are also seeing an increasing demand to support industry and operational decarbonisation. This demand enables Ricardo to utilise both its sustainability and energy expertise to provide robust strategy and impactful implementation, and extends our delivery across the value chain. This has included a range of services, from insights into national and regional sustainable rail policy, through to the integration of clean energy solutions into rail infrastructure and rolling stock. Examples of delivering these services include research, strategy and investment requirements for the utilisation of green hydrogen in UK national rail operations, decarbonisation insights for regional government rail decarbonisation in countries across Asia Pacific and the integration of trackside renewable energy technology directly into rail infrastructure.

Our performance in FY 2022/23

An order intake of £89.2m represents a 1% increase on FY 2021/22 on a constant currency basis, reflecting sustained demand for Rail and Mass Transit. The closing order book remains high at £108.7m, in line with the prior year.

During the year, we were successful in winning significant long-term project extensions across the Middle East and Australia in building our business in North America. Nevertheless, revenue reduced to £73.5m and represented a 4% reduction on the prior year on a constant currency basis – this is in line with expectations, as some large projects completed in the year and new projects won have not yet started.

The strong order book, which includes wins in new territories, provides growth opportunities for FY 2023/24 and beyond. For example, in Ireland we were awarded Designated Body (DeBo) status in November 2022, which enables us to offer clients in that market a broader range of accredited assurance services and access approximately three times the serviceable market (compared to non-DeBo status). This aligns with the full portfolio offered in established markets such as the UK, the Netherlands, Belgium, Denmark and Spain. In North America, we are helping regional governments and rail sector organisations to enhance industry safety standards. This includes securing key strategic and safety roles with new transit systems in Ottawa, Canada.

Underlying operating profit reduced by £1.7m (18%) on a constant currency basis. Underlying operating margin was 10.9% (FY 2021/22: 12.6% – constant currency). This was driven by the reduction in revenue, combined with investment in business development capability to drive order intake in Australia and new territories.

Following a review of subsidies provided during the pandemic, we have taken the decision to provide for the return of a £0.5m COVID-related subsidy to the Dutch government.

In addition, £0.7m of restructuring costs were recognised in the year within specific adjusting items (FY 2021/22: £1.0m). This was driven by the simplification of the management structure, aligned with our focus on core growth opportunities. The cash cost of the actions, which includes the cash cost of the actions accrued for at the end of FY 2021/22, was £1.1m (FY 2021/22: £0.3m).

In addition, following a review of subsidies provided during the pandemic, we have taken the decision to provide for the return of a £0.5m COVID-related subsidy to the Dutch government.

CASE STUDY

SHADOW OPERATOR FOR NEW 15KM METRO LINE IN MANILA

The city of Manila commissioned a new transit line, MRT-4, to connect the central business district with the eastern province of Rizal.

Given the high complexity of the project, Ricardo was appointed as a 'Shadow Operator'. Our Rail experts are advising the technology and design teams on the day-to-day needs of the eventual railway operator, including guidance on operational risks and safety hazards, developing passenger flow models, and advising on recruitment and work scheduling.

EMERGING AUTOMOTIVE AND INDUSTRIAL

Emerging Automotive and Industrial is a trusted partner for the next generation of sustainable mobility. Leveraging expertise in power electronic systems and propulsion systems, software and digital technologies for connected, autonomous vehicles, we deliver clean, efficient and integrated propulsion and energy solutions to support our clients in their energy transitions.

> Specialists in energy transition propulsion, driveline, and controls design, optimisation, and prototype development.

HIGHLIGHTS*

-19%
Order intake

2022/23	£84.3m
2021/22 (CC)	£104.6m
2021/22	£101.3m

+279%
Underlying operating profit

2022/23	£10.6m
2021/22 (CC)	£2.8m
2021/22	£2.7m

+3%
Order book

2022/23	£55.0m
2021/22 (CC)	£53.3m
2021/22	£55.4m

+9.0pp
Underlying operating profit margin

2022/23	12.9%
2021/22 (CC)	3.9%
2021/22	3.9%

+16%
Revenue

2022/23	£82.3m
2021/22 (CC)	£71.1m
2021/22	£69.1m

-20%
Headcount

2022/23	435
2021/22	542

* Prior period results have been restated to reflect the fact that a share of central plc costs are no longer included in the operating profit measure for operating segments. See Note 5 to the Group Financial Statements.

We solve the most complex mobility challenges

From strategic planning and policy, concept to manufacture, we work with clients across the globe in key automotive and industrial transport sectors: passenger and light vehicles, commercial vehicles, off-highway vehicles, motorcycles, marine and aerospace as well as stationary power generation and infrastructure. We bring sustainable mobility solutions to the market quicker while enhancing the overall performance across key transport sectors.

- **Electrification** – We enable our clients to de-risk electric vehicle (EV) development, while reducing time, cost and navigating stringent policies. We provide solutions across power electronics, emachines, edrives and batteries to accelerate EV adoption
- **Hydrogen fuel cell development** – We specialise in design and integration of fuel cell systems to decarbonise commercial vehicle, off-highway, aerospace, and marine applications.
- **Sustainable fuels** – We help clients navigate changing legislations, identify, and implement sustainable fuel solutions including hydrogen, biofuels, and synthetic fuels to reduce emissions across a wide range of transport applications
- **Hybrid** – We support the decarbonisation of transport through the design, development and implementation of hybridised powertrain and driveline systems.

A rapid shift to decarbonised sustainable transport technology

Zero emission propulsion is driving transformational change in all forms of transport driven by increased emissions regulation, country specific bans of fossil fuel vehicles and increasing consumer adoption of electrified vehicles. Across mobility, there are many propulsion technologies, working towards different time frames and different applications by industry, geography and application. Furthermore, new mobility solutions will only become viable for all stakeholders if energy sources are resilient, convenient and cost-effective at the point of need.

Our expertise supports the solution delivery across the value chain from policy, strategy and advisory services to design, engineering, testing and niche production and product launch. We develop strategies for the transport sector which address the biggest challenges of reducing green house gas emissions and we strive to deliver a better world through solutions that take a whole life cycle carbon neutral approach. As an example, Ricardo is working with the Sustainable Hydrogen Powered Shipping consortium (sHYpS) to design and develop hydrogen fuel cell propulsion technologies to power the next generation of zero emissions passenger ships. The project involving 13 partners in six European countries will accelerate the adoption of hydrogen as a renewable fuel in the maritime industry. The work has been funded by UK Research and Innovation (UKRI) under the UK Government's Horizon Europe funding guarantee.

Our performance in FY 2022/23

Emerging Automotive and Industrial built on its return to growth and delivered a good performance in both revenue and underlying operating profit in FY 2022/23. Revenue was up 16% and operating profit increased by 279% on an underlying basis. Headline operating profit margin was 12.9% up by 9.0pp, with the positive impact of volumes and the restructuring which was executed in H2. Throughout the year, we secured a number of significant contracts in both the US and Europe including Cranfield Aerospace Solutions, Toyota Hilux and Kalmar.

Order intake declined by 19% year-on-year, on a constant currency basis, reflecting the market challenges in the automotive industry resulting in timing uncertainties in new electrification and integrated mobility projects. Our order intake was geographically diverse with c.30% coming from North America, c.60% from EMEA and c.10% from Asia.

We expect a level of market uncertainty to continue as we move into Q1 FY 2023/24 but to grow thereafter as new projects become active and we win new contracts.

CASE STUDY

FUEL CELL POWERED TERMINAL TRACTOR

Kalmar offers a range of cargo handling solutions and services to ports, terminals, distribution centres and to heavy industry. To meet legislation requirements, manufacturers must shift to zero emission technologies

Ricardo supported Kalmar, in partnership with Toyota Tsusho America, with the design, integration and assembly of fuel cells into the Kalmar Ottawa platform. The project aims to offer Kalmar clients extended operational uptime and reduce the need for new investment in electrical grid infrastructure. Utilising extensive experience and design expertise in fuel cell systems and integration, Ricardo integrated a fuel cell system to deliver cleaner and more efficient propulsion.

GROWTH WITHIN OUR ESTABLISHED MOBILITY PORTFOLIO

Engineering a better future through our traditional engineering and technical consulting services, with niche specialisms in manufacturing and industrial engineering, designing solutions from concept right through to production. Established Mobility's growth is driven by increasing demands in continuously improving the performance of traditional mobility solutions to reduce the impacts of climate change.

OUR OPERATING SEGMENTS

Performance Products
Ricardo specialises in the design, manufacture and assembly of specialised engine and propulsion systems delivered at niche volumes to our clients in the motorsport, high-performance vehicle, defence and aerospace industries.

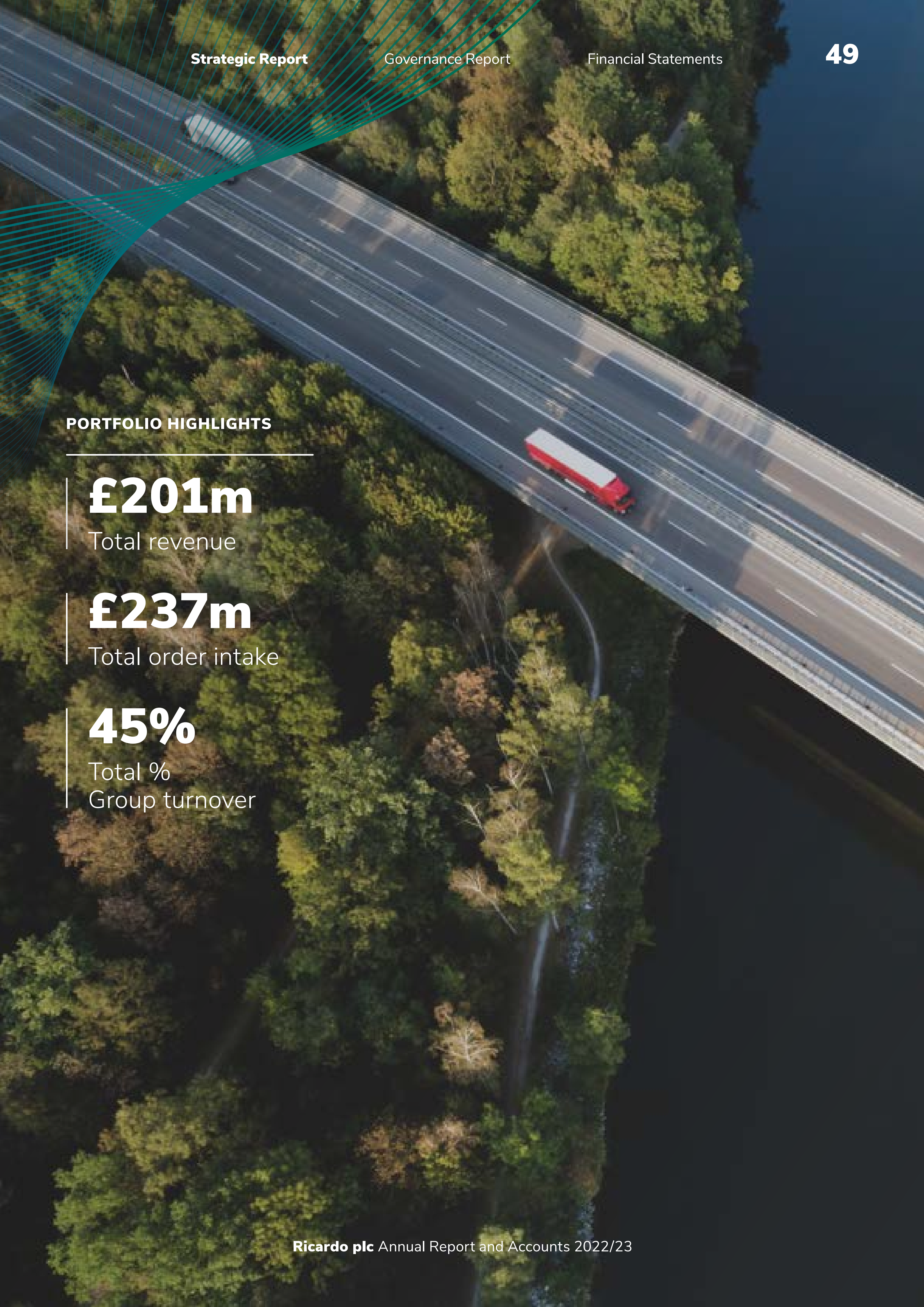
PAGE 50

Defense
A trusted engineering services partner for clean, efficient, integrated propulsion and energy systems with a deep legacy in partnering with the US military in the transition of innovative technologies from science to application.

PAGE 52

Established Automotive and Industrial
With over a century of propulsion design and development, we deliver transportation solutions from strategic planning to concept. We work across key transportation industries to bring solutions to market more quickly, while enhancing performance.

PAGE 54



PORTFOLIO HIGHLIGHTS

£201m
Total revenue

£237m
Total order intake

45%
Total %
Group turnover

PERFORMANCE PRODUCTS

Performance Products (PP) is responsible for the manufacture and assembly of niche high-quality products, including engines, transmissions and other performance-critical driveline and powertrain products. We also provide industrial engineering services for clients around the globe to enable designs to successfully move from concept to series production.

> Engineering specialists in transmission design and niche-volume manufacturing.

HIGHLIGHTS*

+54%
Order intake

2022/23	£115.3m
2021/22 (CC)	£75.1m
2021/22	£75.1m

+2%
Underlying operating profit

2022/23	£9.0m
2021/22 (CC)	£8.8m
2021/22	£8.8m

+58%
Order book

2022/23	£81.3m
2021/22 (CC)	£51.3m
2021/22	£51.3m

-1.3pp
Underlying operating profit margin

2022/23	10.6%
2021/22 (CC)	11.9%
2021/22	11.9%

+15%
Revenue

2022/23	£84.7m
2021/22 (CC)	£73.7m
2021/22	£73.7m

+8%
Headcount

2022/23	355
2021/22	330

* Prior period results have been restated to reflect the fact that a share of central plc costs are no longer included in the operating profit measure for operating segments. See Note 5 to the Group Financial Statements.

Recognised for our global expertise in industrial engineering and niche production

We are a trusted engineering partner for our clients across the motorsports, high-performance vehicles, aerospace and defence sectors. We provide expert design, engineering, manufacturing, assembly and test capabilities for engines and transmissions. With decades of experience, our technical experts support our clients in bringing their cutting-edge innovations to market.

- **Industrial engineering** – From start-ups to established multi-nationals, we apply our range of industrialisation consultancy services to help clients navigate all manner of niche volume production challenges
- **Powertrain systems production** – Our full-service solutions are tailored to the requirements of our clients, enabling us to deliver proven, cost-effective powertrain solutions for the world's most demanding niche applications, from series engine supply to niche volume assembly programmes
- **Driveline production** – We develop and deliver quality, cost-effective driveline and transmission solutions for the world's most demanding high-performance and specialised applications, providing our clients with a complete end-to-end service tailored to their requirements. Ricardo accommodates niche volume programmes of any size, from single prototype builds through to automated production lines

Accelerated adoption of green propulsion

Operators are presented with the challenge of decarbonising their product portfolios while meeting the expected performance specifications and volume requirements associated with these platforms. Our green propulsion solutions support the next generation of specialist vehicles with the development and production of zero emissions technologies, including fully integrated electric drive units (EDU) and battery solutions.

We are helping our clients decarbonise their portfolios without compromising on performance or quality by utilising our significant expertise in high performance automotive, combined with our experience in developing solutions for Formula E and electric vehicle (EV) demonstrators.

Our performance in FY 2022/23

PP has had a record year for order intake. This reflects a number of significant contract extensions as well as new clients attracted to the business. The most significant of these contract awards was the extension of engine supply to McLaren until 2030, the extension of transmission supply to the Porsche Cup programme until 2028, the continuation of transmission supply to Bugatti and a new multi year transmission supply programme to Singer Vehicles, based in California.

Revenue from continuing operations in FY 2022/23 was £84.7m. McLaren engine volumes continued to increase in the year with the launch of the new hybrid V6 Artura. Transmission volumes and revenue also remained strong, with continuing deliveries to Bugatti, Porsche, Aston Martin and several top tier motorsport programmes. In addition, the expected recovery of the aerospace sector was evident over the year, along with continued success in supplying industrial engineering consultancy services.

Underlying operating profit from continuing operations was £9.0m, improving marginally on last year's result despite a number of significant cost increases that impacted the business during the year, including materials, energy and purchased parts. Underlying operating profit margin was 10.6% compared to 11.9% in the prior period.

We continue to develop our portfolio of existing powertrain (engine) and drivetrain (transmission) products during the year as well as new projects in the zero emission propulsion space, including electric drive units, industrial engineering services in EV production and concept work around battery systems and electric machines.

The after-effects of COVID-19, and subsequently the conflict in Ukraine, remained a source of some disruption in the supply chain. However, our rigorous process management and tools ensured that client deliveries were protected.

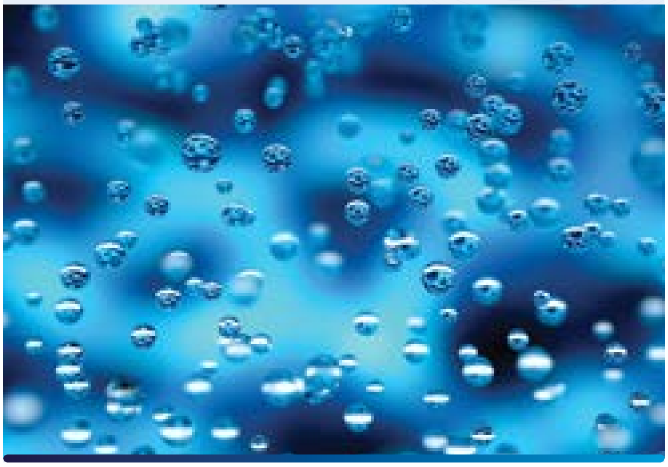
CASE STUDY

SUPPORTING EFFECTIVE PRODUCTION RAMP-UP FOR MANUFACTURER OF PEM ELECTROLYSERS

Ricardo supported an established manufacturer of proton exchange membrane (PEM) electrolysers that was facing the challenges associated with transitioning to producing higher manufacturing volumes.

Ricardo performed a manufacturing-site audit to rapidly measure and assess the manufacturer's operation. A benchmarking exercise was performed to identify areas of improvement in its production processes. This assessment was used to prioritise actions to support production ramp-up and increase both control and yield from critical processes.

Several key areas for improvement were identified that could be delivered immediately and in the longer term to enable the manufacturer to continue to deliver a quality product at increased volumes.



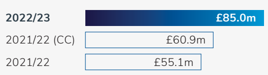
DEFENSE

Defense continues to provide solutions to meet the challenges our clients face in the integration of logistics and field support for complex and diverse systems. The demand for our services has increased as a result of escalating world conflict and the challenges arising in a contested logistic environment. Our wide range of engineering and software solutions provides system-integration engineering for the US Army's ground inventory, and we are the data-replication agent for the US Navy. We also specialise in niche manufacturing, adapting commercial industry products to deliver innovative sector applications that protect people and infrastructure.

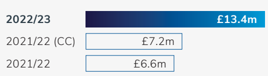
> "Trusted expertise in delivering wide-ranging integrated mobility systems while optimising safety and addressing environmental concerns.

HIGHLIGHTS*

+40%
Order intake



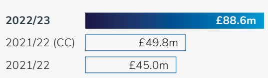
+86%
Underlying operating profit



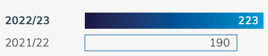
-9%
Order book

+0.6pp
Underlying operating profit margin

+78%
Revenue



+17%
Headcount



* Prior period results have been restated to reflect the fact that a share of central plc costs are no longer included in the operating profit measure for operating segments. See Note 5 to the Group Financial Statements.

Industry expertise across the entire defence system life cycle and product sustainment

We have a deep legacy in partnering with the US armed forces in the transition of innovative technologies from science to application, with a proven track record of successfully fielding, integrating and managing systems across the acquisition life cycles. Our primary operations are located in the USA, and we provide both product and technical service solutions to solve complex integration challenges across various defence platforms.

- **Technical service solutions** – We address the challenges our clients face in the maturation and integration of complex systems for legacy and emerging mobility platforms. With our depth of knowledge in military-system life cycle sustainment, combined with our digital engineering and software development capabilities, we integrate modernisation solutions across the US Department of Defense (DoD) and allied forces
- **Solution products** – We develop and deliver integrated products in response to identified client needs. We also develop complete integrated solutions as a lead systems integrator
- **Field service solutions** – We improve capabilities to support and sustain systems in the field throughout their life cycle to include life cycle sustainability analysis, electronic technical manual development, provisioning, total package fielding (TPF) and new equipment training (NET)

Transition of commercial and technology innovation to client application

The US DoD continues to move away from its traditional approach centred on original equipment manufacturers (OEM), with a strong focus on accelerating the transition of innovations to the fleet of vehicles in the field. It is also increasingly focused on decarbonisation and its net zero plans.

The work that we do in Defense concerns the improvement of safety to the US Army and allied forces, delivering solutions that support the energy transition, significantly reducing fossil-fuel usage and carbon emissions. One example is Ricardo's work with the US Marine Corps to develop capabilities that are aligned with the Department of the Navy's climate strategy to improve the management of energy, the security of energy resources and reduce its carbon footprint.

Our performance in FY 2022/23

Defense's order intake grew by £24.1m on a constant currency basis in FY 2022/23. Over the year, we received $50m of orders from the US Army to provide antilock brake system/electronic stability control (ABS/ESC) retrofit kits to improve the safety of operation of the US Army's high mobility multi-purpose wheeled vehicle (HMMWV). Two contracts were extended beyond the original end date to ensure the continuance of Ricardo Defense in maintaining and updating Army mobility systems. Significant programmes included transitioning a commercial vehicle to the Army's inventory and providing an extended data-management enabler across the Navy's primary communications fleet.

Revenue increased by 78% year-on-year on a constant currency basis. Revenue growth was driven by increased ABS/ESC volumes – in total, we delivered 8,707 ABS/ESC kits in FY 2022/23 compared to 3,602 the previous year, including both retrofit kits and kits for new production vehicles – and a rise in orders for our technical and field support solutions.

Underlying operating profit of £13.4m was an increase of 86% compared to FY 2021/22 on a constant currency basis. Underlying operating profit margin increased by 0.6 basis points to 15.1%.

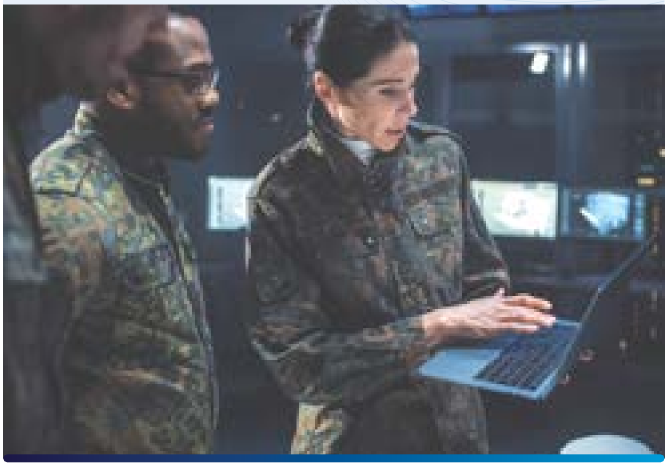
With the establishment of our digital acquisition framework – which enables an integrated management of US Army technical procurement initiatives – we can provide integrated solutions to our clients that cover the entire procurement life cycle for their vehicle platforms, from concept design and development through to production and sustainment through-life support.

Ricardo Defense continues to work with the US Marine Corps to develop and demonstrate capabilities to improve the management of energy supplies and better secure energy resources to reduce the US DoD's overall carbon footprint. Ricardo has expanded the work scope to develop an energy utilising dashboard to augment and deploy a metering and monitoring system. This enables the US Marine Corps to analyse changing electrical demand and logistical fuel constraints so that operators can make better informed command-and-control decisions on fuel and energy resiliency.

CASE STUDY

DIGITAL DATA FILE MANAGEMENT FOR THE US NAVY

The US Navy hosts a set of software services on the deployed fleet that provides for the transfer of technical data for maintainers and supply chain managers. Ricardo has developed an enterprise software solution that incorporates file transfer and messaging capabilities. We have demonstrated exceptional success by providing comprehensive sustainment and product improvement and by introducing new capabilities with each software release. These software products are deployed across the surface and subsurface fleet of the US Navy.



ESTABLISHED AUTOMOTIVE AND INDUSTRIAL

Established Automotive and Industrial is a trusted partner for OEMs and tier one suppliers across the transportation industry. With over 100 years of engineering experience in the design, building and testing of conventional powertrains, it is helping global clients with bridging technologies to support the shift to decarbonised transport solutions. Demand for Established A&I services is driven by global decarbonisation targets and compliance with emissions standards, especially in heavy duty and defence markets.

> Trusted expertise in delivering efficient, integrated propulsion systems while addressing environmental concerns.

HIGHLIGHTS*

-2%
Order intake

2022/23	£36.2m
2021/22 (CC)	£37.0m
2021/22	£34.7m

-214%
Underlying operating profit

2022/23	(£5.8m)
2021/22 (CC)	£5.1m
2021/22	£4.9m

+7%
Order book

2022/23	£27.5m
2021/22 (CC)	£25.7m
2021/22	£26.8m

-30.5pp
Underlying operating profit margin

2022/23	(21.0)%
2021/22 (CC)	9.5%
2021/22	9.6%

-48%
Revenue

2022/23	£27.6m
2021/22 (CC)	£53.5m
2021/22	£50.9m

-25%
Headcount

2022/23	339
2021/22	449

* Prior period results have been restated to reflect the fact that a share of central plc costs are no longer included in the operating profit measure for operating segments. See Note 5 to the Group Financial Statements.

Industry expertise across the transport industry from concept to production

We have deep experience in partnering with OEMs and tier one suppliers across automotive, commercial vehicle, off highway, defence and marine market sectors. We apply innovative tools and processes – refined over a century of mobility engineering experience – to enable faster design and validation of efficient propulsion systems and reduced whole life costs. This includes systems optimisation, design upgrades of existing platforms and complete clean sheet vehicle design through to production.

- **Propulsion systems engineering** – design, development, testing and calibration of conventional powertrain and drivetrain solutions
- **Rapid realisation** – rapid prototype, demonstrators and ultra low volume vehicles from concept to manufacture

Transition to zero emissions propulsion

Our expertise in internal combustion engine design is facilitating energy transition and decarbonised transport by adapting traditional combustion technologies to apply innovative and sustainable fuels, such as hydrogen. We are helping clients with this transition by navigating challenges relating to changes in emissions legislation, such as Euro 7, where the Ricardo Vehicle Emissions Research Centre (VERC) and Advanced Propulsion Research Centre (APRC) support clients achieve such standards.

Our performance in FY 2022/23

Established Automotive and Industrial order intake was £36.2m, a decrease of 2% on a constant currency basis in FY 2022/23. Significant programmes included a highly customised fleet of vehicles for London's Metropolitan Police, driveline systems development for defence vehicle applications in Asia Pacific as well as engine calibration work for off-highway machines and passenger car vehicles to ensure compliance with future emissions legislation.

Revenue decreased by 48% year-on-year on a constant currency basis. Revenue decline was driven by the reduced demand for services in this area which led to management implementing the structural changes announced in the first half and carried out in the second half.

Underlying operating loss was £5.8m, a decrease of 214% compared to FY 2021/22 on a constant currency basis. Underlying operating profit margin decreased by 31pp. Operating profit performance is expected to improve in FY 2023/24, due to the significant restructuring actions taken in order to rebase the business appropriately.

CASE STUDY

NEXT GENERATION ENGINE FOR LIGHT DUTY VEHICLES

Ricardo worked with Achates Power to develop the next generation of opposed piston gasoline compression ignition engines for light duty vehicles. Funded by the US Government's ARPA-E, the project 'BERYL' aims to create a fuel efficient, lightweight engine that offers improved efficiency, while meeting emissions targets.

Ricardo has undertaken design and systems integration, achieving a target of 60% weight reduction. The team expects that, when fully developed, this engine will achieve an improvement of up to 20% over baseline in fuel economy and deliver an unadjusted corporate average fuel economy and combined 35 MPG for a full sized pickup truck, alongside diesel like torque from a gasoline engine.

For Ricardo, stakeholder engagement means participating in conversations to understand the needs and priorities of each of our key stakeholders. The work that we do has an impact on society and, as a Group, we are motivated to continue innovating and being pioneers of change and thus accelerate our clients' energy transitions.

We regularly engage in conversations with key stakeholders on a variety of themes across our business to build strong and positive relationships. Stakeholder engagement takes place across our management teams at Group level, throughout our business operating segments and involving the Board.

Stakeholders and the Board

The Board recognises the need to build trust with our key stakeholders to ensure the long-term success of the business. In accordance with Section 172 of the Companies Act 2006, each Director has acted in a way that they considered, in good faith, would be most likely to promote the success of the Company for the benefit of all its stakeholders.

In making decisions, we consider the interests of stakeholders across the Company – not just at Board level. Nevertheless, our approach to key stakeholders is influenced across Board discussions in terms of how we engage and support value creation. Further details on engagement and how our Board operates can be found in the Governance section of this report.

The following stakeholder groups have been identified as being fundamental to the success of the Group.

Clients

At Ricardo, our clients are the cornerstone of everything that we do. We are committed to delivering service excellence, providing enhanced service levels, ensuring the future sustainability of the Ricardo Group and that our business practices and supply chain accord with our values.

How we engage

- Management teams within our operating segments engage with our clients through formal feedback activities, including the Voice of the Client (VOC), to gain insight on the client-service experience throughout our projects
- Informal feedback is gathered through regular client meetings, which take place both with Group executive team members and field-based teams

How the Board engages

- The Board ensures that it continuously monitors performance through regular reviews with the Chief Executive Officer of the Group's relationships with its key clients and suppliers, including the review of VOC surveys and the Group client-satisfaction survey
- Business review and deep dive sessions with the operating segments are also reviewed by the Board on a quarterly basis

How we create value

In May 2023, around 200 of our clients completed our inaugural client-satisfaction survey, which measured satisfaction, loyalty and brand awareness. The Group's client-satisfaction score currently stands at 81% and, as a result, we are now applying best practices and developing skills and capabilities in key-account management tools to deliver continuous improvement in execution.

People

The experience and expertise of our colleagues is essential for the delivery of our strategy. We promote an open and ethical culture that is diverse and inclusive, fostering good engagement and allowing us to deliver value to all our stakeholders. We provide a safe working environment and regularly engage with our people and provide opportunities for progression and personal development.

How the Board engages

- The Board regularly engages with our people and teams across our sites through regular 'meet the Board' lunches and dinners, and ensuring that a wide range of employees give presentations at Board meetings
- The Board reviews feedback from regular employee opinion surveys and agrees action plans with the management team
- The Board also receives regular feedback from engagement work conducted by the Workforce Engagement Director

How we create value

Our Group Engagement score for 2023 was 3.9 out of 5, which was similar to the previous year's score. We are making strides in building further engagement by listening to feedback gathered not only from the survey but also from the Q&A sessions that take place across our sites annually. We also have several listening forums that meet regularly – including our Diversity, Equity and Inclusion (DEI) Council, our network of affinity groups, our works councils and union representation – to allow our people to have a voice and share ideas. Furthermore, we now have introduced a Group-wide activities plan that includes both DEI and Ricardo culture celebrations, including the launch of our Values Week, which took place in March 2023.

Communities

As a global company with operations in over 20 countries, we play an active role in helping our local communities thrive by contributing both socially and economically. We operate in a responsible and sustainable way by always aligning our decisions and actions according to our values and our ESG commitments, by considering the operational and environmental impact of our businesses on local communities and by demonstrating clear and sustainable policies that support our values.

How the Board engages

- The Board is provided with regular updates on initiatives and activities across countries and sites and their impacts on our wider community
- As part of this approach, the Board also considers the Group's net zero ambitions and its wider ESG strategy and how these can be an integral part of the Group's long-term sustainable success

How we create value

Our teams deliver not only science, technology, engineering and maths (STEM) activities but also promote sustainability and demystify climate change in schools and colleges to raise awareness about careers in these areas. We have also recently launched Ricardo's global charitable programme, which focuses on supporting and expanding the great work that we are already doing and on creating ever more social value through volunteering, STEM education programmes and charitable matching funds.

Shareholders

We are committed to delivering value to our shareholders. Our shareholders provide us with the financial liquidity that we need to continue to operate; and it is our responsibility to build a transparent and open engagement to ensure they are well informed and understand the financial performance of the Group, our strategy, capital distributions, long-term viability and that the Group is a sustainable investment proposition.

How the Board engages

- Regular reviews of shareholder interactions, including feedback by the Chair, Executive Directors and the Group Director of Communications, and feedback from the Group's brokers
- The Board attends the Annual General Meeting where our shareholders are invited to submit questions on various governance matters

How we create value

Ricardo arranged a Capital Markets Day in May 2023 to provide an update on our strategic progress as well as to share information on our growing energy transitions portfolio. We also lead an investor roadshow programme, after our interim and preliminary results presentations, to provide both our major shareholders and prospective new investors with further detail on the progress we are making across the business. Ricardo has also invested in its new website and the investor pages have been updated, ensuring that the relevant information is easy to access.
www.ricardo.com/investors

Suppliers and partners

Ricardo has a global network of suppliers that provide us with services and products that are needed for us to deliver according to client requirements. We actively engage with our suppliers to ensure that our supply chain is competitive and reflects the Group's values, that supply chain disruption is minimised or avoided and that we have trusted relationships to ensure our operational success.

How the Board engages

- The Board reviews suppliers and supply chain risks and opportunities through operating segment reviews and deep dive performance reviews
- The Board reviews partnership arrangements to ensure that they are aligned to our overall strategy

How we create value

We work with our supply chain partners to ensure that we are creating innovative approaches that improve on-time delivery and our ESG credentials in reducing our Scope 3 carbon emissions and waste.

How the Board considers stakeholders in its meetings and principal decisions

Cost of living employee support The Remuneration Committee supported management's approach to mitigate the impact upon key employee groups of increased inflationary pressures and the increased cost of living.

Divestment of the Ricardo Software business When preparing to sell the business there was engagement with local teams to consider the security of employment, services with clients, relationships with suppliers, and the impact upon shareholder value in the Group following the disposal. The Board concluded that the work carried out by the Company, and the papers provided to it, had helped inform the Board as to who was the best buyer for the business.

Acquisition of Aither Pty Limited and E3-Modelling S.A. When the Board considered the acquisition of Aither and E3M it focused on the interests of people, clients and shareholders. The Board reviewed with management whether the acquisitions were aligned with the Group's strategy to build its consulting business and to build value for shareholders. The Board received regular updates from management throughout the acquisition process which highlighted how stakeholder interests were considered and taken into account. Detailed integration plans were produced for both businesses which have ensured that the Board is kept informed as to how stakeholders interests are being managed following acquisition.

2023 Capital Markets Day In May 2023 the Company hosted investors to hold a capital markets day at which it set out the Group's strategy and provided an update on progress. The Board reviewed and provided challenge on the content and messaging used at the event and reviewed and commented on feedback received from attendees and from the market after the event. The Board recognises the importance, and benefit, of engagement with current and future investors so they can better understand the Group and the strength of its investment case.

Increased focus on ESG matters and stakeholders During the year being reported, the Board created a new Responsible Business Committee which is responsible for promoting the long-term sustainable success of the Company with regards to environmental, social and governance matters. When considering the matters before it, the Committee takes into account the interests of its stakeholders and reports upon its activity to the Board.

How Section 172 has become part of the way the Company operates can be found throughout this report, some examples of which are indicated below:

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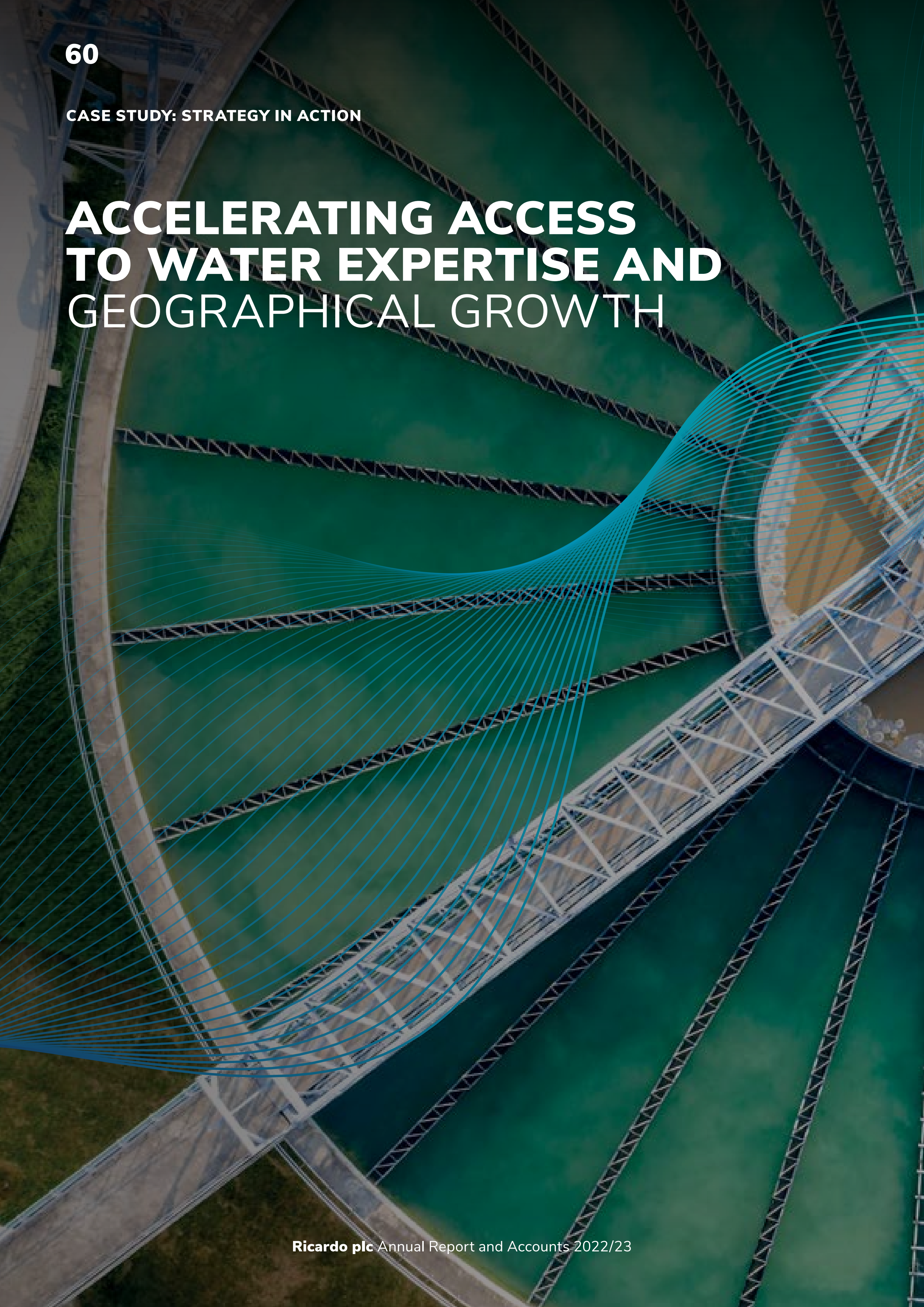
CASE STUDY: STRATEGY IN ACTION

ACCELERATING ACCESS TO WATER EXPERTISE AND GEOGRAPHICAL GROWTH



LOCATION
Australia

Global megatrends underpin Ricardo's long-term growth ambitions as we seek to leverage our expertise in energy and environmental consulting across the full value chain to advise clients in priority markets with the most acute need for trusted guidance to adapt to climate change.

Our most recent acquisitions: Inside Infrastructure Pty Ltd and Aither Pty Ltd, are both highly respected, leading Australian-based consultancies in water advisory, strategy and asset infrastructure. In acquiring, we clearly demonstrated our strategy in action by supporting our clients in navigating uncertainty and complexity through provision of clear evidence-based analysis, insights, and advice in the priority market of global water management. The sector is of critical importance as water and climate change are inextricably linked.

Sustainable water management is central to building the resilience of our societies and ecosystems and to assist in reducing carbon emissions. We know that there is a real need for specialist economic, policy, strategic and implementation services around water which can be tailored to the specific needs of particular regions, but also offer the benefit of repeatable application to solve common issues in the water sector.

Inside Infrastructure's client base complemented Ricardo's existing presence in water and utilities, as well as offering Ricardo the opportunity to expand into adjacencies through a strong client base in both mining and resources together with Australian government agencies. At the time of acquisition in March 2022, Ricardo's existing Australian business had complementary expertise in circular economy consultancy offering a firm foundation to grow our services.

Our capability and domain knowledge of the global water sector was further enhanced in March 2023 by the acquisition of Aither which enabled the expansion of our capabilities across the advisory, policy and strategy aspects of the water value chain, including climate resilience and adaption. With Aither as a market leader in water advisory in Australia, the acquisition provided a springboard from which to help realise growth opportunities in climate change and climate adaptation, ESG, and natural capital leveraging our capabilities from the UK. In addition, Aither's work for international financial institutions and non-governmental organisations (NGOs) increased the breadth of capabilities we offer internationally.

Ricardo's continued investment in environmental services aligns with the significant global demand to address climate change and deliver more ambitious action on decarbonisation. Both acquisitions – which were a good strategic fit to enhance our sector capabilities and provide scale and momentum within Australia – have provided Ricardo with the opportunity to grow both high-value advisory and implementation capabilities across the water sector. In addition, we have already been able to leverage their services for clients' needs outside of Australia.

SUSTAINABILITY – ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG)

Sustainability is at the heart of our DNA: from the solutions we deliver to the actions we take in our own ESG commitments.

We continually strive to be climate leaders: demonstrating responsible business operations, results and data transparency to our internal stakeholders. In doing this, our goal is to be trusted and credible guides to help our clients solve their most complex ESG challenges.

ACHIEVEMENTS IN FY 2022/23

2024 OBJECTIVES

ENVIRONMENTAL

Our key focus is on enabling our clients to solve complex challenges towards reducing the greenhouse gas emissions that will support the global energy transition.

Focus areas

- How we are helping clients to combat climate change
- Our journey to net zero
- Making resource efficiencies: energy, water and waste
- Air pollution reduction, elimination or mitigation

- Reduced greenhouse gas emissions
- Deployment of global greenhouse gas data capture tool
- Meeting or beating our Science Based Targets initiative (SBTi) trajectory
- Maximising renewable energy percentage while reducing overall consumption

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- Plan ESG related targets for senior employees/Directors linked to incentives
- Achieve Scope 3 CO_2 reductions through a focus on our production supply chain
- Achieve increased compliance on sustainable procurement

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SOCIAL

We focus on our people, the social value we contribute to our communities, our clients and ensure we make responsible decisions through our wider supply chain.

Focus areas

- Culture and values
- Safety and wellbeing
- Employment and engagement
- Diversity, equity and inclusion
- Talent development and attraction
- Employees in the community

- Deploy the charitable activity plan across all locations worldwide
- Embedding of the values through engagement campaigns and in recognition programmes
- Across the Ricardo Group in the last 12 months 35% of our new joiners have been female

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- Target charities in each global location (USA, UK, Europe, Australia, Asia) that are focused on science, technology, engineering and maths (STEM) related activities to partner with and support distribution of £250,000 funding through voluntary hours, charitable funds raised matching or direct sponsorship

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GOVERNANCE

Our governance structure starts with the Board and touches every level through every location – both for deployment of strategy and intent and to receive feedback and input.

Focus areas

- Governance structure
- Sustainable procurement
- Modern slavery
- Policies
- Quality, health, safety and environment

- Modern slavery and sustainable procurement assessments completed

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- Target of two Responsible Business Committee meetings with full Board engagement and target 10 ESG Forum meetings with executive Management
- Achievement of ISO 50001 for transparency in energy efficiency planning

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ENVIRONMENTAL

We have achieved much on our environmental agenda and we are on track to deliver our FY 2030/31 SBTi targets. Increase in Scope 3 emissions directly related to increased production activity and related revenues, which will reduce in later years. We are now able to target reduction in waste to landfill and hazardous waste reduction. A new software platform increases the quality of measures.

HIGHLIGHTS

Increasing amount of revenue related to climate change, environmental benefit, and safety – now 77%

91% of electricity used is renewable

Water usage reduced by 13%

Scope 1 + Scope 2 less than 2% of greenhouse gas emissions

HOW WE ARE HELPING CLIENTS TO COMBAT CLIMATE CHANGE

Ricardo is in a unique position of offering solutions to carbon reduction and technical expertise, as well as being at the intersection of science, technology, regulation and safe implementation. Through our extensive product and project work, we have helped many public and private sector clients, and earned accolades in the process. Ricardo delivers many positive environmental outcomes because of the work we undertake. These include:

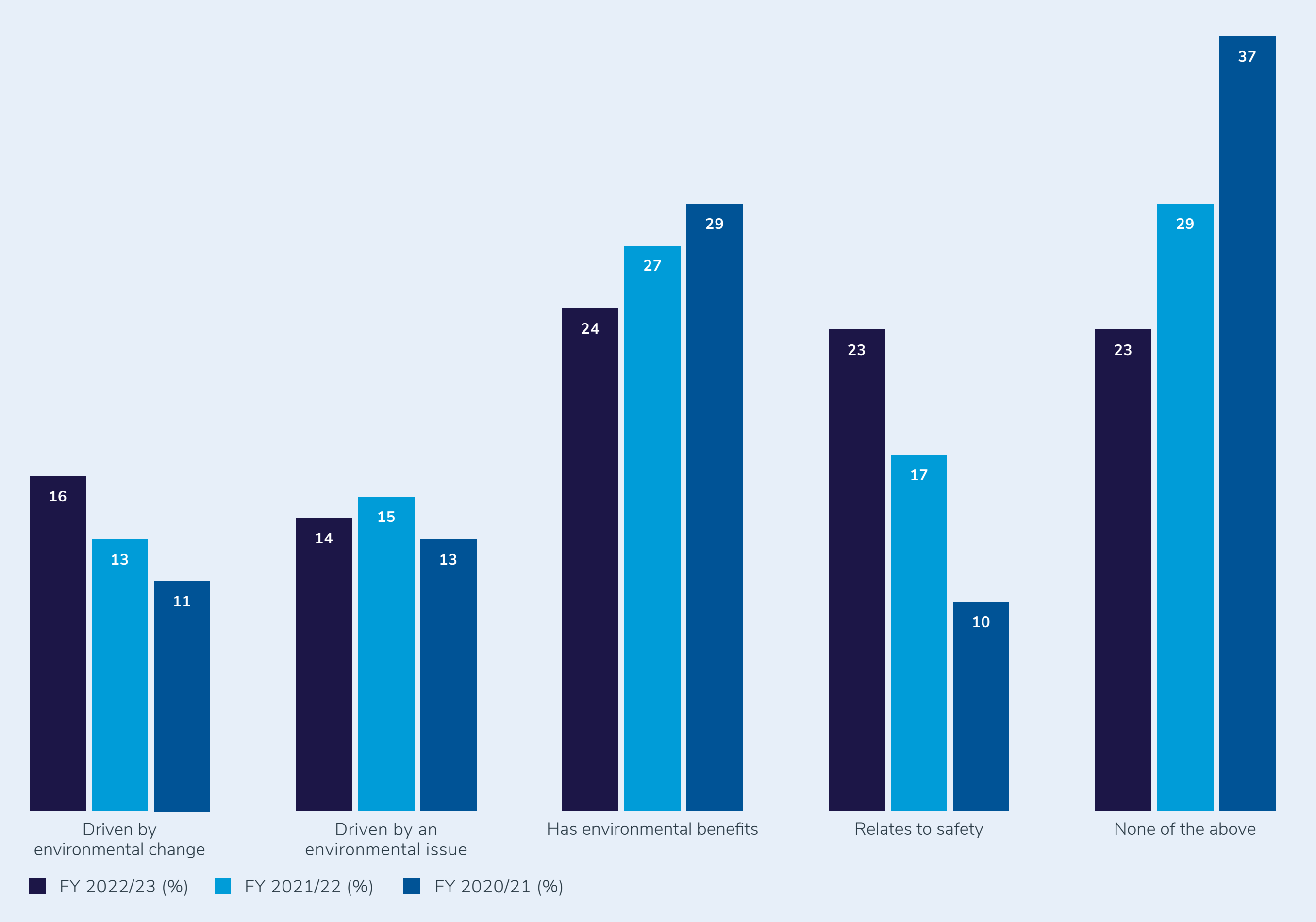
- Ricardo and client-funded engineering projects to develop low-emission and high-efficiency technologies for incorporation into global product lines
- Digitalisation of products and services: to drive technical innovation, and enable Ricardo and its stakeholders to reduce overall emissions during design, development and deployment
- Decarbonising transportation: Advising clients on decarbonisation of operations or products; electrification and propulsion systems to make their consumer products more efficient; and developing mobility solutions with reduced life cycle greenhouse gas (GHG) emissions, are at the heart of Ricardo's strategy
- Environmental consultancy which includes:
  - Excellence in thought leadership around economic, societal and environmental interactions
  - Extensive understanding of the climate change challenges facing organisations, including scarcity of natural resources, strategic sustainability and energy management
  - Deep understanding of policy drivers, environmental strategy and economics – providing insight and project delivery for business and industry
  - Modelling and data management to identify and realise value for organisations

These products and services will have an impact on future levels of emissions, waste, energy usage, water consumption and noise across many of the markets we serve. The cumulative benefits of the projects we complete each year save many multiples of our operational carbon footprint over the service life of the products we engineer and the services we provide to our clients.

UN Sustainable Development Goal	Progress on the goals
3 GOOD HEALTH AND WELL-BEING Ensure healthy lives and promote well-being for all at all ages	• Promotion of monthly global wellbeing themes • Introduction of global Employee Assistance Programme service to every country or business unit • Creation of a global wellbeing strategy • KPIs/tracker based on CIPD best practice to audit our current wellbeing offerings
6 CLEAN WATER AND SANITATION Ensure availability and sustainable management of water and sanitation for all	• The impacts of climate change and growth in population continue to put pressure on water resources. We have been gathering ecological data and conducting environmental assessments to help identify options that will meet the needs of the population.
7 AFFORDABLE AND CLEAN ENERGY Ensure access to affordable, reliable, sustainable, and modern energy for all	• Ricardo is supporting the Regulatory Authority of Bermuda in its ambition to facilitate the deployment of offshore wind • Ricardo is currently installing a carbon negative combined heat and power demonstrator plant in the south of England. It will showcase climate repairing technology to reduce greenhouse gas emissions and demonstrate effective community-scale clean energy generation
11 SUSTAINABLE CITIES AND COMMUNITIES Make cities and human settlements inclusive, safe, resilient, and sustainable	• Ricardo is the Independent Safety Assessor to bring experience of constructing climate systems in Dubai, Doha, Abu Dhabi. We perform audits of safety plans, processes, documentation including design, manufacture, installation, testing and trial operations • In 2018, 36 out of 50 most polluted cities in the European Union (EU) were in Poland. The country's capital, Warsaw, is one of the most polluted cities – with exposure to air pollution having a health-related cost to society of an estimated 4.2bn euros every year. Ricardo is applying its world-leading expertise in air quality modelling to advise the City of Warsaw in its ambition to introduce a Low Emission Zone, funded through the Clean Air Fund's Breathe Warsaw programme
12 RESPONSIBLE CONSUMPTION AND PRODUCTION Ensure sustainable consumption and production patterns	• Building on its seminal vehicle life cycle assessment study for the European Commission, Ricardo is now working with consortium partners on a European Union-funded project to develop the definitive European standard for life cycle assessment for zero emission vehicles and batteries • Ricardo has developed a bespoke life cycle assessment (LCA) tool developed by us for chemical manufacturer Croda to understand the environmental impact of its products
13 CLIMATE ACTION Take urgent action to combat climate change and its impacts	• Helping the European Commission with its 2050 objectives – European Green Deal – to achieve 90% reduction in emissions from transport and aviation • Building on its international expertise in climate adaptation, Ricardo is delivering adaptation planning and resilience support to Europe's regions and local authorities. Ricardo is leading the EU Mission Implementation Platform for Adaptation to Climate Change (MIP4Adapt), providing support to the European Commission and everyone delivering the EU Mission on Adaptation to Climate Change • ICOMIA commissioned us to identify suitable propulsion technologies for marine leisure with the aim to reduce and or neutralise the footprint from fossil fuel
14 LIFE BELOW WATER Conserve and sustainably use the oceans, seas, and marine resources for sustainable development	• The release of nutrients into the aquatic environment can have a negative effect on the ecology of our rivers and the marine environment. We have worked with Natural England to develop tools that will help local planning authorities ensure we mitigate the nutrient inputs of future developments and protect designated areas.
15 LIFE ON LAND Protect, restore, promote sustainable use of ecosystems, forests, combat desertification, halt, reverse land degradation, and bio-diversity loss.	• We have been working with England's water resources conducting environmental assessments to establish ways to protect the aquatic and terrestrial environment.

Climate change and environmental revenue

Ricardo's revenue streams have been analysed to assess how strongly they are driven by climate change and the environment. In addition to the climate change/environmental impact, we also categorise the revenue relating to safety as this has societal benefits.



Our strategy is to focus on high revenue, high margin and low capital intensity services underpinned by the environmental and energy transition megatrends as shown on **page 18**. Part of this strategy is also to ensure disciplined execution across the Group, and we have established eight workstreams to support this delivery, one of which is capital allocation. Within this capital allocation workstream we are prioritising investment in R&D and capital expenditure to support further growth in services with a strong connection to climate change. The trends in data show we are following the strategy, with the growth in safety driven by the increase in ABS kit volumes in RDI. In 2023, 57% of our R&D spend (39% in 2022), net of government grants, was on areas with a strong connection to climate change or the environment.

In addition, we have a clear focus to use M&A as an accelerator to support our portfolio transition to environmental and energy transition solutions.

An example of this is the acquisition of Aither that establishes greater environmental capability in Australia, particularly in the water sector. As a result of the clear strategy to prioritise capital allocation and M&A to environmental and energy transition solutions, we expect the revenue strongly driven by climate change to increase over the coming few years. This outcome is reflected in the risk/opportunity analysis discussed in the TCFD section analysis on pages **84**–**97** indicating environmental and climate change provides substantial upside opportunity for Ricardo.

CASE STUDY

SUPPORTING CLIENTS TO ACHIEVE THEIR CLIMATE GOALS

Ricardo's sustainability experts have been working with a leading home improvements retail company to reduce its supply chain carbon emissions and help it achieve its ambition of being emissions net positive by 2050.

The retail organisation has set ambitious climate goals, aiming to reduce carbon emissions in their upstream and downstream supply chain both from the goods and services they purchase and in the use of their products once sold.

As part of the project, Ricardo's experts have delivered a product emissions inventory to identify emissions 'hotspots' which will become priority areas for action as well as life cycle analysis of products to inform the best ways to reduce carbon through product design, identifying both quick wins and longer-term strategies.

MANAGING OUR ENVIRONMENTAL FOOTPRINT

We are committed to managing our environmental footprint and reducing it to a minimum, as well as ensuring that our services have a positive impact on society and the communities where we are based. The Board's commitment to this is embodied in our environmental policy (available internally and via our website) which covers:

- Relevant UN Sustainable Development Goals
- Delivering services that enable strategic improvements for our clients and the end-users of their products and services
- The desire to be responsible members of the local communities in which Ricardo operates

The impact of our operations, particularly testing and manufacturing, are the largest contributors to our operational carbon footprint and greenhouse gas (GHG) emissions (Scope 1 and 2). Our testing, for client- and research-funded programmes, primarily uses fuel and electrical energy; in addition, there is energy required for heating some of our sites. Our manufacturing energy use is predominantly power for machine tools and assembly facilities and gas used in our heat treatment plant. Our Scope 2 use is mainly electricity.

We comply with the Companies Act 2006 (Strategic and Directors' Report) Regulations 2013 on GHG emissions and have stated our comparative history in our strategic performance on pages **99**–**101**. We comply with Streamlined Energy and Carbon Reporting via our disclosures under the Greenhouse Gas Protocol and commenting on all elements of our net zero strategy. As this requires the inclusion of fuels used in engine and vehicle testing, year-on-year variability can be expected due to the mix in types of tests and engine size.

Many of Ricardo's clients require certification for their key suppliers in respect of the environmental management system standard, ISO 14001. Our certification directly covers 39 sites and 95% of our site-based employees. Our remaining colleagues and sites are managed via the ISO 14001 processes. The achievement of the standard is defined by appropriate policies, processes and procedures as part of the management system in each business unit. Many of these are closely linked to both quality and health and safety procedures.

Other environmental impacts arise from waste streams, which are monitored to identify potential improvement opportunities and to ensure legislative compliance. Higher-risk areas of our facilities, such as fuel storage and distribution systems, have containment and inspection regimes that meet local legislative requirements. We target zero pollution incidents and have had none this year.

The suite of ISO certifications and the supporting internal and external audit programmes are used to check policy effectiveness, share best practice, identify improvement opportunities and ensure compliance. Staff training in health and safety and environmental matters is a priority and is reviewed annually as part of normal appraisal processes. We have not had any enforcement action, fines or penalties this year.

OUR JOURNEY TO NET ZERO

Ricardo already measures and discloses elements of its impact on the environment, by greenhouse gas emissions inventory reporting, and we are into our second year including Scope 3 for FY 2022/23. We have refined some of the methodologies for data collection and verification and have invested in a GHG and other ESG measurement platform – FigBytes **www.FigBytes.com** This platform has allowed Ricardo to collect data across distributed global sites more frequently and convert the data into metrics, comparisons and a call to action for our worldwide staff. The transparency that comes with the system has provided an easy route to verify the data, and provided direct visibility of opportunities for action or data that requires review.

SBTi Targets

We have stated our commitment and remain committed to achieving the following SBTi targets:

- Reduce Scope 1 and 2 emissions 46.2% by FY 2030/31. Target aligned to 1.5°C average global temperature rise
- Increase annual sourcing of renewable electricity from 74% in FY 2019/20 to 90% by FY 2025/26
- Reduce absolute Scope 3 emissions 27.5% by FY 2030/31. Target aligned to well below 2°C temperature rise
- Sustainable procurement continues to be a core focus area both from compliance with our principles, and policies and to ensure compliance with the current and emerging legislation related to supply chain due diligence (further details on page 82)

Ricardo has adopted the SBTi net zero standard to set both near- and long-term science-based targets across all scopes. Near-term targets cover immediate emissions reductions for the next five to ten years, while long-term science-based targets determine the total level of decarbonisation by 2050 or before.

Our current SBTi target is set on the baseline year of FY 2019/2020. However, due to the advancements made in GHG reporting for FY 2023/24, and business developments during this period, we are reviewing an update to this baseline year, and setting a net zero SBTi target. As relevant, any updates will be communicated during FY 2023/24.

Through the standard, the SBTi clarifies that science-based net zero requires Ricardo to achieve deep decarbonisation of 90–95% before 2050. After which time, Ricardo will neutralise any limited residual emissions that are not yet possible to eliminate, through carbon removals, which will not exceed 5–10% of Ricardo's baseline emissions.

Setting out our carbon reduction plan

The specific progress and achievements towards our carbon reduction plan are set out below and embedded in our business planning processes:

Net zero objective:
Maximising use of renewable energy sourcing

Achievements in FY 2022/23
- 91% across the Group – this is an improvement from 74% in FY 2019/20
- There was no planned reduction in percentage of green energy supplied to sites, some small UK based sites moved to renewable tariffs during the year

Net zero objective:
Reducing the size of our properties as more flexible office working is implemented

Achievements in FY 2022/23
- Continued office space consolidation and downsizing in all regions
- Rolling programme details properties acquired from acquisitions, break points in leases and hybrid working in some business units

Overall status

Achieved

- We have set an interim target of 90% for FY 2025/26
- Progress on remaining sites requires renewable energy to be available in particular countries where we operate or agreement from specific property landlords where renewable energy is not currently used

Overall status

On track

- Delivering space reduction in Troy and subletting space to our former Software colleagues in Shoreham and Prague
- Where possible office moves are linked to moving to fully renewable electricity tariffs
- At our Shoreham Technical Centre we are planning to reduce the number of test facilities in active use

Net zero objective:
Maximising 'digital-first' to optimise our travel needs and ways of working

Achievements in FY 2022/23
We have balanced the need to travel, as we engage with new and existing clients with the digital-first approach, for example:

- Using virtual reality and augmented reality to design factory plant equipment and vehicles

Overall status

On track

- We saw an increase in travel, but not to pre-COVID-19 levels
- We encourage digital communications or rail instead of air travel where door-to-door times are better or similar
- Where long-haul travel is required we encourage the use of the most modern fuel-efficient aircraft wherever they are available on a route

Net zero objective:
Implementing energy efficiency improvements focusing on our high energy-use sites

Achievements in FY 2022/23
- 35% reduction in Scope 1 emissions due to the change in demand for engine testing
- 16% reduction in Scope 2 location-based emissions due to more efficient use of properties and reduction in number of test facilities in active use
- Increasing the use of submetering at our Shoreham and Midlands Technical Centres to provide greater insight into energy use
- Introducing a central focus on investment planning for FY 2023/24 onwards via the capital allocation workstream

Overall status

On track

- Focus on energy reduction with good financial return to complement the maximisation of renewable energy procurement
- The ESG forum will be the focus for driving and monitoring change
- Implementation of ISO 50001 has commenced

CASE STUDY

WORKING WITH CHARITIES TO IMPROVE PUBLIC HEALTH

Over the past 12 months, Ricardo has collaborated with Impact on Urban Health and the Clean Air Fund. Impact on Urban Health is a charity committed to achieving health equity by focusing on a few complex health issues that disproportionately impact people living in cities: children's health and food, multiple long-term conditions, the health effects of air pollution, and children's mental health.

The Clean Air Fund is a global philanthropic organisation working with governments, funders, business and campaigners to create a future where everyone breathes clean air. They fund and partner with organisations that promote air quality data, build public demand for clean air and drive policy change.

UNDERSTANDING OUR OWN AIR POLLUTION FOOTPRINT

Air pollution
Our Clean Energy and Environmental Solutions business unit initiated The Air Pollution Footprint Partnership, which is a scheme that helps organisations to understand and reduce their air pollution emissions. Participation can improve business efficiency, improve corporate ESG and appeal to environmentally conscious investors and consumers. Our partners are the Clean Air Fund and Impact on Urban Health. On Thursday 15 June 2023, Clean Air Day, the scheme launched a reporting toolkit that allows organisations to estimate their air pollution emissions, look at ways to reduce their emissions, and share their experience with like-minded businesses.

Ricardo itself was one of a number of organisations from different sectors which participated in the Air Pollution Footprint pilot scheme to user test the air pollution emission reporting tools, guidance and developed materials in a working environment, and provide feedback and suggestions for improvements. This was to help organisations with key information needed to estimate and report on their corporate air pollutant emissions, alongside standard greenhouse gas emissions. Ricardo plans to use the tools developed by the scheme to report on its own emissions at its largest site in the next financial year.

MAKING RESOURCE EFFICIENCIES: ENERGY, WATER AND WASTE

Resource efficiency

As the business has recovered manufacturing volumes in Performance Products after COVID-19 and our ABS volumes increased, we have seen our Scope 3 categories 1, 11 and 12 increase significantly.

As a result of this our Scope 1 and Scope 2 emissions are now less than 2% of our emissions on an SBTi basis.

Energy reduction

We continue to implement energy efficiency improvements, focusing on our high energy-use sites. We major on energy reduction with good financial return to complement the maximisation of renewable energy procurement.

The largest reduction in electricity use came from Shoreham Technical Centre through change in demand for testing and mothballing some buildings.

We have commenced the process to achieve ISO 50001 energy management for the Group towards the end of 2023; this will cover all but the smallest sites. It will also provide the evidence for Energy Savings Ops Scheme (ESOS) compliance in the UK.

	Renewable electricity-percentage used per financial year	Non-renewable electricity percentage used per financial year	Electricity used per employee for the financial year kWh
2022/23	**91%**	**9%**	**4,922**
2021/22	89%	11%	4,923
2020/21	91%	9%	5,412
2019/20	74%	26%	5,721

Water management

We have focused on water use reduction in our industrial processes, test facilities and consumption in site bathrooms and kitchens for maximum efficiency.

Water usage

Water usage on large sites m^3	**FY 2022/23**	FY 2021/22	FY 2020/21	FY 2019/20 Baseline
Volume	**34,167**	39,265	41.276	55,506
Volume/employee	**12.2**	14.2	14.2	18.2

Waste management

We are seeking to understand our waste, and the carbon dioxide output from the waste – which links to our water use – and how we can reduce both. We have full transparency of where waste goes: disposed of safely, reuse, avoiding landfill, hazardous substances removed and disposed of as per environmental legislations.

We have also enhanced our metal recycling. All test product transmissions, engines where possible, plus machine scrap is 100% recycled. By segregating scrap by different metals, pure scrap is taken by specialist metal brokers – all to maximise value back to Ricardo and maximise the value of the waste stream by this careful segregation.

Waste stream	Sum of quantity kg	Percentage of total waste	kg per employee
Electronic waste	5,215	1%	2
Food waste to recycling (composting or anaerobic digestion)	17,086	2%	6
General waste – to a mix of recycling and land fill	529,483	57%	189
Hazardous waste	381,005	41%	136
Grand Total	**932,789**		**333**
Amount of waste recycled	555,714	60%	198
Amount of waste converted to energy (EfW)	204,570	22%	73

Hazardous waste largely comes from our engine and vehicle testing and UK-based manufacturing activities. It included waste steams such as sludge and waste oil sent to recycling,

It is assumed that 18% (the remainder) of waste goes to landfill and we will seek to reduce that in time, where we are able to influence landlords on smaller sites and improve processes on our larger sites.

SOCIAL

Culture and values

- Embedding of the values through inaugural Values Week and making values a major theme at pan-Ricardo Growing Together Leadership Conference and Leading Lights Awards ceremony, plus via formal and informal recognition programmes and processes

Employment and engagement

- Our annual engagement score was: 3.9/5, tracking consistently with last year's figures

Diversity, equity and inclusion

- Across the Ricardo Group in the last 12 months 35% of our new joiners have been female
- In our current workforce, we have 28% females
- In our executive management team we will have a female Chief Financial Officer, and a female General Counsel joining in FY 2023/24, making the overall gender mix at 40%

Talent development

- Creating greater line of sight and alignment in total reward structures including extending our population eligible for the long-term incentive scheme; deployment of another long-term incentive scheme, even deeper into the organisation

CULTURE AND VALUES

Growing together

Throughout the financial year, we have continued to focus on, and successfully achieve, greater and closer alignment across the business, feeling the benefit of improved collaboration and more efficient, effective ways of working. This can be evidenced by the amalgamation of our Rail and Energy and Environment business units into the newly formed Clean Energy and Environmental Solutions team, and the removal of traditional regional divisions to form the Global Automotive and Industrial team. Perhaps the tangible embodiment of our growing together was our inaugural Group global leadership conference, which brought together all the principal members of our leadership community from across the business to forge connections, build communities and identify opportunities to collaborate to win work, share knowledge and drive more efficient ways of working.

OUR VALUES

In 2022, we launched the new Ricardo values of: Create Together, Be Innovative, Aim High and Be Mindful.

To us, our values are not just words but how we fulfill our day-to-day working lives. To reflect this and to celebrate our culture and the achievements of our colleagues who truly live the values day in and day out, we evolved our existing formal awards programme and introduced a new and informal employee recognition platform. In the summer of 2022, an information nomination platform on our intranet was created to enable anyone in the Company to spotlight a colleague who is living the values and offer their thanks to them.

The CEO Monthly Awards had previously formally recognised the achievements of colleagues who were delivering exceptional and outstanding results against four key growth pillars. In the autumn of 2022, the criteria for the awards nominations were expanded to include behaviour reflecting one or more corporate values. Each of the monthly winners, together with individuals nominated specifically for living the values, were the stars of the inaugural Leading Lights awards ceremony in October 2022.

SEE OUR FULL VALUES ON PAGES 16–17

"I was delighted to win Young Scientist/Engineer of the Year at the Leading Lights Awards 2022. I am honoured to represent the excellent work done not only by my water sector colleagues in Australia but by Ricardo colleagues all around the world. Since Inside Infrastructure was acquired by Ricardo, I have welcomed the opportunity to meet and work with new colleagues across the Group: growing my technical network, ensuring the expertise of the Australian team can be applied more widely to support clients globally, but also expanding on Ricardo's capabilities within the Australian market, particularly around knowledge sharing activities and grow sustainability, ESG, net zero capabilities (and hopefully more)."

DR ADAM TOMLINSON
STRATEGIC PROGRAMME MANAGER
CLEAN ENERGY AND ENVIRONMENTAL SOLUTIONS

SAFETY AND WELLBEING

The health, safety and welfare of employees and stakeholders is central to everything we do at Ricardo. Our culture strives for zero harm. We support training in health and safety internal audits and inspections, and we are certified to ISO 45001 in our technical centres and larger offices in the US, the UK, the Netherlands, Italy, the Czech Republic and China. Our certification directly covers 39 sites and 95% of our site-based employees. Our remaining colleagues and sites are managed via the ISO 45001 process. Our health and safety policies are available through our intranet and to the public through our website. Risk assessment is an integral part of our processes, both on a project basis for specific hazard management and more generally in the way we manage risk on our sites and in travel.

Reportable accidents

We recognise the level of reportable accidents as a measure of performance in health and safety. The overall level is low and shows the continued success of our health and safety. We continue to target reducing accidents. All accidents are investigated and reported to business unit management and employee consultation forums.

Reportable accidents	Number
2022/23	4
2021/22	1
2020/21	1
2019/20	1

Based on current definitions of the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR)

Each accident was reviewed and no patterns between accidents were identified. None were classified as a major injury. We have not had any enforcement fines or penalties this year.

39 sites

Our certification directly covers 39 sites and 95% of our site-based employees

Promoting employee wellbeing

Our focus throughout the financial year has been on proactively promoting and enabling employee wellbeing. We have created a pan-Ricardo approach to wellbeing, with monthly wellbeing promotions to all of our teams. This includes a dedicated themed week of wellbeing activities. As a company, we are advocates of the benefits of medical health first aiders, and we intend to extend the rollout of this provision across our workplaces globally. Additionally, our Employee Assistance Programme is now in place for every employee across the Ricardo Group, so all team members have access to employee assistance wherever they are located in our global organisation.

EMPLOYEE ENGAGEMENT

As a purpose-led organisation, we have continued to make progress in enabling better knowledge sharing and collaboration through the expansion and development of more structured and planned internal communications and engagement activities at all levels of the business – such as consistent use of central communications platforms, monthly senior leadership team virtual meetings and a CEO all-employee email, and regular town hall meetings.

Our overall employee engagement has continued to track consistently with the previous financial year.

Our employee engagement in numbers at a glance:

- Overall response rate: 63%
- Overall score: 3.9/5
- Top three areas where we are performing well:
  - We feel we have a colleague who cares about us as a person SCORE: 4.25/5
  - Our colleagues are committed to doing quality work SCORE: 4.23/5
  - Our teams know what is expected of them at work SCORE: 4.18/5

Pan-Ricardo actions were communicated to our teams via global town hall meetings, and then local feedback was given and local action plans developed. Regular feedback on progress against the plans – both Group and local – will be shared throughout FY 2023/24.

DIVERSITY, EQUITY AND INCLUSION

Addressing gender diversity

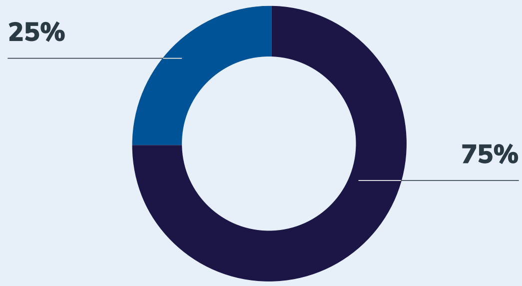
We are continuously shifting the balance and changing the gender profile of the organisation. Overall across the Ricardo Group in the last 12 months 35% of our new joiners have been female whereas in our current workforce overall, we have 28% females. This trend is further amplified in our Executive Management Team where we will have a female Chief Financial Officer, and a female General Counsel joining our organisation in FY 2023/24. This adds to the three existing females on our Executive Management Team, making our overall gender mix at 40% going forwards. Within our senior leadership team, 31% of the constituents are female.

Reducing our gender pay gap

For those areas of our business about which we have been reporting on for the last six reporting cycles, we see positive trends in the form of a generally declining gender pay gap at both the median and the mean, with the median gap for each Group company required to report reducing between 5% and 20% year on year. The median is the more statistically reliable of the two measures, and our preferred way of reviewing our progress as it is less susceptible to outliers. Our figures either sit well beneath or on par with the national median of 14.9% in favour of males, according to the Office for National Statistics in 2022.

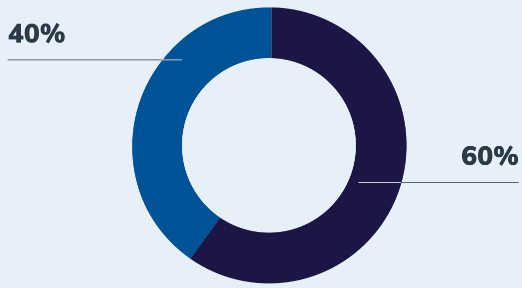
DIVERSITY METRICS

Board members
Excludes Company Secretary



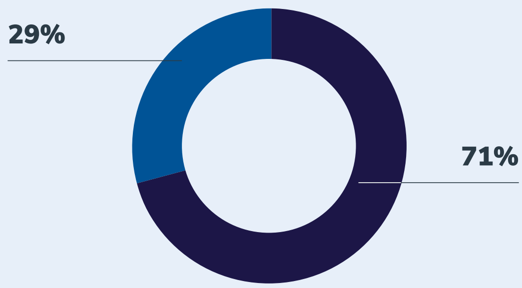
Male	6
Female	2
Total	**8**

Executive Committee, including Company Secretary and excluding Board members



Male	6
Female	4
Total	**10**

All employees
Excludes contractors



Male	1,945
Female	778
Total	**2,723**

OUR LONDON SOCIAL COMMITTEE: CASE STUDY OF PEOPLE ENGAGEMENT IN ACTION

Fostering a thriving community and inclusive culture: the London social committee

The Ricardo London office's social committee started out informally in 2021 in response to the lived experiences of working during the pandemic. The overwhelming majority of people based in the London and Madrid offices are early careers professionals and during periods of lockdown, individuals were often living and working in one room in their shared house, away from family and friends, and experiencing feelings of isolation and separation from work colleagues. Once lockdown restrictions were lifted, there was a real need to bring people together and build a strong working culture, and a desire to focus that strong culture on improving lives in local communities through volunteering.

Supported with funding by the senior leadership team in 2022, dependent on consistent attendance at events in both offices, each month the social committee organises one to two events determined by the outcomes of regular surveys among the office teams. The committee will be supportive of any activities, so long as they are inclusive, and to date, the teams have taken part in bowling, sports, cinema-going and even creative arts – a recent art evening was attended by a least a third of people who do not usually attend office social gatherings.

Ella Wingard, Chair of the social committee said: "So many of our colleagues move to London or Madrid for their roles with Ricardo, and consequently, they do not have a solid support network of family and friends to sustain them through good times and bad. As a consequence, we work hard to make the offices inclusive. Every new office member is added to the London Office Lunch Chat so that they can start to make friends and share their hobbies and interests in a safe and supportive environment."

As well as supporting each other, the social committee is actively reaching out to improve lives in the wider community. During the past year, London office team members have undertaken litter picking along the banks of the River Thames, as part of a wider initiative led by the Port of London Authority to pick up, document and then use the insight to prevent similar litter being left in the future. The team in London also makes monthly donations to the North Paddington food bank and regularly goes into local schools and youth groups to talk about science, technology, engineering and maths careers, and even re-enact a COP event.

The social committee has grown and grown, now hosting events for as many as 50 people each month, with a thriving culture defined by highly engaged and supportive team members. Emma Gresswell, Deputy Chair of the social committee said: "Our activities help to break down barriers and give each one of us confidence that our voice can be heard in our community."

TALENT DEVELOPMENT AND ATTRACTION

Ricardo is seen as an employer of choice and has a strong employer brand. The new Ricardo corporate website, which was launched at the end of January 2023, has provided an invaluable global platform to share the Ricardo story in order to attract new talent – with analytics showing that the careers section consistently is the most visited area of the site. The conversion rate of people responding to proactive outreach from Ricardo regarding job opportunities is currently running at close to 30% which benchmarks us well against many other organisations.

We understand the value that our technical communities place on learning and development. We seek to match our people's technical interests and technical development areas with opportunities to provide work-based learning primarily through the delivery of our consulting programmes. We continue to recruit science, technology, engineering and maths (STEM) graduates into the business, who are attracted to the opportunities of delivering meaningful work, learning from like-minded, capable technical professionals, and developing their career at Ricardo.

TESTIMONIALS

"I joined Ricardo as an automotive engineering graduate in 2021. Ricardo has supported and enabled my next graduate scheme rotation into the energy and environment team so I can achieve my long-term desire to combine engineering and my passion for environmental issues, sustainability and renewable energy."

ARWYN MUNDAY
GRADUATE ENGINEER

"I am doing a level 3 apprenticeship in business administration, working in the site services team. I hope to further pursue my career at Ricardo and do a higher-level apprenticeship. Ricardo really values apprentices like me – I feel very supported here."

NEILA AYDARUS
BUSINESS ADMINISTRATION APPRENTICE

> Having spent over a decade at Ricardo specialising in the internal combustion engine, I have now switched to hydrogen fuel cell technology and development. This transition was enabled by the ever-present can-do attitude within Ricardo, and opportunities to work on a range of pioneering projects with a great team."

ROSCOE SELLERS
CHIEF ENGINEER

> From the Netherlands to Canada, my journey started in June. I got the opportunity to develop myself, learn new skills, try another field of work and see how I adapt myself in a new country and new working environment. I have some time to go, but I have already learned a lot, am enjoying myself and am really looking forward to the coming 10 months."

INGMAR WESTERHOF
CONSULTANT/ASSESSOR

EMPLOYEES IN THE COMMUNITY

Our commitment to social value is embedded through a centrally funded social value strategy launched in 2022, action plan and a dedicated social value management core team, supported by champions currently just in UK offices, but with plans to expand globally. Our social value strategy consists of three priority areas which enable us to deliver clear goals and outcomes across the organisation: skills and opportunities – to inspire the next generation; social enterprise – to share our professional expertise; and community wellbeing – to contribute to the environment and tackle deprivation or inequality.

Intervention areas under this strategy include sharing our professional expertise through skills-based volunteering to not-for-profit groups; and encouraging wellbeing of workforces and local communities through improving natural environments and green spaces for example through litter picking along the River Thames in London, planting nearly 3,000 trees in Glasgow and Reading, and creating a community garden in Manchester.

Focusing on STEM

As a company of engineers, scientists and technologists, Ricardo has always been a strong supporter of STEM and related activities within community and charity work. We actively managed our Ricardo Group charity and volunteering programme which provides all Ricardo employees with voluntary hours per year to support selected STEM partner organisations. For the initial phase of the programme, we are focusing on the UK and have partnered with The British Science Association (BSA), Women's Engineering Society (WES), Engineering Development Trust (EDT) and In2ScienceUK. We intend to extend the programme into the US and other regions during FY 2023/24. We have refreshed our charities and community engagement policy: **www.ricardo.com/media/qvdnohqu/engaging-and-supporting-local-communities.pdf**

A key element of our community engagement is inspiring the future green workforce and encouraging social mobility to overcome disparity in the STEM sector. We are setting out to inspire the next generation of problem-solvers from all backgrounds into careers in the clean energy, environment and sustainability sector and support young people's knowledge of topical issues in the sector. In the last financial year, we have engaged with more than 20 schools and colleges through careers events, talks, workshops and work experience placements.

We have developed a number of interactive workshops within our sustainable transport and climate action planning and transparency teams, to connect topics learned in the classroom with real-time projects being delivered to clients. Our air quality team developed its existing links with the University of the West of England, to host MSc placements.

In Manchester, we are working with State Talking to connect Manchester state schools with relatable role models. We are looking at other ways to support social mobility in the UK through virtual mentorship from our people. This mentoring opportunity will enable undergraduates to receive one-to-one mentoring to help prepare for the transition from being a student into the world of work.

Charitable donations

Financial contributions to charities in the financial year were £16,069 (FY 2021/22: £10,469). There was no dominant donation.

We will measure the success of our partnerships, the number of people we support, our social value impact and report on this next year. The Ricardo Board has set aside a charity budget to match funds raised by employees for outstanding achievements, and we will celebrate these individual successes across the Ricardo Group, both informally and formally, through the introduction of awards for volunteers.

CASE STUDY

SUPPORTING THE GREEN SCHOOLS PROJECT

We have shared our professional expertise through skills-based volunteering to the Green Schools Project to improve its carbon calculator tool which estimates the total greenhouse gas emissions arising from schools. This tool is used to benchmark schools against comparable counterparts, and acts as the starting point for the Green Schools Project's Zero Carbon Schools programme, that educates pupils on sustainability and helps them to make change at school and at home.

Henry Greenwood, the CEO of the Green Schools Project, commented: "Ricardo's help could be a 'game changer' considering that our hope that our carbon calculator will be the first such tool to reach the wider UK market and become the Department for Education's chosen platform for schools to assess their greenhouse gas emissions. Ricardo's expertise was welcome in giving us the confidence to distribute our programme more widely, while the move to online data collection can allow us to scale faster and increase the uptake of our programme nationwide."

GOVERNANCE

Governance framework enhanced

- Regular executive and non-executive engagement
- New Board committee established
- Policies reviewed, refreshed where appropriate and put on regular review cycle

Responsible Business Committee

- Terms of reference agreed and introduced, mandate defined and will be on the Board agenda two times a year
- Responsible Business Committee membership includes executive and non-executive Board members

Sustainable procurement:

- Process enhanced
- Supplier code of conduct refreshed
- Review of the emerging EU legislation: the Corporate Sustainability Reporting Directive and the Corporate Sustainability Due Diligence Directive– which reflect all elements of human rights – in all the territories where we operate

GOVERNANCE STRUCTURE

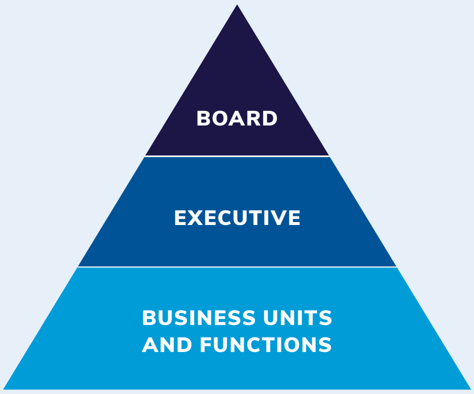
Growing together

The key elements of our ESG agenda are reviewed on a regular basis from the PLC Board level through the working teams and business units managing implementation and data collection and reporting every day. Wider aspects of corporate governance, including how we comply with the provisions of the UK Corporate Governance Code 2018, are described on page 118.

Our policies are reviewed on a regular basis or sooner if legislation dictates change. The key policies are in the public domain via our website and are referenced in this report.

Regular reviews of pending, developing and international regulations are undertaken to provide a three to five-year view on impending changes to reporting, disclosure or risk decision. This gives our stakeholders increased transparency regarding our risk decisions by early adoption of reporting standards, and we get opportunity to report our involvement publicly. We understand it, we know how to implement it and we are ideally placed to assist our clients. It reinforces the accountability and responsibility we all share, to ensure the highest standards are maintained across all Group activities.

The governance of ESG at Ricardo is through a three-layer system starting with the Board and progresses through the Company with broad deployment to capture the sites and locations that are occupied and managed by the business units. The hierarchy is described below:



Governance role	Remit
BOARD **Responsible Business Committee**	**Promoting the long-term ESG matters** • Environmental: Climate transition, strategy and impact • Social: Employees, communities and clients • Governance: Ethics, health and safety
EXECUTIVE COMMITTEE **ESG Forum**	**Promoting the long-term ESG matters** • Directs and steers activities including approval for investments • Directs activities and resources • Reviews and directs progress against metrics • Prepares report for RBC
BUSINESS UNITS **ESG Transformation Workstream**	**Promoting the long-term ESG matters** • Collects and measures energy, waste, water and utilities • Implements CAPEX expenditure • Drives quality, health safety and environmental (QHSE) activities • Drives charity and volunteering activities

Setting and aligning targets

As a values-led organisation, we truly believe in reducing those emissions under our control – Scopes 1 and 2 – and those through our operations: Scope 3. During FY 2022/23 a number of greenhouse gas related methodologies for linking compensation to GHG emissions were studied for implementation in FY 2023/24. The senior management of the Company will have an element of variable compensation, as part of a long-term incentive scheme, based on reducing GHG emissions. We have engaged with Scope 1 and 2 emissions where they are now less than 2% of our emissions, and now we are on the journey to reducing our Scope 3 emissions. In light of this, we have elected to embrace Scope 1, 2 and 3 so as to capture all elements of our business.

GHG intensity for incentive KPI will be derived using the numerator (sum of) Scopes 1, 2 and 3, (SBTi basis & Location Based) and denominator of employee headcount + production units (engines, transmissions & ABS kits) embracing consulting and manufacturing business streams.

For FY 2022/23, the baseline is 14.4 tCO_2e, (FY 2021/22: 15.7 tCO_2e). Target trajectory is declining intensity of 2.5% per annum.

SUSTAINABLE PROCUREMENT

Our supplier partnerships are built on integrity, transparency and being equally accountable and responsible for all activities throughout our operations. Maintaining our business relationships with our suppliers is imperative in supporting our objectives and delivery of quality performance and services. In 2020 we published our procurement policy, and this is reviewed annually with all other Group policies. During 2022 we launched our new supplier approval and due diligence process for both new and existing suppliers. As part of this process, we have increased monitoring and key performance indicators (KPI) measurements, with ongoing dialogue with our suppliers on performance and remediation within reasonable, agreed timescales. Where required, we cascade through the supply chain the Corporate Sustainability Reporting Directive (CSRD) requirements.

We achieved over 90% of supplier assessments by value. As a global consultancy a large percentage of our suppliers do not manufacture products, they provide business services. They are required to adhere to our business code of conduct as well as our supplier code of conduct, as applicable to their operations.

We expect all our employees and external stakeholders to respect individuals with dignity and to not breach this per our terms of business and code of conduct.

We have a range of related publicly-available policies, which can be viewed on our corporate website: **www.ricardo.com/en/corporate-governance/policies**

Examples include:
- Sustainable procurement policy
- Human rights policy
- Supplier code of conduct

These are linked to our internal policies and processes, including our: sustainable procurement process, supplier evaluation questionnaire, modern slavery risk review procedure, and sustainable procurement KPIs.

We require all new suppliers to complete a supplier questionnaire and to provide supporting evidence. We require information and details related to all core sustainable activities. Topics include, but are not limited to, waste and pollution, climate risks, carbon reduction targets, energy saving and renewables, working conditions, supply chain transparency, modern slavery due diligence. We also review supplier accreditation to relevant standards. It is an in-depth due diligence procedure for both new suppliers and existing suppliers to be approved and or remain a supplier providing they meet satisfactory standards. The finance and procurement teams conduct commercial checks for all suppliers, which include checks for any negative activity such as corruption, illegal business activities, ownership, structure, and finances.

Keeping our team up to date with supplier practices

Our business unit procurement teams receive training on the procedures, including modern slavery global legislation. This training has also been conducted for other team members and is ongoing. In addition to these sessions, training on ESG is also delivered to ensure everyone across the Group is aware of our objectives, goals, and delivery of positive performance, why it is important, what it means to Ricardo, and how we are perceived publicly. These sessions are led by our Group Head of Procurement and Group Head of Sustainability. We will start to conduct workshops for suppliers with a focus on those who manufacture as a priority, and deliver training on specific topics, where more support and guidance is needed.

OUR RATINGS AND ENGAGEMENTS

We proactively engage with investor rating agencies such as, but not limited to: ISS, CDP, Sustainalytics, and FTSE Russell. From Ecovadis, our Rail operating segment in the Netherlands received a platinum award, and Automotive and Industrial in the UK received a silver award in 2022. We await this year's updates.

Our GRI appendix can be found here: **www.ricardo.com/en/sustainability** We have set our appendix using the GRI Context Index with Reference. We have referenced the relevant disclosures to our business including those which are mandatory to GRI.

We continue to be a signatory of the United Nations Global Compact (UNGC), the world's largest corporate responsibility initiative, for companies committed to integrating 10 corporate responsibility principles in their business operations and strategies. Our Communication on Progress (COP) report will be submitted to the UNGC in October.

MODERN SLAVERY

We consider the risks of all forms of modern slavery throughout our global operations. Modern slavery legislation exists in Australia and the US which are two of the large operational regions for the Group.

Therefore, as part of our supplier procurement due diligence process, modern slavery risk assessments are a mandatory requirement for all suppliers, even if the threshold of the obligations do not legally impact a supplier's business. Risks are prevalent in all countries, and we sometimes consider a smaller business partner more at risk than those who are large corporate businesses.

Data from our KPIs gives us a good understanding of our suppliers' knowledge and experience. We can identify those who need additional training and support to help assess and mitigate their own risks: we will be conducting training sessions for our suppliers to continue to partner with us on this ongoing journey of complex due diligence. During this financial year we have conducted further materiality assessments, in particular our cleaning operative service providers, security staff and catering provider. We continue to engage with organisations such as the UNGC, third parties and NGO – Stop the Traffik to keep aware of wider issues and legislation that may impact Ricardo.

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Background and approach
Ricardo has been a supporter of the Task Force on Climate-related Disclosures (TCFD) since June 2020 which at the time was a leading voluntary practice to integrate into the annual filings and subsequently was selected as a TCFD case study for scenario analysis on the official TCFD website. As of April 2022, the UK Government now requires all large UK-registered companies and financial institutions to disclose climate-related financial information on a mandatory basis, using guidelines from the TCFD. A decision was made to update Ricardo's analysis to use publicly available scenarios to better align with the TCFD requirements.

This year Ricardo plc used its Clean Energy and Environmental Solutions business unit to refresh its climate risk and scenario analysis for this annual report FY 2022/23 in line with the TCFD framework. This approach has been taken as Ricardo provides the service externally to meet benchmark services and by using the same team internally with access to internal budget projections, risk registers, strategy insight and access to global management, a thorough analysis could be performed. It has the additional advantage that the benefits of the TCFD analysis approach regarding risks and opportunities (R/O) could be immediately incorporated to shape the five-year business plans and strategy alongside the principal risk register integration.

Climate scenario analysis is an analysis of different hypothetical, plausible pathways for the future, related to climate change. It is a way to understand possible R/O created by the impacts of, or response to, climate change. It aims to enhance business resilience in a climate-changed future, through identifying risks and opportunities, building capacity to anticipate surprises, while collaborating across a company and its supply chain. It can be used as a tool to enhance strategic thinking and challenge standard assumptions about the future. It is also a way to explore alternatives to 'business as usual' assumptions and stress test your portfolio.

The process started with 360° horizon scanning to identify stakeholders, interested parties, prior TCFD analysis and contributors, key investors, banks and insurers to gather the breadth of inputs needed to provide comprehensive R/O analysis and to be able to assess materiality correctly. A combination of stakeholder reviews and desktop analysis was used to formulate the master list of R/O. The expertise in climate scenarios brought by the Ricardo Clean Energy and Environmental Solutions team was invaluable in selection, impact assessment and derivation of materiality to our worldwide business locations and products by geography. An iterative approach was used to circle around and continually hone the climate materiality scoring to get to a matured set of R/O and a collection of higher quality, focused material impacts.

TCFD compliance matrix

In accordance with the requirements of LR 9.8.67R (UK Listing Rules), Ricardo's climate-related disclosures are consistent with all of the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD). In 2023, we conducted a complete overhaul of the Climate-Related Financial Disclosures, with a particular focus on the TCFD strategy section (a), (b) and (c) and metrics and targets section. We have summarised our plans for further improvement in the TCFD compliance table below.

<table>
<tr><th colspan="3">GOVERNANCE</th></tr>
<tr><th>How we comply</th><th>What Ricardo has done in 2023</th><th>What Ricardo's plans are for further improvement</th></tr>
<tr><td colspan="3">a) Describe the Board's oversight of climate-related risks and opportunities.</td></tr>
<tr><td>The Board of Ricardo (see Principal Risks on Climate Change section on page 104) oversees all risks, including those that may occur due to climate change. In the Group Risk Register (on page 104), one risk specifically focuses on climate change. This is expanded into all the facets (through TCFD analysis) that cover acute, physical, transitional, geographic and geopolitical risks. Multiple business unit (BU) and functional risks are mapped into this single, consolidated group level risk.
The Responsible Business Committee (RBC) (see: www.ricardo.com/en/investors/corporate-governance/key-committees) receives regular updates on ESG and climate progress and provides direction and guidance on setting the organisation's performance objectives.
Progress towards ESG and climate-related targets or deviations therefrom are shared with the Board for update and decisions on strategy.
With the introduction of GHG-related targets, the Remuneration Committee in conjunction with the RBC will set targets for variable remuneration with target achievement aligned with SBTi targets.</td><td>• RBC formed and all non-Executive members assigned to the committee
• Group Risk Register reviewed and updated in line with the TCFD update of climate-related R/O
• Regular ESG Forum meetings reviewed with the Chair of the RBC
• Quarterly deeper ESG reviews spanning all activities are conducted
• In total for the ESG governance structure the following meetings were held:
  • RBC 1
  • ESG Forum 9
  • ESG Transformation Workstream 17</td><td>• Multiple RBC meetings per year – currently two
• Further improve the integration of climate-related R/O into other Group Risk Register categories versus one consolidation climate change risk
• ESG Forum target = 10
• Endorsement for capital planning and expenditures related to climate and ESG projects
• Support of strategic direction and plans regarding products, business streams and location decisions
• Clear table of targets and link to remuneration for ESG/GHG targets</td></tr>
<tr><td colspan="3">b) Describe management's role in assessing and managing climate-related risks and opportunities.</td></tr>
<tr><td>Executive management – the business units and enabling functions are responsible for implementation and reporting on all aspects of our ESG and climate strategy.
Senior management attend the ESG Forum and provide output to the Board RBC and implement the directions and instructions from the RBC.
Provision of ESG head per BU is assigned to support the work of the ESG Forum. The management team are responsible for achieving our GHG reduction targets and deciding products, process and investment requirements to continue the Company along the journey. The senior management review the KPIs and act upon the data.</td><td>• The Board and the Executive Committee review climate change regularly as part of a wide review of ESG matters
• An ESG update from the ESG transformation workstream activity regarding GHG measurement, waste, efficiency projects, charitable programme and other activities is discussed and direction issued from the ESG Forum
• Key members of management formed a core TCFD project team to update the R/O analysis and provide inputs related to materiality. All members were interviewed for inputs during the process</td><td>• Deploy the personal employee objectives related to GHG and other ESG matters to executive and senior management (page 82)
• Budgeting appropriate capital for site, operational and purchased elements of services to drive progress along the SBTi trajectory for GHG reduction
• Manage local purchasing systems to ensure compliance with ESG criteria, supply chain due diligence related regulations and ethical sourcing, especially aspects related to sourcing stress due to climate change
• Set objectives for the BU ESG lead aligned with overall Ricardo strategy</td></tr>
</table>

STRATEGY		
How we comply	**What Ricardo has done in 2023**	**What Ricardo's plans are for further improvement**
a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term.		

During our analysis we considered three time frames: 2030, 2050 and out to 2100. These are detailed as short, medium, and long term along with how they are linked to Ricardo's strategic business planning.
The physical (acute and chronic) and transitional (regulatory, technological, market, legal and reputational) risks and opportunities attributed to climate change were assessed and ranked on climate sensitivity, adaptive capability and finally financial materiality based on impact to revenue.
We have detailed the methodology and process, and have identified the material risks and opportunities.
	• Ricardo identified the three most material risk issue groups as:
	  • Physical risks to Ricardo's operations and assets
	  • Reputational pressures from stakeholder and compliance
	  • Human capital
	• We rated risks attributable to climate change – location, supply chain, product offering, market and employee capabilities
	• The two most material opportunity issue groups as:
	  • Portfolio prioritisation
	  • Market expansion (geography, industry and M&As)
	• Opportunities were assessed relating to Ricardo's capability to grow environmental consulting, service ever broader climate needs, maintain integrity of analysis and results and develop new tools in a timely fashion
	• The opportunity around digitalisation was also identified as an important topic given its alignment with Ricardo's growth strategy
		• Monitoring growth in capability and scale to meet our clients' needs for climate change consulting
		• Managing the established business portfolio as our clients move towards a decarbonised future with minimal fossil fuel energy

b) Describe the impact of climate related risks and opportunities on the organisation's businesses, strategy and financial planning.		
Ricardo has operated at the forefront of emissions reduction for just under 40 years. This vantage point has allowed transition to begin 15 years ago with investment in zero carbon skills and facilities, and acquisition of major environmental consultancy. Hence the strategy of zero carbon mobility is well established, and any established sector (fossil fuel) facilities have a planned age-out and retirement to minimise these risks. Ricardo's main risks are now concentrated in managing the expansion and growth, rather than acute and transitional impacts on existing business practice – see page 93.	• Portfolio prioritisation and physical risks to operations and assets: ICE test-bed infrastructure consolidated in the UK only across two sites • Investment in the California offices focused on software and electronics • Market expansion and human capital: Grown environmental consulting headcount by 200 people. Expanded presence in Australia, the US and Europe for low carbon mass transit • Continued environmental acquisitions of premium consulting practices • For more details on the climate-related impacts for each scenario and material issue group across the time horizons see page 94	• Conversion of further asset base in established segment of the business to be appropriate for electrified propulsion system testing • Integration of environmental acquisitions and leveraging skills, capabilities and digital modelling assets • Maintain and increase focus on high quality growth in the environmental consulting space • Further expansion in selected new business territories related to air, water and emissions consulting

STRATEGY CONTINUED

How we comply	What Ricardo has done in 2023	What Ricardo's plans are for further improvement
c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.		
Supported by Ricardo's environmental consultancy, a study was undertaken across four wide-ranging scenarios (page 92) to examine impacts over long-term time horizons and materiality thereof. The detailed output is presented on page 92. As described above, Ricardo is well along the path of adaption to climate change. This has allowed us to assess risks, and opportunities and responses (resilience) in terms of adaptive capability. For the immaterial aspects, Ricardo had relatively low adaptive capability, but with significant and material risks and opportunities, Ricardo can demonstrate strong adaptive capabilities.	• Assessed all locations for impact of acute weather events, looked at staff access, production disruption and ability to work remotely. There was only one site that would be impacted by acute weather disaster with relatively little transfer capability. The remaining sites feature staff exercising hybrid/remote working, cloud-based knowledge management and other processes minimise probability or major interruption	• Continue monitoring the physical and transitional impacts of climate change, weather scenarios and bring this thinking into location selection, acquisition planning and resiliency calculations for the growing business • Leverage Ricardo's recently acquired E3-Modelling (E3M), to access in-house state-of-the-art economy-energy-environment modelling (GEM-3) tools to gain further valuable quantitative insights on climate-related risks and opportunities. Details of E3M are highlighted on page 22

RISK MANAGEMENT

How we comply	What Ricardo has done in 2023	What Ricardo's plans are for further improvement
a) Describe the organisation's processes for identifying and assessing climate-related risks.		
Climate risk identification is fully embedded as part of our global risk management process – see page 91. New and emerging risks and opportunities are typically identified at a local level and are discussed with the Head of Risk. and incorporated into the risk register as appropriate. A detailed review and update – such as completed in 2023 the TCFD framework is planned every three years with maintenance level updates in the interim years. Emerging risks and opportunities include compliance with or responding to rapidly evolving climate and sustainability regulation. Risks will be allocated an owner and will be assessed for impact and likelihood using the global risk framework, together with adaption and mitigation approaches.	• Wide ranging interview process developed • Distillation and review of refreshed risks and opportunities. Developed enhanced scoring process and assessed all risks and opportunities for materiality • With over 800 staff in environmental consulting, regulatory changes (and development) are assessed and addressed together with developing new opportunistic avenues to provide external consulting services	• Plan for anticipated UK policy integration of the International Sustainability Standards Board (ISSB) planning for Climate Transition Plan requirements under the UK Government Transition Plan Taskforce and the EU Corporate Sustainability Reporting Directive and how to efficiently meet these reporting standards and frameworks. Maintain awareness as regulation thresholds evolve and Ricardo's changing business footprint could trigger earlier threshold requirement for compliance • Remain current with and proficient in regulatory matters, such as the upcoming UK Sustainability Disclosure Rules (SDR) and the UK Taxonomy

RISK MANAGEMENT CONTINUED

How we comply	What Ricardo has done in 2023	What Ricardo's plans are for further improvement
b) Describe the organisation's processes for managing climate-related risks.		
Ricardo runs a comprehensive risk identification and risk management process. This involves assessment and rating by the Head of Risk in conjunction with BU and function management and delegation to risk owners for mitigation and update. Lower-level risks are owned and managed wholly within local business units. Specific climate-related risks are owned by the Director of Sustainability. These are managed in detail by the ESG Forum and appropriate business unit heads. The categories most relevant to climate impacts market changes, transformation management, supply chain, people, technology, laws and regulations, business interruption.	• During 2023, a ground-up overhaul of the Group Risk Register was completed and focus given to each of the principal risks though ownership and mitigation using new probability/impact trade-off scores • Specific BU level risks related to climate change, growth and recruitment are being addressed continually with the headcount increases. Specific skills in air quality and water management have been directly addressed through targeted recruitment • Growth capabilities are being addressed by specific investments aligned with client demands in climate-related consulting	• Regular annual reviews which are built into the strategic planning process – refreshed yearly and incorporated into budget planning, capital allocation and M&A planning
c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.		
Whole Group transitional and emerging risks and opportunities are currently identified by the working group for ESG in combination with a review at the ESG Forum. When fully defined, these risks are migrated into the appropriate local risk register and transferred to local ownership. This includes risks identified through scenario analysis. Local physical climate-related risks (both acute and chronic) are already embedded and managed in local risk registers with local owners and mitigation actions defined. Addressing potential climate impacts in supply chain, procurement and test locations are assessed for each project where relevant so a real-time decision process is enacted.	• Utilising the TCFD framework, the 2023 process demonstrated the opportunities that lie ahead being heavily embedded in climate consultancy and the degree of change through which Ricardo has adapted with disposal of legacy test facilities and confirmed investment in the commissioned hydrogen test capability and improved battery testing partnerships. As project work has a short and distinct time horizon, adaptions are made on a per-project basis	• Continue to assess supply chain logistics, adaptability and test locations to maintain flexibility with sourcing and positioning bid offers to be cognisant of climate change and severe weather impacts on project delivery

METRICS AND TARGETS

How we comply	What Ricardo has done in 2023	What Ricardo's plans are for further improvement
a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.		
Ricardo records data related to calculation of GHG data. In addition, specific measures are recorded for fuel consumption for powertrain development, water, waste, utilities, discharges and leaks of fire suppression and heating, ventilation and air conditioning system. Data is now recorded in our third-party digital platform, FigBytes aggregation system along with other pertinent ESG records.	• Planned objectives for targets for Long Term Incentives related to GHG reduction • Validated prior year data loaded into FigBytes • Initiated manual and automated loading of data for FY 2022/23 to improve productivity of ESG data capture and management ready for assurance and auditing	• Business unit specific carbon reduction planning and progress along trajectories to achieve the committed SBTi targets and climate transition planning • Implement a review of metrics and the ISSB recommendations
b) Disclose Scope 1, Scope 2, and if appropriate Scope 3 emissions, and the related risks.		
Scope 1, 2 and relevant categories for Scope 3 are disclosed on pages 99-100. Scope 1,2 and 3 (categories 13) have been verified to 'Reasonable assurance' and Scope 3 (categories 1,2,4,5,6,7,8,9,11 and 12 have been verified by LRQA to 'Limited Assurance'. Carbon calculation methodologies are described on page 101. There are risks in the method of data collection and conversion from cost-based invoiced using emissions factors.	• Implementation of a carbon data (and other ESG data) aggregation platform – FigBytes – see description page 68. This has allowed granular collection of data across sites by business unit, location and has allowed a degree of precision in application of location/ market-based emissions factors	• Further efficiency improvement with a distributed data collection process • Strive towards monthly reporting allowing in-year projections rather than just annual reporting
c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.		
A range of targets are used focused around SBTi annual reductions for Scopes 1, 2 and 3 and a target of achieving 90% electricity consumed being renewable. With regards to climate-related risks, we target management of facilities and operations to have a level of impact due to acute weather events and to be able to relocate, redeploy or recover production within three months of a disaster. For most of the knowledge work, the metric is same or next-day deployment through remote or relocated workplaces. The Group Risk Register framework approach is used to assess a probability/ impact score on a range from 1 to 25 to ensure risks are managed within the Group's risk appetite. This covers climate-related risks such as regulatory compliance, incorrect disclosure, acute and chronic weather-related risks and failure to respond to business growth in environmental consultancy.	• Regular reporting to the Responsible Business Committee on ESG ratings agency scores, carbon emissions projections and capital investment planning versus carbon benefits • Updated risk appetite statement approved by the Board to align with the new risk management framework	• All non-financial metrics related to GHG and ESG (such as DEI statistics) to be captured in FigBytes. Application of a comprehensive reporting system of dashboards to provide BU and Executive leadership close to real-time progress report and gap/missing data recording • Aspiration is to achieve reasonable assurance across Scope 1 and 2. • Quarterly refreshed risk register reviews and updates where appropriate

APPROACH TO ISSUES IDENTIFICATION, MATERIALITY AND SCORING

1

Gap analysis

Our positioning in the market provides unique insight on the journey of efficiency improvement, emissions reduction and climate change. This was used as input to guide the approach to a refreshed TCFD analysis. A gap analysis was undertaken across Ricardo's small-CAP peers, its top seven investors and a selection of Ricardo's banks and insurers and used to compare/contrast against climate-related risks and opportunities in Ricardo's previous TCFD disclosures. Key topics and gaps were also noted from ratings agency feedback on our prior TCFD report. This provided well-defined talking points and questions for the interviews held across Ricardo operations.

2

Stakeholder interviews

Extensive interviews were conducted with key stakeholders across all Ricardo geographic regions and all levels of employees from the executive team through to enabling functions. The aim of the interviews was to identify the breadth of climate-related R/O applicable to each business unit, function, location, or client set. The interviews were tailored to each of the stakeholders depending on their role in the business and sought to reveal the impacts, opportunities and assess alignment with the gap analysis output identified above. The interview findings were consolidated and summarised into the materiality assessment.

3

Materiality assessment

A materiality assessment was conducted and was fundamental to the scenario analysis and prioritisation of mitigation actions. The initial qualitative analysis was followed by curation of the ratings and subsequent layering of quantitative financial assessment in to the R/O. A longlist was created based on the interviews and desktop research spanning the full value chain of raw materials, operations, products and services. The R/O were grouped under the relevant TCFD risk and opportunity themes. For risks, these included: policy and legal, market, technology, reputation and physical risks. For opportunities these included: new products and services, new markets, energy sources, resource efficiencies and resilience.

4

Scoring and grouping

Workshops were used to score the materiality of each R/O. Scoring rated business sensitivity and adaptive capability. These two scores combined gave an overall potential qualitative business impact score. The definitions of these terms are detailed below:

- Business sensitivity – The extent to which Ricardo is affected by climate variability or change
- Adaptive capability – The ability of Ricardo to adjust to potential impact or to take advantage of opportunities presented by climate change

These two scores in combination gave an overall potential business impact measure and these were collated into issue groups and mapped onto a climate materiality matrix.

Climate-related risks and opportunities issue groups and definitions

All issue groups have been identified in alignment with Ricardo's growth strategy. The definitions of the issue groups are detailed below.

CLIMATE-RELATED RISK

HUMAN CAPITAL

Ricardo's ability to retain, reskill and recruit the human capital required to meet opportunity growth targets.

REPUTATIONAL PRESSURES FROM STAKEHOLDERS

Increasing pressure to act on climate change may increase, leading to potential reputational risks.

PHYSICAL RISKS TO RICARDO'S OPERATIONS AND ASSETS

Physical climatic changes reducing function of Ricardo facilities, locations, supply chain and human capital. Physical risks identified include: flooding (related to either storm surges or sea level rise), extreme heat and cold, storms, drought. Ricardo has the ambition to maximise growth in the UK and EU market and to grow in the Middle East and South Africa. Assessing the physical risks in these geographies will be key to Ricardo's success.

CLIMATE-RELATED OPPORTUNITY

PORTFOLIO PRIORITISATION

Growth in Ricardo's environment and energy transition offering e.g. safe and sustainable mobility, clean energy, environmental services, and clean energy and resources.

MARKET EXPANSION

Ricardo's growth into new geographical and industrial markets, supported by M&As and partnerships.

DIGITALISATION

Ricardo's digital solutions can support with the energy and environmental transition.

Climate scenario selection

TCFD guidance on scenario analysis selection states that organisations should describe how resilient their strategies are to climate-related risks and opportunities, taking into consideration a transition to a lower-carbon economy consistent with a 2°C or lower scenario and, where relevant to the organisation, scenarios consistent with increased physical climate-related risks. Ricardo selected four scenarios in total; two scenarios that represent the transition risks and opportunities and two scenarios that represent the physical risks and opportunities it may face over the short (2023–2030), medium (2030–2050) and long term (2050+).

To allow for an assessment of the impact of the most material issue groups over a range of potential futures, Ricardo chose a **best case (well below 2°C) scenario** for transition and physical risks and opportunities (IEA Net Zero Emissions by 2050 and IPCC RCP 2.6), and **a worst case/business-as-usual scenario** (>4°C and 2.6°C) for each respectively (IEA Net Zero Emissions by 2050 and IPCC RCP 2.6 Stated Policies Scenario). The selected scenarios enabled Ricardo to stress test its strategy under these extremes.

	TRANSITION risk and opportunity modelling		**PHYSICAL risk and opportunity modelling**	
	IEA – NZE Net zero by 2050 Well below 2°C	IEA – STEPS Stated policies Above 2°C	IPCC – RCP 2.6 Well below 2°C	IPCC – RCP 8.5 Above 4°C
SCENARIO DESCRIPTION	A rising number of countries and companies are targeting net zero emissions, typically by mid-century. All of these are achieved, putting global emissions on track for net zero by 2050. Transformation of the global energy system.	A more conservative benchmark for the future which does not assume that governments will reach all announced goals.	**Sustainability** – taking the green road.	**Fossil-fuelled development** – taking the highway.
MAXIMUM GLOBAL TEMPERATURE RISE	**1.5°C**	**2.6°C**	**1.8°C**	**5°C**
ENERGY TRANSITION	High	Medium (BAU)	–	–
CLIMATE POLICY AND REGULATION	High	Medium (BAU)	High	Low
CARBON PRICE	High	Medium (BAU)	High	None
PHYSICAL IMPACTS	Best case (expected to be an increase compared to current day)	High	Best case (expected to be an increase compared to current day)	Very high
TRANSITION RISKS AND OPPORTUNITIES	High	Medium/low	–	–
PHYSICAL RISKS AND OPPORTUNITIES	–	–	Low (expected to be an increase compared to current day)	Very high

Evaluation of business impacts

The R/O were ranked, plotted and reviewed as to impacts for Ricardo. The tables below details the issue groups, the scenario impact rating (high, medium and low) over the time horizons and the potential risk and opportunity mitigation/adaption and resiliency measures.

Climate-related Risks (R)	Identifier	Climate-related Opportunities (O)	Identifier
Policy and legal	R1	Resource efficiency	O1
Technology	R2	Energy source	O2
Market	R2	Products and services	O3
Reputation	R4	Markets	O4
Physical	R5	Resilience	O5

The following tables detail the risks and opportunities that present themselves to Ricardo over the short, medium and long term time scales and Ricardo's response to each risk or opportunity.

Climate-related potential business impacts through risks and opportunities.

		TRANSITION risk and opportunity modelling						PHYSICAL risk and opportunity modelling					
		IEA – NZE Net zero by 2050 Well below 2°C			IEA – STEPS Stated policies Above 2°C			IPCC – RCP2.6 Well below 2°C			IPCC – RCP 8.5 Above 4°C		
Risk/Opportunity group	TCFD themes												
TIME HORIZON		Short	Medium	Long	Short	Medium	Long	Short	Medium	Long	Short	Medium	Long
PORTFOLIO PRIORITISATION OPPORTUNITY	R3, O1, O3, O2, O5	6	6	6	6	6	6	N/A	N/A	N/A	N/A	N/A	N/A
MARKET EXPANSION OPPORTUNITY	R3, O1, O3, O2, O5	6	6	6	4	6	6	N/A	N/A	N/A	N/A	N/A	N/A
DIGITALISATION OPPORTUNITY	R3, O1, O3, O2, O5	6	6	6	6	6	6	N/A	N/A	N/A	N/A	N/A	N/A
HUMAN CAPITAL RISK	R3, R4	-2	-2	-1	-2	-1	-1	N/A	N/A	N/A	N/A	N/A	N/A
REPUTATIONAL PRESSURES FROM STAKEHOLDERS AND COMPLIANCE RISK	R1, R3, R4	-3	-2	-2	-2	-2	-2	N/A	N/A	N/A	N/A	N/A	N/A
PHYSICAL RISKS TO OPERATIONS AND ASSETS RISK	R5	N/A	N/A	N/A	N/A	N/A	N/A	-1	-1	-1	-1	-2	-3

KEY

- -3, -2: High-moderate potential risk
- -1: Slight potential risk
- N/A: No potential risk
- 1, 2: Slight potential opportunity
- 3, 4: Moderate potential opportunity
- 5, 6: High potential opportunity

PORTFOLIO PRIORITISATION

OPPORTUNITY

Scenario	Short	Medium	Long	Impact on Ricardo under each scenario	Responses
Net zero emission (NZE)	6	6	6	**Short term:** Implementation and policy development support for both governments and private sector. Some implementation solutions for easy to mitigate sectors. **Medium term:** Opportunity ramps up as heavy industries are expected to decarbonise by 2050, and the desire for ongoing implementation support is required. Long term: Opportunities tail off as targets are met. Lighter touch ongoing strategy support, but focus continues with implementation support.	• Energy and environment transition (EET): strategy refocus will establish resiliency responses for the long term. This will continually evolve after the five-year business plan • Employees and their adaptability as a skilled workforce will be central to Ricardo being able to exploit these opportunities. • Ricardo should track market and service growth rates and compare its own figures against this. Ricardo must actively engage with key industry groups and sustainability standards bodies to monitor changes first hand and remain competitive • It is too premature to begin assessing in detail what Ricardo's offering in this area should look like beyond 2050. This will be very scenario dependent. Ricardo should continue monitoring global progress against climate targets to understand which direction of travel industry and governments will take
Stated transition emission pathways (STEPS)	6	6	6	**Short term:** Same as current day trends in implementation and policy development support for both governments and private sector. **Medium term:** Increase in opportunities compared to short term but significantly less than under NZE. **Long term:** Opportunities continue to increase due to delayed climate action. This is done under extreme time pressure and increased costs to industry, increasing financial risks of companies, particularly SMEs.	

MARKET EXPANSION

OPPORTUNITY

Scenario	Short	Medium	Long	Impact on Ricardo under each scenario	Responses
NZE	6	6	6	**Short term:** Significant opportunities for Ricardo to support decarbonisation at a global scale in multiple emerging sectors. This will first occur in the advanced economies in which Ricardo sits. **Medium term:** The size of this opportunity will depend on Ricardo's service offering of implementation. There may be an opportunity to also support emerging economies with technology feasibility studies. **Long term:** Post 2050, the size of the opportunity will reduce in scale as climate targets are met. Opportunities will be around the maintenance and efficiency of systems and technologies implemented.	• Physical risk responses – a lot of expansion can be done remotely, reducing the vulnerability to the risk here, links with digitalisation • Travel – managing emissions and disruption of travel • Financial and insurance sector access – recruitment and value propositions • Employees will be central to Ricardo being able to exploit these opportunities • Ricardo should track market and service growth rates and compare its own figures against this. Ricardo must actively engage with key industry groups and sustainability standards bodies to monitor changes first hand and remain competitive • It is too premature to begin assessing in detail what Ricardo's offering in this area should look like beyond 2050. This will be very scenario dependent. Ricardo should continue monitoring global progress against climate targets to understand which direction of travel industry and governments will take
STEPS	4	6	6	**Short term:** Less opportunities for Ricardo to support decarbonisation at a global scale. Opportunity will likely sit in portfolio prioritisation. **Medium term:** Opportunities for Ricardo to support emerging markets (geographically and industry) will likely increase as 2050 approaches and delayed climate action kicks in. This will likely be led by the private sector driven by consumers and investors. **Long term:** The opportunity for Ricardo will likely continue increasing after 2050 as decarbonisation is still occurring, particularly in emerging markets and economies.	

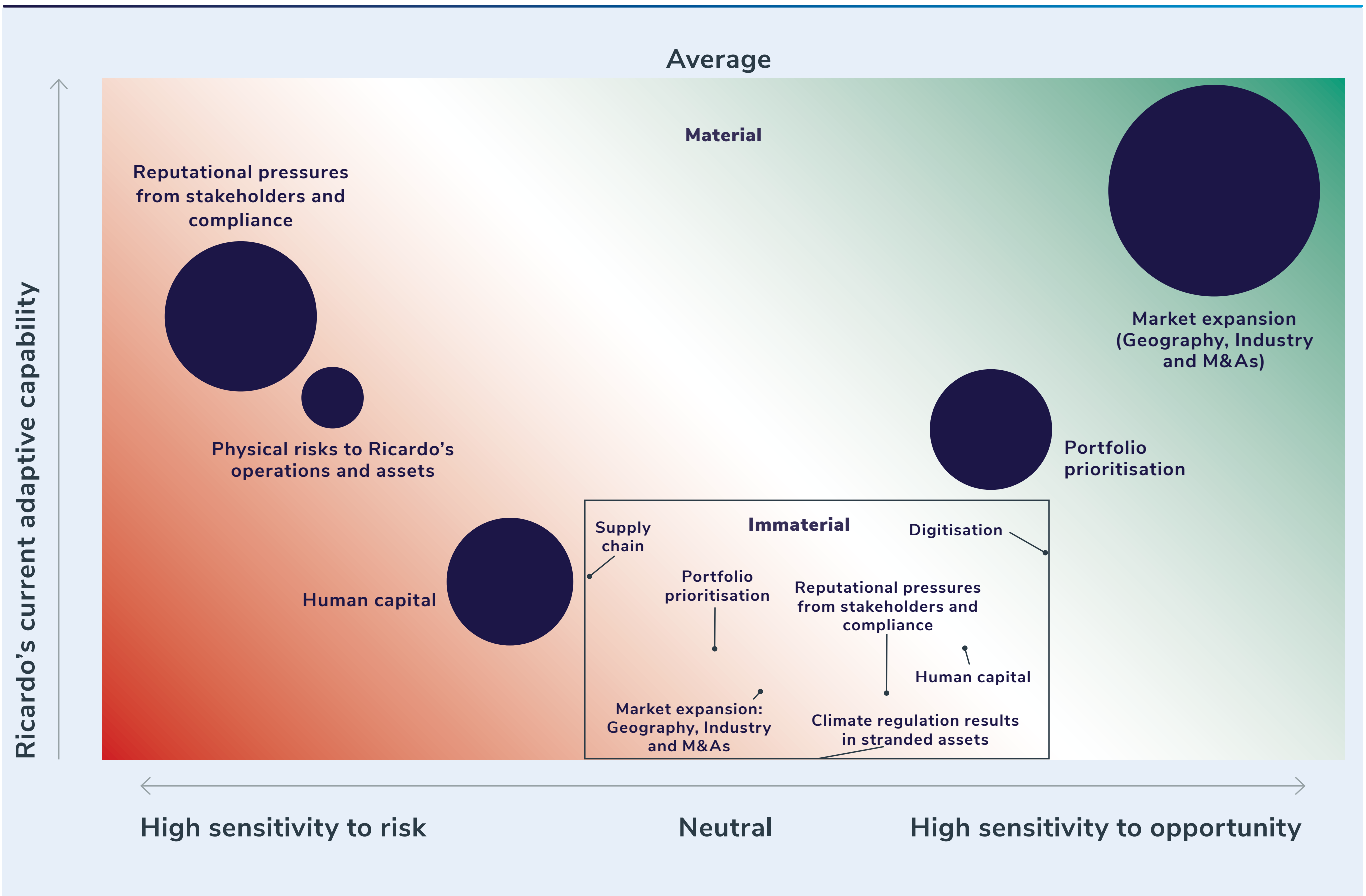
DIGITALISATION

OPPORTUNITY

Scenario	Short	Medium	Long	Impact on Ricardo under each scenario	Responses
NZE	6	6	6	There is little direct evidence within the scenarios selected on the attribution of emission reductions to digital solutions. However, it could be assumed that global trends and the shifts to automated services will drive efficiency gains and will continue to contribute towards climate related solutions. Ricardo already integrates some digital solutions into its current products and services. This can be expected to increase in the future to support the Company's climate-related services and is already occurring to some extent with digital prototyping in Automotive and Industrial and automation in Rail.	• Digital knowledge transfer • Integrate the IT systems of the Group • Ricardo should continue to consider how digitalisation can be integrated into the solutions Ricardo provides, as it is demonstrated in Ricardo's strategy. Partnerships will support this and fill the gap in the company's current digital capabilities. Tracking the revenue and efficiencies from digital solutions
STEPS	6	6	6		

Scenario			Impact on Ricardo under each scenario	Responses
HUMAN CAPITAL				RISK
NZE				• Snowball effect, transfer of knowledge and skills and investing in next generation • Ensure Ricardo's compensations are competitive with other rivals in the sector • Increase investment in the career development and retention of junior employees. The market is currently under saturated in the skills and expertise required for the climate transition • Therefore, transferring these skills throughout the Company will encourage sustainable growth into the medium term • Ensure HR and team leaders are consistently engaging with employees on career and life satisfaction. Policies like flexible working, volunteering, personal development, and socials all encourage employee wellbeing
Short	Medium	Long		
-2	-2	-1	The opportunities for Ricardo under this scenario are high in scale and level of impact. Therefore, the growth rates and development necessary to take advantage of these are large. Ricardo will be operating in a competing market and therefore, scaling for growth will be difficult.	
STEPS				
Short	Medium	Long		
-2	-1	-1	Ricardo will still face challenges in scaling for growth, however the scale of the associated opportunities is lower and therefore this challenge will be less than under the NZE. This will become a more 'business as usual' challenge.	
REPUTATIONAL PRESSURES FROM STAKEHOLDERS AND COMPLIANCE				RISK
NZE				• Further evolution of strategy and processes in place • Legal and commercial checks to be enhanced • Carry out current growth strategy, prioritising the energy and environment transition • Ricardo should continue impairing elements of declining business units to reduce the risk • Ricardo should continue to prioritise the performance of the energy and environment transition, in both the quality of work delivered to clients but also in the quality of reporting and climate action of Ricardo itself
Short	Medium	Long		
-3	-2	-2	Political and regulatory pressures will increase in the short to medium term as decarbonisation progress must be made.	
STEPS				
Short	Medium	Long		
-2	-2	-2	Pressures are likely to still increase from current day and so the impact may not be dissimilar to under the NZE. Over the past few years, Ricardo has made significant progress around prioritising its portfolio to be focused on the future around the energy and environment transition. This consists of having targets to increase the proportion of revenue in this area, compared to the established mobility side of the business which is associated with more reputational risk.	
PHYSICAL RISKS TO RICARDO'S OPERATIONS AND ASSETS				RISK
RCP 2.6				• Becoming a larger and more global player will enable more support for employees with adaptation (financial strength enabling investment) • Careful consideration of the location of new technical centres and potential relocation of existing technical centres • Continuous encouragement of flexible working where possible and exploration of new ways of working such as work patterns that avoid the hottest period of the year in Ricardo's most vulnerable locations • Investment in building facilities such as air conditioning and flood defence mechanisms where necessary
Short	Medium	Long		
-1	-1	-1	Global temperature increases but is limited to below 2°C. Physical impacts of climate change increase from current day but catastrophic impact is narrowly avoided.	
RCP 8.5				
Short	Medium	Long		
-1	-2	-3	Global temperature rises to 5°C, leading to catastrophic impacts at a global scale. Some regions will become uninhabitable, and others will experience positive impacts e.g. growing season extensions. The overall impact is very negative, and society falls into a disruptive state.	

Financial overlay for material issue groups



Financial materiality of business impacts and individual business unit exposure

The climate materiality R/O scoring results were used to compare materiality against Ricardo's adaptive capability. The graph above (bubble chart) is used to detail the issue groups against sensitivity and adaptive capability. The top right-hand quadrant represents the opportunity issue groups that are most material to Ricardo as the business is highly sensitive to these opportunities and has high adaptive capability to them. The issue groups in the lower left-hand quadrant represent the risk issue groups that are most material to Ricardo as the business is highly sensitive to these risks and has little adaptive capability.

A second loop of scoring quantified by financial impact was then applied. This permitted the magnitude of revenue exposure to be visualised for each of the climate risk and opportunity groups. This analysis further informed how the material climate-related R/O issue groups could be incorporated into Ricardo's overall strategy from a climate sensitivity, vulnerability, and financial perspective.

The overall business revenue exposure was developed as a 'bubble' chart where the bubble size reflects the size of the impact upon Ricardo as well as those issues that are immaterial for Ricardo.

As explained above – Ricardo has been adapting for decades along the journey to low/zero carbon economies and technical requirements. Recent changes in footprint, divestment of some fossil fuel test facilities, reconfiguration of combustion test facilities to focus on zero carbon fuels or electricity generation have positioned Ricardo to be highly adaptable and well positioned to deal with climate change. The physical risks will only impact a small local region and most of the staff are able to work from any facility or location. This resilience was demonstrated during COVID 19, where using remote, hybrid and on-site protocols, business delivery was not interrupted.

The analysis highlighted the extent of the opportunities before Ricardo to address new markets, and expand services related to climate change. The greatest risk is in reporting or advising clients on reporting with the wide range of current, emerging, and region-specific requirements. However, there is a high degree of adaptability through quality assurance, training, oversight, and process to ensure the risk of incorrect advice or misguidance is minimised.

Improving climate change issue and impact integration into risk management process

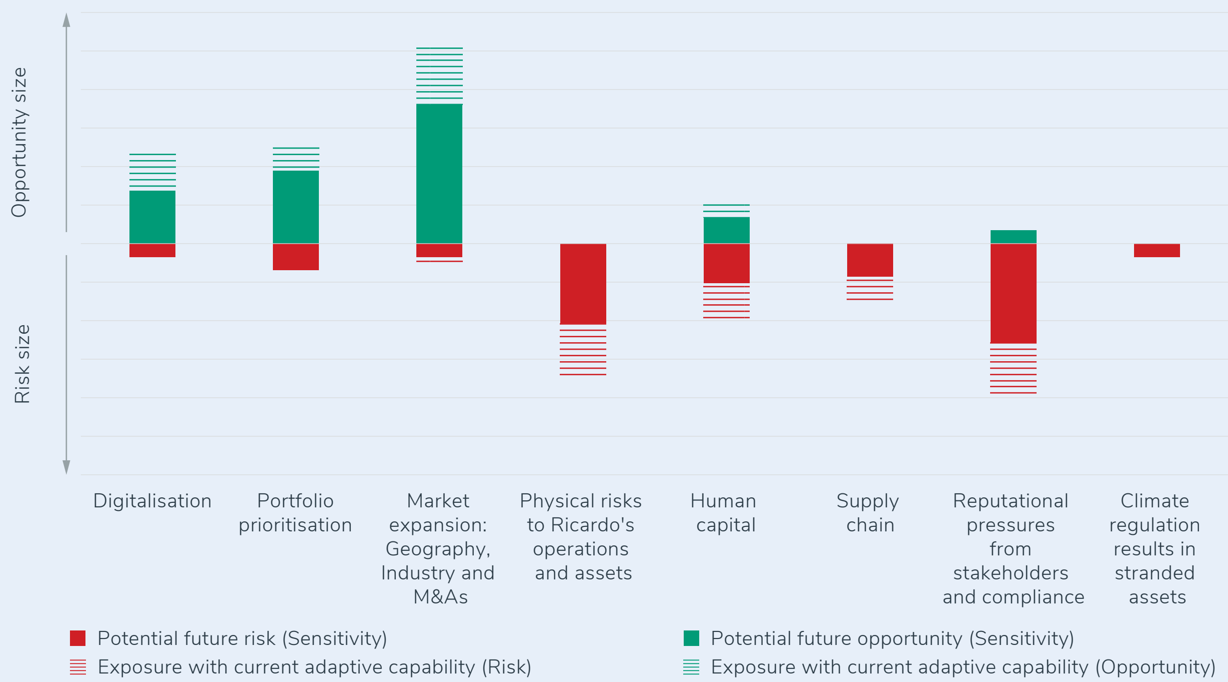
Our principal risks and management protocols are explained on **page 102**. One of the principal risks is climate change and how both physical and transitional risks could impact the Company. It is evident that climate-related risk is embedded in all but two of the principal risks. We have refreshed the 2019 TCFD scenario analysis work and updated it to reflect the evolving shape and products of the Company, locations and staff numbers for the materiality assessment. The TCFD analysis used the principal risks as one of the inputs along with extensive internal interviews and external assessments of investors, pension funds and banks to provide a 360° view of the risk horizon for Ricardo. In addition, the time horizon was extended to 2100 to ensure the longer-term impacts of climate change could be captured. The accuracy of the financial projections is greatly diminished with trajectory extrapolated out 80 years but in our materiality analysis, we bracketed the lower and upper estimates for materiality and saw relatively small differences in positioning of the risks, an average has been taken as a consensus view to give the relative sizes of the risks and opportunities.

In line with the TCFD recommendations, we have considered the transitional risks that Ricardo are addressing and looking to turn into opportunities as the global economy moves to a lower carbon economy. In addition, a focus was applied to short and longer-term physical risks associated with severe weather events, catastrophic events associated with climate change such as bushfires or power outages and the physical risks of long-term climate change such as sea level rise.

Time frame	Short	Medium	Long
	2023-2030	2030-2050	2050+

The output from the TCFD framework review have been integrated into strategic planning and the enterprise risk management processes. These have been disseminated into planning at business unit levels and for oversight at the ESG Forum and Board level. The relative magnitudes of the R/O and the impact of Ricardo's ability to adapt or exploit is shown on the chart below. The most significant risk is the reputational risk of misinterpreting climate legislation or reporting requirements – but this can be mitigated through broad application of expertise, peer review and ensuring we are current with standards, frameworks and developing legislation. The growth opportunities are similarly treated – examining the opportunities and the growth potential without exhausting the market.

R/O impact exposure and impact size by issue group



This graphic illustrates the opportunity and risk impact exposure and impact size by issue group. The solid green bars represent the current opportunity exposure, without the adaptive capability of each focus area, and the solid red bars represent the potential reduced/mitigated risk exposure with the adaptive capability of each focus area. The hatched green bars represent the potential maximum opportunity exposure with adaptive capability of each focus area, and the hatched red bars represents the potential unmitigated risk exposure without adaptive capability of each focus area.

Greenhouse gas emissions

In support of our ambition to achieve our SBTi targets, we are increasing the breadth of KPI reporting as shown below.

Metrics and targets

		FY 2022/23	FY 2021/22	FY 2020/21	FY 2019/20 baseline
Emissions – tCO_2e					
Scope 1	Gas (methane based) usage	593	697	777	
	Diesel usage	502	762	555	
	Gasoline usage	477	495	381	
	Other emissions	303	966	703	
	Total	1,875	2,920	2,416	4,343
Scope 2	Location-based	2,764	3,292	3,791	4,981
	Market-based	637	618	774	2,016
Total (Scopes 1 and 2)	Location-based	4,639	6,212	6,207	9,324
	Market-based	2,512	3,538	3,190	6,359
Scope 3	Category 1 (including Category 8) – Purchased goods and services	141,204	85,306	*	*
	Category 2 – Capital goods	4,936	4,430	*	*
	Category 3 – Fuel and energy related activities	216	276	*	*
	Category 4 – Upstream transportation and distribution	361	206	*	*
	Category 5 – Waste	113	144	*	*
	Category 6 – Business travel (all modes)	3,018	2,462	*	*
	Category 7 – Employee commuting	1,737	2,902	*	*
	Category 9 – Downstream transportation and distribution	163	89	*	*
	Category 11 – Use of sold product (weight apportioned basis – GHG protocol)	8,971	8,431	*	*
	Category 11 – Use of sold product – (whole vehicle weight method – SBTi)	65,504	59,500	*	*
	Category 12 – End of life of sold products	435	285	*	*
	Category 13 – Downstream leased assets, location based	65	46	*	*
	Scope 3 total – GHG basis	161,218	104,577	*	*
	Scope 3 total – SBTi basis	217,751	155,645	*	*
	Total – Location-based (Scopes 1,2,3) GHG Protocol basis	165,858	110,790	6,688	13,291
	Total – Market-based (Scopes 1,2,3) GHG Protocol basis	163,730	108,116	3,671	10,326

Metrics and targets (continued)

		FY 2022/23	FY 2021/22	FY 2020/21	FY 2019/20 baseline
Intensity measures – GHG basis (tCO_2e per employee)					
Total (Scopes 1 and 2)	Location-based	1.66	2.25	2.14	3.05
	Market-based	0.90	1.28	1.10	2.08
Scope 3	GHG Protocol basis	57.56	37.85	*	*
Total (Scopes 1, 2, 3)	Location-based	59.21	40.10	*	*
	Market-based	58.45	39.13	*	*
(tCO_2e per £m revenue)					
Total (Scopes 1 and 2)	Location-based	10.40	16.04	17.64	24.49
	Market-based	5.63	9.14	9.07	18.07
Scope 3	GHG Protocol basis	361.56	270.02	*	*
Total (Scopes 1, 2, 3)	Location-based	371.96	286.06	*	*
	Market-based	367.19	271.45	*	*
Electricity consumption MWh					
	Electricity consumed (all sources)	12,021	15,369	15,742	17,455
	Renewable electricity consumed	10,901	13,601	14,296	12,973
	Non-renewable electricity used	1,120	1,768	1,446	4,482
	Percentage of renewable electricity used	91%	89%	91%	74%
SECR (UK Streamlined Energy and Carbon Reporting)					
	UK Scope 1 tCO_2e	1,364	2,526	2,175	2,496
	UK Scope 2 – Location-based tCO_2e	2,078	2,606	2,971	3,065
	UK Scope 2 – Market-based tCO_2e	12	26	47	166
	UK Scope 1 + Scope 2 tCO_2e location-based	3,442	5,132	5,146	5,562
	UK Scope 1 + Scope 2 tCO_2e market-based	1,375	2,552	2,223	2,662
	Energy consumption (million kWh)	14	21	21	17
Intensity measures (tCO_2e per UK employee)					
	Scope 1	0.82	1.52	1.35	1.50
	Scope 2 Location based	1.25	1.57	1.84	1.84
	Scope 2 Market based	0.01	0.02	0.03	0.10
	Scope 1 + Scope 2 Location-based	2.06	3.09	3.19	3.34
	Scope 1 + Scope 2 Market-based	0.82	1.54	1.38	1.60

(*) No data
Scope 1, 2 and Scope 3 – Categories 13 have been verified to 'Reasonable Assurance'.
Scope 3 – Categories 1, 2, 4, 5, 6, 7, 8, 9, 11 and 12 have been verified to 'Limited Assurance'.

Notes on the table

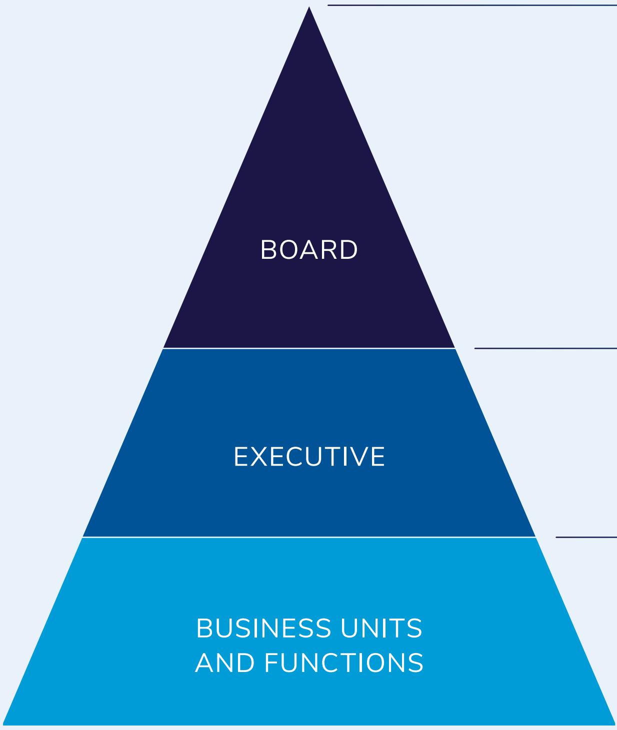
- The operational control test is applied to determine if an emission is within Scope 1 or Scope 2
- The inventory has been compiled according to the GHG Protocol and internal procedures with the exception that individual gases are not reported. Our GHG emissions for FY 2022/23 have been verified by LRQA in accordance with ISO 14064–3:2006, 'Specification with guidance for validation and verification of greenhouse-gas assertions'
- The base year is FY 2019/20, as this is the first year where Scope 1 and Scope 2 data was verified. The Scope 3 base year is FY 2021/22. Some data includes estimates, which may be updated at a later time when more accurate data are available
- Large improvements have been made to our emissions reporting during the FY 2022/23 reporting cycle. Therefore, FY 2021/22 values have been re-estimated and re-stated by Ricardo for comparability, due to the following:
  - Improved emission factors, using more location specific and more granular breakdown. For example, US EPA factors used for the US instead of IEA
  - Improved methodology (e.g. employee commuting)
  - Improved data capture system, allowing for more data visibility (FigBytes – the ESG/GHG data aggregation platform Ricardo has implemented in FY 2022/23 – details provided on page 68)
- Emission factors used for fuels, transmission and distribution and electricity are based on the most appropriate open-source data by location. For example, BEIS/ Defra conversion factors are used for the UK, US EPA for the US and the most recent confirmed IEA factors for the majority of other locations. Electricity emissions factors used for market-based calculations where renewable electricity is procured are 0kgCO_2e/kWh. Location-based factors are applied elsewhere
- For Scope 3 emissions factors for Categories 1, 2, 4, 5, 8, and 9 are based upon finance data using Defra for UK and EU based entities, and Quantis for other entities. Scope 3, Category 7 is based on an annual employee commuting survey, which had a complete return rate of 73% for site-based employees. Defra and US EPA emission factors are used for this. Categories 11 and 12 emissions are estimated based on volumes of engines and ABS kits sold. End of life emissions are estimated on material type and weight using Defra and Ecoinvent emission factors. Category 11 is based on published WLTP emissions for each engine variant, and estimated vehicle use over 10 years
- Air, rail and hotel emissions are calculated by FCM using bespoke factors that take airline and aircraft type. This methodology follows those outlined by Thrust Carbon. The remaining elements of Category 6 are calculated based on cost using the Defra and Quantis factors as above. For previous years, business travel was estimated on a slightly different methodology due to a change in travel provider, therefore, a fair comparison cannot be made. We are working with our travel provider to update our baseline calculations using the same methodology as FY 2022/23
- Other Scope 1 emissions include refrigerants used to top up cooling and air conditioning plants after leakage, fire extinguishants such as FM200 and sulphur hexafluoride (SF6) associated with switchgear. These vary from year to year
- SECR: Our UK operations are our biggest consumer of electricity, which is our only UK Scope 2 emission source, where we directly procure electricity from renewable sources for our largest sites
- We have no Scope 3 emissions in Categories 10 (processing of sold product), 14 (franchises) or 15 (investments). Category 8 emissions (upstream leased assets) are included within our Category 1 reporting if applicable
- Our triggers for base year recalculation would be an acquisition or disposal which changed head count by +/- 20%; this did not occur in the current or previous year. The combined effect of the acquisitions was below the threshold
- Revenue based intensity metrics rely of the financially audited information and the KPMG-audit opinion

In common with all businesses, the Group faces risks and uncertainties on an ongoing basis. Effective risk management is required to support the achievement of the Group's strategic and business objectives. Our risk management framework is aligned to ISO 31000 and includes an ongoing formal process for identifying, assessing and responding to risk.

Governance

Ricardo operates both a bottom-up and top-down approach to the identification, ownership and management of risks. Our strategy is designed to optimise our business model and take risk, with the required controls, on an informed basis. Responsibility for this operates at all levels throughout the Group.

GOVERNANCE STRUCTURE



Board
The Board takes overall responsibility, determining the nature and extent of the principal risks it is willing to take in achieving our strategic objectives, and overseeing the Group's risk governance structure and internal control framework. Each year, the Board carries out a robust assessment of the principal risks facing the Group, including those emerging, that would threaten its business model, future performance, solvency or liquidity. This report describes those risks and how they are being managed or mitigated.

Executive
The Executive Committee regularly reviews the Group Risk Register prior to submission to the Board and individual members own specific risks which are updated at least quarterly.

Business units and functions
Business unit and functional leadership are responsible for the management of risk and for compiling and maintaining their own risk registers. These are submitted quarterly and aggregated to form the basis of the Group Risk Register.

Risk management process

The risk management processes have been updated for 2023, providing dynamic risk assessments to support decision-making for business unit, functional and executive management. Our risk management processes require identified risks throughout the Group to be owned by a named individual. They must review them regularly and consider related emerging risks. Risk identification is embedded within other processes, including strategy, project management, bid approvals and other operational activities.

Risks are identified and reviewed at a business unit and functional level on a consistent basis, before being submitted through the Group's review process.

Risks are reviewed by all business areas on a quarterly basis and measured against a defined set of likelihood and impact criteria. The likely time frame within which the impact of these risks might be felt (risk velocity) is also assessed. These risks are captured and reported consistently, enabling them to be consolidated and ranked. This prioritisation of risks then feeds into our assessment of long-term viability.

The resultant Group Risk Register is subject to a detailed review and discussion by the Executive Committee which includes discussion of risks which may not have been identified through the normal channels. This is then submitted to the Board for review and approval half-yearly. As part of this bi-annual process, Directors and senior managers are required to certify that they have established effective controls to manage risk and to comply with legislation, as well as with the Group's policies and procedures. We also ensure that emergent risks are considered as part of the Board's existing half-yearly reviews of risk and annual review of strategy.

The Board assesses the outputs from this process and takes comfort from the 'three lines of defence' risk assurance model. The first line represents operational management who own and manage risk on a day-to-day basis, utilising effective internal controls. Group functions and business units monitor and oversee these activities, representing governance and compliance at the second line. The third line is the independent assurance over these activities provided by internal and external audits. Rigour over the management of these risks is demonstrated through the updated Group risk assurance matrix which summarises the assurance activities taking place throughout the Group in relation to the principal risks.

Internal controls

The system of internal control is designed to manage, but not to eliminate, the risk of failure to achieve business objectives and to provide reasonable, but not absolute, assurance against material misstatement or loss.

Ricardo's internal control and monitoring procedures include:

- Group level policies, including risk management, approved by the Board
- Procedure and process documents setting our controls, approved by Group functions
- Strategic plans, approved by the Board and monitored through forecasting and budgeting processes
- Business unit review processes covering operational and financial performance
- Half yearly business unit internal control questionnaire sign-off confirming compliance with Group policies and procedures
- Monthly business unit accounting control checklist sign-off confirming that appropriate controls are in place and identifying any exceptions
- Control of key financial risks through clearly set authorisation levels and appropriate segregation of accounting duties
- Control of key project risks through project delivery and review systems
- Review and implementation of recommendations in reports on internal control by internal and external auditors
- A speaking up process to ensure employees concerns are able to be raised
- Reporting on insurance policies as well as any uninsured risks

To ensure our risk process drives continuous improvement across the business, we monitor the ongoing status and progress of key action plans against each risk on a half-yearly basis. Risk is a key consideration in all strategic decisions made at Board level.

The Group's internal audit function provides assurances on operating segment systems of internal control and compliance with applicable legislation and regulations. This is complemented by audits required as part of maintaining certifications to international standards for management systems. The effectiveness of these risk management and internal audit processes is reviewed annually by the Audit Committee and is set out on pages **133** to **136**.

Financial risks faced by the Group comprise capital risk, liquidity risk, credit risk and market risk (comprising interest rate risk and foreign exchange risk). The Group's objectives, policies and strategies in respect of these risks are set out in **Note 28** to the Group financial statements.

The following table details the Group's principal risks, the mitigating activities in place to address them and the actions implemented to further reduce the risk to the Group.

It is also recognised that the Group is exposed to a number of emergent risks that are currently deemed to be less material, together with additional risks and uncertainties beyond those listed below that are at present not known to management and which may also have an adverse effect on the business.

CHANGE IN RISK

Increase | No change | Decrease

LINK TO STRATEGIC PRIORITIES

1 Enabling meaningful and fulfilling work
2 Being a trusted partner to our clients
3 Achieving high growth in our chosen markets
4 Delivering operational excellence and efficiency
5 Optimising cash to invest for growth

RISK VELOCITY

High impact with one month of risk occurring
Medium impact within one year of risk occurring
Low impact after more than one year of risk occurring

STRATEGIC RISKS

Risk	Description	Impact	Mitigation
MARKET CHANGES No change 2 3 High	The Group operates in diverse markets which are politically and economically volatile. This exposes the Group to evolving legislative, geopolitical and macroeconomic pressures, as well as industry consolidation threats in a dynamic competitive landscape.	Unpredictability in the timing of the receipt of orders from clients and the utilisation of our resources to generate revenue and profit may give some volatility in our ability to forecast future performance.	• These risks are mitigated by the diversification of the Group, so as to reduce exposure to any one specific client, territory or segment • Rigorous performance review process which is led by the executive to monitor current and forecast performance • Short term contingency plans to react to sudden market downturn or changes in geopolitical risk
CLIMATE CHANGE No change 2 3 4 High	Climate change is both a series of risks and opportunities to the business, which we describe in pages 64 to 70 of our Sustainability and ESG section. Failure to adapt to global climate change or respond to client needs driven by climate change. This includes both the legal and regulatory transition requirements as well as the acute and chronic physical impacts.	If we do not have the right services, capability and products to meet those client needs, we: Will be unable to meet our strategic objectives. May have assets which are impaired due to the rate of climate change in certain markets. May not deliver our net zero objectives.	• We were early adopters of TCFD and are well versed in exploring both the risks and opportunities climate change brings • We have a net zero strategy described on page 68 underpinned by Science Based Targets which we have now adopted • We review the values of our assets for climate change-related impairment on an annual basis • This is an element of wider impairment reviews described in Notes 1(d) and 1(l) to the Group financial statements
TRANSFORMATION MANAGEMENT Increase 1 3 4 5 Medium	Failure to successfully, simultaneously, deliver the significant change programmes currently in process and planned across the Group, including integration of the recent E3M and Aither acquisitions.	Decreased revenue and profit, increased costs, damage to operational performance and reputation.	• Dedicated project oversight of large capital projects • Integration management teams for significant acquisitions • Regular monitoring by the Executive Committee through operational and project reviews

OPERATIONAL RISKS

Risk	Description	Impact	Mitigation
CLIENT PROJECT DELIVERY 2 3 4 Medium	The Group's revenue depends on successful delivery of a broad range of contract types for engineering, technical, environmental and strategic consultancy services, product supply (niche manufacturing of parts and components), together with accreditation and independent assurance services, with an increasingly complex range of projects, technologies, clients and geographies.	Failure to perform on contracts within estimated cost and delivery timescales, and to the required level of quality could impact profitability.	• Risks are proactively managed by clearly defined lead qualification, bidding, contracting and project management processes • Regular monitoring by the Executive Committee through operational and project reviews
SUPPLY CHAIN 2 3 4 Medium	Failure or inability of critical suppliers to supply unique products, capabilities or services preventing the Group from satisfying clients or meeting contractual requirements.	Decreased revenue and profit, damage to operational performance and reputation.	• Production supplier choices often undertaken with the original equipment manufacturer client so that risk assessments are shared • Supplier quality assurance needs are agreed with clients and operate within our processes and ISO 9001 certifications • We have increased our production supply chain monitoring and expediting capability and capacity • Implemented a sustainable procurement process to increase supply chain transparency and a Supplier Code of Conduct to state our supplier expectations
BUSINESS INTERRUPTION 2 4 High	A catastrophic event such as natural disasters; civil unrest, military conflict or terrorist activity; or a pandemic (including further impacts from COVID-19) could lead to infrastructure disruption and/or property damage which prevents the Group from fulfilling its contractual obligations.	Decreased revenue and profit, damage to operational performance and reputation.	• Group-wide business continuity and crisis management plans, subject to regular testing and updated for lessons learned • Comprehensive insurance programme, renewed annually and subject to property risk assessment visits
PEOPLE 1 3 Medium	Failure to attract, retain or mobilise people due to factors including availability of talent, inadequate compensation, workforce demographics, lack of training and industrial action.	Decreased revenue and profit, damage to operational performance.	• We aim to ensure that we actively develop and manage staff in an environment where everybody belongs • We are sharing best practice in talent acquisition across business units so we can maximise recruitment and retention efficiency • Our IT infrastructure enables us to share work and mitigates mobility issues • Our people as stakeholders are discussed further on pages 73 to 80

OPERATIONAL RISKS CONTINUED

Risk	Description	Impact	Mitigation
HEALTH, SAFETY & WELLBEING 1 4 Medium	Failure to comply with local health and safety requirements impacting the physical and mental health of our employees, stakeholders or the public.	Health and safety compliance failures by the Group, or its representatives, could result in reputational damage, substantial fines and potential market exclusion.	• The Group has defined health and safety policies and operational procedures which are supplemented by regular training • Incident reporting with near miss and lessons learned processes • Comprehensive insurance programme, renewed annually • Regular health and safety audits supporting ISO 45001 Health and Safety Management certification
INFORMATION SECURITY 2 4 High	A breach of IT security due to increasingly more sophisticated cyber crime/terrorism resulting in proprietary or other sensitive information being lost, made inaccessible, corrupted or accessed by unauthorised users. This also includes the loss of critical systems due to poorly executed implementation or change control; poor maintenance, business continuity or back-up procedures and the failure of third party service providers to deliver to their service level agreements.	The loss, theft, or inability to access information assets could result in reputational damage, loss of competitive advantage, business disruption and financial penalties.	• Ricardo has implemented an Information Security Management System (ISMS) which is certified to ISO 27001 Information Security Management • We have adopted a layered defence in-depth approach, with dedicated information security resources who continuously monitor controls and adapt them in response to emerging threats • Penetration tests are conducted regularly by both internal and external resources to augment our control regime • Information security risks are reviewed each quarter by the Group IT Director • The performance, progress and continued maturing of our information security controls are monitored bi-annually by the Audit Committee
TECHNOLOGY 2 3 Low	Investment in technologies that prove unsuccessful or suitable for our chosen markets, or failure to invest in technologies that are key for us and our clients.	Loss of competitive marketplace advantage and reduction in revenue. If there are disruptions in the implementation of new regulations, which in turn accelerate or delay client programmes dependent on new technology, the time taken to deliver returns from our research and development (R&D) programmes may also increase.	• Our R&D programmes are developed through a mixture of client consultation, long-range forecasting, thought leadership and deep technology roadmap development. We are increasingly leveraging digital and data science technologies as enablers for our innovations • Capitalised development costs are subject to regular review to assess project progress, returns and any risk of impairment

CORPORATE RISKS

Risk	Description	Impact	Mitigation
LAWS AND REGULATIONS 2 4 Medium	Failure to comply with laws or regulations leading to reputational damage, substantial fines and potential market exclusion. The Company operates in many jurisdictions and as a consequence is subject to complex and wide ranging laws and regulations including those concerning health and safety, export controls, data privacy, anti-trust, anti-bribery and corruption and taxation.	Increased compliance costs, fines, penalties or reputational damage, or trading restrictions which could have a materially adverse impact on the business.	• To mitigate these risks, the Group has a number of defined policies and operating procedures in place and takes professional advice, where considered necessary, to ensure that the Group acts upon current and anticipated changes in legislation • Our Code of Conduct ensures that employees and others act with the highest ethical standards and within local legal and regulatory requirements • The Group's rolling assurance programme includes the review of compliance with applicable legislation and regulations and awareness of key Group policies and procedures

FINANCIAL RISKS

Risk	Description	Impact	Mitigation
FINANCING 3 5 Low	The Group is in a net debt position, having drawn on available facilities primarily to fund acquisitions and for general corporate purposes.	Inability to access financing on normal commercial terms.	• This risk is mitigated by robust cash and working capital management, regular process improvement initiatives, monitoring actual cash flows to budgets and forecasts, maintaining good relationships with the Group's bankers and ensuring that sufficient borrowing facilities are in place at all times to support the Group's funding requirements to deliver on its growth strategy, with additional headroom available to meet possible downside scenarios • Further details of the Group's borrowing facilities and other financial risks can be found in Note 25 and Note 28 to the Group financial statements, respectively

VIABILITY STATEMENT

The Directors have assessed the prospects of the Group in accordance with provision 31 of the 2018 UK Corporate Governance Code.

The context supporting the assessment
The Group's prospects are underpinned by its business model and strategy, which can be found on pages 14 to 29. The Group continues to follow a balanced approach to its strategy, which is subject to ongoing monitoring and development as described herein. In FY 2022/23, the Group delivered revenue of £446.0m and underlying operating profit of £34.5m, including the results of Ricardo Software, classified as a discontinued operation, growth of 15.2% and 14.6% on the prior year, respectively. On a continuing basis, the Group delivered revenue of £445.2m and underlying operating profit of £34.0m, growth of 17.1% and 21.4% on the prior year. FY 2022/23 Adjusted EBITDA, defined as earnings before interest, tax, depreciation, impairment and amortisation, excluding the impact of IFRS 16 leases, adjusted for any one-off, non-recurring, exceptional costs and acquisitions or disposals, was £44.4m.

The Group enters the new financial year with an order book from continuing operations of £395.3m, growth of 16.3% on the prior year, of which c.63% is expected to be workable within the next 12 months. The year-end order book comprises the value of all unworked purchase orders and contracts received from clients.

The Group funds its operations via a Revolving Credit Facility (RCF) of £150m, with a £50m uncommitted accordion, which provides funding through to August 2026, alongside the Group's uncommitted overdraft facilities of £16.1m. Net debt at 30 June 2023 was £62.1m, comprising cash and cash equivalents of £49.8m and borrowings, including hire-purchase liabilities, but excluding IFRS 16 lease liabilities, of £111.9m.

Adjusted Leverage, defined as net debt over Adjusted EBITDA, was 1.4x, providing significant headroom of 1.6x against the covenant limit of 3.0x. Interest cover, defined as Adjusted EBITDA over net finance costs, excluding pension and IFRS 16 interest, was 8.3x, compared to the covenant limit of 4.0x. There are no changes to debt covenants under the new facility.

The strategy of the Group is to deliver long-term and sustainable growth in environmental and energy transition services. The Group's businesses focus is on the development of longer-term, multi-year contracts and relationships, underpinned by global long-term megatrends. The Board has considered the risk appetite and profile of the Group in this context and has determined that this remains appropriate for the Group as a whole.

Assessing the prospects of the Group
The Group's prospects are assessed primarily through its five-year business planning process, led by the Chief executive Officer.

The five-year planning process is a forward-looking process which is undertaken by Group management and the Group's constituent operating segments in the second half of the financial year. The planning process includes an assessment of changes in the market and competitive environment, together with macroeconomic, political, societal and technological changes. The detailed operating segment business plans are consolidated to form a Group-wide budget and five-year plan.

The Group-wide and individual operating segment plans are reviewed and approved by the Board. Part of the Board's role is to review the performance of the Group in the last financial year and to consider whether the plan presented is appropriate. The first year of the business plan forms the Group's annual operating budget. This is subject to a re-forecast on a monthly basis.

Assessment of viability

The five-year business plan reflects the best estimate of the prospects of the Group. The plan has been stress-tested, to consider the impact of known risks, including the pace of technological change in the automotive sector, driven by climate change, which continues to shift rapidly away from the traditional internal combustion engine towards more renewable propulsion methods, on the Group's results, operations and financial position in a severe but plausible downside scenario.

The scenario includes lower gross margins and higher costs across the operating segments to account for global inflationary pressures and the removal of new or 'blue sky' revenue streams, together with:

- Flat revenue from Automotive and Industrial established mobility solutions each year, together with a lower growth rate in Automotive and Industrial emerging solution revenues
- Reduced revenue growth rates in Energy and Environment
- Reduced revenue growth rates in Rail and a decline in EBITDA in FY 2023/24
- Decline in key programme volumes in Performance Products in FY 2023/24 with no revenue from new revenue streams in later years
- Delays in the ramp-up of production volumes in Defense with no revenue from new revenue streams in later years
- An increase of 10 working capital days for each operating segment compared with FY 2022/23

The scenario incorporates the appropriate reversal of discretionary bonus payments and setting appropriate levels of dividends based on the sensitised results of the operating segments. Under this scenario, the Group's adjusted EBITDA is forecast to increase by 14% in FY 2023/24, be broadly flat in FY 2024/25 and then increase by an average of 12% over the final 3 years.

The impact of this scenario on the Group's business plan has been quantified and presented to the Board as part of the approval process. The scenario, which is based on aspects of the Group's principal risks and uncertainties, including clients and markets, contracts, and financing, as set out on pages **104** to **107**, and takes into consideration the risks identified as part of our TCFD work, as set out on pages **84** to **95**, represents severe but plausible circumstances that the Group could experience.

The results showed that the Group would be able to continue operating well within its debt covenants and liquidity headroom under the downside scenario. If full bonus costs were included, headroom under the Group's banking covenants and liquidity is reduced, but no covenants are breached.

The Group also performed reverse stress-testing on its financial plan using these scenarios to identify the point at which its banking covenants would be breached. Based on this reverse stress testing, a further 20% reduction in sensitised Adjusted EBITDA compared to the downside scenario would be required in FY 2023/24 (c.50% in later years) before covenants are breached. In the event of such scenarios materialising, more severe cost actions would be taken to ensure covenant compliance.

The Directors have assessed the prospects of the Group over the five-year plan period to 30 June 2028, consistent with the five-year planning process, and confirm that their assessment of the principal risks and uncertainties facing the Group was robust. Based on their assessment of prospects and viability, the Directors confirm that they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the five-year period ending 30 June 2028.

Going concern

Given the viability statement provided above, the Directors consider it appropriate to prepare the financial statements on a going concern basis, as explained in **Note 1(a)** to the Group financial statements.

NON-FINANCIAL INFORMATION STATEMENT

This section of the Strategic Report constitutes the Group's non-financial information statements, pertaining to Sections 414CA and 414CB of the Companies Act, and demonstrates our commitment to acting at all times as a responsible business. The description of our business model can be found on pages **14** to **17** and includes detailed information relating to Ricardo's values and strong culture that guide our everyday work.

Environmental matters

Climate change is pivotal to our thinking and to the Group's strategy. We put into operation the principles of the UN Global Compact, and in October 2021 we formally committed to the Science Based Targets Initiative (SBTi), stating our commitments to reduce absolute Scope 1 and 2 greenhouse-gas emissions 46.2% by FY 2030/31 from a FY 2019/20 base year. Scope 3 emissions have been measured and verified for the first time in FY 2021/22 and we have already achieved a 44% reduction in Scope 1 and 2.

The policies that guide our approach include our health and safety, energy management, environmental, and sustainable procurement policies. Further details of our policies – including our disclosure of our carbon emissions and energy-usage data – is provided on pages **99** to **100** within the Sustainability section.

PLEASE REFER TO RELATED PRINCIPAL RISKS ON CLIMATE CHANGE, PAGE 104

Our people

The success of our business is – quite simply – down to our talented teams. We achieve success for our business and for our clients by collaborating and connecting, always learning and encouraging different perspectives to deliver the right solutions. In this respect, we continue to focus on building a learning organisation that attracts, retains, develops, engages and inspires the very best people around the world.

Our policies – diversity, equity, and inclusion; human resources; engaging and supporting local communities; code of conduct – all support equal opportunities for our colleagues and ensure that we create an inclusive culture where everyone feels that they belong and where we all have opportunities to fulfil our potential.

PLEASE REFER TO DIVERSITY, EQUITY AND INCLUSION, PAGE 76

Social matters

We aim to create ever more social value across our business by contributing positively to our communities and society. Our focus is to support and expand access to science, technology, engineering and maths (STEM) skills through actively encouraging volunteering and sponsorship activities.

Recently, the Group launched its global charitable programme supporting STEM activities, thereby formalising our commitment to volunteering, STEM modules and charitable match donations.

This approach is supported by our policies on engaging and supporting local communities, health and safety, and our code of conduct.

Human rights, anti-corruption, and bribery

We are committed to operating to the highest ethical standards and maintain regular policies to ensure that we are transparent, honest and fair. As a responsible business, we expect our suppliers and other stakeholders to act in the same way across all the countries where we work.

The policies that set out our approach include those on human rights, the Modern Slavery Act, and our supplier code of conduct.

Our 2022/2023 Strategic Report, from page 1 to 111 has been reviewed and approved by the Board of Directors on 12 September 2023.

GRAHAM RITCHIE
CHIEF EXECUTIVE OFFICER

PLEASE REFER TO RELATED PRINCIPAL RISKS ON LAWS AND REGULATION, PAGE 107

GOVERNANCE REPORT

GOVERNANCE REPORT

LEADERSHIP WITH INSIGHT AND EXPERIENCE

Our Board during the year ended 30 June 2023

COMMITTEE MEMBERSHIP AS AT 1 JULY 2023

- Audit and Risk Committee
- Responsible Business Committee
- Nomination Committee
- Remuneration Committee
- Disclosure Committee
- Executive Committee

C Denotes Chair of the Committee

MARK CLARE
FCMA
CHAIR OF THE BOARD

Mark Clare was formally announced as Chairman of Ricardo plc on 17 November 2022. He brings to Ricardo substantial plc-level experience and is currently Non-Executive Chairman of Grainger plc, a UK-based residential property business, listed on the London FTSE 250 index. He is also the Senior Independent Director of Wickes Group plc and a Non-Executive Director of Premier Marinas Holdings Limited. From 2005–2016, he was the CEO of Barratt Developments plc, a FTSE 100 house builder.

GRAHAM RITCHIE
BA (ECON), ACA
GROUP CHIEF
EXECUTIVE OFFICER

Graham Ritchie was appointed Chief Executive Officer on 1 October 2021.

Since 2016, Graham was a member of the Executive Committee of Intertek Group plc, responsible for its operations in Europe, including Russia, and Central Asia. Prior to that role, Graham was Intertek's Group Financial Controller. Previously, Graham held senior financial positions at BT Group plc and other technology services organisations, having started his career with PwC. Graham is a qualified Chartered Accountant and holds a BA in Economics.

IAN GIBSON
BSC, ACA
CHIEF FINANCIAL OFFICER

Ian Gibson was appointed Chief Financial Officer on 1 July 2013. A member of the Institute of Chartered Accountants in England and Wales, Ian is a finance professional with more than 30 years of commercial experience. He was previously Chief Financial Officer of Cable & Wireless Worldwide plc, where he spent a total of 17 years in a number of senior financial management positions. Prior to this, Ian spent 12 years at Deloitte where he worked in both the London and Toronto offices. Ian will retire as CFO and from the Board on 13 September 2023.

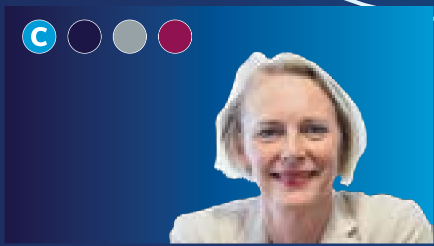
JUDITH COTTRELL
BSC ACA
CHIEF FINANCIAL OFFICER

Judith was appointed to the Board on 1 July 2023 as Chief Financial Officer Designate and will assume the role of Chief Financial Officer when Ian Gibson retires from the Board on 13 September 2023. Judith, a former KPMG accountant, has more than 20 years' experience working in senior financial and operational roles. She was previously the Group Finance Director for RPS, and, prior to that, she held various senior roles within the company, including Chief Executive of RPS's UK & Ireland consulting business and Group Strategy Director. Before RPS, Judith worked at Ricardo as a Finance Director within its Automotive and Industrial business unit, having originally joined AEA Technology, which Ricardo acquired in 2012.

RUSSELL KING
BA (HONS)
EXECUTIVE DIRECTOR

Russell King was appointed Non-Executive Director on 5 September 2019. Russell is an Independent Non-Executive of BDO LLP. Russell served as Chief Strategy Officer at Anglo American plc where he had global responsibility for strategy, business development, government relations, safety and sustainable development. He was also a member of its executive committee for eight years.

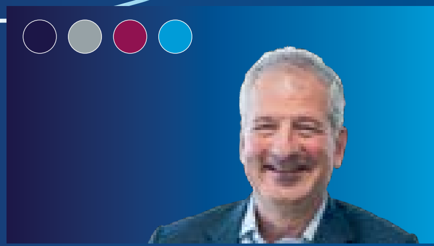
Additionally, Russell was Senior Independent Director and Remuneration Committee Chair of Spectris plc from 2010 to 2020 and Senior Independent Non-Executive Director and Remuneration Committee Chair of Aggreko plc, from 2007 to 2017.



MALIN PERSSON
MSC
NON-EXECUTIVE DIRECTOR, SENIOR INDEPENDENT DIRECTOR

Malin Persson was appointed Non-Executive Director on 4 January 2016 and Senior Independent Director on 14 November 2019.

Malin is also the nominated Non-Executive director for workforce engagement and ESG. Malin held a number of senior executive roles during her employment by the Volvo Group between 1995 and 2012. She is an elected member of the Royal Swedish Academy of Engineering Sciences and has an MSc in Industrial Engineering and Management from the Chalmers University of Technology in Gothenburg. Malin is also currently a Non-Executive Director of Peab AB, Getinge AB, Hexpol AB, OX2 AB, and Absolent Air Care Group AB. Malin is intending to retire one of her director mandates in the first half of 2024.



JACK BOYER OBE
BA (HONS), MSC, MBA
NON-EXECUTIVE DIRECTOR

Jack Boyer OBE was appointed Non-Executive Director on 5 September 2019.

Jack is a Non-Executive Director and Senior Independent Director of TT Electronics plc and member of the Audit, Remuneration and Nominations Committees. Jack is a Non-Executive Director of Bela Holdings AG, and a non-executive board member at the Department for Education. He chairs the Board of Trustees of the University of Bristol and is Chair of the Henry Royce Institute Hydrogen Accelerator. Previous appointments include Non-Executive Director of Mitie plc and Laird plc, and Senior Independent Director and Chair of Remuneration Committee of Elcogen Group plc.

LAURIE BOWEN
BSC, MBA
NON-EXECUTIVE DIRECTOR

Laurie Bowen was appointed Non-Executive Director on 1 July 2015.

She has over 30 years of international leadership experience at IBM, British Telecom, Tata Group, Telecom Italia Sparkle and Cable & Wireless Communications. She was appointed Non-Executive Director of Chemring Group plc on 1 August 2019 and a Non-Executive Director of SBA Communications Corporation on 24 May 2023. Laurie has an MBA, a BSc in Electrical Engineering and a BSc in Computer Science from Washington University in St. Louis, Missouri.

BILL SPENCER
BSC, FCMA, MCT
NON-EXECUTIVE DIRECTOR

Bill Spencer was appointed Non-Executive Director on 24 April 2017 and Chair of the Audit Committee on 8 November 2017.

For 15 years until 2010 he was the CFO of Intertek Group plc. Since then he has developed a varied non-executive career. His former NED roles where he also chaired the Audit Committee include UK Mail plc, Exova Group plc and Northgate plc. Currently Bill is the Senior Independent Director and the Audit Committee Chair at The Royal Mint. He is a Chartered Management Accountant and Corporate Treasurer and has a BSc in Management Sciences from the University of Manchester.

MARK SERFOZO
LLB (HONS)
GROUP GENERAL COUNSEL

Mark Serfozo was Group General Counsel for Ricardo plc from March 2023 to 8 September 2023. Mark was General Counsel and Company Secretary of Spectris plc from 2017 to 2022. He joined Spectris from Rolls-Royce plc where he served as Director of Risk for four years and before that he spent 18 years at BAE Systems plc where he held a number of senior legal positions including, latterly, the role of Group Chief Counsel Compliance and Regulation. Mark has considerable experience in leading behavioural change programmes, M&A, managing large-scale criminal and regulatory investigations, compliance and regulatory affairs, risk management and governance. Mark qualified as a solicitor in 1990 and is a member of the University College London Centre for Ethics and Law Advisory Board. Harpreet Sagoo joined Ricardo Plc as General Counsel and Company Secretary on 21 August 2023.

CORPORATE GOVERNANCE STATEMENT

I am pleased to present the Corporate Governance Report to shareholders for the financial year 2022/23. As outlined in my letter on pages 8 and 9, our ambitions for the company are clear and we have a well communicated strategy to deliver. For the Board, it is now about execution of the strategy.

MARK CLARE
CHAIR

CORPORATE GOVERNANCE CODE STATEMENT OF COMPLIANCE

As a UK premium listed company, Ricardo plc is expected to comply or explain any non-compliance with the 2018 UK Corporate Governance Code, published by the FRC and available on its website, www.frc.org.uk.

The Board considers that the Company complied fully with the provisions and principles as set out in the Code throughout the year ended 30 June 2023.

Chair's overview

During the year we have continued to execute our strategy to become a global leader in consultancy, delivering strategic environmental and engineering solutions that are at the intersection of transport, energy and global climate agendas.

The Board sees the delivery of the strategy as key to delivering long-term sustainable value for all its stakeholders.

Our section 172 statement on pages 56 and 59 contains examples of the areas where we have engaged and considered our stakeholders whilst making our decisions and below I highlight some of these examples.

Our people – The Company is, at its heart, a people business: we have continued to invest in our people who are our most valuable asset. The Company has continued to roll out its new values, vision and purpose and the Board is pleased with how they are being embraced by employees across the whole of the organisation. We continue to place health and safety of employees at the centre of decisions made by the Board and management. I am pleased to report that the Board has continued to make visits to colleagues in a number of the Company's UK facilities including: Shoreham, Harwell and Leamington Spa. In 2024, it intends to extend this to our important sites internationally.

Our shareholders – the Board recognises the importance of its duty to shareholders and that returns from capital invested are a key element of its investment case. It is pleasing to note that the strength of the Company's balance sheet has allowed the Company to continue its progressive approach to dividends payments. The interim dividend of 3.35p per share was paid in April 2023 and the final dividend proposed for the year ended 30 June 2023 is 8.61 pence per share. The total dividend payment represents a yield of 2.1% on a share price of £5.72 at 30 June 2023.

Our clients – the Board has continued its focus on its clients and receives regular reviews from senior management. In the FY 2022/23 the Company undertook its inaugural client satisfaction survey and the findings and follow up actions of this annual exercise have been reviewed by the Board.

Our commitment to a safe and sustainable world – The Board has continued to prioritise investment on the decarbonisation and the net zero agenda with a focus on electrification and hydrogen, whilst continuing to support the transition away from fossil fuel-based internal combustion engines. The Board plans to achieve this through a combination of organic growth and a programme of focused acquisitions. The Board believes that continuing to focus on this strategy will positively impact all of our stakeholders and the long-term health of the business.

Our communities – Ricardo has always been a strong supporter of Science, Technology, Engineering and Maths (STEM) and related activities through its community and charity work. During the pandemic and last year as the world adjusted back to normality, our STEM activity was low. To address this the Company has invested more heavily in its community activity by undertaking programmes with several STEM partners, providing charitable support, matching employee contributions, and launching an employee volunteering programme. It is planned to extend the STEM programme to the US and Australia.

We will measure the success of our partnerships, the number of people we support, our social value impact and report on this next year.

Changes to our Group – on 1 August 2022 the Company divested its software business Ricardo Simulation Limited, this divestment was in line with the Company's strategy to simplify and focus its portfolio on clean energy, environmental services and sustainable mobility. The Board was pleased to approve the acquisitions of E3 Modelling S.A. on 24 January 2023 and Aither Pty Limited on 10 March 2023. Further details of the acquisitions are set out on **page 39**.

The Board carefully considered all of its stakeholders during these transactions, further details of which can be found in our s.172 statement on pages **56** and **59**.

Board changes and succession planning – In November 2022 Sir Terry Morgan retired from the Board and I thank him for his time leading the Board and the contribution that he made to the Company. I joined the Board on 1 November 2022 and was announced as Chairman on 17 November 2022.

Ian Gibson will retire from the Board on 13 September 2023 and I thank him for his time on the Board as Chief Financial Officer and the contribution that he has made to the Company. I am pleased to welcome Judith Cottrell to the Board who will assume the role of Chief Financial Officer on 13 September 2023.

We continue to carefully consider our medium and long-term succession plans, more details of which is contained in the Nomination Committee report on pages **128** to **131**.

I welcome your comments on this Corporate Governance Report and upon the 2022/23 Annual Report and Accounts as a whole.

MARK CLARE
CHAIR
12 September 2023

REPORTING IN ACCORDANCE WITH THE 2018 UK CORPORATE GOVERNANCE CODE

The 2018 UK Corporate Governance Code (the Code) sets out the Company's approach to governance. This table shows where shareholders can evaluate how the Company has applied the principles of the Code and where key content can be found in this report.

Board leadership and division of responsibilities

Board and Executive Committee structure

The Board and its committees oversee and manage the governance of the Company, and provide a mechanism to approve, review, challenge and monitor the strategies, policies and codes of conduct and behaviours through which the Company operates. The terms of reference of the Committees, and the Matters Reserved to the Board, can all be found at "ricardo.com/corporate governance". The structure and responsibilities of the Board and its management committees are set out below.

The Board and Committee attendance in FY 2022/23

Board and Committee attendance

	Board (scheduled)	Audit and Risk Committee	Nomination Committee	Remuneration Committee	Responsible Business Committee	AGM
Laurie Bowen	7/7	4/4	2/2	5/5	1/1	N
Jack Boyer(3)	6/7	3/4	2/2	4/5	1/1	Y
Mark Clare(1)	5/5	n/a	1/1	3/3	1/1	n/a
Ian Gibson	7/7	n/a	n/a	n/a	n/a	Y
Russell King	7/7	4/4	2/2	5/5	1/1	Y
Sir Terry Morgan(2)	3/3	n/a	1/1	3/3	n/a	Y
Malin Persson	7/7	4/4	2/2	5/5	1/1	Y
Graham Ritchie	7/7	n/a	2/2	n/a	n/a	Y
Bill Spencer	7/7	4/4	2/2	5/5	1/1	Y

(1) Mark Clare was appointed to the Board on 1 November 2022.
(2) Sir Terry Morgan CBE resigned from the Board on 17 November 2022.
(3) Jack Boyer was unable to attend the Board and Committee meetings held in September 2022 due to a prior arranged Board meeting and the Audit Committee meeting held in January 2023 due to attending to an ill close relative in hospital.

Directors who are unable to attend meetings continue to receive papers in advance of the meeting and have the opportunity to discuss them with, and provide comments to, the relevant Chair or Company Secretary and feedback is provided on any decisions made at the meeting.

THE BOARD

Responsible for defining the Company's purpose, setting a strategy to deliver it, and monitoring values and behaviours that shape how the Company conducts its business and its culture. The Board has several matters reserved for its consideration and delegates other responsibilities to its Board and Management Committees as appropriate.

BOARD COMMITTEES

The Board has the following four committees:

Audit Committee – responsible for overseeing the financial reporting process, significant accounting judgements and estimates, the Company's ethics and compliance programme, financial and compliance controls, and risk management.

Remuneration Committee – responsible for recommending the policy for the remuneration of the Chair, Executive Directors and the Executive Committee members, in the context of considering the pay and conditions of the wider workforce.

Nomination Committee – responsible for advising on succession matters and talent management for the Board, Executive Committee and senior management.

Responsible Business Committee – during the year the Board created a new Responsible Business Committee which is responsible for promoting the long-term sustainable success of the Company with regards to environmental, social and governance matters.

MANAGEMENT COMMITTEES

The Board has the following management committees:

Executive Committee – responsible for the day-to-day management of the Company's operations.

Disclosure Committee – responsible for the identification and disclosure of inside information and for ensuring that announcements comply with applicable regulatory requirements.

Board activity

Other key areas of focus for the Board and the stakeholders that it considered in its discussions and decisions.

Topic	2022-2023 activities	Stakeholders considered
PEOPLE AND CULTURE	• Received regular updates on workforce matters including health and wellbeing, recruitment and attrition rates, gender pay gap, and employee engagement activity. Reviewed the results of the employee engagement survey • Continued to develop the role of the Workforce Engagement Director. • Succession planning for the Board, the Executive Committee and senior management including the approval of the succession of the Chief Financial Officer and the engagement of a President for the Group's new Clean Energy and Environmental Services business and a new President of the Group's Performance Products business • Supported management with the development of a Company-wide Diversity, Equity and Engagement programme	
FINANCIAL PERFORMANCE	• Received regular updates to the Board on the Group's financial performance including its cash management and conversion, working capital, profits and costs, and the management of clients, suppliers and operations • Considered and approved the 2022-23 budget following review of progress against the prior year budget • Approved the Annual Report, interim and full/half year results presentations • Considered and approved the Group's going concern and viability statements. • Considered and approved dividend payments • Considered and assessed the efficacy of the Group's capital allocation model	
STRATEGY REVIEW	• Received regular updates from the Chief Executive on progress executing the Group's strategy, to become a leading environmental and energy transition consultancy, including reviews of the market and updates on investor relations • Reviewed progress against the 2022-27 five-year plan. Carried out strategy reviews of the businesses within the Group • Oversight of M&A activity: Including updates on acquisition and divestiture activities at each scheduled Board meeting • The Board continues to prioritise investment on decarbonisation and the net zero agenda with a focus on electrification and hydrogen, whilst continuing to support the transition away from fossil fuel-based internal combustion engines. The Board plans to achieve this through a combination of organic growth and a programme of focused acquisitions • The Board considers that this renewed focus on strategy will positively impact all of our stakeholders and the long-term health of the business	
M&A	• Received updates on the progress made to become a leading environmental and energy transition consultancy and to prioritise investment on the decarbonisation and net zero agenda and ensured that the Group's stakeholders were considered during this process • Considered and assessed each of the Group's M&A activities where Board approval was required, including the divestment of Ricardo Software and the acquisitions of Aither Pty Limited and E3 Modelling	
GOVERNANCE AND ETHICS	• Created a new Responsible Business Committee of the Board with responsibility for promoting the long-term sustainable success of the Company with regards to environmental, social and governance matters • Monitored progress against the actions from 2022 internal Board evaluation and reviewed the outcome, and agreed actions, from the 2023 internal evaluation • Reviewed and approved the terms of reference of the Board committees, Matters Reserved to the Board • Received updates on ongoing litigation matters and key legal and regulatory topics • Received updates on the ethics and compliance programme and reviewed concerns raised through the Group's confidential Speak Up line	

Clients Communities Shareholders Colleagues Suppliers and partners

Overseeing the Group's culture

Purpose and culture

The Board is committed to maintaining an open and ethical culture at Ricardo and believes this is of significant importance to the success of the Group. Our Code of Conduct and our Values of – Create Together, Be Innovative, Aim High and Be Mindful – provide the framework within which we expect all of our employees to operate ethically and with integrity and provide solutions for our clients and other stakeholders.

Our Purpose is to enable our clients to solve the most complex and dynamic challenges to help achieve a safe and sustainable world. Our Values focus on the right behaviours to support our Purpose;

CREATE TOGETHER

BE INNOVATIVE

AIM HIGH

BE MINDFUL

FOR MORE ON OUR VALUES, SEE PAGE 17

The Board and culture

The Board has continued to develop the ways in which it considers the culture at Ricardo and the activities of the Board during FY 2022/23 include:

- Engaging with employees at meet the Board events and lunches at the Company's operating facilities;
- Through the activities of the workforce engagement director which are discussed at Board and Committee meetings, further details are set out at pages 125 and 126;
- Reviewing the feedback from the annual Group employee engagement survey;
- Regular reviews with the Group People Director to understand employee retention and the reasons why employees join and leave the Company;
- Regular reviews of ethics cases reported to the Company's confidential Speak Up helpline;
- Reviews of the Company's diversity and inclusion programme; and
- Reviews of feedback from clients and suppliers including through voice of the client and the feedback from the annual client engagement survey.

"Since joining Ricardo as a Chief Engineer, the Company has actively helped me to develop as a leader: I have been recognised as both a technical expert in my field and a senior team manager. I have been able to develop my career through the senior leaders programme, and it has also been very important to me in turn to support the career development of my own team members and that of early careers colleagues in my business unit. It was important to me to take part in Passing on the Baton: Conversations for Change – our activities for this year's International Women in Engineering Day. The conversations were a significant opportunity for us not only to celebrate our female engineers, but also to highlight our commitment to talent development and succession planning by bringing together existing and potential future leaders of our business, so that we could all learn from each other and support each other on our leadership journeys."

DRAGICA KOSTIC PEROVIC
CHIEF ENGINEER, AUTOMOTIVE AND INDUSTRIAL

INTERVIEW PROFILE:

COLLEAGUE EXPERIENCE FROM OUR BOARD MEET AND GREET SESSIONS

Before attending the Board Meet and Greet session at Shoreham Technical Centre, I really only knew of Graham Ritchie and Malin Persson, because I had attended her virtual event for International Women's Day.

It was nice not only to meet the Board in person, but also to meet them in an informal setting, so that we could all connect together on a very personal level. I really liked that there was no formality, no standing on ceremony at all – it was all: come and have a chat.

As a graduate, I rarely interact with senior leaders in the business, so I really enjoyed the opportunity to discuss the Company's electrification strategy and, in particular, speak to the Board members about Group strategy. Hearing from them in their own words and with their own insights in conversation was powerful, because I got to see strategy from their level, but also share what the strategy means at my level, so it felt like a real alignment of views.

Everyone I met was incredibly friendly and genuinely interested in us as people and in our work at Ricardo, asking us which department we were in and about our projects. Graham Ritchie actually sought me out to speak to me because we were both about to do a charity rowing event for Hoveraid, so he was asking for my advice! I really felt that the Board cared about us, and that we could have a genuine, open conversation: it was very much a two-way street. It was refreshing to be able to see for myself that the people at the very top reflect the great culture that exists across our Company.

I went away from the meet and greet feeling very inspired that Ricardo has such experienced people at the top, who are able to make very informed decisions based on their breadth and depth of experience. It was a privilege to speak with them – a great opportunity taken which helped me to feel even more connected to the Company.

GABE ROBERTSON
GRADUATE ENGINEER,
AUTOMOTIVE AND INDUSTRIAL

Board effectiveness

Informed decision making

The Chairman is supported by the General Counsel and the Company Secretary in ensuring the dissemination of accurate, timely and clear information to the Board allowing it to function effectively and efficiently. The General Counsel and the Company Secretary are responsible for compliance with appropriate laws and regulations and are available to support all of the Directors. Directors may solicit independent professional advice at the Company's expense where specific expertise may be required to effectively discharge their duties.

Access to the business

The Board undertakes a review of each business at least annually. Additionally, each year the Board meets on site at several of the businesses. Board visits include a deep dive into the business with the wider leadership team including a Board dinner, an overview of the key products and services, and opportunity to meet informally with employees.

During the 2022-23 reporting period the Board visited the Clean Energy & Environmental Services site at Harwell in Oxfordshire, The Automotive and Industrial and Performance Products sites at Shoreham by Sea, and Leamington Spa.

Training and development

New directors receive a formal, tailored and comprehensive induction programme on joining the Board and further training and development needs are reviewed and agreed with the Chairman

Board evaluation

Period of evaluation

The evaluation was conducted at the end of FY 2022/23, with feedback and review taking place at the Board meeting held on 27 July 2023.

EVALUATION PROCESS

The Board evaluation process was led by the Chairman of the Nomination Committee. The internal evaluation process used a questionnaire developed by the Company. Questions covered the performance of the Board, its committees and individual Directors. The evaluation covered a range of matters including the following:

Board	Board Committees	Feedback	Key resulting actions
• Strategy oversight • Market awareness and understanding • Risk management • Composition of the Board – skills, diversity, experience and knowledge • Engagement with shareholders and other stakeholders • Board focus and priorities, use of time • Quality of papers and presentations • Communication with management • Succession planning for the Board and senior management	• Information and resources available to members • Quality and extent of matters covered by committees • Quality of papers and presentations	A report on the findings of evaluation process was provided to Directors ahead of the Board meeting held on 27 July 2023. The principal findings and recommendations from the evaluation were discussed at the meeting and a number of actions were agreed (see next column). Reports were also provided to each of the committees on the findings of the evaluation as it applied to them. The Chairman will provide feedback on the evaluation to individual Directors.	• Increase engagement with external stakeholders • Enhance Company Secretarial services to support committees and track all Board actions to completion. • Schedule latest developments in regulatory environment and market practice into Board Planner • Spend more time getting to know senior management and wider workforce • Continue to actively manage Board succession and diversity

FY 2023/24 Evaluation

The evaluation for the financial year 2023/24 will be carried out externally

Workforce engagement activity

The Company activity for workforce engagement is part of a programme to establish meaningful and regular dialogue with the workforce to capture key insights and bring the employee voice into the boardroom; the programme supports the requirement of the UK Corporate Governance in this area.

Malin Persson is the Board member responsible for workforce engagement and was appointed to this role in September 2020. The Board recognises the importance of having clear lines of communication with the workforce and is pleased with how the Workforce Engagement Director continues to strengthen these links and the role that she plays in doing so. The dialogue that Malin has had with employees has provided them with the opportunity to express their opinions and have open discussions on topics that are important to our employees.

The workforce engagement activities undertaken in FY 2022/23 were varied and included the following:

- Malin met with all members of the Executive Committee, who are direct reports of the Chief Executive, to discuss the revised strategy and how they were all working with the Chief Executive
- Sir Terry Morgan and Russell King joined the Company's inaugural leadership conference and recognition awards
- Malin attended the Company's Women in Engineering Forum Affinity Group
- To support Mark Clare's induction process on becoming Chairman, Malin provided feedback on the opinions she had received from employees as part of her workforce engagement activity
- Malin held meetings with The Group People Director to obtain a detailed understanding of the feedback from the Group Employee Engagement Survey

The Board received regular feedback from those Directors who had taken part in workforce engagement activity throughout the year.

During FY 2023/24, it is planned that engagement activity will focus on face-to-face meetings at the Company's sites where employees can share their thoughts with the Board, and will include the Workforce Engagement Director receiving feedback from various listening forums that the Company is setting up across the Group. Malin will continue to provide regular feedback to the Nomination Committee and the Board to support their consideration of areas that impact our employees such as ethics and the Company's Speak Up programme, sustainability, diversity, equity and inclusion.

Board composition

As at the 30 June 2023, the Board had 8 Directors, comprised of 5 non-executive directors, in addition to the Chairman and two executive directors. The charts on page 126 and 127 provide details of each of the director, as well as some information on gender and nationality split and also on overboarding scores. There were no related party transactions involving and board member in FY 2022/23.

Board changes

Sir Terry Morgan CBE retired from the Board and the role of Chairman with effect from 17 November 2022. Mark Clare was appointed to the Board on 1 November 2022 and assumed the role of Chairman on 17 November 2022. Ian Gibson notified the Board on 3 April 2023 that he would retire from the Board at the end of September 2023, and Judith Cottrell joined the Board on 1 July 2023 as Chief Financial Officer Designate. On 13 September 2023 Ian Gibson will retire from the Board and as Chief Financial Officer

DIRECTORS' OVERBOARDING SCORES[1]

	Number of board members	Percentage of the board
1 mandate	2	25%
2 mandates	1	13%
3 mandates	3	36%
4 mandates	–	– %
5 mandates	1	13%
6 mandates	1	13%

1. Based on the 2021 ISS Guidance, which classifies any person with more than five mandates at a listed company as being overboarded. A Non-Executive Directorship counts as one mandate, a Non-Executive Chairmanship counts as two mandates and a position as an Executive Director (or comparable role) counts as three mandates.

BOARD REPRESENTATION[2]

	Number of board members	Percentage of the board	Number of senior positions on the board (CEO, CFO, SID and Chair)	Number in executive management	Percentage of executive management
Sex/gender representation					
Men	6	75%	3	6	67%
Women	2	25%	1	3	33%
Ethnicity representation					
White British or other White (including minority-white groups)	8	100%	4	8	89%
Black/African/Caribbean/Black British	–	– %	–	1	11%

2. The gender and ethnicity data for the Board and other management groups, was captured through a combined process of self report where the data is not already captured in our HR systems.

and Judith will assume the position of Chief Financial Officer. The Nomination Committee Report on pages 128 to 132 sets out the processes that was followed for new appointments and succession planning.

Election and re-election of Directors

The Nomination Committee considered a number of factors in considering the election and re-election of Directors including:

- The tenure and independence of each of the Directors
- The results of the individual evaluation process
- The skills, capabilities and relevant market experience of the Directors and
- The other external appointments held by the Directors

Any potential or actual conflicts of interest were also considered which allowed the Board to assess if any circumstances are likely to, or could, impair a Non-Executive Director's independence. Following the Nomination Committees recommendation, the Board has concluded that all Non-Executive Directors being recommended for election and re-election are considered to be independent.

Time commitments and external appointments

On appointment Directors declare external directorships and any actual or potential conflicts of interest and these are reviewed annually by the Committee. Any external appointments are considered and approved by the Chairman following careful consideration of the impact on the individual Directors ability to meet the necessary time commitments. The Company reviews and records any conflicts of interest, evidence of any situational or transactional conflicts, Directors shareholdings.

Diversity

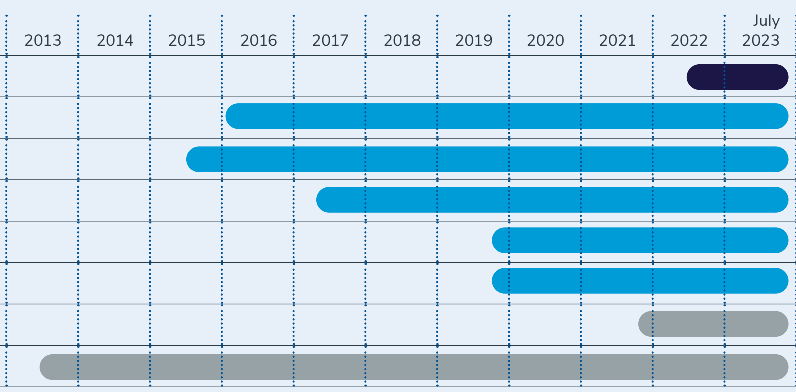
The Board continues to actively encourage the promotion of diversity in its composition as per the recommendations issued by the FTSE Women Leaders Review and the Parker Review.
The Women Leaders Reviews has sets the following targets for FTSE 350 Boards and leadership teams:-

- 40% of FTSE 350 Board and leadership positions should be held by women by the end of 2025 (and).
- FTSE 350 companies should have at least one woman appointed as chair, senior independent director (SID), CEO or CFO by the end of 2025.

The Board is proud to declare it is on target to meet, and in some cases exceed the recommendations by 2025 set by the Women Leaders Reviews. From 1 July 2023, the percentage of women on the Board increased from 25% to 33%, and as of 13 September 2023 with the appointment of the Chief Financial Officer this percentage will increase to 37.5%. From 13 September the Board will have already met the recommendations of having a female Senior Independent Director and a Chief Financial Officer.

The Board regrettably has not been able to meet the targets set by the Parker Review, for FTSE 250 companies to have at least one member of the Board from an ethnic background. This is a result of limited opportunities to drive personnel change. However, as opportunities arise the Board will seek to address this. It should be noted that the Board is to review diversity holistically throughout the organisation and has ensured Executive Sponsorship of its DE&I Committee which will be mandated to ensure that external targets on diversity are met within a given timeframe, and with the formalisation of the Board Diversity and Inclusion Policy a clear tone from the top will be set.

NON-EXECUTIVE DIRECTORS TENURE



	Appointed	Tenure
Mark Clare	November 2022	1.0 years
Malin Persson	January 2016	7.5 years
Laurie Bowen	July 2015	8.0 years
Bill Spencer	April 2017	6.0 years
Jack Boyer	September 2019	4.0 years
Russell King	September 2019	4.0 years
Graham Ritchie	October 2021	2.0 years
Ian Gibson	July 2013	10.0 years

● Chairman ● Non-Executive Director ● Executive Director

NOMINATION COMMITTEE REPORT

Members	Meetings attended
Laurie Bowen	2/2
Jack Boyer	2/2
Mark Clare	1/1
Russell King	2/2
Sir Terry Morgan	1/1
Malin Perrson	2/2
Bill Spencer	2/2
Graham Ritchie	2/2

LAURIE BOWEN
CHAIR OF THE NOMINATION COMMITTEE

Introduction

During FY 2022/23 the Committee held two meetings and attendance at those meetings is recorded on this page and on page 120. The Committee's work has focused on the reorganisation of Executive management and succession planning for the Board. Significant time was spent on the recruitment and engagement of Mark Clare as Chairman and Judith Cottrell as Chief Financial Officer. The Committee's effectiveness was assessed as part of the internally conducted annual effectiveness review and is considered to be operating effectively. Further details on the evaluation process is set out on page 125. The Committee's terms of reference can be found at www.ricardo.com.

Composition of the Committee and Attendance

In accordance with the UK Corporate Governance Code, the Nomination Committee comprises a majority of independent Non-Executive Directors. During the year under review the Committee comprised the independent Non-Executive Directors Mark Clare, Sir Terry Morgan, Laurie Bowen, Russell King, Malin Persson, Bill Spencer and Jack Boyer, together with the Chief Executive Officer. The biographies of the Committee members can be seen on pages 114 to 117. Throughout FY 2022/23, all Non-Executive Directors (whilst in office) and the Chief Executive were members of the Committee and attendance in meetings are set out on page 120. The Group People, Team and Organisation Director regularly attends meetings of the Committee.

Role of the Committee

The Nomination Committee is responsible for corporate governance and succession planning, including leading the process for Board appointments and reviewing the appropriateness of the size, structure and composition of the Board. The Committee is also responsible for succession planning for senior executives of the Company. In fulfilling its responsibilities, the Committee evaluates the balance of skills, experience, independence and knowledge of the members of the Board. The Board values diversity in all of its forms and takes this into account when recruiting new Board members. The gender balance of the Board can be found on page 126 and the gender balance of those in senior executive roles can be found on page 127. The wider work being carried out by the Company on diversity can be found on page 127. In FY 2023/24, the Committee will oversee the extension of the Company's diversity and gender metrics to all other levels within the Group where this is legally permissible.

The key responsibilities of the Committee are:

- Reviewing the structure, size, and composition of the Board
- Undertaking succession planning for Directors and Senior Executives
- Evaluating the balance of skills, knowledge and experience on the Board
- Leading the process for Board appointments and nominating for the approval of the Board candidates for appointment as Directors
- Reviewing and refreshing membership of Board Committees
- Undertaking the annual review of Directors' independence
- Assessing whether Directors are able to commit enough time to discharge their responsibilities; and
- Reviewing the induction and training needs of Directors.

The Committee's performance was assessed as part of the Board's internal evaluation further details of which can be found on page 125. Following the review, the Committee is considered to be operating effectively.

The Committee's full terms of reference can be found at www.ricardo.com.

Diversity

We take diversity and inclusion seriously within Ricardo and look at the external set targets as a guideline to ensure we can have the right representation for our workforce and the wider community we serve. Details of the targets achieved are listed under page 127 which will not be replicated here. As a Board it is important to note that though there is emphasis on the Women Leaders Report and the Parker Review, we strive to have diversity of thought and representation across a wider spectrum to facilitate the growth of our company. The Board is cognisant that the process of driving change will take time but will seize the opportunities as they arise.

Activities of the Committee

During FY 2022/23, the Committee's key activities included:

- A detailed review of executive management talent and succession planning
- A detailed review with the Group People, Team and Organisation Director of the Group's organisational design and the progress being made for the recruitment of key senior executives
- Considering the independence of each of the Non-Executive Directors and their time commitments
- A review of the right mix of skills and capabilities on the Board and the right size of the Board to optimise its effectiveness
- Succession planning for the Board
- Regular updates from the Workforce Engagement Director
- A detailed review with the Group People, Team and Organisation Director on the results from the Group-wide employee engagement survey
- Board effectiveness

Succession planning

The Committee devoted a considerable period of time on succession and in particular focused on the induction process for Mark Clare when he assumed the role of Chairman, and also on the role of Chief Financial Officer. In preparing for the Board change of Chief Financial Officer, the Committee evaluated the balance of skills and experience required for the role and also value of diversity in all of its forms and this formed the basis for a brief to Inzito to assist in the search for a pool of suitable candidates which was as diverse as possible. Following a thorough search and assessment process the Committee identified and recommended Judith Cottrell for appointment to the Board as Chief Financial Officer. Having served over 10 years on the Board, on 13 September 2023 Ian Gibson will retire as Chief Financial Officer and from the Board and Judith Cottrell will take on the position of Chief Financial Officer.

In line with the requirements of the UK Corporate Governance Code, the Committee can confirm that Inzito was the external search consultancy engaged for the appointment referred to above and that there is no further connection between the consultancy and the Company or individual Directors. The Committee is clear that any external search consultancy engaged should ensure that the selection process used promotes diversity in all of its forms, together with personal strengths, merit and other objective criteria.

On joining the Board, Judith Cottrell undertook a tailored induction process and planning is underway for a tailored development and education programme for all Directors.

I will have served nine years on the Board prior to the 2024 AGM and therefore will not stand for re-election at that meeting. The Committee has started the process of considering my succession as part of its usual process which considers the skills and capabilities of the Board and the Board's commitment to promoting diversity in all of its forms including meeting external targets on gender and ethnicity. In support of this succession process, Mark Clare became Chair of the Committee on 1 July 2023.

LAURIE BOWEN
CHAIR OF THE NOMINATION COMMITTEE
12 September 2023

SUCCESSION PLANNING:

JUDITH COTTRELL
RICARDO'S NEW CHIEF FINANCIAL OFFICER

Judith Cottrell will be appointed Chief Financial Officer (CFO) at Ricardo with effect from 13 September 2023. Judith joined the Company and the Board on 1 July 2023. Here, she shares details of her induction and the structured, thorough handover process she has experienced with the retiring CFO, Ian Gibson.

JUDITH COTTRELL
CHIEF FINANCIAL OFFICER

You previously worked at Ricardo, what drew you back to the Company?

"I really enjoyed my time working at Ricardo and always kept an eye on the Company after I left. I could see so many similarities between the achievements of my most recent company, RPS, and Ricardo, and so I knew that I have useful experience to offer. Ricardo has a great opportunity to create value for stakeholders: our clients, our people, our suppliers and our investors, through operating in dynamic, burgeoning markets where there are significant opportunities for growth. I am really passionate about what Ricardo does at the forefront of the environmental, energy and mobility sectors. Being known as the go-to company to solve complex challenges in these sectors, we can drive value for investors and our people, through more investment in R&D and our teams, creating a virtuous circle."

Can you tell us about your tailored induction programme as a new Executive Committee and Board member?

"During the interview process, I spent time with and talked extensively to Mary Moore and Graham Ritchie – it was so important to know that he and I could feel we could work together effectively. I met with Mark Clare and most of the Board members, then subsequently with Russell King. Having been introduced to the Executive Committee members on a Teams call, I subsequently met them all in person the following week as part of the sales conference at which I met many of the senior commercial leaders of the business. On my first official day in the business, I had a speaker slot during Graham's global town hall call, and then subsequently took part in in-person town halls at Shoreham, Prague and the Midlands Technical Centres and in our London Paddington office. I was really struck by the energy, enthusiasm and deep engagement with the business that I witnessed."

"As part of my induction programme, I also have the luxury of a three-month hand-over period with Ian Gibson who has been very generous in sharing his knowledge, bringing me up to speed and enabling me to tap into his insights. Investors can feel slightly nervous when a new CFO comes in, but Ricardo in arranging this very structured induction programme for me, has shown that community that it understands the importance of business continuity and is serious about making the transition very managed and smooth."

Given your recent C-Suite experience and expertise, what are you hoping to bring to Ricardo to help transform and deliver growth?

"In my last role with RPS, the company went on a very similar journey and transformation to the one that Ricardo is currently on. From that experience, I know what the pitfalls are, how to manage people through change successfully, how we enable our functions to support growth, and how to implement better systems and set informative KPIs. I understand that I have a significant role to play with Graham to drive a culture of delivery and top line growth, and working closely with our investor community to continue to cut through complexity in our story for them and demonstrate our value."

Q&A WITH

MALIN PERSSON
WORKFORCE ENGAGEMENT DIRECTOR

Malin has been a non-executive director on Ricardo's Board for seven years. She has also taken on the Board remit for workforce engagement.

The workforce engagement director briefed the Committee and the Board throughout the year on the workforce engagement activities undertaken including feedback from the Group employee opinion survey, discussions with the Chief Executive's direct reports on strategy and experience of working with the Chief Executive, engagement with employees at the Company's leadership conference and recognition awards and the Women in Engineering forum.

Describe your experience of being on the Board
"I love Ricardo – I really do. Ricardo is a fantastic company with talented and committed people."

How has your experience helped Ricardo develop diversity and business growth?
"Laurie Bowen and I were the first female members of the board at Ricardo, and it is clear that there is an appreciation of our experience as the company is looking to increase diversity – not necessarily from a gender perspective but by having someone on the board who had led international businesses and who is not based in the UK. In Ricardo, we are a global business which is a strength and opportunity for us to embrace and benefit from cultural differences."

You have identified that there is a really important link between the Board and the global Ricardo workforce. Tell us more
"My role was specially created because the Board realised that due to Ricardo's size and global presence, alongside the employee engagement survey results, we wanted to build a stronger link to the day-to-day business. The role is our way of saying: 'let's reach out and communicate with the wider workforce, and let's have more two-way conversations.' The remit for workforce engagement is something I've really enjoyed and learnt a lot from."

What engagements have you undertaken so far?
"We were very ambitious in the first year. I had conversations with 5% of the Ricardo global workforce. We didn't have an agenda but wanted people to be open in discussing the culture of the business. It was very interesting and valid and helped us come to some sort of conclusion about how we progress. We work on a one-to-two-year cycle for employee engagement, and we obviously must be very linked with HR, to ensure that everything is joined up."

"A specific example during 2023 was the virtual conversation with global colleagues as part of International Women's Day. We have so much to offer our workforce in Ricardo and it is good to share diversity examples. Subsequently, the Board met with Ricardo teams in Shoreham, Leamington Spa and Harwell, as part of our meet and greet the Board programme. In my role, I am extremely privileged to learn about the facts and the figures of a business, and different business cultures, and meet really interesting people."

AUDIT COMMITTEE REPORT

AUDIT COMMITTEE REPORT

Members	Meetings attended
Bill Spencer	4/4
Malin Persson	4/4
Laurie Bowen	4/4
Russell King	4/4
Jack Boyer	3/4

BILL SPENCER
CHAIR OF THE AUDIT COMMITTEE

Composition

I chair the Audit Committee. In line with the requirements of the UK Corporate Governance Code, during the year the Committee also comprised the independent Non-Executive Directors, Laurie Bowen, Malin Persson, Jack Boyer and Russell King. There was no change in membership during the year.

As the Committee's Chair and as is considered desirable by the Financial Reporting Council's Guidance on Audit Committees, I have recent and relevant financial experience and a professional accountancy qualification.

As set out on **page 125**, the performance of the Audit Committee has been evaluated and continues to be considered effective.

The Committee convenes four scheduled meetings each year and other ad hoc meetings, as required. Details of attendance at meetings held during the financial year are set out on **page 120**. The Chair, Executive Directors, the Group's Head of Internal Audit, PwC – the Group's internal audit co-source partners – and the Company's external auditors all have standing invitations to attend all Committee meetings. These meetings were held via a mixture of video conference and in-person.

Responsibilities and key areas of focus

The Committee is established by, and is responsible to, the Board. As authorised by the Board, the Committee has obtained all necessary documentation and information it required from officers or employees of the Company, as well as external professional advice. In order to carry out its responsibilities during the year, the Committee undertook the following activities:

Accounting, tax and financial reporting

- Considered separate reports prepared by the Chief Financial Officer and external auditors on financial reporting and internal control matters as part of the interim review and annual audit processes
- Assessed the results, on behalf of the Board, of the application of agreed assumptions to re-confirm the continued operational and financial viability of the Group for a period of five years from the date of this report

- Reviewed the significant financial reporting matters, judgements and estimates, and changes in accounting policies applicable in the preparation of both the Group's interim and year-end consolidated financial statements, prior to submission to the Board for approval; and
- Evaluated the content of the Annual Report and Accounts as a whole and assessed the processes in place to assure its integrity, to advise the Board on whether the information presented is fair, balanced and understandable, and whether it contains the information necessary for shareholders to assess the Group's position and performance, business model and strategy

Risk management

- Monitored the Group's risk management processes and internal control systems as part of its role on behalf of the Board to oversee the Group's approach to risk management and with due consideration to the principal risks and uncertainties facing the Group
- Assessed the Group's risk profile, as well as its appetite for risk on behalf of the Board, and evaluated the effectiveness of the Group's risk management and internal control systems, together with the policies and procedures in relation to ethics, speaking up (whistleblowing), fraud and bribery prevention
- Monitored the key risks to the Group in respect of data and cyber security and evaluated the effectiveness of its control environment; and
- Reviewed the approach to ESG assurance

Internal controls

- Considered significant matters arising from internal audits performed during the year, evaluated the effectiveness of the internal audit function, and reviewed the scope and available resource for the internal audit plan in the following year to ensure that it is appropriate

External audit

- Reviewed the scope and planning of the external audit, and evaluated the external auditors' remuneration, effectiveness, independence and objectivity, including consideration of the provision of non-audit services

Significant financial reporting matters

The Committee considered the following significant financial reporting matters, judgements and estimates in approving the Group financial statements for the year ended 30 June 2023. Following discussions with senior management and the external auditors, the Committee approved the disclosure as set out in **Note 1(d)** to the Group financial statements.

Carrying value of intangible assets

The issue: Intangible Assets receive careful attention from the Board and Committee who need to be satisfied that their carrying value is appropriate. Goodwill impairment testing is normally undertaken as at 30 June of each financial year, with additional assessments also undertaken at the half year if there are indicators of possible impairment.

In the first half of the financial year the performance of the Established A&I mobility segment was impacted by economic uncertainty and the continuing technological change in the automotive sector giving rise to indicators of possible impairment. Impairment testing was therefore undertaken at that time with the future projections and discounted cash flows for the operating segment being re-assessed.

The role of the Committee: The Board and the Committee considered the appropriateness of the CGUs for goodwill testing. In addition, they reviewed and challenged the assumptions made by management, at both the half year and the full year, which underpinned the impairment testing, including the FY 2022/23 forecast, the FY 2023/24 budget and the five-year plan.

Comments and conclusions: Given the performance of the A&I Established mobility segment and the accelerating technological changes facing the business, the Board and the Committee approved the recognition of a non-cash impairment charge at the half year and the full year in respect of goodwill, intangible assets, and property, plant and equipment.

Overall, at 30 June 2023 these A&I Established mobility assets were fully impaired in the amount of £18.7m as the asset recoverable amounts were less than their carrying value. No other CGUs were impaired.

Revenue recognition on fixed-price contracts

The issue: The Group recognises a significant proportion of its consulting revenue from the supply of services under fixed-price contracts, which may span a number of reporting periods. Changes in these estimates may impact revenue recognition and the actual outcome may differ to the estimate made at the reporting date. The identification and separate accounting of distinct performance obligations within the context of a contract is a critical judgement in recognising revenue, as set out in more detail in **Note 1(d)** to the Group financial statements.

The role of the Committee: A summary of the judgements and estimates taken by management to assess the extent to which these contract assets are recoverable was reviewed by the Committee at the February and September meetings.

Comments and conclusions: The Committee is satisfied that the Group's policies and procedures have been followed to reflect management's best estimate of revenue recognised at the reporting date and that no individual judgement or estimate is expected to have a materially different outcome.

Specific adjusting items

The issue: The Group presents specific adjusting items in the income statement which include the amortisation of acquired intangibles, costs relating to major restructuring programmes, acquisition-related expenditure and other items which are deemed to be significant or non-recurring in nature. The treatment and disclosure of such items is critical to allow stakeholders to fully understand the performance of the Group.

The role of the Committee: The committee reviewed the papers presented to the Board detailing the nature and composition of the specific adjusting items. The Committee challenged the nature and the amount of the items and evaluated the disclosures made in respect of the items.

Comments and conclusions: The Committee is satisfied that the items have been presented consistently and are in accordance with the Group's policy. The Committee is comfortable that the enhancements made to the disclosure of such items presents the Group's results in a transparent manner. After reviewing the Annual Report and Accounts, the Committee is satisfied that the reported and underlying results are given equal prominence throughout the document.

Defined benefit pension obligation

The issue: The Company operates the defined benefit Ricardo Group Pension Fund (RGPF). The accounting basis of the RGPF is exposed to changes in the value of its assets and liabilities. Economic uncertainty has continued to drive volatility in markets and the value of the scheme's assets and liabilities. The liabilities of the RGPF are also sensitive to changes in actuarial assumptions, on which management takes professional advice. Further detail is set out in the financial statements in **Note 34** to the Group financial statements.

The role of the Committee: The Committee reviewed the papers presented to the Board at the February and September meetings and considered the impact of the changes in assumptions on the pension obligation.

Comments and conclusions: The Committee is satisfied that the assumptions were reviewed by senior management and that the value of the RGPF's liabilities reflects the best estimate at the reporting date.

Internal audit

The internal audit function is accountable to the Committee and is considered to be an effective function as part of the Group's approach to risk management.

During the year, we have continued our co-source internal audit arrangement with PwC whilst expanding our in-house capabilities. Business unit audits are now typically performed by the in-house team, with geographic support from PwC, where required. PwC was also engaged to carry out Group-wide audits of key functional areas. The co-source arrangement with PwC has given the Group access to specialist internal audit staff for deployment on higher risk, more complex audits and independent subject matter expertise. Responsibility for the internal audit process and setting the internal audit plan has remained with the Group's Head of Internal Audit, who has independently reviewed and scrutinised the work performed by PwC. The approach ensures independence in the internal audit process and combines external experience with the sharing of best practice around the Group.

All internal audit reports submitted during the year were reviewed by the Committee, and the status of each remedial action is tracked to completion to ensure appropriate resolution. The Audit Committee meets with the Group's Head of Internal Audit without the presence of management. The Committee also monitored the effectiveness of the Group's internal audit function including the approval of the scope and resources required to carry out work to be performed, and received an external perspective on internal audit development from PwC.

External audit

KPMG LLP were reappointed for the audit of the Group's results to 30 June 2023 at the Group's AGM on 17 November 2022.

The Committee were advised that the Financial Reporting Council's (FRC) Audit Quality Review team had undertaken a review of certain aspects of KPMG LLP's audit of Ricardo plc's financial statements for the year ended 30 June 2022. The FRC noted that only limited improvements were required. We have discussed the review and its findings with KPMG and are satisfied with the responses to be implemented by KPMG.

Non-audit services

The Board's policy is that the provision of permissible non-audit services may only be undertaken by KPMG in limited circumstances and is subject to a cumulative cap (which prohibits non-audit fees exceeding more than 70 percent of the average audit fees for the preceding three-year period). In order to remove the possibility of a perceived conflict of auditor objectivity and independence, KPMG has agreed with the Committee that no permissible non-audit services will be provided to Ricardo other than those closely related to the audit of the Group, such as the interim review.

Fees for non-audit services paid to the external auditors during the year were 7.8% of KPMG's audit fee (FY 2021/22: 5.0%). The ratio of audit and non-audit fees and the nature of non-audit fees are disclosed in Note 11 to the Group financial statements. Given the nature and scale of the services provided by KPMG, the Committee concluded that these services did not cause any concerns regarding KPMG's objectivity or independence.

There are limited instances where Ricardo enters into business relationships or joint arrangements with KPMG to pursue commercial opportunities, either as a prime contractor, sub-contractor or as part of a consortium, with either party or a third party being the project manager. These business relationships are considered acceptable to the extent that they remain immaterial to both organisations and do not compromise the auditors' independence.

Independence and effectiveness

Both the Board and KPMG have safeguards in place to ensure the auditor's objectivity and independence cannot be compromised. The Committee supports KPMG in having the necessary professional scepticism in its role. KPMG also provides the Committee with information about policies and processes for maintaining its independence.

The Committee confirms that during the year it has maintained formal and transparent arrangements for considering corporate reporting, risk management and internal control and for maintaining an appropriate relationship with KPMG.

During the year, the Committee carried out its annual effectiveness review of the external auditor, which primarily focused on the 2023 audit. This assessment was completed at the end of the 2023 audit and was based upon KPMG's audit findings and responses to questions from the Committee, together with input from senior management and finance personnel. The Committee also met with the audit partner without management being present. There were no significant findings following the review and it was concluded that the audit process was effective. The Committee recommended to the Board that their reappointment be proposed to shareholders at the 2023 AGM.

BILL SPENCER
CHAIR OF THE AUDIT COMMITTEE

DIRECTORS' REMUNERATION REPORT

Members	Meetings attended
Laurie Bowen	5/5
Jack Boyer	4/5
Mark Clare	3/3
Russell King	5/5
Sir Terry Morgan	3/3
Malin Persson	5/5
Bill Spencer	5/5

See notes on page 120

RUSSELL KING
CHAIR OF THE REMUNERATION COMMITTEE

PART 1 – REMUNERATION COMMITTEE CHAIR'S OVERVIEW AND ANNUAL STATEMENT

Dear Shareholder,

The Ricardo Group portfolio has performed in line with the Board's expectations in FY 2022/23, and our target to more than double underlying operating profit over the five years to FY 2026/27 remains central to the Group's activities.

The new Directors' Remuneration Policy and our approach to long-term performance-related pay

With this in mind, we have designed, and will be submitting for approval by our shareholders, a new Directors' Remuneration Policy. The review of the current Directors' Remuneration Policy has been carried out during FY 2022/23 in tandem with a review of Ricardo's approach to variable pay for the top 60 leaders.

The Remuneration Committee (the Committee) concluded that changes to the policy and, in particular, to the approach to long-term variable pay are required to align remuneration with Ricardo's growth strategy and the five-year plan. As part of the process, we consulted with our largest shareholders. I would like to thank all the shareholders who participated for their constructive feedback and guidance and, although we received a range of views, I am happy to say that the responses were generally positive. We listened carefully to shareholder feedback and the original proposal has been modified in the light of the input we received.

At the heart of Ricardo's corporate strategy is the doubling of operating profit, and the sustainable growth of profit margins, over the four years to FY 2026/27. This plan underpins the annual budget-setting process to 2027. To achieve our ambition, we are changing the mix of our portfolio by prioritising solutions above services and expanding our international footprint through targeted and complementary acquisitions.

Provided the execution of the strategy is successful, significant shareholder value will be created. To ensure the alignment of reward and shareholder value creation throughout the organisation, we are proposing the following changes to the Directors' Remuneration Policy. The principal modifications relate to the long-term incentive arrangements.

The Committee is proposing that the Executive Directors should be awarded, in 2023 only and in addition to usual (or 'Core') annual awards under the Company's Long Term Incentive Plan (LTIP), a one-off 'Accelerator' LTIP award. This will enhance the award to the CEO and the CFO by 100% of salary over three years i.e. 33.3% of salary on an annualised basis over the three-year performance period. To be clear, the enhanced award is very much a one-off specifically targeted at doubling operating profit.

Under the current Directors' Remuneration Policy, the face value of the 'Core' awards for the CEO and the CFO is 150% of salary and 130% of salary respectively on grant. No change to the 'Core' award levels is proposed but we are proposing changes to the performance measures and the weightings for the 2023 'Core' awards with the incorporation of a third measure linked to our Science-Based carbon emissions reduction targets to 2030. As a reminder, the Science Based Targets initiative (SBTi) is a collaboration between the CDP, the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF) Our carbon emissions reduction targets will be audited by Lloyds.

The shares under the one-off 'Accelerator' LTIP award will vest subject to the achievement of stretching Earnings per Share (EPS) performance over three years from FY 2023/24 in excess of that required to trigger maximum vesting of the 'Core' award. The performance targets of the 'Accelerator' award have been set so that the shares start to vest only if Ricardo hits EPS targets that are consistent with our strategic growth target of doubling operating profit. The shares will vest in full only if we achieve a superior level of EPS performance or 'stretch' which will be a further 12% above this strategic growth target.

To summarise, the approach to the long-term incentive arrangements from FY 2023/24 to FY 2025/26 will be as follows:

- The CEO and the CFO will receive each year a 'Core' award of shares under the LTIP of up to 150% of salary and 130% of salary respectively on grant.
- In FY 2023/24 only, the CEO and the CFO will receive a one-off additional 'Accelerator' LTIP award of 100% of salary.
- For awards in FY 2023/24, the vesting of the 'Core' award will be based on the achievement of targets set for three performance measures: EPS (with a weighting of 60%); relative Total Shareholder Return (TSR) v FTSE Small Cap (with a weighting of 30%); and carbon emissions reduction targets (with a weighting of 10%).
- The vesting of the 'Accelerator' award will wholly be based on EPS performance.
- The targets are being set to align with the strategic growth target of doubling operating profit and the 'Accelerator' award will vest in full only if we achieve a superior level of EPS performance or 'stretch' which is 12% ahead of this strategic growth target.
- The EPS range for the 'Core' and 'Accelerator' awards to be granted are as follows:

Element	Threshold	FY 2025/26 EPS	CAGR from FY 2022/23
Core	Minimum Threshold (25% vesting)	38.3p	c.5% p.a.
	Maximum (100% vesting)	50.1p	c.15% p.a.
Accelerator	Maximum (100% vesting)	56.2p	c.20% p.a.

- The emissions reduction target range for the 'Core' award will be based on the reduction in Scope 1, 2 and 3 emissions relative to the number of employees and production units. The vesting range at threshold is a 1 percentage point reduction resulting in 25% vesting rising to full vesting for a 2.5 percentage point reduction, averaged over the three financial years in the performance period compared with the outturn from FY 2022/23. Further details are included on page 171. The targets are based on Ricardo's 2030 Science-Based Targets.
- The Committee will continue to have the ability to modify the vesting outcome if the quality of the performance is not adequate and/or we have doubts about its sustainability. This will be reviewed annually.
- In-post share ownership policy will be increased to 250% of base salary for the CEO with the net value of 50% of vested shares under the LTIP and the Deferred Bonus Plan (DBP) to be retained until the shareholding requirement is met.

In the light of what we heard from our shareholders we adapted the original proposals as follows:

- We increased the EPS performance hurdle for maximum vesting of the Accelerator awards to 12% (up from 10%) above the EPS performance required for full vesting under the 'Core' awards;
- The Committee will, each year, assess the sustainability of the performance outcomes;
- Before awards vest at the end of the three-year performance period, the Committee will apply a supplementary test of the quality of Ricardo's performance and assess the underlying performance based on the Board's expectations in respect of, for example, efficient capital management and the ratio of net debt to EBITDA in light of the Company's strategy for growth; and
- The shareholding requirement for the Chief Executive Officer will be increased from the current 200% of salary to 250% of salary.

It is fair to say that a variety of views on remuneration policy and design were expressed. The Committee recommends the new Policy to shareholders on the basis that it directly reinforces the five-year plan and also aligns with the Chief Executive Officer's approach to leading the Company as well as Ricardo's ethos and values.

Chief Financial Officer and succession

As announced on 3 April 2023, Ian Gibson steps down as Chief Financial Officer on 13 September 2023 having served for over 10 years in the role. During his notice period, which will end by 1 April 2024, Ian will receive his salary, pension entitlement and contractual benefits as normal. As he remained in service for the full financial year, Ian's annual bonus for FY 2022/23 will be paid in October 2023 and one third of the annual bonus will be deferred into shares. Ian will not be entitled to a bonus in respect of FY 2023/24. The Committee has determined that Ian will be treated as a good leaver for the purposes of his awards under the DBP and LTIP, the latter of which will be pro rated for time. The Committee, in exercising its discretion on this, took into account: Ian's contribution to Ricardo over many years, his commitment to a smooth handover to his successor whose appointment was also announced on 3 April 2023 and his performance. Furthermore, Ian Gibson is not resigning from Ricardo to take up a new executive appointment. His remuneration will be paid in the usual way until the date of the cessation of employment. He will be subject to Ricardo's usual approach to mitigation and Ricardo's clawback and malus provisions remain in force for two years after the end of the applicable performance period or, in the case of his existing deferred awards, three years following the date of grant.

Judith Cottrell joined Ricardo as its Chief Financial Officer-designate on 1 July 2023 and takes over from Ian when he steps down on 13 September 2023. Judith will receive a base salary of £365,000 per annum (in line with her predecessor) and will be eligible for an annual bonus of up to 100% of her base salary, and a 'Core' long-term incentive award of 130% of salary and a one-off 'Accelerator' LTIP award of 100% of salary to be made under the new Directors' Remuneration Policy. Her pension allowance will be 7% of salary which is in line with our practice in the UK for all employees. No buyout of any foregone incentive awards was necessary.

Ricardo's people and incentives below the Board

In order to execute the Group's strategy successfully we have to continue to ensure that we are able to recruit and retain the best talent available.

Our Group People, Team & Organisation Director has continued to work with the Chief Executive Officer in reviewing the design and operation of Ricardo's incentive schemes – both cash and share-based – below the Board. A new incentive arrangement to complement the 'Accelerator' LTIP award has been introduced from FY 2023/24. A new profit sharing scheme has been launched for the wider leadership team linked to Ricardo's ambitious operating profit targets and the five-year plan. In addition, share awards were made during the year to executives with key skills and the Chief Executive Officer also has the discretion, within parameters agreed by the Committee, to nominate key colleagues for share awards on a non-hierarchical basis. The number of participants in the LTIP and Ricardo's other share-based pay arrangements is constantly under review but at the moment 122 employees hold shares awarded to them on a discretionary basis. This is an increase from 54 in FY 2020/21, reflecting the desire to increase share ownership of senior leaders across the Group and incentivise longer term planning and delivery. Every aspect of our incentives continues to be aligned to the delivery of our five year-plan.

Malin Persson is the designated Non-Executive Director responsible for overseeing Workforce Engagement and has during the year shared with the Committee what she has heard from colleagues – see page 125.

We regard the Directors' Remuneration Report as a key element of our communication both with shareholders and our people as we explain how the Committee ensures that executive pay is aligned to the strategy and performance of the Company and with the remuneration of colleagues across the Group.

Our performance during the year

Ricardo's results for FY 2022/23 are in line with the Board's expectations and are underpinned by strong growth in order intake and increased profitability. This is the direct consequence not only of the leadership of Graham Ritchie and the senior team, but also the skills and hard work of every single one of Ricardo's 2,914 people around the world. Underlying PBT for the year was £27.9m on a continuing operations basis, an increase of 15% over the prior year. Order intake was £521.5m, up 23% on the previous year. Net debt was £62.1m.

The Group's underlying cash conversion was 75% and, when adjusted by £1.8m to remove pension deficit payments, in line with the Group's bonus principles, the resulting adjusted underlying cash conversion was 79%. This is below the threshold set for the year and for bonus purposes.

Our Energy and Environment and Defense businesses, which both separately accounted for 20% of the Group's total revenue in FY 2022/23, continued to deliver good revenue and underlying operating profit growth in the year. Performance Products (19% of total revenue) also saw growth in revenue and modest growth in underlying operating profit. Rail (16% of total revenue) saw a decrease in revenue and underlying operating profit. The Emerging Automotive and Industrial business (18% of total revenue) had an increase in both revenue and underlying operating profit, while the Established Automotive and Industrial business (6% of revenue) saw a decline in both measures.

Pay outcomes and performance for FY 2022/23

Salaries

The salary of the Chief Executive Officer and Chief Financial Officer was increased by 3% which was in line with increases for employees across the Group with effect from 1 January 2023.

Annual bonus

Underlying Group PBT on a continuing operations basis was £27.9 million for the year. Adjusting this for bonus purposes by reference to the budget exchange rates for FY 2022/23 resulted in underlying Group PBT of £26.6m. The target for underlying Group PBT was therefore met and the consequential bonus payments are 20% of the maximum for this element. The threshold set in respect of value added turnover was not met and the consequential bonus payments are zero for this element. Adjusted cash conversion was 80% which was below the threshold set and this resulted in a bonus pay-out of zero for this element.

The Committee's assessment of performance against the strategic objectives set at the start of the financial year for the Executive Directors – see **page 163** – resulted in an overall score of 77% and 56% for the Chief Executive Officer and the Chief Financial Officer respectively. The overall outcome resulted in bonus payments of 23% and 19% as a percentage of maximum for the Chief Executive Officer and the Chief Financial Officer respectively. One third of these bonus payments will be deferred into shares to be retained for three years.

The Committee took the view that these outcomes were in line with overall Group performance and took the view that no discretion to reduce the bonus outcome was required. Shareholders will be asked to approve a final dividend of 8.61 pence per share, which in addition to the interim dividend paid in April 2023 of 3.35 pence, brings the total dividends in respect of the financial year to 11.96 pence.

Pension

The pension allowance of both the Chief Executive Officer and the Chief Financial Officer is 7% of salary in line with the level for other UK-based colleagues.

Long-term incentives lapsing in 2022

In October 2022, awards under the LTIP and bonus-linked share awards under the DBP that were granted in October 2019 lapsed on the basis of underlying EPS and TSR performance over the relevant performance periods.

Long Term Incentive Plan awards granted in 2022

Awards were granted under the LTIP in October 2022.

The target range for EPS, which determines the vesting of two thirds of the shares under award, was disclosed in the 2022 Directors' Remuneration Report as follows:

- No part of the EPS portion will vest if the Company's underlying EPS for the final year in the performance period is below 36.8p;
- 20% of this portion (increased from 15% for awards made in FY 2021/22) will vest where the final year underlying EPS is 36.8p;
- 100% of this portion will vest where the final year underlying EPS is greater than or equal to 51p; and
- Vesting will take place on a straight-line basis between 36.8p and 51p.

The remaining one third of the shares under awards are subject to a relative TSR measure which is consistent with the prior year's grants.

Operation of the Directors' Remuneration Policy

The Committee is satisfied that the current Directors' Remuneration Policy has operated as intended during FY 2022/23 and, in light of the performance outcomes described above and on page **163** and **164**, decided that incentive outcomes are in line with corporate performance.

Overview of exercise of other discretions

Save for those already described in this statement, the Committee did not exercise any other discretions afforded to it under Ricardo's share plans and/or its Directors' Remuneration Policy.

Conclusion

I hope our shareholders will support the Policy and approach we have taken on remuneration this year. If you have any questions or comments on the Directors' Remuneration Report please do contact me through Harpreet Sagoo, Ricardo's Group Legal Counsel and Company Secretary, at Harpreet.Sagoo@ricardo.com.

RUSSELL KING
CHAIR OF THE REMUNERATION COMMITTEE
12 September 2023

SUMMARY OF THE KEY ELEMENTS OF EXECUTIVE DIRECTORS' PAY IN FY 2022/23

The following table provides a summary of the key elements of Graham Ritchie's (CEO) and Ian Gibson's (CFO) pay in FY 2022/23.

Base salary (From 1 January 2023)	• CEO: £484,100 • CFO: £365,815
Other benefits	• Company car allowance: £12,000 • Private fuel; • Private medical insurance; and • Life assurance.
Pension	• 7% of salary (over Lower Earnings Limit)
Annual bonus with deferral of one-third of any bonus earned	• Maximum opportunity of 125% of salary (CEO) and 100% of salary (CFO). • Based on PBT (40%), value added turnover (20%) cash conversion (20%), and personal targets (20%). • One-third of any bonus to be deferred into shares for three years.
Long-term Incentive Plan shares(1)	• CEO: 150% of salary • CFO: 130% of salary
Share ownership and retention policy	• In-post: a minimum of 200% of base salary; • Post-cessation of employment: a minimum of 200% of salary (or holding if lower) for first 12 months and half of this for second 12-month period;(2) • Net value of 50% of vested shares under LTIP/DBP to be retained until holding requirement met; • Year-end holding for Graham Ritchie is 32% of base salary;(3) and • Year-end holding for Ian Gibson is 119% of base salary.(3)

(1) Face value of award of long-term incentive plan shares granted in October 2022 was 150% and 130% of salary for the CEO and CFO respectively:
   a. Subject to three-year performance conditions: two-thirds underlying EPS growth, one-third TSR vs. FTSE Small Cap Index (excluding financial services companies and investment trusts);
   b. Once vested, the awards will be subject to a holding period of two years; and
   c. 50% of vested shares (net of tax) to be retained until share ownership requirement met.
(2) Only share plan awards made following the shareholder approval of the revised Directors' Remuneration Policy in 2020 will be subject to these post-cessation restrictions.
(3) Calculated by reference to the number of beneficially owned shares, a share price of 572.0p per share (2022: 361.5p) and salaries as at 30 June 2023, including unvested shares not subject to performance conditions and any vested shares subject to a holding period, both on a net-of-tax basis.

PART 2 – DIRECTORS' REMUNERATION POLICY

Introduction

This part of the Directors' Remuneration Report provides an overview of the Company's policy on Directors' pay that is designed to align with and support Ricardo's strategic plan and will operate over the three years from the AGM to be held on 16 November 2023 (the 2023 AGM) until the AGM to be held in 2026 (the 2023 Policy). The previous policy that was approved by shareholders at the AGM held on 12 November 2020 (the 2020 Policy) will continue to operate until the 2023 AGM and indeed the 2023 Policy permits the execution of remuneration arrangements that were agreed when the 2020 Policy was in effect. The 2020 Policy was most recently reproduced in the *Annual Report and Accounts 2022* with the originally approved text being included in the *Annual Report and Accounts 2020*, both of which are available on our website at **www.ricardo.com**.

In accordance with the requirements of the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (as amended) (the Regulations), the 2023 Policy will be subject to a binding vote at the 2023 AGM and will take effect immediately upon receipt of such approval from shareholders.

The Remuneration Committee – what we do

The Committee's primary purpose is to make recommendations to the Board on the Group's framework or broad policy for executive remuneration. The Board has also delegated responsibility to the Committee for determining the remuneration, benefits and contractual arrangements of the Chair and the Executive Directors. No individual is involved in deciding their own remuneration.

The Committee has written terms of reference, which are available at **www.ricardo.com**, and its responsibilities include:

- Determining and agreeing with the Board the policy for executive remuneration and monitoring and considering the policy for, and structure of, senior management remuneration, taking into account that the ultimate decision-making responsibility for the remuneration of the senior management team (other than the Executive Directors) lies with the Chief Executive Officer;
- Agreeing the terms and conditions of employment for Executive Directors, including their individual annual remuneration and pension arrangements, and reviewing such provisions for senior management;
- Agreeing the measures and targets for any performance-related bonus and share plans;
- Agreeing the remuneration of the Board Chair;
- Ensuring that, on termination, contractual terms and payments made are fair, both to the Company and the individual, so that failure is not rewarded and the duty to mitigate loss is recognised wherever possible; and
- Agreeing the terms of reference of any remuneration advisors it appoints.

Taking shareholders' views into account

When considering Ricardo's Remuneration Policy and its implementation, the Committee is always keen to ensure that it takes into account the views and opinions of all the relevant stakeholders in the business. In particular, when preparing its policy for approval at the 2023 AGM, the Committee undertook a programme of engagement with the Company's largest institutional investors and their representative bodies in order to better understand their perspective on our previous pay practices and the then proposed policy for 2023–2026. Through the consultation process, we received valuable feedback and insights from all those we spoke to which directly influenced the final proposals that are being submitted for approval. For example, as a result of the feedback received, changes were made to the structure of the performance ranges and enhancements were made to the share ownership guidelines.

In the spirit of continuous improvement and in order to ensure that our Directors' Remuneration Policy continues fully to support achievement of business objectives and delivery of value to shareholders, the Committee will continue to review our policy periodically in the context of the changing business environment. Any material future changes to the policy will be discussed with shareholders in advance.

Consideration of employment conditions elsewhere in the Company

Ricardo does not consult directly with employees on the subject of Directors' remuneration. The remuneration packages for each Executive Director and their fixed and variable elements are reviewed annually. This process (and the setting of the revised Remuneration Policy as a whole) takes into account a number of factors, including the following:

- Individual and business performance;
- Pay arrangements for similar roles in other companies and consultancy organisations of Ricardo's size, complexity and international reach;
- Risk management; and
- Pay and employment conditions of employees of the Group.

The Committee also looks at the differential between the Chief Executive Officer's pay and Ricardo average employee earnings over time.

Overview of Ricardo's Directors' Remuneration Policy for 2023–2026

The objective of Ricardo's Directors' Remuneration Policy is to support the business strategy and timescales of an international consultancy business by not only rewarding the standard of performance and the outcomes that our shareholders require, but also encouraging share ownership and fostering alignment of interest between the Executive Directors and shareholders. We do this by setting base levels of salaries that are competitive, compared with companies of similar size and complexity to Ricardo, and providing other remuneration package elements, namely the short-term annual bonus plan and long-term incentive arrangement, that only pay for performance. Taken together, our two variable pay platforms focus on growing the profitability of the business, its resilience, the achievement of discrete non-financial targets and linking executive outcomes with the shareholder experience both by delivering rewards in the form of Ricardo shares and also by using a relative total shareholder return performance measure over the longer term.

Changes to the 2020 Directors' Remuneration Policy

The changes to the 2020 Policy are as follows:

- The maximum opportunity under the long-term incentives has been amended to incorporate the granting on a one-off basis in FY 2023/24, of an 'Accelerator' LTIP award equal to 100% of salary to each Executive Director.
- The share ownership requirement for the Chief Executive Director is being increased to 250% of salary.
- The cash in lieu of pension policy has been simplified by the removal of references to legacy pension arrangements.

Overview of the decision making process that was followed for the determination of the new policy

As explained in the Chair's introduction on page 137 of the *Annual Report & Accounts* 2023, the new 2023 Policy, which shareholders will be invited to approve at the 2023 AGM, was developed by the Remuneration Committee following a thorough review of the pre-existing executive remuneration arrangements. This also involved the Committee undertaking a consultation exercise with our major shareholders and the Chief Executive Officer and Chief Financial Officer.

In its deliberations, the Committee received support and advice from FIT Remuneration Consultants and Shepherd and Wedderburn, its independent external advisors (see page 155 for details).

Although the Executive Directors provided the Committee with a level of input in relation to the formulation of the new policy, the final decisions around its structure were taken by the Committee alone in order to avoid any conflicts of interest arising.

Corporate Governance

When determining the 2023 Policy, the Committee was mindful of its obligations under Provision 40 of the Corporate Governance Code to ensure that the policy and other remuneration practices were clear, simple, predictable, proportionate, safeguarded the reputation of the Company and were aligned to Company culture and strategy. Set out below are examples of how the Committee addressed these factors:

Clarity

- Remuneration Policy and arrangements are clearly disclosed each year in the Annual Report.
- The Company invited its principal shareholders and shareholder representative groups to consult on the updated Remuneration Policy and received good feedback. Changes were made to the proposals following input from this process.
- The Committee is regularly updated on workforce pay and benefits across the Group during the course of its activity.

Simplicity

- Our remuneration structure is comprised of fixed and variable remuneration, with the performance conditions for variable elements clearly communicated to, and understood by, participants in order to ensure they are effective.
- The proposed 2023 Policy has received positive feedback from stakeholders for its simplicity.

Risk

- The Committee has the power to modify the outcomes under the incentive plans.
- Ricardo's variable pay is subject to malus and clawback provisions.
- When setting total pay of the Executive Directors the Committee considers pay ratios with the wider workforce and shareholder returns.

Predictability

- The range of possible rewards for the Executive Directors is considered in the scenario charts on **page 151**.
- The Committee has a range of discretions in relation to variable pay awards, new joiners and leavers, which are identified and explained in the Remuneration Policy section.

Proportionality

- As shown in the scenario charts on **page 151**, variable performance-related elements represent a significant proportion of the total remuneration opportunity for our Executive Directors.
- The Committee considers the appropriate financial and personal performance measures each year to ensure that there is a clear link to strategy. For example, for FY 2022/23 the value-added turnover measure was introduced under the annual bonus.
- Discretions are available to the Committee to reduce awards if necessary to ensure that outcomes do not reward poor performance.
- The potential payments under the new Policy were tested as a proportion of value created for shareholders and deemed to be good value.

Alignment to culture

- The Committee is confident that the incentive schemes, including the one-off changes in FY 2023/24 are aligned with the Company's purpose, values and strategy.
- The use of metrics in both the annual bonus and LTIP measure how we perform against our financial and non-financial KPIs.

THE STRUCTURE OF OUR DIRECTORS' REMUNERATION PACKAGE – THE 2023 POLICY TABLE

Pay element and link to strategy	Maximum	Operation	Framework for assessing performance
Base salary To provide a core level of remuneration to enable the Company to attract and retain skilled, high-calibre executives to deliver its strategy.	Base salary increases will not ordinarily be more than 10% p.a. with exceptional increases over the normal maximum limit capped at 25% p.a. However, generally speaking, increases will be no higher than salary increases for employees across the Group.	Salary levels are normally reviewed annually in January each year. Pay is set by considering: • Market levels of total pay for comparable roles in companies of similar size, complexity and sector; • Each individual Executive Director's experience, scope of responsibilities and performance; and • The salary increases for employees across the Group. Ricardo places a strong emphasis on internal succession planning. This emphasis may mean that talented individuals are promoted rapidly. In such circumstances, the Committee's policy is to set a relatively low base salary initially and then increase this to a market competitive level for the role over time. This may mean relatively high annual salary increases as the individual gains experience in the new role. We will notify shareholders where this is the case.	None
Other benefits To provide market-competitive benefits.	The total value of benefits will not exceed 10% of base salary p.a., save in the case of relocation.	The Company provides other cash benefits and benefits in kind to Executive Directors in line with market practice. These include a company car or cash alternative, private fuel, private medical insurance, life assurance and permanent health and disability insurance. The benefits arrangements are reviewed on an annual basis. The Committee reserves the right to provide further benefits where this is appropriate in the individual's particular circumstances (for example, costs associated with relocation as a result of the Executive Director's role with the Company). Certain other employees are eligible for the same or similar benefits described above depending on their role, seniority and geographical location.	None

Pay element and link to strategy	Maximum	Operation	Framework for assessing performance
Pension To offer market-competitive retirement benefits.	Workforce aligned (currently 7% of salary)	The Company operates a defined contribution scheme (the 'Pension Scheme'). All UK employees are entitled to receive Company pension contributions. For Executive Directors, the Company's pension contributions are at a level that is capped at the maximum amount payable to the wider UK workforce population (currently 7% of basic salary). Executive Directors may only choose to opt out of the Pension Scheme where they are close to or have exceeded the pension lifetime allowance and have applied for fixed protection from HMRC. Under such circumstances, Executive Directors will receive a cash payment in lieu of pension. On death in service, all Executive Directors, subject to the medical requirements of the insurance company, are entitled to a lump sum of four times annual salary at date of death. Early retirement is available with the consent of the Company and the pension scheme trustees if the individual is over 55 or retiring due to ill health.	None

Pay element and link to strategy	Maximum	Operation	Framework for assessing performance
Pay for performance: Annual bonus To reward the annual delivery of financial and operational targets.	Maximum opportunity of 125% of base salary for the Chief Executive Officer and 100% of base salary for other Executive Directors.	**Bonuses are awarded by reference to performance against specific targets measured over a single financial year** Two-thirds of any bonus paid to an Executive Director will be paid out in cash shortly after the assessment of the performance targets has been completed. The remaining one third of the bonus will be compulsorily deferred into ordinary shares, the vesting of which is normally subject to continued employment for a three-year period from the award date. The cash element of the bonus is not payable unless the individual remains in employment at the payment date. The principal purpose of this bonus deferral mechanism is to: • Provide for further alignment of executives' and shareholders' interests; • Provide an additional retention element; and • Encourage Executive Directors to build up a shareholding in accordance with our share retention policy. Dividends and dividend equivalents for each deferral period may also be paid in respect of shares under award to the extent that shares have vested in the relevant participants. Bonus arrangements exist for certain other employees throughout the Group on terms that are applicable to their role, seniority and geographical location, although typically at lower levels of maximum opportunity to reflect that a greater proportion of Executive Directors' remuneration is performance-based. **Malus and clawback** Annual bonuses (including any element deferred into shares) may be subject to malus and clawback provisions if certain events occur in the period of three years from the end of the financial year to which they relate. These events include the Committee becoming aware of: • A material misstatement of the Company's financial results; • An error in the calculation of performance conditions; or • An act committed by the relevant participant that could have resulted in summary dismissal by reason of gross misconduct or which has caused significant reputational damage to the Group. The mechanism through which malus and clawback can be implemented enables the Committee to take various actions including: • Reducing outstanding incentive awards; and • Requiring a cash payment to be made by participants.	The measures and targets applicable to the annual bonus scheme (and the different weightings ascribed to them) are set annually by the Committee in order to ensure they are relevant to participants and take account of the most up-to-date business plan and strategy. A significant majority (at least 50%) of the bonus opportunity will normally be determined by reference to performance against Group KPIs such as: • Underlying Profit Before Tax; • Cash conversion; and • Value added turnover. Any remaining part of an Executive Director's bonus will normally be based on the achievement of personal objectives which relate to delivery of the business strategy. See page 163 for examples. A payment scale for different levels of achievement against each performance target is specified by the Committee at the outset of each year – this ranges from zero for below-threshold performance up to 100% for full satisfaction of the relevant target. Bonus payments will also be subject to the Committee considering whether the proposed awards, calculated by reference to performance against the targets, appropriately reflect the Company's overall performance and shareholders' experience. If the Committee does not believe this to be the case, it retains the discretion to adjust the bonus outturn accordingly.

Pay element and link to strategy	Maximum	Operation	Framework for assessing performance
Pay for performance: Long-term incentives Performance shares under the Long-Term Incentive Plan ('LTIP') To focus motivation on the long-term performance of the Group and reward shareholder value creation. To encourage share ownership and alignment with shareholders.	Maximum opportunity of 250% of base salary for the Chief Executive Officer and 230% for other Executive Directors for awards in FY 2023/24. Maximum opportunity drops to 150% of base salary for the Chief Executive Officer and 130% for other Executive Directors for awards in future years.	**LTIP – performance measured over a three-year period** Performance share awards under the LTIP are made on an annual basis to the Executive Directors and a small group of other senior managers. Each year, the Company intends to grant 'Core' LTIP awards equal to 150% and 130% of base salary for the Chief Executive Officer and Chief Financial Officer respectively. In addition, a further one-off 'Accelerator' LTIP award equal to 100% of salary is intended to be granted in FY 2023/24 to each Executive Director. From time to time a number of employees below board level are granted non-performance based share awards to reflect exceptional performance. **Holding Period** Vesting of awards will generally take place on the third anniversary of grant or, if later, the date on which the performance conditions are assessed by the Committee. Executive Directors' awards that vest will normally be subject to a holding period in terms of which the relevant shares will only be released after a further period of at least two years has expired from the vesting date. **Dividends and equivalents** Dividends and dividend equivalents for each performance / holding period may also be paid in respect of shares under award to the extent that shares have vested in the relevant participants. **Malus and clawback** Long-term incentive awards may be subject to malus and/or clawback provisions if certain events occur after their grant but before the expiry of the period of two years from the end of the relevant performance period. These events include the Committee becoming aware of: • A material misstatement of the Company's financial results; • An error in the calculation of performance conditions; or • An act committed by the relevant participant that has (or could have) resulted in summary dismissal by reason of gross misconduct or which has caused significant reputational damage to the Group. The mechanism through which malus and clawback can be implemented enables the Committee to take various actions including: • Reducing outstanding incentive awards; and • Requiring a cash payment to be made by participants.	The vesting of long-term incentive awards is subject to both continued employment and the extent to which performance conditions measured over a specified three-year period are met. The measures and targets applicable to the long-term incentive awards will consist of challenging shareholder return, financial and/or strategic / ESG measures. The particular measures and targets to apply (and the different weightings ascribed to them) will be set annually prior to each grant by the Committee in order to ensure they are relevant to participants, challenging to achieve and take account of the most up-to-date business plan and strategy. Our policy is simply for financial and shareholder return targets to make up at least 50% of awards. A maximum of 25% of each element of an award will vest for achieving the threshold performance target with 100% of the awards being earned for maximum performance (with straight-line vesting between these points). Further details of the performance conditions applicable to awards to be made in FY 2023/24 are set out on pages 171 and 172. Formulaic outcome of all LTIP performance measures will also be subject to the Committee considering whether the proposed vesting levels, calculated by reference to performance against the targets, appropriately reflect the Company's overall performance and shareholders' experience. If the Committee does not believe this to be the case, it retains the discretion to adjust the LTIP outturn accordingly.

Pay element and link to strategy	Maximum	Operation	Framework for assessing performance
Chair and other Non-Executive Directors Helps recruit and retain high-quality experienced individuals. Reflects time commitment and role.	The aggregate fees of Chair and other Non-Executive Directors will not exceed the limit from time to time prescribed in the Company's Articles of Association.	The fees for the Chair and other Non-Executive Directors are set in line with prevailing market conditions and at a level that will attract individuals with the necessary experience and ability to make a significant contribution to the Group's affairs. Non-Executive Directors receive an annual basic fee plus an additional fee for acting as the Chair of the Audit or Remuneration Committee or the Senior Independent Director. The Chair of the Board receives an annual fee payable monthly with no additional fees for chairing Board committees. They also receive reimbursement for travel and incidental costs (including any associated personal tax charges) incurred in furtherance of Company business.	None

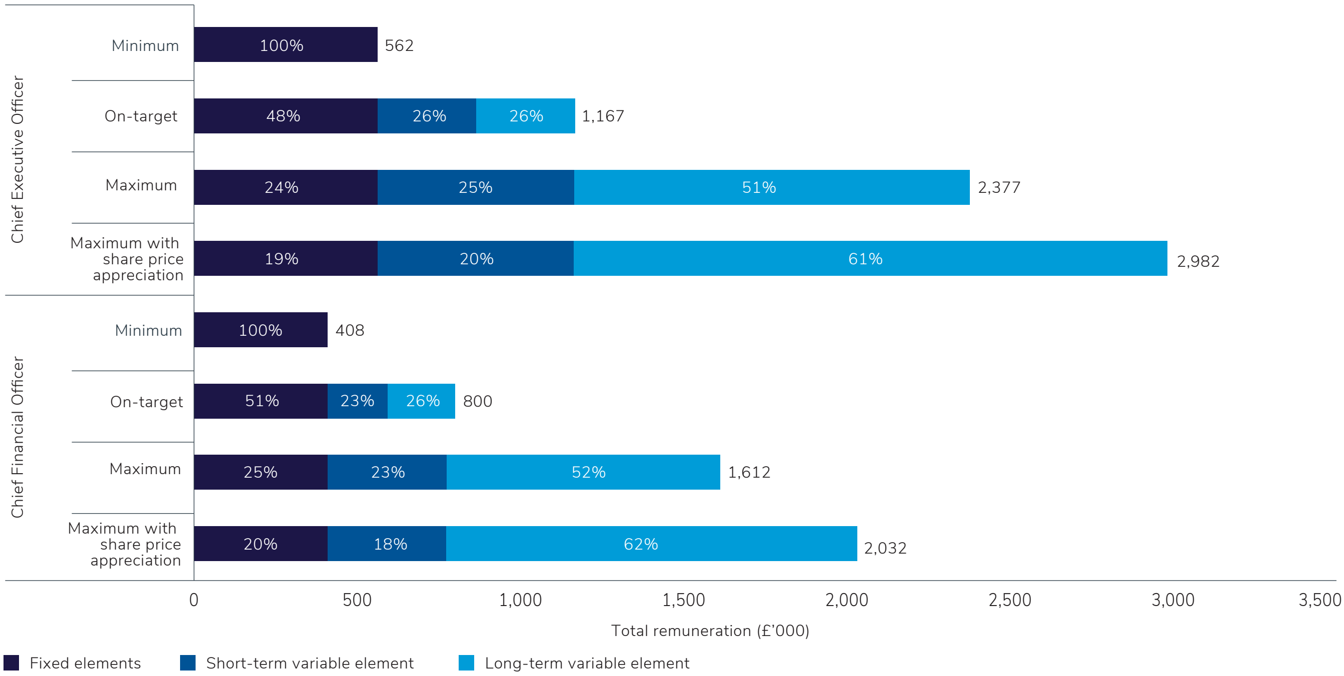
Notes to the 2023 Policy table:
1. Where maximum amounts for elements of remuneration have been set within the 2023 Policy, these will operate simply as caps and are not indicative of any aspiration.
2. A description of how the Company intends to implement the 2023 Policy set out in the tables on pages **146** to **150** during the financial year to 30 June 2024 is provided on pages **171** and **172**.
3. A general overview of how each remuneration element applies to other employees of the Group is included under the relevant section of the policy table.
4. The Committee reserves the right to make any remuneration payments and payments for loss of office (including exercising any discretions available to it in connection with such payments) notwithstanding that they are not in line with the 2023 Policy (as set out on pages **146** and **150**) where the terms of the payment were agreed:
   (i) before 29 October 2014 (the date the Company's first shareholder-approved Directors' Remuneration Policy came into effect);
   (ii) before the 2023 Policy came into effect, provided that the terms of the payment were consistent with the shareholder-approved Directors' Remuneration Policy in force at the time they were agreed; or
   (iii) at a time when the relevant individual was not a Director of the Company and, in the opinion of the Committee, the payment was not in consideration for the individual becoming a Director of the Company.
   For these purposes, payments include the Committee satisfying awards of variable remuneration and, in relation to an award over shares, the terms of the payment are 'agreed' at the time the award is granted.
5. The 'framework for assessing performance' column of the tables on pages **146** to **150** provide information on choosing the particular performance measures and target setting in relation to them.
6. Ricardo's variable pay may have any performance conditions applicable to the relevant element amended or substituted by the Committee if an event occurs which causes the Committee to determine that an amended or substituted performance condition would be more appropriate and not materially less difficult to satisfy. The Committee may make adjustments, where these are fair and reasonable, to measures or targets to take account of, for example, the implications of acquisitions and disposals.
7. Long-term incentive awards can be granted in a variety of forms such as performance shares, nil-cost options or forfeitable shares, and the Committee reserves the right to grant long-term incentive awards with the same economic effect but in any of these different contractual forms (including in cash). Long-term incentive awards can also be adjusted in the event of any variation of the Company's share capital or any demerger, delisting, special dividend or other event that may affect the Company's share price.
8. Under the terms of long-term incentive award performance conditions, where any company becomes unsuitable as a member of the comparator group as a result of, for example, a change of control or delisting, the Committee has the discretion to treat that company in such manner as it deems appropriate (including replacing it with another organisation).
9. In the event of a change of control, long-term incentive awards will normally vest at that time, taking into account, amongst other things, the extent to which any performance criteria have been met (over the shortened performance periods) and the time elapsed since grant.

All-employee share plans

For its UK employees the Company has historically operated tax-advantaged share plans such as a Share Incentive Plan ('SIP') and a Save As You Earn share option plan. Where operated, these are intended to encourage share ownership and wider interest in the performance of the Company's shares. A SIP, for example, may involve the award of free shares or free matching shares, the purchase or partnership shares and/or the award of dividend shares. Executive Directors are eligible to participate in these arrangements when offered up to the applicable statutory limits in the same way as any UK employee of Ricardo. Equivalent arrangements operate from time to time for non-UK employees.

Illustrative remuneration outcomes at different performance levels

Ricardo's pay policy seeks to ensure that the long-term interests of Executive Directors are aligned with those of shareholders. The remuneration packages for each Executive Director and their fixed and variable elements are reviewed annually. The scenario chart below presents remuneration outcomes for the 2023 Policy under minimum, on-target, maximum and maximum with share price appreciation scenarios.



The on-target scenario broadly illustrates the remuneration level when budgeted performance is achieved. A further column has also been included which illustrates the impact on the figures contained in the maximum scenario of an assumed share price appreciation for the LTIP award of 50% over the relevant performance period. The disclosures in the chart above reflect FY 2022/23 data on the basis of the assumptions set out below:

- Fixed elements comprise current base salary, pension and other benefits. For example, for the Chief Executive Officer, fixed elements comprise base salary of £484,100, pension (cash in lieu) of 7% of base salary above the Lower Earnings Limit and benefits equal to those received in FY 2022/23;
- Long-term variable element performance includes the maximum policy level of grant (e.g. 250% of annual base salary for the Chief Executive Officer) but grants at this level will only occur in FY 2023/24 to reflect the one-off accelerator LTIP award. The levels of award will return to 150% and 130% for the Chief Executive Officer and Chief Financial Officer, respectively, from FY 2024/25 onwards.
- For minimum performance, Executive Directors receive only the fixed elements of pay;
- For on-target performance, an assumption of 50% of bonus pay-out and threshold vesting (25%) in respect of long-term incentives has been applied;
- For maximum performance, an assumption of maximum bonus pay-out and maximum vesting in respect of long-term incentives has been applied;
- Save for the 'maximum with share price appreciation' column, no share price increase has been assumed for the above and this means that the single total figure in any year may be higher than the maximum shown above; and
- For maximum with share price growth performance, share price appreciation of 50% over the relevant performance period has been assumed for the LTIP awards.

Recruitment remuneration policy

New Executive Directors will be appointed on remuneration packages with the same structure and elements as described in the policy table starting on page 146. Annual bonus and long-term incentive awards will be within the limits described in the policy table for the particular role. The limits for any new Executive Director roles will be set by the Committee taking into account the particular responsibilities of the role, but will not exceed those that apply to the current Chief Executive Officer. Pension contribution levels will be aligned to those applicable to the wider workforce.

For external appointments, although we have no plans to offer additional benefits on recruitment (and indeed did not do so for our last Executive Director appointment), the Committee reserves the right to offer such benefits when it considers this to be in the best interests of the Company and shareholders, and in order to protect a new Director against additional costs. The Committee may agree that the Company will meet certain relocation expenses as appropriate.

The Company may make an award to compensate a new recruit for the value of any remuneration relinquished when leaving a former employer. Any such award would reflect the nature, timescales and performance requirements attaching to that relinquished remuneration. The Listing Rules exemption 9.4.2 may be used for the purpose of such an award. Shareholders will be informed of any such payments as soon as practicable following the appointment.

For an internal appointment, any variable pay element awarded in respect of the prior role may be allowed to pay out according to its terms, adjusted as relevant to take into account the appointment. In addition, any other ongoing remuneration obligations existing prior to appointment may continue and will be disclosed to shareholders at the earliest opportunity.

On the appointment of a new Chair or Non-Executive Director, fees will be set taking into account the experience and calibre of the individual. Where specific cash or share arrangements are delivered to Non-Executive Directors, these will not include share options or other performance-related elements.

The Board's policy on setting notice periods for Directors is that these should not exceed one year. It recognises, however, that it may be necessary in the case of new executive appointments to offer an initial longer notice period, which would subsequently reduce to one year after the expiry of that period. All future appointments to the Board will comply with this requirement.

Termination remuneration policy

The contractual termination provision is payment in lieu of notice or, if termination is part way through the notice period, the amount of base salary relating to any unexpired notice to the date of termination. There is an obligation on Directors to mitigate any loss which they may suffer if the Company terminates their service contract. The Committee will take such mitigation obligation into account when determining the amount and timing of any compensation payable to any departing Director. No compensation is paid for summary dismissal, save for any statutory entitlements.

The cash element of any bonus is not payable unless the individual remains in employment at the payment date.

Unvested share-based awards will lapse unless the individual concerned leaves for one of a number of specified 'good leaver' reasons which are: death; injury, illness or disability; redundancy; or retirement. The Committee retains the discretion to prevent such awards from lapsing depending on the circumstances of the departure and the best interests of the Company.

Awards which do not lapse on cessation of employment will vest on their originally anticipated vesting date with any holding period also continuing to apply (although the Committee retains the discretion to allow vesting and/or release from the holding period at cessation, depending on the circumstances under the applicable rules). These awards will also usually be subject to a time pro-rating reduction to reflect the unexpired portion of the performance or deferral period concerned, although the Committee will retain the discretion to disapply this pro-rating. Awards that are subject to performance conditions will usually only vest to the extent that these conditions are satisfied.

Executive Directors will also be entitled to a payment in respect of any accrued but untaken holiday and statutory entitlements on termination.

In the event that any payment is made in relation to termination for an Executive Director, this will be fully disclosed.

Executive Directors' service contracts

The service contracts of Executive Directors in post during the financial year contain the key terms shown in the table below:

Provision	Detailed terms
Remuneration	• Salary, pension and benefits; • Company car or cash allowance; • Private health insurance for Director and dependants; • Life assurance and death in-service benefits; • Permanent health and disability insurance; • Director's liability insurance; • Up to 30 days' paid annual leave; • Participation in annual bonus plan, subject to plan rules and at the discretion of the Committee; and • Eligible to participate in share plans, subject to plan rules and at the discretion of the Committee.
Duration	• Indefinite subject to termination by either party in certain circumstances including serving notice as set out below.
Notice period	• 12 months' notice by the Director and 12 months' notice by the Company.[1]
Termination payment	• See separate general disclosure on page 152.
Restrictive covenants	• During employment and for 12 months after leaving.

(1) Except for Ian Gibson, who may give 6 months' notice.

The Executive Directors' service contracts are available for inspection, on request, at the Company's registered office.

The Chair and other Non-Executive Directors – fees and letters of appointment

The Committee determines the Chair's fees. The Chair and the Executive Directors determine the fees payable to other Non-Executive Directors. No Director is present for any discussion or decision about their own remuneration. The fees are reviewed each January.

The Chair and other Non-Executive Directors do not participate in any of the Company's employee share plans, pension schemes or bonus arrangements, nor do they have service agreements.

The Chair and other Non-Executive Directors are appointed for a period of three years by letter of appointment and are entitled to one month's notice of early termination for which no compensation is payable. The unexpired terms of the Non-Executive Directors' appointments, as at 30 June 2023, are:

Non-Executive Director	Unexpired terms of appointment (months)
Mark Clare	28
Russell King	26
Laurie Bowen	12
Malin Persson	18
Bill Spencer	4
Jack Boyer	26

PART 3 – ANNUAL REPORT ON REMUNERATION

This section of the report explains how Ricardo's Directors' Remuneration Policy, which was approved in November 2020, has been implemented during the financial year ended 30 June 2023. The paragraphs that have been audited in this Annual Report on Remuneration are indicated.

The Remuneration Committee

During the year under review, the Remuneration Committee (Committee) was chaired by Russell King. The Committee also comprised Sir Terry Morgan (until he retired from the Board on 17 November 2022), Mark Clare (from 17 November 2022), Laurie Bowen, Malin Persson, Bill Spencer and Jack Boyer.

The Non-Executive Directors serving on the Committee have no personal financial interest (other than as shareholders) in matters to be decided, no potential conflicts of interest arising from cross-directorships and no day-to-day involvement in running the business. Biographical details of the members of the Committee are shown on pages 114 to 117; details of attendance at the meetings of the Committee during the year ended 30 June 2023 are shown on page 137.

Advisors to the Remuneration Committee

During the year, FIT Remuneration Consultants and Shepherd and Wedderburn (who have been jointly appointed by the Committee following a competitive tender process) provided independent advice on matters under consideration by the Committee and updates on legislative requirements and market practice.

FIT Remuneration Consultants' fees for this work amounted to £89,945 (calculated based on a mixture of fixed fees and time spent). Shepherd and Wedderburn's fees for advising the Committee amounted to £57,792 (also calculated based on a mixture of fixed fees and time spent). Shepherd and Wedderburn also advises Ricardo on the design, implementation and operation of its various share incentive plans. FIT Remuneration Consultants are members of the Remuneration Consultants Group and their work is governed by its Code of Conduct. Shepherd and Wedderburn is a law firm and is regulated accordingly. Having carefully considered all relevant factors and using its judgement, the Committee is satisfied that the advice provided on executive remuneration is objective and independent and that no conflict of interest arises.

The Committee also seeks internal support from Group Human Resources and the Group General Counsel & Company Secretary, as appropriate. The Chief Executive Officer attends the Committee's meetings by invitation and is consulted in respect of certain proposals. The Chief Financial Officer may also be invited to attend meetings to address specific matters. Neither the Chief Executive Officer nor the Chief Financial Officer is consulted or involved in any discussions in respect of their own remuneration.

Voting outcome at AGM

The AGM for the financial year ended 30 June 2022 was held on 17 November 2022. The Directors' Remuneration Policy in operation during the year was approved by shareholders at the 2020 AGM. The results of the votes on the remuneration report and remuneration policy are set out below.

	Annual Report on Remuneration approved at 2022 AGM		Directors' Remuneration Policy approved at 2020 AGM	
Votes(1)	%	Number	%	Number
For, including discretion	98.43	46,779,635	94.79	37,176,754
Against	1.57	745,375	5.21	2,043,567
Total votes cast	100.00	47,525,010	100.00	39,220,321
Withheld		4,093		2,148

(1) Excludes withheld votes. A vote withheld is not a vote in law and so is not counted for the purposes of the calculation of the proportion of votes 'for' and 'against' a resolution.

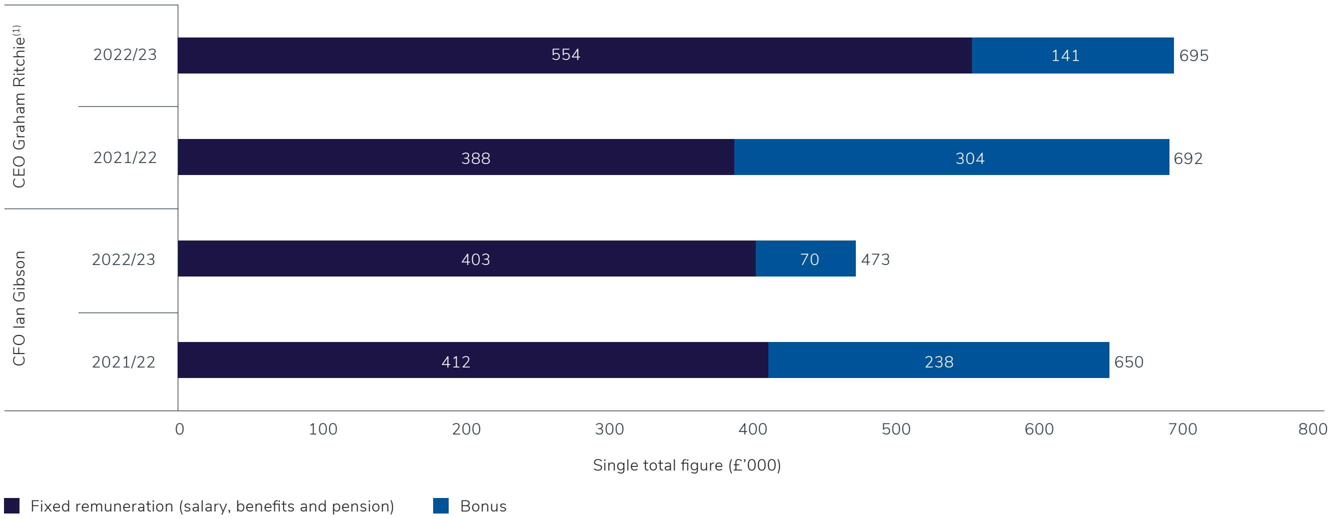
Performance at a glance in FY 2022/23 compared with FY 2021/22

Bonus performance outcomes			Long-term incentive performance outcomes in respect of awards vesting in FY 2022/23	
Underlying PBT (adjusted)	Cash conversion (adjusted)	Value Added Turnover	Underlying EPS (adjusted)	3-year TSR growth
£26.6m (FY 2022/23)	**80%** (FY 2022/23)	**£291.1m** (FY 2022/23)	**31.5p** for year to 30 June 2022 (below threshold vesting level)	**(25.8)%** (below median to October 2022)
£26.0m[(1)] (FY 2021/22)	*118% (FY 2021/22)*	*Not part of bonus plans*	*22.4p for year to 30 June 2021 (below threshold vesting level)*	*(45.5)% (below median to October 2021)*

(1) Adjusted for £0.3m of amortisation on Ricardo Software which was not charged during the held for sale period.

The closing mid-market price of the Company's shares on 30 June 2023 was 572.0p per share (2022: 361.5p). The highest closing price during the year was 600.0p per share and the lowest closing price during the year was 360.0p per share.

Pay at a glance in FY 2022/23



(1) Graham Ritchie commenced employment with the Group on 1 October 2021
(2) The long-term incentive awards granted in October 2018 and October 2019 lapsed in full in FY 2021/22 and FY 2022/23 respectively. As a result, the face value at grant of these awards and any share price appreciation has not been shown in the above table.

Single total figure of remuneration table (audited)

The table below sets out the remuneration received by the Executive Directors and Non-Executive Directors during the year.

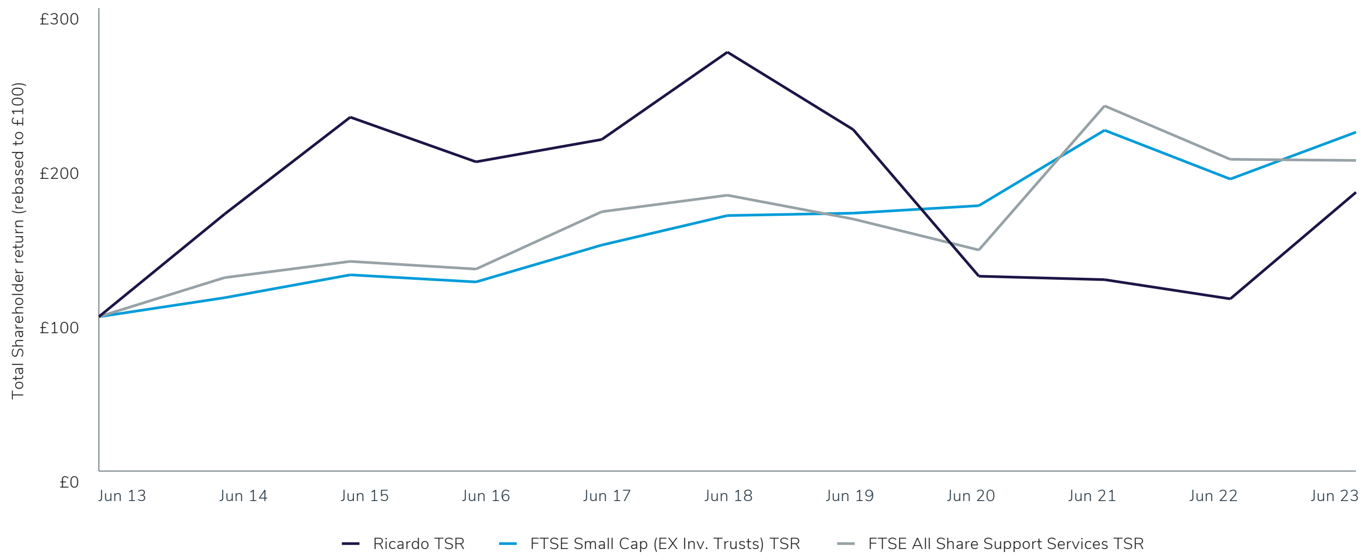
		Fixed remuneration			Short-term variable remuneration			Long-term variable remuneration: 3-year performance periods			Totals		
	Financial year	Base salary and fees £'000	Benefits[1] £'000	Pension £'000	Bonus (cash element)[2] £'000	Bonus (deferred element) £'000	Total £'000	Bonus-linked shares[3] £'000	LTIP[4] £'000	Total £'000	Total £'000	Total Fixed Remuneration £'000	Total Variable Remuneration £'000
EXECUTIVE DIRECTORS													
Graham Ritchie[5]	**2022/23**	**477**	**44**	**33**	**94**	**47**	**141**	**–**	**–**	**–**	**695**	**554**	**141**
	2021/22	353	11	24	203	101	304	–	–	–	692	388	304
Ian Gibson	**2022/23**	**360**	**18**	**25**	**47**	**23**	**70**	**–**	**–**	**–**	**473**	**403**	**70**
	2021/22	350	16	46	159	79	238	–	–	–	650	412	238
NON-EXECUTIVE DIRECTORS													
Sir Terry Morgan CBE[6]	**2022/23**	**63**	**1**		**–**	**–**	**–**	**–**	**–**	**–**	**64**	**64**	–
	2021/22	162	–	–	–	–	–	–	–	–	162	162	–
Mark Clare[7]	**2022/23**	**113**	**1**		**–**	**–**	**–**	**–**	**–**	**–**	**114**	**114**	–
	2021/22	–	–	–	–	–	–	–	–	–	–	–	–
Russell King	**2022/23**	**60**	**1**		**–**	**–**	**–**	**–**	**–**	**–**	**61**	**61**	–
	2021/22	60	–	–	–	–	–	–	–	–	60	60	–
Laurie Bowen[8]	**2022/23**	**52**	**65**		**–**	**–**	**–**	**–**	**–**	**–**	**117**	**117**	–
	2021/22	51	37	–	–	–	–	–	–	–	88	88	–
Malin Persson[9]	**2022/23**	**60**	**10**		**–**	**–**	**–**	**–**	**–**	**–**	**70**	**70**	–
	2021/22	59	6	–	–	–	–	–	–	–	65	65	–
Bill Spencer	**2022/23**	**60**	**1**		**–**	**–**	**–**	**–**	**–**	**–**	**61**	**61**	–
	2021/22	60	–	–	–	–	–	–	–	–	60	60	–
Jack Boyer	**2022/23**	**52**	**1**		**–**	**–**	**–**	**–**	**–**	**–**	**53**	**53**	–
	2021/22	51	–	–	–	–	–	–	–	–	51	51	–
Total	**2022/23**	**1,297**	**142**	**58**	**141**	**70**	**211**	**–**	**–**	**–**	**1,708**	**1,497**	211
	2021/22[10]	1,146	70	70	362	180	542	–	–	–	1,828	1,286	542

(1) Further information on benefits for the Executive Directors can be found on page 161. The benefits include reimbursement of expenses incurred (including any associated personal tax charges) while travelling for business and Committee meetings.
(2) Further details of the annual bonus can be found from **page 162**.
(3) Further details of the lapse in FY 2022/23 of the bonus-linked shares historically granted under the Deferred Bonus Plan can be found on **page 164**. As no bonus-linked shares vested in the year, share price appreciation had no impact on the relevant figure included in the above table.
(4) Further details of the lapse of the LTIP awards in FY 2022/23 can be found on **page 164**. As no LTIP shares vested in the year, share price appreciation had no impact on the relevant figure included in the above table.
(5) Graham Ritchie commenced employment with the Group on 1 October 2021.
(6) Sir Terry Morgan retired as a Director on 17 November 2022.
(7) Mark Clare was appointed as a Director and the Chair of the Company on 17 November 2022.
(8) Laurie Bowen's benefits consisted of travel expenditure.
(9) Malin Persson's benefits consisted of travel expenditure and accountancy fees.
(10) Dave Shemmans has been excluded from the table as he was not a Director of the Company in FY 2022/23 therefore the total figure for FY 2021/22 will differ to the total figure disclosed in last year's Director's Remuneration Report. Payments made to Dave Shemmans during FY 2022/23 in respect of loss of office are described on **page 165**.

Following the year-end, the Committee considered whether there were any circumstances that could or should result in the recovery or withholding of any sums pursuant to the Company's clawback arrangements. The conclusion reached by the Committee was that it was not aware of any such circumstances.

Pay for performance – TSR performance graph and CEO pay history

TSR from the year ended 30 June 2013 to 30 June 2023



Source: Datastream (a Refinitiv product)

The chart above shows Ricardo's TSR performance for the past ten years against the FTSE Small Cap index (excluding investment trusts). In the Committee's opinion, the FTSE Small Cap index (excluding investment trusts) represents an appropriate index against which the Company should be compared when considering the Company's size. The FTSE All Share Support Services index is also shown for information. The remuneration of the Chief Executive Officer for the same period is shown in the table below.

Financial year	Group CEO	Single figure of CEO's total remuneration £'000	Annual variable element award rates against maximum opportunity %	Long-term incentive vesting rates against maximum opportunity %
2022/23	Graham Ritchie(1)	695	23	N/A
2021/22	Graham Ritchie(1)	692	52	N/A
2021/22	Dave Shemmans(2)	350	18	–
2020/21	Dave Shemmans	813	23	–
2019/20	Dave Shemmans	656	–	–
2018/19	Dave Shemmans	998	25	40
2017/18	Dave Shemmans	1,411	43	74
2016/17	Dave Shemmans	1,612	–	100
2015/16	Dave Shemmans	2,291	63	100
2014/15	Dave Shemmans	1,367	59	67
2013/14	Dave Shemmans	760	38	N/A(3)

(1) Graham Ritchie commenced employment with the Group on 1 October 2021 and as a result did not hold any long-term incentive awards that vested during the year.
(2) Dave Shemmans ceased to be a Director on 30 September 2021.
(3) The performance period for awards made in November 2011 ended in October 2014 and so their vesting rate is included in the 2014/15 row of the table above. The vesting rate is 'N/A' for the 2013/14 row because the performance period for awards made in October 2010 ended in June 2013 and so the applicable vesting rate for those grants is included in the 2012/13 row of the table on page 117 of the *Annual Report & Accounts 2021/22*.

Directors' remuneration compared to employees

The table below shows the percentage change in the Directors' salary / fees, taxable benefits and annual bonus each financial year between the year ended 30 June 2018 and the year ended 30 June 2023 compared with the percentage change in each of those components of pay for all employees of the Group on a full-time equivalent basis.

	Percentage change in FY 2022/23 compared with FY 2021/22			Percentage change in FY 2021/22 compared with FY 2020/21			Percentage change in FY 2020/21 compared with FY 2019/20			Percentage change in FY 2019/20 compared with FY 2018/19		
	Base salary/ fees	Taxable benefits	Annual bonus(1)	Base salary/ fees	Taxable benefits(2)	Annual bonus(1)	Base salary/ fees	Taxable benefits(2)	Annual bonus	Base salary/ fees	Taxable benefits(2)	Annual bonus
All Employees	3	-	(62)	3	–	556	–	–	N/A	3	–	(100)
EXECUTIVE DIRECTORS												
Graham Ritchie(3)	35	301	(54)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ian Gibson(4)	3	12	(71)	1	3	403	1	(9)	N/A	3	–	(100)
Dave Shemmans (former CEO)(5)	N/A	N/A	N/A	(75)	236	(23)	1	(4)	N/A	3	–	(100)
NON-EXECUTIVE DIRECTORS												
Sir Terry Morgan CBE(6)(7)	(61)	N/A	N/A	1	–	N/A	1	(100)	N/A	3	–	(100)
Mark Clare(8)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell King (7)	2	N/A	N/A	–	–	N/A	28	(100)	N/A	N/A	N/A	N/A
Laurie Bowen(9)	2	75	N/A	–	See note (10) below	N/A	1	(100)	N/A	3	(39)	N/A
Malin Persson(11)	2	78	N/A	–	232	N/A	7	(57)	N/A	14	(52)	N/A
Bill Spencer (7)	2	N/A	N/A	–	–	N/A	1	(100)	N/A	3	–	N/A
Jack Boyer (7)	2	N/A	N/A	–	–	N/A	21	(100)	N/A	N/A	N/A	N/A

(1) The Non-Executive Directors are not eligible to participate in the bonus scheme. The large % change in annual bonus between FY 2020/21 and FY 2021/22 reflects the business recovering from the COVID-19 pandemic and returning to normal levels of bonus payments.
(2) The reduction in taxable benefits for the Non-Executive Directors reflects a lower level of travel and associated costs compared to the prior year.
(3) Graham Ritchie commenced employment with the Group on 1 October 2021.
(4) The large % change in annual bonus for Ian Gibson between FY 2020/21 and FY 2021/22 reflects that a bonus of only 13.7% of annual salary was paid in respect of FY 2020/21. While not included in the table above, as explained on **page 112** of the Annual Report & Accounts 2021/22, Ian Gibson's cash in lieu of pension contributions reduced with effect from 1 January 2022 from 20% of salary (above the lower earnings limit) to 7% of salary (above the lower earnings limit).
(5) The % change in base salary and fees figure for Dave Shemmans between FY 2020/21 and FY 2021/22 reflects that he stepped down as CEO on 30 September 2021. The % change in taxable benefits figure for Dave Shemmans is based on the actual figure due to the mix of benefits received. The increase in taxable benefits is due to the payment of accrued but untaken holidays on cessation of employment.
(6) Sir Terry Morgan retired as Director of the Company on 17 November 2022.
(7) The year-on-year change in taxable benefits for Sir Terry Morgan, Bill Spencer, Jack Boyer and Russell King between FY 2021/22 and FY 2022/23 cannot be shown as no taxable benefits were received in respect of the 2021/22 financial year.
(8) Mark Clare was appointed as Director of the company on 17 November 2022.
(9) The increase in taxable benefits for Laurie Bowen between FY 2021/22 and FY 2022/23 largely reflects an increase in travel and associated costs since the prior financial year.
(10) The year-on-year change in Laurie Bowen's taxable benefits between FY 2020/21 and FY 2021/22 cannot be shown as no taxable benefits were received in respect of the 2020/21 financial year.
(11) The increase in taxable benefits for Malin Persson between FY 2020/21 and FY 2021/22 largely reflects an increase in travel and associated costs since the prior financial year.

Pay ratio information in relation to Chief Executive Officer's remuneration

Financial year	Method of calculation adopted	25th percentile pay ratio (CEO : UK employees)	Median pay ratio (CEO : UK employees)	75th percentile pay ratio (CEO : UK employees)
2022/23	Option A	20 : 1	15 :1	10 : 1
2021/22	Option A	32 : 1	24 : 1	16 : 1
2020/21	Option A	25 : 1	18 : 1	12 : 1
2019/20	Option A	19 : 1	14 : 1	10 : 1

The median, 25th percentile and 75th percentile figures used to determine the above ratios were calculated by reference to the full-time equivalent annualised remuneration (comprising salary, benefits, pension, annual bonus and long-term incentives) of all UK based employees of the Group as at 30 June 2023 (i.e. "Option A" under the applicable regulations). The Committee selected this calculation methodology as it was felt to produce the most statistically accurate result available to it.

The median pay ratio for FY 2022/23 appears to have narrowed this year. The ratios shown for the FY 2020/21 and FY 2021/22 years should, however, be treated with particular caution as the data is based on the combined totals of the remuneration of Dave Shemmans who left the Board in FY 2021/22 and of Graham Ritchie who joined during the same year so Graham's total pay relates to a portion of the year only.

The table below shows the pay ratio data for FY 2021/22 using Graham Ritchie's annualised total pay data for the part year in which he served.

Financial year	Method of calculation adopted	25th percentile pay ratio (CEO : UK employees)	Median pay ratio (CEO : UK employees)	75th percentile pay ratio (CEO : UK employees)
2021/22	Option A	21 : 1	16: 1	10 : 1

In FY 2022/23 Graham Ritchie's total remuneration was 0.43% higher than the year before (the year in which he joined Ricardo) and Ricardo's upper and median total pay has increased by 4.5% and the lower quartile has increased by 5.8%. Graham Ritchie's first LTIP award was made in 2021 and has yet to vest and hence, assuming continued strong performance and that the LTIP share awards vest, we expect the ratio of the Chief Executive Officer's total pay to Ricardo's median total pay to widen significantly given that variable pay (both long-term and short-term) account for a significant proportion of pay. By contrast, fixed pay accounts for a much higher proportion of total pay for the majority of Ricardo's employees. The ratios are volatile and will also widen further as Ricardo's share price increases. The ratios shown for all the quartiles have been calculated on the same basis. We take the view that the median pay ratio which results from Ricardo's desire to pay for performance, to pay competitively and to pay fairly is consistent with the pay, reward and progression policies for the Company's UK employees taken as a whole. The Committee reviews the pay of all Ricardo's employees to ensure the alignment of the Executive Directors' pay with pay across the Group.

Pay details (on a full-time equivalent annualised basis where appropriate) for the individuals whose FY 2022/23 remuneration is at the median, 25th percentile and 75th percentile amongst UK based employees are as follows:

FY 2022/23	25th percentile	Median	75th percentile
Salary	£27,132	£46,000	£55,466
Total pay and benefits	£34,407	£46,084	£69,919

Relative importance of pay spend

The following table sets out the total amounts spent on remuneration for all employees, the dividends declared and other significant distributions to shareholders in FY 2021/22 and FY 2022/23.

	FY 2022/23	FY 2021/22	% change
Total remuneration spend (£m)	**206.8**	195.4	6
Key management remuneration as a percentage of total remuneration spend(1) (%)	**3.2**	3.5	(0.3)
R&D expenditure(2) (£m)	**14.6**	13.3	10
Distributions to shareholders(3) (£m)	**6.9**	6.5	6

(1) The key management personnel are the Board of Directors, together with the Managing Directors who have the authority and responsibility for planning, directing and controlling the Group's activities and resources within the market sectors in which the Group operates. Further details on key management remuneration can be found in **Note 33** to the Group Financial Statements. This measure was chosen in order to give greater context for the scale of key management remuneration within Ricardo.
(2) Further details on R&D expenditure can be found on **page 37**. This measure was chosen because of the importance to Ricardo's business of developing its R&D portfolio.
(3) The only distributions made by the Company over these years were in the form of dividends.

Detailed breakdown of pay in FY 2022/23

Base salary

As described in the policy section on **page 146**, a number of factors are taken into account when salaries are reviewed, principally: market levels of total pay for comparable roles in companies of a similar size, complexity and sector; the individual's experience, scope of responsibilities and performance; and the salary increases for colleagues across the Group. The current salary levels for the Executive Directors, which reflect a 3.0% increase from the previous year, are set out in the table below. The Group-wide average increase approved in FY 2022/23 was 3.0%.

Executive Director	Salary (from 1 January 2023)
Graham Ritchie	£484,100
Ian Gibson	£365,815

Other benefits (audited)

The Company provides other cash benefits and benefits in kind to its Executive Directors. These include a company car or cash alternative, private fuel, private medical insurance, life assurance and permanent health or disability insurance. The car allowance levels are set at £12,000 p.a. for both Graham Ritchie and Ian Gibson.

Non-Executive Directors can recover travel and accommodation expenses for carrying out their duties and do not receive any other benefits. If tax is payable by a Non-Executive Director on expenses received, these may be paid gross of tax.

Pension (audited)

(a) The defined benefit scheme is closed and there are no active members.

(b) With respect to defined contribution pension schemes, each of the Directors received cash in lieu of such contributions as set out below:

	Cash in lieu £'000
Graham Ritchie	33
Ian Gibson	25

Annual performance-related bonus (audited)

Introduction

For the year ended 30 June 2023, the maximum annual performance-related bonus opportunity was 125% of salary for the current and former Chief Executive Officer and 100% of salary for any other Executive Director. To determine the amount of bonus payable for the year, the Committee assessed the level of achievement against the financial measures and targets set in respect of:

- Group underlying profit before tax (40%);
- Value added turnover (20%) (a measure that focuses on profitable revenue growth);
- Cash conversion (20%); and
- The achievement of specified individual objectives (20%).

The choice of these measures, and their respective weightings for each individual, reflected the Committee's belief that any incentive compensation should be tied both to the overall performance of the Group and to those areas of the business that the relevant individual can directly influence.

Cash conversion is defined as underlying cash generated from operations (excluding defined benefit pension scheme payments) divided by underlying EBITDA. The definition of "*underlying*" EBITDA excludes specific adjusting items comprising amortisation of acquired intangible assets, acquisition-related expenditure and reorganisation costs.

On-target performance (50% pay-out) is set at the budgeted cash conversion, i.e. budgeted underlying cash from operations ÷ budgeted underlying EBITDA. Threshold and maximum cash conversion targets are calculated based on performance below and above budget respectively.

Value added turnover is defined as revenue (net of pass-through) less external material costs. On-target performance (50% pay-out) is set at budgeted Group value added turnover. Threshold (20% of maximum bonus opportunity) and maximum value added turnover targets are calculated at £15.9m above and below the budget.

Details of financial targets

The financial targets for FY 2022/23 (details of which are provided in the following table along with confirmation of their respective weightings) were set by the Committee after taking into account several factors such as the business plan, management's expectations and brokers' forecasts. Underlying profit before tax performance was achieved at 'on target' and both the cash conversion performance and the value added turnover performance were below the thresholds of the applicable performance ranges set.

	Weighting (% of maximum opportunity)		Performance required			Actual performance outturn	Pay-out (as % of maximum opportunity)
Measure	**CEO**	**CFO**	**Threshold**	**On-target**	**Maximum**		
Underlying profit before tax	40	40	£26.6m	£29.6m	£32.6m	£26.6m	8
Value added turnover	20	20	£301.3m	£317.2	£333.1m	£291.9m	–
Cash conversion	20	20	88%	93%	98%	80%	–

A sliding scale of targets for each financial measure of the Group was also set at the start of FY 2022/23:

Performance achieved	Element payable
Threshold	20%
On-target	50%
Maximum	100%
Between any two performance levels	Sliding scale between the above percentages

Details of personal objectives

The Committee, supported by the Chair of the Board in the case of the Chief Executive Officer, and supported by the Chief Executive Officer in the case of Chief Financial Officer and members of the leadership team, set the personal objectives at the start of the year. The Committee usually identifies 'strategic areas' which each Executive Director is asked to focus on and seeks to ensure that all personal objectives are specific, measurable and are indirect drivers of financial performance and value creation. They usually set five to six objectives and weight them in accordance with their relative importance, however for FY 2022/23 the Committee determined that only one of these objectives should be linked to a bonus payout for achieving personal objectives. The remainder continue to be assessed as part of the regular performance review programme run by the nomination committee. At the end of the year, based on a formal and qualitative assessment of performance against the bonus objective, the Committee decides how well each individual has performed overall.

The objective set by the Committee for purposes of the bonus plan for the Executive Directors was to continue to transform the group service portfolio in line with the Board approved strategy delivering the transition from Established Mobility to Environmental and Energy transition; continue to drive improvements in cash management; and ensure completion of material acquisitions in target markets.

	Examples of performance outcomes against personal objectives	Overall achievement (%)	Pay-out (% of maximum opportunity)
Graham Ritchie	• Continued momentum in transformation to environmental and energy transition. • Within organic growth and portfolio prioritisation Ricardo has established the growth solutions across the business units, initiated separate reporting and planning for environmental & energy transition and established mobility, and prioritised investment of R&D and capital, including the development of repeatable digital solutions. • Within A&I, clear steps have been taken to restructure the business to support the Company's growth for the future. • Within market expansion, clear target industries have been defined and more proactive sales planning have been established. • M&A has been used to accelerate Ricardo's transition within the sale of its software business and reinvestment in E3 Modelling and Aither.	77%	15%
Ian Gibson	• Ricardo has increasing transparency of reporting and planning of its environmental and energy transition enabling its focus on a high revenue growth, margin accretion and low capital intensity portfolio of services. • M&A has been used to accelerate Ricardo's transition with the sale of its software business and reinvestment in E3 Modelling and Aither.	56%	11%

Committee's assessment of achievement levels and determination of bonuses payable

The performance of the Group over the year included a 15% increase in underlying profit before tax to £27.9m (2022: £24.2m) on a continuing operations basis. The underlying profit before tax used for bonus purposes has been calculated at FY 2022/23 budget exchange rates, consistent with the rates used when setting the targets, resulting in underlying PBT for FY 2022/23 of £26.6m. This is in line with the threshold underlying PBT set and therefore the resulting bonus outturn is 20% of the maximum payable for this element of bonus or 8% of the overall bonus maximum opportunity.

The Group underlying cash conversion for the year was 75%. The Group cash from operations was adjusted by £1.8m to remove pension deficit payments, in line with the Group's bonus principles, resulting in an adjusted underlying cash conversion of 80%. This was below the threshold set and so no bonus was achieved for this element.

The Group value added turnover for the year was £291.9m, on a continuing operations basis and calculated using FY 2022/23 budget exchange rates, consistent with the rates used when setting the targets. This was below the threshold set and so no bonus was achieved in full for this element.

The Committee carried out a detailed and rigorous review of the achievement of personal objectives and determined that these had been achieved at a level of 77% and 56% for Graham Ritchie and Ian Gibson respectively.

The following table summarises the bonus outcomes for FY 2022/23.

Measure	Pay-out: Graham Ritchie	Pay-out: Ian Gibson
Underlying profit before tax (payout as % of maximum bonus opportunity)	8	8
Value added turnover (payout as a % of maximum bonus opportunity)	–	–
Cash conversion (payout as % of maximum bonus opportunity)	–	–
Personal objectives (payout as % of maximum bonus opportunity)	15	11
Total pay-out (as a % of maximum) = (a)	23	19
Maximum (% of base salary) = (b)	125	100
Total pay-out (% of base salary) = (a) x (b)	29	19

One third (approximately 33%) of any bonus paid to an Executive Director, including former Executive Directors, is subject to a policy of compulsory deferral into ordinary shares, via the DBP.

Long-term incentive awards vesting during the financial year (audited)

Awards under the LTIP and bonus-linked awards under the DBP made in October 2019 lapsed in October 2022 on the basis of underlying EPS and TSR performance measured over specified periods, the last of which ended in October 2022. For the avoidance of doubt, the Committee did not exercise any discretion in relation to these awards.

The performance conditions applicable to these awards are summarised below:

Relative TSR portion (one-third)	
Relative TSR performance against the FTSE Small Cap (excl. financial services companies and investment trusts)	Vesting level (% of maximum)
Below median	–
Median	25
Upper quartile (or above)	100
Between median and upper quartile	Sliding scale between the above percentages

Underlying EPS (two-thirds)	
Underlying EPS (adjusted)	Vesting level (% of maximum)
Less than 60.1p	–
60.1p	25
Equal to or greater than 69.1p	100
Between 60.1p and 69.1p	Sliding scale between the above percentages

Over the three-year performance period, Ricardo was ranked below the median of the TSR comparator group, giving a zero vesting level for this portion of the award. Ricardo's TSR over the period was (25.8)% against a median of (19.7)%. The adjusted EPS for the year was 31.5p with the result that the adjusted EPS target was not achieved. Therefore, the overall vesting level for this award was zero and the shares under the awards lapsed in full.

The number of shares which lapsed in October 2022 in respect of awards granted to each of the Executive Directors in October 2019 are set out on pages 167 and 168 of this report.

The Chair of the Board's and the other Non-Executive Directors' fees

The Chair's fees as of 1 January 2023 and Non-Executive Directors' are as follows:

	£'000
Chair's fee	170
Non-Executive Directors' fees:	
Basic fee	52
Additional fee for Audit and Remuneration Committee Chairs	9
Additional fee for the Senior Independent Director	9

Payments to past directors and in respect of loss of office (audited)

As disclosed in the Directors' Remuneration Reports for the past two financial years, Dave Shemmans ceased employment on 30 September 2021. In accordance with Dave's Service Agreement, Ricardo exercised its right to make a payment in lieu of the 12 months' notice (the PILON) that Dave was entitled to receive. Further details of the PILON and its calculation can be found on page 124 of the *Annual Report & Accounts 2021/22*. Part of the PILON was paid during FY 2021/22 with the balance of £170,619 being paid in 3 equal instalments from July to September 2022 (inclusive).

Dave was treated as a good leaver in respect of awards granted under the DBP and LTIP. The treatment of such awards is described in more detail on **page 124** of the *Annual Report & Accounts 2021/22*. Dave's October 2019 LTIP award and DBP bonus-linked share award that were due to vest in October 2022 both lapsed in full because the performance conditions set out on **page 164** were not satisfied. Dave's October 2019 DBP deferred award vested in full in respect of 13,802 shares with a value at the date of vesting of £61,281 (based on a market price per share of 444.0p on 24 October 2022).

Long-term incentive awards granted during the financial year (audited)

LTIP awards were granted on 6 October 2022 under the rules of the Ricardo plc 2020 Long Term Incentive Plan to the Executive Directors on the basis set out below.

	Type of award	Basis of award (% of salary)	Number of shares	Face value of award (£)(1)	Threshold level of vesting (% of maximum)	End of performance period
Graham Ritchie	Performance shares(2)	150	157,788	£704,997	20% for EPS portion of awards and 25% for TSR portion of awards	15 days after release of preliminary results announcement for FY 2024/25 (expected to be October 2025)
Ian Gibson	Performance shares(2)	130	103,336	£461,705	20% for EPS portion of awards and 25% for TSR portion of awards	15 days after release of preliminary results announcement for FY 2024/25 (expected to be October 2025)

(1) The face value of the award is based on the average of the share prices over the five days up to and including 5 October 2022 (446.8p).
(2) As the LTIP awards are granted in the form of performance share awards, no 'exercise price' is payable in order to receive any vested shares. This position has not changed since the awards were granted.

The vesting of these awards will be based on Ricardo's underlying EPS growth (two-thirds) and three-year relative TSR (one-third) performance summarised in the table below. The relative TSR measure was chosen by the Committee to link the remuneration of Executive Directors to the performance experienced by shareholders and to further align their interests. The underlying EPS measure was chosen to reward sustained profit growth and align with one of our key performance indicators.

In addition, no part of an award will vest unless the Committee is satisfied that the achievement against the TSR and underlying EPS performance conditions is a genuine reflection of the underlying performance of the Group over the performance period. The Committee will consider all relevant factors when the awards vest in October 2025 and may reduce vesting levels where appropriate. These factors will include the timing and extent of the recovery of the share price of the Company, the indices on which it is listed, the overall performance of the Company during the period 2022 – 2025 and any other considerations that the Committee deems relevant.

The Committee chose the weighting between TSR and underlying EPS growth to signal the importance of increasing Ricardo's profitability as measured by underlying EPS and to give the management team a stronger incentive to drive profitable performance which should in turn lead to increased shareholder value.

Relative TSR portion (one-third) Relative TSR performance against the FTSE Small Cap (excl. financial services companies and investment trusts)	Vesting level (%)
Below median	–
Median	25
Upper quartile (or above)	100
Between median and upper quartile	Sliding scale between the above percentages

Adjusted EPS portion (two-thirds) Adjusted underlying EPS for the final year in the performance period (FY 2024/25)	Vesting level (%)
Less than 36.8p	–
36.8p	20
Equal to or greater than 51p	100
Between 36.8p and 51p	Sliding scale between the above percentages

Performance target setting and those applying to awards outstanding during FY 2022/23

As shown in previous Directors' Remuneration Reports, the Committee has a track record of setting stretching underlying EPS targets which are carefully calibrated in light of Ricardo's business plan and market expectations. Full vesting of the shares linked to relative TSR performance only occurs where Ricardo's performance is in the upper quartile of the FTSE Small Cap Index (excluding financial services companies and investment trusts).

The EPS performance targets applicable to LTIP and the bonus-linked share awards under the DBP outstanding during the year are as follows:

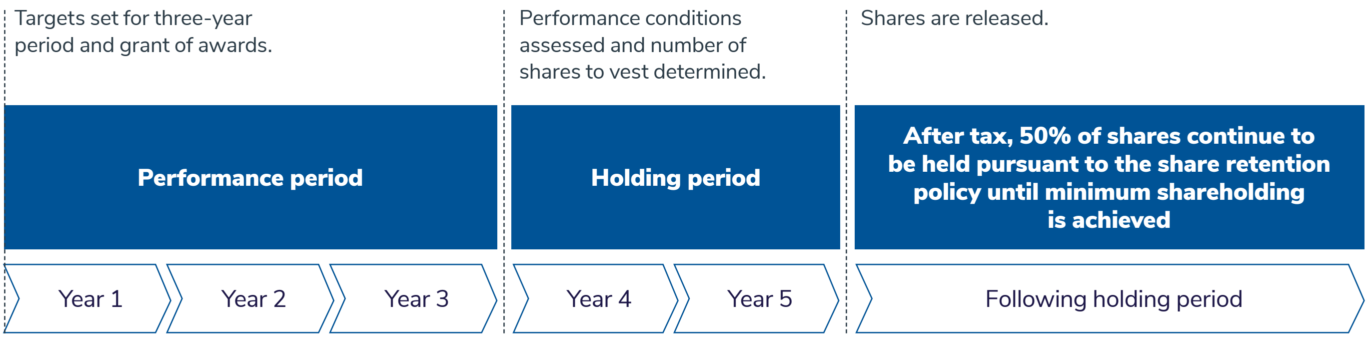
	FY 2019/20	FY 2020/21	FY 2021/22
Threshold vesting[1]	60.1p	28.5p	29.7p
Maximum vesting	69.1p	40.7p	50.2p

(1) 25% for FY 2019/20 and 15% for FY 2020/21 and FY 2021/22.

The performance condition applicable to the TSR portion of awards has remained constant through this period and is the same as set out on page 164 for awards granted in the year ended 30 June 2023. The number and value of shares which were awarded to each of the Executive Directors in the year ended 30 June 2023 are set out in the table on page 167.

Directors' interests in shares provisionally awarded under the LTIP (audited)

The following chart sets out in graphical form how the Company's LTIP was operated in FY 2022/23:



FOR DETAILS OF THE SHARE RETENTION POLICY, SEE PAGE 168.

Awards granted prior to November 2020 under the rules of the previous Ricardo plc 2014 Long Term Incentive Plan are not subject to the two-year holding period.

As at 30 June 2023, the Directors' interests in shares provisionally awarded under the LTIP were as follows:

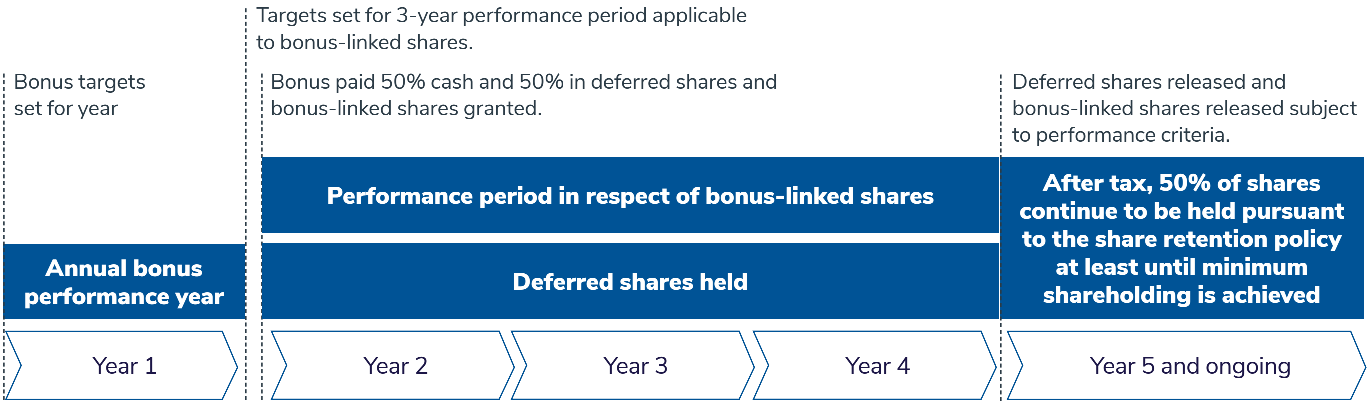
			Number of provisional shares						
	Award date[1]	Share price at award date in pence	At 1 July 2022	Awarded[2]	Lapsed	Vested	At 30 June 2023[3]	Vesting date	Holding period ends
Graham Ritchie	Oct 21	420.00	167,857	–	–	–	167,857	27/10/2024	27/10/2026
	Oct 22	446.80	–	157,788	–	–	157,788	06/10/2025	06/10/2027
Ian Gibson	Oct 19	623.60	29,526	–	29,526	–	–	24/10/2022	–
	Nov 20	354.80	126,341	–	–	–	126,341	27/11/2023	27/11/2025
	Oct 21	420.00	106,728	–	–	–	106,728	27/10/2024	27/10/2026
	Oct 22	446.80	–	103,336	–	–	103,336	06/10/2025	06/10/2027

(1) Awards granted in 2019 were made under the rules of the Ricardo plc 2014 Long Term Incentive Plan. The awards granted in November 2020 and thereafter were made under the rules of the Ricardo plc 2020 Long Term Incentive Plan. Performance conditions applicable to all awards are as outlined on pages 164 to 166.
(2) The face value at the date of grant of the awards made in October 2022 was £704,997 for Graham Ritchie and £461,705 for Ian Gibson.
(3) The mid-market closing price of the Company's shares on 30 June 2023 was 572.0p per share (2022: 361.5p).

The October 2019 awards that were due to vest in October 2022 lapsed in full because the performance conditions as set out on page 164 were not satisfied.

Directors' interests in shares provisionally awarded under the DBP (audited)

The following chart sets out in graphical form how the DBP was operated in earlier years and continues to operate in respect of outstanding DBP awards granted prior to the adoption of the new Directors' Remuneration Policy in November 2020 (set out in the table below):



FOR DETAILS OF THE SHARE RETENTION POLICY, SEE PAGE 168.

Following the adoption of the Directors' Remuneration Policy in November 2020, Executive Directors are no longer entitled to future bonus-linked share awards and a third (rather than half) of any bonus payable is deferred in shares.

As at 30 June 2023, the Directors' interests in shares provisionally awarded under the DBP were as follows:

					Number of provisional shares					
	Type of Award[1]	Award date	Deferral / performance period	Share price at award date in pence	At 1 July 2022	Awarded[2]	Dividend shares[3]	Lapsed	Vested	At 30 June 2023[4]
Graham Ritchie	Deferred	Oct 22	3 years	446.80	–	22,682	523	–	–	23,205
Ian Gibson	Deferred	Oct 19	3 years	623.60	7,283	–	–	–	7,283	–
	Bonus-linked shares[5]	Oct 19	3 years	623.60	6,844	–	–	6,844	–	–
	Deferred	Nov 21	3 years	426.80	3,764	–	86	–	–	3,850
	Deferred	Oct 22	3 years	446.80	–	17,752	409	–	–	18,161

(1) Awards granted in 2019 were made under the rules of the Ricardo plc 2011 Deferred Bonus Plan. The awards granted in November 2021 and October 2022 were made under the rules of the Ricardo plc 2021 Deferred Bonus Plan.
(2) The face value at the date of grant of the awards made in October 2022 was £79,316 for Ian Gibson and £101,343 for Graham Ritchie.
(3) Amounts allocated include shares equivalent to dividends on provisional deferred award shares.
(4) The mid-market closing price of the Company's shares on 30 June 2023 was 572.0p (2022: 361.5p).
(5) Bonus-linked shares awarded under the rules of the Ricardo plc 2011 Deferred Bonus Plan: performance conditions as outlined on page 164.

Share retention policy

Current policy

In order to foster greater alignment of interest between our Executive Directors and our shareholders, the Board has operated a share retention policy with the intention that each Executive Director will own shares in the Company with a value equal to at least two times annual base salary with the requirement that 50% of any vested LTIP / DBP shares (net of tax) are held until this is met. In line with the Investment Association's Principles of Remuneration, vested shares subject to a holding period (i.e. vested LTIP awards under the new 2020 LTIP) and unvested shares that are not subject to performance conditions (i.e. DBP deferred awards) will count towards this shareholding requirement on a net-of-tax basis.

The retention requirement will continue post-cessation of employment with shares worth two times annual base salary (or, if lower, the shareholding as at the date of cessation) to be held for the initial 12 month period, and half of this amount required to be held for the second 12 month period. This will apply to share plan awards granted after the 2020 Directors' Remuneration Policy was approved by shareholders.

In order to facilitate the post-cessation retention requirements, vested shares that are released will be held in a nominee structure.

Future policy

As part of the package of changes to the Directors' Remuneration Policy proposed for adoption by shareholders at the 2023 AGM, the Committee has reviewed the share retention policy and proposes to revise this as soon as the new policy comes into force. The holding requirement (in post and post cessation of employment) for the Chief Executive Officer will be increased from 200% of annual base salary to 250% of annual base salary with the other elements of the current policy continuing to apply.

Directors' shareholdings (audited)

The interests of Directors and their connected persons in ordinary shares as at 30 June 2023, including any shares provisionally awarded under the LTIP and DBP, are presented in the table below. At 12 September 2023, the interests in shares of the Directors who were still in office were unchanged from those at 30 June 2023.

	No. of shares held	Share awards not subject to performance conditions(1)	Share awards subject to a holding period	Shareholding for purposes of share retention policy(2)	Shareholding (% of base salary)(3)	Share awards subject to performance conditions(4)
EXECUTIVE DIRECTORS						
Graham Ritchie	14,880	23,205	–	27,178	32	325,645
Ian Gibson	64,713	22,011	–	76,378	119	336,405
NON-EXECUTIVE DIRECTORS						
Sir Terry Morgan CBE(5)	26,111	–	–	–	–	–
Mark Clare	–	–	–	–	–	–
Russell King	5,105	–	–	–	–	–
Laurie Bowen	6,000	–	–	–	–	–
Malin Persson	1,500	–	–	–	–	–
Bill Spencer	10,402	–	–	–	–	–
Jack Boyer	–	–	–	–	–	–

(1) Deferred awards granted pursuant to the rules of the Ricardo plc 2011 Deferred Bonus Plan and the Ricardo plc 2021 Deferred Bonus Plan.
(2) This includes the number of beneficially owned shares, unvested shares not subject to performance conditions and any vested shares subject to a holding period, on a net-of-tax basis (i.e. 53% of the shares shown in the adjacent "share awards not subject to performance conditions" and "share awards subject to a holding period" columns).
(3) For Executive Directors only (i.e. those who are subject to the share retention policy). Calculated by reference to the number of shares shown in the adjacent "shareholding for purposes of share retention policy" column, a share price of 572.0p per share (2022: 361.5p) and salaries as at 30 June 2023.
(4) Bonus-linked awards granted pursuant to the rules of the Ricardo plc 2011 Deferred Bonus Plan and LTIP awards granted pursuant to the rules of the Ricardo plc 2014 Long Term Incentive Plan and the Ricardo plc 2020 Long Term Incentive Plan.
(5) Shareholding as at 17 November 2022, being the date Sir Terry Morgan retired as Director of the Company.

Dilution limits

The number of shares that may be issued in any ten-year rolling period will be restricted to:

- 10% of the issued ordinary share capital of the Company in respect of all Ricardo share plans; and
- (included within the above limit) 5% of the issued ordinary share capital of the Company for Ricardo's discretionary share plans.

At the end of the year under review, the Company's overall share plan dilution was 2.57% all of which all related to discretionary share plans. The Company operates an employee benefit trust which has principally been used to facilitate the operation of the LTIP and DBP arrangements. Any new shares issued to the trust are, however, included in the dilution limits noted above.

Executive Directors and their Board positions with other companies during FY 2022/23

Executive Directors may, with the prior consent of the Board, hold a non-executive directorship with another company. Neither the Chief Executive Officer, nor the Chief Financial Officer, held a non-executive directorship with another company during the period from 1 July 2022 to 30 June 2023 (inclusive).

Departure of Ian Gibson

Ian Gibson steps down as Chief Financial Officer and from the Board with effect from 13 September 2023. Thereafter, he will remain with the Company to allow for a smooth transition of responsibilities following a thorough handover process. During this notice period, Ian will receive his salary, pension entitlement and contractual benefits as usual. This notice period will end by 1 April 2024 or earlier where the Company exercises its right to make a payment in lieu of notice (PILON). Any such PILON would be calculated in accordance with Ian's service agreement, based on the unexpired notice period at that time, and include amounts in respect of basic salary, car allowance and pension cash allowance. It has been agreed with Ian that he will remain eligible to receive a bonus in respect of FY 2022/23 (as described on page 164 and which will partly be delivered in a deferred award of shares in the normal course), but no bonus will be paid in respect of FY 2023/24. The Committee has determined that Ian will be treated as a good leaver for the purposes of his awards under the DBP and LTIP based on his committed service to Ricardo, his commitment to a smooth transition and his performance. He is not resigning to seek employment with a new employer. His outstanding awards will continue and vest on the original timescales with the LTIP awards remaining subject to the original performance conditions and being pro rated for time. Malus, clawback, post-vesting holding periods and share retention provisions will continue to apply.

Appointment of Judith Cottrell

Following the announcement of her appointment on 3 April 2023, Judith Cottrell joined Ricardo as its Chief Financial Officer-designate on 1 July 2023 and will take over from Ian Gibson when he steps down as Chief Financial Officer on 13 September 2023. Judith's base salary is £365,000 and she will be eligible for an annual bonus of up to 100% of salary. Judith will also be eligible to receive a 'Core' LTIP award of 130% of salary and a one-off 'Accelerator' LTIP award of 100% of salary to be made under the new Directors' Remuneration Policy as part of the FY 2023/24 award cycle (further details on pages **171** and **172**. All other arrangements are in accordance with the Directors' Remuneration Policy.

Implementation of Directors' Remuneration Policy in FY 2023/24

It is anticipated that the implementation of the 2023 Directors Remuneration Policy (the 2023 Policy) in FY 2023/24 will be broadly similar to that of the implementation of the former policy in FY 2022/23.

The Committee will:

- Review base salary levels for the Executive Directors with effect from 1 January 2024;
- Set and review the performance targets for the FY 2023/24 annual bonus and the LTIP awards to be made in 2023 to ensure continued alignment to strategy;
- Make awards under the Ricardo plc 2020 Long Term Incentive Plan (the 2020 LTIP); and
- Make awards under the Ricardo plc 2021 Deferred Bonus Plan (the 2021 DBP).

To determine the amount of bonus payable for FY 2023/24, the Committee will assess the level of achievement against the financial measures and targets set in respect of:

- Group underlying profit before tax (40%);
- Value Added Turnover (20%);
- Cash conversion (20%); and
- The achievement of specified individual objectives (20%).

Owing to concerns about commercial sensitivity, we do not believe it is in shareholders' interests to disclose any further details of these targets on a prospective basis. However, the Company is committed to adhering to principles of transparency and will, provided disclosure of targets is not then deemed to be commercially sensitive, make appropriate and relevant levels of disclosure of bonus targets and performance against these targets for the FY 2023/24.

2023 LTIP Awards

Subject to receipt of the necessary shareholder approvals, it is anticipated that awards under the Company's 2020 LTIP will be granted shortly after the conclusion of the 2023 AGM. This year the Committee has approved the grant of 'Core' LTIP awards of 150% and 130% of salary respectively for the Chief Executive Officer and Chief Financial Officer and a further award of 100% of salary to each Executive Director, known as 'Accelerator' awards.

The 'Accelerator' awards will be a one-off arrangement for FY 2023/24 designed to pay out in full only if the new strategic commitment to double operated profit by 2027 is on track to being exceeded. This award is aligned with creating a growth mindset well above budget and guidance. The 'Core' and 'Accelerator' awards would both be subject to the two-year holding period following the performance period in accordance with the 2023 Policy.

As with the 2020 Directors' Remuneration Policy, the 2023 Policy provides that the measures and targets of the LTIP awards and the different weightings ascribed to them may be set annually by the Committee in order to ensure they are relevant to participants, challenging to achieve and take account of the most up-to-date business plan and strategy. The targets for the awards to be granted in FY 2023/24 are set out in detail below.

'Core' LTIP Awards

In FY 2022/23, as part of the review of executive remuneration, the Committee considered how Ricardo could enhance the link between its ESG strategy, the climate-related targets it sets and remuneration. The Committee concluded that, in addition to TSR and underlying EPS, which it believes continue to be appropriate measures for the Company's long term incentive arrangements, a portion of the awards would be subject to the satisfaction of certain targets relating to the reduction of the Company's carbon emissions.

The peer group applicable to the TSR portion (30%) of these awards will be the same as those which applied to awards granted last year. Threshold performance (i.e. median ranking in the comparator group, for which 25% of this portion will vest) is generally intended to align with the anticipated performance of the relevant market and our competitors. If the maximum performance is achieved (i.e. upper quartile ranking in the comparator group), we would expect to have significantly outperformed the relevant market and our competitors.

In order to ensure that the target range for the EPS portion (60%) of the awards remains challenging in light of market expectations of the Company's underlying EPS performance to the year ending 30 June 2026, the Committee has determined that:

- No part of the underlying EPS portion of these awards will vest if the Company's underlying EPS for the final year in the performance period is lower than 38.3p;
- 25% of this portion will vest where the final year underlying EPS is 38.3p;
- 100% of this portion will vest where the final year underlying EPS is greater than or equal to 50.1p; and
- Vesting will take place on a straight-line basis between 38.3p and 50.1p.

Where the underlying EPS performance period ends before 30 June 2026 (the final year of the performance period), the Committee retains the discretion to amend these targets and the corresponding vesting levels accordingly.

The ESG portion of these awards (10%) will relate to the Company's reduction in carbon emissions (Scopes 1, 2 and 3) intensity during each of the next 3 financial years ending 30 June 2026. This is measured by emissions per employee / contractor and per units of production (engines, transmission & ABS). The Committee has determined that:

- No part of the ESG portion of these awards will vest if the average reduction is less than 1 percentage point;
- 25% will vest if the average reduction is 1 percentage point;
- 100% will vest if the average reduction is greater than or equal to 2.5 percentage points; and
- Vesting will take place on a straight-line basis between 1 percentage point and 2.5 percentage points.

'Accelerator' LTIP Awards
The Committee has confirmed that the 'Accelerator' awards will vest subject to a stretching EPS performance requirement over the 3 years to 30 June 2026. The targets for these awards are based on delivering an additional 12% above the core award maximum EPS target with vesting for performance above 50.1p (from 0% on a straight-line basis) and 100% vesting where the final year underlying EPS is 56.2p.

Under the terms of the 2023 Directors' Remuneration Policy, the Committee will have the ability to adjust the vesting outcomes from performance conditions where appropriate and the Committee will ensure that outcomes reflect Company and executive performance as well as the experience of shareholders and other stakeholders. In particular, before the awards vest at the end of the three-year performance period, the Committee will apply a supplementary test of the quality of Ricardo's performance and assess the underlying performance based on the Board's expectations in respect of, for example, efficient capital management and the ratio of net debt to EBITDA in light of the Company's strategy for growth. The Committee will also use its discretion to reduce vesting outcomes where it determines that windfall gains have been received.

The Directors' Remuneration Report, comprising the Chair's Overview and Annual Statement in Part 1, the Directors' Remuneration Policy in Part 2 and the Annual Report on Remuneration in Part 3 was approved by the Board on 12 September 2023 and signed on its behalf by:

RUSSELL KING
CHAIR OF THE REMUNERATION COMMITTEE
12 September 2023

DIRECTORS' REPORT

This section sets out the information required to be disclosed by the Company in the Directors' Report in compliance with the Companies Act 2006 (the Act), the Listing Rules of the UK Listing Authority (Listing Rules) and the Disclosure Guidance and Transparency Rules (DTR).

Overview of information required to be disclosed

Certain matters that would otherwise be disclosed in this Directors' Report have been reported elsewhere in this Annual Report. This report should therefore be read in conjunction with the Strategic Report on pages 1 to 111 and the Governance section on pages 112 to 172 which are incorporated by reference into this Directors' Report. The Strategic Report and this Directors' Report, together with other sections of this Annual Report and Accounts including the Governance section on pages 114 to are incorporated by reference, and when taken as a whole, form the Management Report as required under Rule 4.1.5R of the DTR.

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Annual General Meeting	Directors' Report	Page 176
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Auditor's reappointment and remuneration	Directors' Report	Page 176
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Stakeholder engagement	Governance	Page 56
Streamlined Energy and Carbon disclosures	Strategic Report	Page 84
Substantial share interests	Directors' Report	Page 176
Treasury shares	Directors' Report	Page 176
Viability statement	Strategic Report	Page 108

Dividends
On 11 April 2023 an interim dividend of 3.35p (HY 2021/22: 2.91p) was paid to shareholders. The Directors recommend the payment of a final dividend of 8.61 pence per ordinary share on 24 November 2023 to shareholders who are on the register of members at the close of business on 3 November 2023, which together with the interim dividend paid on 11 April 2023 makes a total of 11.96 pence (FY 2021/22: 10.40 pence) per ordinary share for the year. The payment of the final dividend is subject to the approval of shareholders at the 2023 AGM. Dividend details are given in Note 9 to the Consolidated Financial Statements.

Articles of Association
The Company's Articles of Association are available on the Company's website **www.ricardo.com/en**

Acquisitions and disposals
On 1 August 2022, Ricardo completed the sale of its Software business, comprising of shares in the UK, US and Czechia companies of Ricardo Software together with related assets (Ricardo Software) to FOG Software Group, a division of Constellation Software Inc (CSI).

On 24 January 2023, the Group acquired E3-Modelling S.A, a consultancy which specialises in delivering advanced empirical modelling of the energy-economy-environment nexus, based in Greece.

On 12 March 2023, the Group acquired Aither Pty Ltd, a water and natural resources consultancy based in Australia.

Events after the reporting date
There are no post balance sheet events to report after the reporting date.

Research and development
The Group continues to devote effort and resources to the research and development of new technologies. Costs of £14.5m have been incurred, of which £5.4m has been capitalised and £2.3m has been charged to the income statement, excluding amortisation of any capitalised costs and net of £6.8m of government grant income, during the year.

Board of Directors
Details of the Directors who served during the year are set out on pages **114** and **117**. Sir Terry Morgan retired as a Director and left the Board at the close of the Company's General Meeting on the 17 November 2022. Mark Clare was appointed as Non-Executive Director and Deputy Chair on 1 November 2022 and was appointed as Chair at the close of the Company's General Meeting on 17 November 2022.

Directors' Remuneration and interests in shares
Details of Directors' remuneration and their interest in the Company's shares are set out on pages **137** to **172** of the Directors' Remuneration Report.

Directors' indemnities
The Company maintains liability insurance for its Directors and officers. The Company has entered into deeds of indemnity in favour of each of its Directors, under which the Company agrees to indemnify each Director against liabilities incurred by that Director in respect of acts or omissions arising in the course of their office or otherwise by virtue of their office.

At the date of this report, these indemnities are therefore in force for the benefit of all the current Directors of the Company.

On 30 June 2014, Ricardo UK Limited and Ricardo-AEA Limited, subsidiaries of the Group, entered into qualifying third-party indemnity provisions as defined by section 234 of the Companies Act 2006 in favour of their Directors, under which each Director is indemnified against liabilities incurred by that Director in respect of acts or omissions arising in the course of their office or otherwise by virtue of their office and such provisions remain in force as at the date of this report.

Directors' powers
The business of the Company is managed by the Board, which may exercise all of the powers of the Company subject to the Company's Articles of Association and the Act.

Employee share plans

Details of employee share plans are set out in **Note 35** to the Consolidated Financial Statement.

Employee information and equal opportunities

The Company provides colleagues with various opportunities to obtain information on matters of concern to them and to improve awareness of the financial and economic factors that affect the performance of the Company.

These include bi-annual presentations to all members of staff, department and team briefings and meetings with employee representatives that take place throughout the year.

All companies within the Group strive to operate fairly at all times and this includes not permitting discrimination against any employee or applicant for employment on the basis of race, religion or belief, colour, gender, disability, national origin, age, military service, veteran status, sexual orientation or marital status. This includes giving full and fair consideration to suitable applications for employment from disabled persons and making appropriate accommodations so that if existing team members become disabled they can continue to be employed, wherever practicable, in the same job or, if this is not practicable, making every effort to find suitable alternative employment and to provide relevant training.

Change of control provisions

There are a number of agreements that take effect, alter or terminate upon a change of control of the Company following a takeover bid, such as commercial contracts, bank facility agreements, property lease arrangements and employees' share plans. None of these are considered to be significant in terms of their likely impact on the business of the Group as a whole.

Financial instruments

Details of the Company's financial risk management in relation to its financial instruments are given in **Note 28** to the Consolidated Financial Statements.

Share capital, shareholders rights and obligations, and purchase of own shares

As at 12 September 2023, the Company's share capital is divided solely into 62,218,280 ordinary shares of 25 pence each, all of which are fully paid. The ordinary shares are listed on the London Stock Exchange. All ordinary shares rank equally for all dividends and distributions that may be declared on such shares. At General Meetings of the Company, each member who is present (in person, by proxy or by representative) is entitled to one vote on a show of hands and, on a poll, to one vote per share. With respect to shares held on behalf of participants in the all-employee Share Incentive Plan, the trustees are required to vote as the participants direct them to do so in respect of their plan shares. There are no restrictions on voting rights and no securities carry special voting rights with regard to the control of the Company.

Awards granted under the Company's share plans are satisfied either by shares held in the employee benefit trust or by the issue of new shares when awards vest. The Remuneration Committee monitors the number of awards made under the various share plans and their potential impact on the relevant dilution limits recommended by the Investment Association.

Based on the Company's issued share capital as at 30 June 2023, the overall dilution was 2.57% (i.e. below the 10% limit for all plans in any rolling 10- year period) and 2.57% for discretionary employee share plans (i.e. below the 5% limit for discretionary employee share plans in any rolling 10-year period).

The Company was given authority to purchase up to 10% of its existing ordinary share capital at the 2022 AGM; that authority will expire at the conclusion of the 2023 AGM unless renewed. Accordingly, a special resolution to renew the authority will be proposed at the forthcoming AGM.

The existing authority for Directors to allot ordinary shares will expire at the conclusion of the 2023 AGM unless renewed; accordingly, an ordinary resolution to renew this authority will be proposed at the forthcoming AGM. In addition, it will be proposed to give the Directors further authority for a period of one year to allot ordinary shares in connection with a rights issue in favour of ordinary shareholders. This is in accordance with guidance issued by the Association of British Insurers.

Details of these resolutions are included with the Notice of AGM.

Treasury shares

Shares held by the Company in treasury do not have voting rights and are not eligible to receive dividends. Currently, the Company does not hold any shares in treasury.

Related party transactions

Details of related party transactions are set out in Note 38 to the Consolidated Financial Statements.

Resolutions at the Annual General Meeting

It is intended that the Company's AGM will be held on 16 November 2023 at Liberum Capital Limited, Ropemaker Place, Level 12, 25 Ropemaker Street, London EC2Y 9LY. The Notice of AGM sets out the resolutions to be considered and approved at the meeting, together with some explanatory notes.

The resolutions cover such routine matters as the renewal of authority to allot shares, to disapply pre-emption rights and to purchase own shares. The Notice of AGM accompanies this Annual Report and is available at **www.ricardo.com/en**

Substantial shareholdings

As at 18 August 2023, the Company has been notified of the following material interests in the voting rights of the Company under the provisions of the Disclosure and Transparency Rules.

Rank	Shareholder	Shares	% IC
1	Gresham House	7,396,038	11.89
2	Aberforth Partners	4,668,464	7.50
3	JO Hambro Capital Mgt	4,431,344	7.12
4	Invesco	3,117,008	5.01
5	Schroder Investment Mgt	3,015,190	4.85
6	abrdn (Standard Life)	2,637,322	4.24
7	Royal London Asset Mgt	2,479,880	3.99
8	Canaccord Genuity Wealth Mgt	2,146,500	3.45
9	Aviva Investors	2,087,263	3.35
10	Janus Henderson Investors	1,856,178	2.98
11	Montanaro Asset Mgt	1,846,965	2.97

Charitable and Political Donations

During the year the Group made various charitable donations, which are summarised in the Environmental, Social and Governance Report on page 80. The Group made no political donations nor incurred any political expenditure during the year to 30 June 2023.

Auditor's re-appointment and remuneration

Resolutions for the appointment of KPMG LLP as the Company's auditor and to authorise the Directors, acting through the Audit Committee, to agree the remuneration of the auditor, are to be proposed at the 2023 AGM.

Going concern and Viability Statement

Having reviewed the Company's plans and available financial facilities, the Board has a reasonable expectation that the Company has adequate resources to continue in operational existence for at least 12 months following the signing of the accounts. For this reason, it continues to adopt the going concern basis in preparing the Company's accounts. The Company's Viability Statement can be found on page 108.

Branches outside the UK

The Company has no overseas branches outside the UK. A number of the Group's subsidiaries have overseas branches outside the UK, which are disclosed in their local statutory financial statements, where required.

Disclosures required under UK Listing Rule 9.8.4

There are no disclosures required to be made under UK Listing Rule 9.8.4 other than in respect of long term incentive schemes.

Disclosure of Information to auditor

The Directors who held office at the date of approval of the Directors' Report confirm that:

- So far as they are each aware, there is no relevant audit information, which would be needed by the Company's auditor in connection with preparing its audit report, of which the Company's auditor is unaware; and
- Each Director has taken all steps that they ought to have taken as a Director in order to make themselves aware of any relevant audit information and to establish that the Company's auditor is aware of that information.

The Directors' Report was approved by order of the Board on 12 September 2023 and signed on its behalf by:

HARPREET SAGOO
GROUP GENERAL COUNSEL & COMPANY SECRETARY
Registered office Ricardo plc
Shoreham Technical Centre Shoreham-by-Sea, West Sussex, BN43 5FG

STATEMENT OF DIRECTORS' RESPONSIBILITIES
IN RESPECT OF THE FINANCIAL STATEMENTS

The Directors are responsible for preparing the Annual Report and the Group and parent Company financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare Group and parent Company financial statements for each financial year. Under that law they are required to prepare the Group financial statements in accordance with UK-adopted international accounting standards and applicable law and have elected to prepare the parent Company financial statements in accordance with UK accounting standards and applicable law, including FRS 101 Reduced Disclosure Framework. Under company law the Directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and parent Company and of the Group's profit or loss for that period. In preparing each of the Group and parent Company financial statements, the Directors are required to:

- Select suitable accounting policies and then apply them consistently
- Make judgements and estimates that are reasonable, relevant, reliable and prudent
- For the Group financial statements, state whether they have been prepared in accordance with UK-adopted international accounting standards
- For the parent Company financial statements, state whether applicable UK accounting standards have been followed, subject to any material departures disclosed and explained in the parent Company financial statements
- Assess the Group and parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and
- Use the going concern basis of accounting unless they either intend to liquidate the Group or the parent Company or to cease operations, or have no realistic alternative but to do so

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the parent Company's transactions and disclose with reasonable accuracy at any time the financial position of the parent Company and enable them to ensure that its financial statements comply with the Companies Act 2006. They are responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error, and have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Group and to prevent and detect fraud and other irregularities.

Under applicable law and regulations, the Directors are also responsible for preparing a Strategic Report, Directors' Report, Directors' Remuneration Report and Corporate Governance Statement that complies with that law and those regulations.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

In accordance with Disclosure Guidance and Transparency Rule 4.1.14R, the financial statements will form part of the annual financial report prepared using the single electronic reporting format under the TD ESEF Regulation. The auditor's report on these financial statements provides no assurance over the ESEF format.

Responsibility statement of the Directors in respect of the annual financial report

We confirm that to the best of our knowledge:

- The financial statements, prepared in accordance with the applicable set of accounting standards, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole; and
- The Strategic Report includes a fair review of the development and performance of the business and the position of the issuer and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face
- We consider the Annual Report and Accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy

GRAHAM RITCHIE
CHIEF EXECUTIVE OFFICER

IAN GIBSON
CHIEF FINANCIAL OFFICER
12 September 2023

FINANCIAL STATEMENTS

INDEPENDENT AUDITOR'S REPORT
TO THE MEMBERS OF RICARDO PLC

1. Our opinion is unmodified

We have audited the financial statements of Ricardo plc ("the Company") for the year ended 30 June 2023 which comprise the consolidated income statement, consolidated statement of comprehensive income, consolidated statement of financial position, consolidated statement of changes in equity, consolidated cash flow statement, company statement of financial position, company statement of changes in equity, and the related notes, including the accounting policies in **note 1**.

In our opinion:

- the financial statements give a true and fair view of the state of the Group's and of the parent Company's affairs as at 30 June 2023 and of the Group's loss for the year then ended;
- the Group financial statements have been properly prepared in accordance with UK-adopted international accounting standards;
- the Parent Company financial statements have been properly prepared in accordance with UK accounting standards, including FRS 101 Reduced Disclosure Framework;and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities are described below. We believe that the audit evidence we have obtained is a sufficient and appropriate basis for our opinion. Our audit opinion is consistent with our report to the audit committee.

We were first appointed as auditor by the shareholders on 15 November 2018. The period of total uninterrupted engagement is for the five financial years ended 30 June 2023.

We have fulfilled our ethical responsibilities under, and we remain independent of the Group in accordance with, UK ethical requirements including the FRC Ethical Standard as applied to listed public interest entities.

Apart from the matters noted below, we have not performed any non-audit services during the financial year ended 30 June 2023 or subsequently which are prohibited by the FRC Ethical Standard. During 2023 we identified that a KPMG member firm had provided foreign language translation services during the periods ending 30 June 2020 to 30 June 2023 to a group entity. The services, which have been terminated, were administrative in nature and did not involve any management decision-making or bookkeeping. The work in each case had no direct or indirect effect on Ricardo plc's consolidated financial statements.

In our professional judgment, we confirm that based on our assessment of the breach, our integrity and objectivity as auditor has not been compromised and we believe that an objective, reasonable and informed third party would conclude that the provision of these services would not impair our integrity or objectivity for any of the impacted financial years. The Audit Committee concurred with this view.

Overview

Materiality: group financial statements as a whole		£1.2m (2022: £1.1m) 5.1% (2022: 5%) of normalised profits and losses that make up Group profit before tax
Coverage		69% (2022: 76%) of normalised profits and losses that make up Group profit before tax
Key audit matters		**vs 2022**
Recurring risks	Impairment of A&I Established CGU (Goodwill, Intangibles & PPE)	◀▶
	New: Impairment of Rail Division CGU (Goodwill)	▲
	Valuation of defined benefit pension obligation	◀▶
	Revenue recognition of fixed price contracts	◀▶

2. Key audit matters: our assessment of risks of material misstatement

Key audit matters are those matters that, in our professional judgement, were of most significance in the audit of the financial statements and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by us, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. We summarise below the key audit matters, in decreasing order of audit significance, in arriving at our audit opinion above, together with our key audit procedures to address those matters and, as required for public interest entities, our results from those procedures. These matters were addressed, and our results are based on procedures undertaken, in the context of, and solely for the purpose of, our audit of the financial statements as a whole, and in forming our opinion thereon, and consequently are incidental to that opinion, and we do not provide a separate opinion on these matters.

	The risk	Our response
Carrying value of assets and impairment charge of A&I Established CGU (Goodwill, Intangibles & PPE) (Total impairment charge – £18.7m; 2022: £0.0m) *Refer to* **page 133** *(Audit Committee Report), page* **207** *(accounting policy) and page* **237** – **239** *(financial disclosures).*	**Forecast-based assessment:** Valuation of the fixed assets (Goodwill, Intangibles and PPE) associated with the A&I Established CGU is significant and at risk of recoverability at the reporting date due to reduced demand and recent trading losses. The estimated recoverable amount is subjective due to the inherent uncertainty involved in forecasting and discounting future cash flows. The effect of these matters is that, as part of our risk assessment, we determined that the value in use of the A&I Established CGU is based on key assumptions that resulted in the CGU being fully impaired. Changes in these key assumptions, whilst not sensitive, may result in a lower impairment charge, greater than our materiality for the financial statements as a whole.	We performed the detailed tests below rather than seeking to rely on any of the company's controls because the nature of the balance is such that we would expect to obtain audit evidence primarily through the detailed procedures described. Our procedures included: • **Our sector experience:** Evaluating cash flow assumptions used, in particular those relating to forecast revenue growth and profit margin; • **Model:** Assessing the reasonableness of the methodology used for calculation of the recoverable amount; • **Benchmarking assumptions:** Comparing the group's assumptions to externally derived data in relation to key inputs such as projected economic growth and discount rates; • **Sensitivity analysis:** Performing a sensitivity analysis on the assumptions noted above and considered reasonably possible changes in key inputs that had the greatest judgment and their impact on the valuation. This included consideration that reasonably possible changes in key assumptions would have reduced the level of impairment charged; • **Assessing transparency:** Assessing whether the group's disclosures about the sensitivity of the outcome of the impairment assessment to changes in key assumptions reflect the risks inherent in the recoverable amount of the CGU. **Our results** We concur with the group's conclusion that the full impairment of the CGU's fixed assets (goodwill – £5.2m; intangibles – £1.8m & PPE – £11.7m) of £18.7m to be acceptable (2022: Impairment charge of £nil – acceptable).

2. Key audit matters: our assessment of risks of material misstatement (continued)

	The risk	Our response
Impairment of Rail division CGU (Goodwill) (Carrying value of goodwill relating to the CGU – £44.4m; 2022: £46.2m) *Refer to page 133 (Audit Committee Report), page 207 (accounting policy) and page 237 – 239 (financial disclosures).*	**Forecast-based assessment:** Goodwill associated with the Rail CGU is significant and there is an increased risk of recoverability at the reporting date due to the sensitivity of key assumptions within the Group's forecast model. The estimated recoverable amount is subjective due to the inherent uncertainty involved in forecasting and discounting future cash flows. The effect of these matters is that, as part of our risk assessment, we determined that the value in use of Rail CGU assets have a high degree of estimation uncertainty, with a potential range of reasonable outcomes greater than our materiality for the financial statements as a whole, and possibly many times that amount. The financial statements (**note 15**) disclose the sensitivity estimated by the Group.	We performed the detailed tests below rather than seeking to rely on any of the company's controls because the nature of the balance is such that we would expect to obtain audit evidence primarily through the detailed procedures described. Our procedures included: • **Our sector experience:** Evaluating cash flow assumptions used, in particular those relating to forecast revenue growth and profit margin; • **Model:** Assessing the reasonableness of the methodology used for calculation of the recoverable amount; • **Benchmarking assumptions:** Comparing the group's assumptions to externally derived data in relation to key inputs such as projected economic growth and discount rates; • **Sensitivity analysis:** Reperforming the breakeven analysis on the key assumptions and the sensitivity disclosures over these assumptions disclosed in **note 15** to the financial statements; • **Assessing transparency:** Assessing whether the group's disclosures about the sensitivity of the outcome of the impairment assessment to changes in key assumptions reflect the risks inherent in the recoverable amount of the CGU. **Our results** We found the Group's conclusion that there is no impairment of the Rail Division CGU, and the related disclosures, to be acceptable (2022: n/a).
Group and parent Company: Valuation of defined benefit pension obligation (£92.0m; 2022: £111.9m) *Refer to page 133 (Audit Committee Report), page 212 (accounting policy) and page 262 – 264 (financial disclosures).*	**Subjective estimate:** A significant level of estimation is required in order to determine the valuation of the gross liability of the Defined Benefit Obligation. Small changes in the key assumptions (in particular, discount rates, inflation & mortality rates) can have a material impact on the gross liability. The effect of these matters is that, as part of our risk assessment, we determined that the valuation of the defined benefit obligation has a high degree of estimation uncertainty, with a potential range of reasonable outcomes greater than our materiality for the financial statements as a whole, and possibly many times that amount. The financial statements (**Note 34**) disclose the sensitivity estimated by the Group and Parent Company.	We performed the detailed tests below rather than seeking to rely on any of the company's controls because the nature of the balance is such that we would expect to obtain audit evidence primarily through the detailed procedures described. Our procedures included: • **Benchmarking assumptions:** We challenged key assumptions applied (discount rate, inflation rate, and mortality rate) with the support of our own actuarial specialists, including a comparison of key assumptions against external market data; • **Assessing base data:** We have confirmed the data used in the current year valuation is consistent with that prepared at the triennial valuation as at 31 March 2020. We used our actuarial specialists to challenge the methodology used to roll forward the results of the triennial valuation as at 5 April 2020 to 30 June 2023. • **Assessing transparency:** We considered the adequacy of the Group and Company's disclosures in respect of the sensitivity of the surplus to changes in key assumptions. **Our results** We found the valuation and presentation of the disclosure of the defined benefit pension obligation to be acceptable. (2022: acceptable)

	The risk	Our response
Revenue recognition on fixed price contracts (£216.9m; 2022: £198.5m – restated) *Refer to page* **133** *(Audit Committee Report), page* **203** – **206** *(accounting policy) and page* **224** *(financial disclosures).*	**Accounting application:** Fixed price contracts is an area which requires the largest allocation of senior team members in the audit, and which has a major impact on directing the efforts of the engagement team, due to the volume of contracts and the amount of the fixed price contracts revenue. For fixed price contracts the Group recognises the majority of revenue and profit on the stage of completion based on the proportion of contract costs incurred for the work performed to the balance sheet date, relative to the estimated total forecast costs of the contract at completion. The judgments and estimates impacting the recognition of revenue include: • The identification of distinct performance obligations. • Assessment of stage of completion and costs to complete • The recognition of variations A large part of the portfolio comprises contracts that individually have low estimation uncertainty. The highest value, highest risk, most technically complex and financially challenging contracts to deliver are categorised as 'Red Category 4' contracts, which are subject to more frequent and senior levels of management review. The financial statements (**note 1d**) disclose the range of possible financial outcomes estimated by the Group on 'Red Category 4' contracts.	Our procedures included: • **Control observation:** We attended the 'Red Category 4' review meetings in January and July 2023 at which performance of these contracts was discussed with the Chief Financial Officer, Group Financial Controller, Group Quality & Risk Director, and divisional Managing and Finance Directors; • **Test of detail:** We selected a sample of costs incurred in the year and agreed to supporting documentation which included, for example invoices and timesheets; • We inspected a sample of correspondence with customers and instances where contractual variations had arisen to inform our assessment of the revenue and costs recorded up to the balance sheet date. We also agreed the variations to relevant invoicing schedules and payment plans and the subsequent cash receipts, where possible; • **Analysis of comparisons:** We assessed the reasonableness of the Group's forecasts by comparing with the comparative forecasts and the actual financial performance for the current and prior years. Additionally, we challenged the Group's forecasts relating to the remainder of contracts through assessment of actual and planned contract milestones, inquiry of project teams, and analysis of, the forecasts based on total contract value and any related contract variations; • **Independent reperformance:** We recalculated the stage of completion on the basis of actual costs and the Group's latest forecast to inform our assessment of the appropriate amount of revenue and profit to recognise and compared this to the amounts recorded by the Group; • **Assessing transparency:** We considered the adequacy of the Group's disclosures about the degree of estimates involved in estimating the stage of completion for determining the revenue amounts for fixed price contracts; **Our results** We found revenue recognised on fixed price contracts to be acceptable (2022: acceptable).

3. Our application of materiality and an overview of the scope of our audit

Materiality for the group financial statements as a whole was set at £1.2m (2022: £1.1m), determined with reference to a benchmark of normalised group profit before tax from continuing operations, of which it represents 5.1% (2022: 5%).

We normalised profit before tax by adding back adjustments that do not represent the normal, continuing operations of the Group, for both 2023 and 2022. The items we adjusted for were exceptional acquisition related expenditure, asset purchases and disposals and other reorganisation costs as disclosed in **note 7**.

Materiality for the parent company financial statements as a whole was set at £0.5m (2022: £0.4m), which is the component materiality for the parent company determined by the group audit engagement team. This is lower than the materiality we would otherwise have determined with reference to company total assets, of which it represents 0.4% (2022: 0.2%).

3. Our application of materiality and an overview of the scope of our audit (continued)

In line with our audit methodology, our procedures on individual account balances and disclosures were performed to a lower threshold, performance materiality, so as to reduce to an acceptable level the risk that individually immaterial misstatements in individual account balances add up to a material amount across the financial statements as a whole. Performance materiality was set at 65% (2022: 75%) of materiality for the financial statements as a whole, which equates to £0.8m (2022: £0.9m) for the group and £0.4m (2022: £0.3m) for the parent company. We applied this percentage in our determination of performance materiality based on the level of identified misstatements and control deficiencies during the prior period.

We agreed to report to the Audit Committee any corrected or uncorrected identified misstatements exceeding £0.06m (2022: £0.05m), in addition to other identified misstatements that warranted reporting on qualitative grounds.

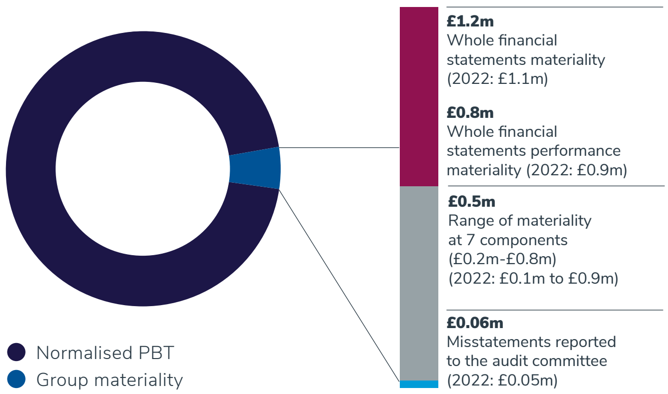
Of the group's 67 (2022: 68) reporting components, we subjected 7 (2022: 11) to full scope audits for group purposes and nil (2022: 3) to specified risk-focused audit procedures. The latter were not individually financially significant enough to require a full scope audit or specified risk-focused audit procedures that needed to be addressed for group purposes.

The components within the scope of our work accounted for the percentages illustrated opposite. The remaining 34% (2022: 15%) of total group revenue, 31% (2022: 24%) of group's normalised profit before tax and 37% (2022:22%) of total group assets is represented by 60 (2022: 54) reporting components, none of which individually represented more than 7.1% (2022: 5.5%) of any of total group revenue, group's normalised profit before tax or total group assets. For the residual components, we performed analysis at an aggregated group level to re-examine our assessment that there were no significant risks of material misstatement within these.

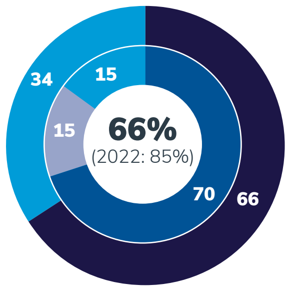
The scope of the audit work performed was predominately substantive as we placed limited reliance upon the Group's internal control over financial reporting.

Normalised group profit before tax
£23.6m (2022: £21.0m)

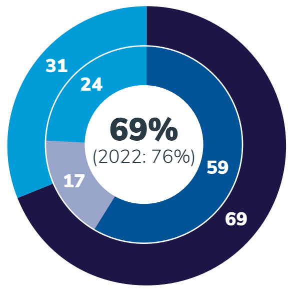
Group materiality
£1.2m (2022: £1.1m)



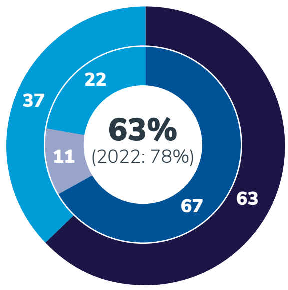
Group revenue



Group profit before tax



Group total assets



- Full scope for group audit purposes 2023
- Full scope for group audit purposes 2022
- Specified risk-focused audit procedures 2022
- Residual components

The Group team instructed component auditors as to the significant areas to be covered, including the relevant risks detailed above and the information to be reported back. The Group team approved the component materialities, which ranged from £0.2m to £0.8m (2022: £0.3m to £0.6m), having regard to the mix of size and risk profile of the Group across the components. The work on 2 of the 7 in-scope components (2022: 4 of the 14 components) was performed by component auditors and the rest, including the audit of the parent company, was performed by the Group team. The Group team performed procedures on the items excluded from normalised group profit before tax.

The Group team visited 1 (2022: 1) component location in order to assess the audit risk and strategy. In addition the Key audit partner for the UK components was a member of the group engagement team, involved in group risk and strategy discussions. During the year, 1 overseas site visit was conducted by the Group team, with all other in-scoped components audited by the Group team. At these meetings, the findings reported to the Group team were discussed in more detail, and any further work required by the Group team was then performed by the component auditor.

4. Going concern

The directors have prepared the financial statements on the going concern basis as they do not intend to liquidate the Group or the Company or to cease their operations, and as they have concluded that the Group's and the Company's financial position means that this is realistic. They have also concluded that there are no material uncertainties that could have cast significant doubt over their ability to continue as a going concern for at least a year from the date of approval of the financial statements ("the going concern period").

We used our knowledge of the Group, its industry, and the general economic environment to identify the inherent risks to its business model and analysed how those risks might affect the Group's and Company's financial resources or ability to continue operations over the going concern period. The risks that we considered most likely to adversely affect the Group's and Company's available financial resources and metrics relevant to debt covenants over this period were:

- challenges impacting the automotive industry with a potential decline in trading results for the A&I Established CGU.

We considered whether these risks could plausibly affect the liquidity or covenant compliance in the going concern period by assessing the Directors' sensitivities over the level of available financial resources and covenant thresholds indicated by the Group's financial forecasts taking account of severe, but plausible adverse effects that could arise from these risks individually and collectively.

Our procedures also included:

- Critically assessing assumptions in base case and downside scenarios relevant to liquidity and covenant metrics, and overlaying knowledge of the entity' plans based on approved budgets and our knowledge of the entity and the sector in which it operates.
- We also compared past budgets to actual results to assess the directors' track record of budgeting accurately.
- We inspected the confirmation from the lender of the level of committed financing, and the associated covenant requirements.
- Our procedures also included an assessment of whether the going concern disclosure in note 1 to the financial statements gives a complete and accurate description of the Directors' assessment of going concern.

Our conclusions based on this work:

- we consider that the directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate;
- we have not identified, and concur with the directors' assessment that there is not, a material uncertainty related to events or conditions that, individually or collectively, may cast significant doubt on the Group's or Company's ability to continue as a going concern for the going concern period;
- we have nothing material to add or draw attention to in relation to the directors' statement in note 1 to the financial statements on the use of the going concern basis of accounting with no material uncertainties that may cast significant doubt over the Group and Company's use of that basis for the going concern period, and we found the going concern disclosure in **note 1** to be acceptable; and
- the related statement under the Listing Rules set out on **page 176** is materially consistent with the financial statements and our audit knowledge.

However, as we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the above conclusions are not a guarantee that the Group or the Company will continue in operation.

5. Fraud and breaches of laws and regulations – ability to detect

Identifying and responding to risks of material misstatement due to fraud

To identify risks of material misstatement due to fraud ("fraud risks") we assessed events or conditions that could indicate an incentive or pressure to commit fraud or provide an opportunity to commit fraud. Our risk assessment procedures included:

- Enquiring of directors, the audit committee, internal audit and inspection of policy documentation as to the Group's high-level policies and procedures to prevent and detect fraud, including the internal audit function, and the Group's channel for "whistleblowing", as well as whether they have knowledge of any actual, suspected or alleged fraud;
- Considering remuneration incentive schemes and performance targets for management and Directors including the EPS target for management remuneration;
- Using analytical procedures to identify any unusual or unexpected relationships, and
- Reading Board and Audit Committee minutes.

We communicated identified fraud risks throughout the audit team and remained alert to any indications of fraud throughout the audit. This included communication from the group to full scope component audit teams of relevant fraud risks identified at the Group level and request to full scope component audit teams to report to the Group audit team any instances of fraud that could give rise to a material misstatement at group.

As required by auditing standards, and taking into account possible pressures to meet profit targets and our overall knowledge of the control environment, we perform procedures to address the risk of management override of controls, in particular the risk that Group and component management may be in a position to make inappropriate accounting entries. On this audit we do not believe there is a fraud risk related to revenue recognition because of the relatively low estimation risk across the contract portfolio, the historical accuracy of forecasting and the strength of the control environment in place. We did not identify any additional fraud risks, other than those included above.

We performed procedures including:

- Identifying journal entries to test for all full scope components based on risk criteria and comparing the identified entries to supporting documentation. These included those posted to cash and revenue where applicable to check for unexpected journal pairings.
- agreeing of a sample of timesheet entries recorded directly with employees to confirm the accuracy.

Identifying and responding to risks of material misstatement due to non-compliance with laws and regulations

We identified areas of laws and regulations that could reasonably be expected to have a material effect on the financial statements from our general commercial and sector experience, through discussion with the directors and other management (as required by auditing standards), and discussed with the directors and other management the policies and procedures regarding compliance with laws and regulations.

As the Group is regulated, our assessment of risks involved gaining an understanding of the control environment including the entity's procedures for complying with regulatory requirements.

We communicated identified laws and regulations throughout our team and remained alert to any indications of noncompliance throughout the audit. This included communication from the group to full scope component audit teams of relevant laws and regulations identified at the Group level, and a request for full scope component auditors to report to the group team any instances of non-compliance with laws and regulations that could give rise to a material misstatement at the Group level.

The potential effect of these laws and regulations on the financial statements varies considerably.

Firstly, the Group is subject to laws and regulations that directly affect the financial statements including financial reporting legislation (including related companies legislation), distributable profits legislation, taxation legislation and pensions legislation and we assessed the extent of compliance with these laws and regulations as part of our procedures on the related financial statement items.

Secondly, the Group is subject to many other laws and regulations where the consequences of non-compliance could have a material effect on amounts or disclosures in the financial statements, for instance through the imposition of fines or litigation. We identified the following areas as those most likely to have such an effect: health and safety, anti-bribery, employment law, road and motor vehicle regulations, competition laws, regulatory capital and liquidity and certain aspects of company legislation recognising the regulated nature of the Group's activities and its legal form. Auditing standards limit the required audit procedures to identify non-compliance with these laws and regulations to enquiry of the directors and other management and inspection of regulatory and legal correspondence, if any. Therefore if a breach of operational regulations is not disclosed to us or evident from relevant correspondence, an audit will not detect that breach.

Context of the ability of the audit to detect fraud or breaches of law or regulation

Owing to the inherent limitations of an audit, there is an unavoidable risk that we may not have detected some material misstatements in the financial statements, even though we have properly planned and performed our audit in accordance with auditing standards. For example, the further removed non-compliance with laws and regulations is from the events and transactions reflected in the financial statements, the less likely the inherently limited procedures required by auditing standards would identify it.

In addition, as with any audit, there remained a higher risk of non-detection of fraud, as these may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls. Our audit procedures are designed to detect material misstatement. We are not responsible for preventing non-compliance or fraud and cannot be expected to detect non-compliance with all laws and regulations.

6. We have nothing to report on the other information in the Annual Report

The directors are responsible for the other information presented in the Annual Report together with the financial statements. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except as explicitly stated below, any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether, based on our financial statements audit work, the information therein is materially misstated or inconsistent with the financial statements or our audit knowledge. Based solely on that work we have not identified material misstatements in the other information.

Strategic report and directors' report

Based solely on our work on the other information:

- we have not identified material misstatements in the strategic report and the directors' report;
- in our opinion the information given in those reports for the financial year is consistent with the financial statements; and
- in our opinion those reports have been prepared in accordance with the Companies Act 2006.

Directors' remuneration report

In our opinion the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006.

Disclosures of emerging and principal risks and longer-term viability

We are required to perform procedures to identify whether there is a material inconsistency between the directors' disclosures in respect of emerging and principal risks and the viability statement, and the financial statements and our audit knowledge.

6. We have nothing to report on the other information in the Annual Report (continued)

Based on those procedures, we have nothing material to add or draw attention to in relation to:

- the directors' confirmation within the viability statement page 108 that they have carried out a robust assessment of the emerging and principal risks facing the Group, including those that would threaten its business model, future performance, solvency and liquidity;
- the Principal risks and uncertainties disclosures describing these risks and how emerging risks are identified, and explaining how they are being managed and mitigated; and
- the directors' explanation in the viability statement of how they have assessed the prospects of the Group, over what period they have done so and why they considered that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

We are also required to review the viability statement, set out on page 108 under the Listing Rules. Based on the above procedures, we have concluded that the above disclosures are materially consistent with the financial statements and our audit knowledge.
Our work is limited to assessing these matters in the context of only the knowledge acquired during our financial statements audit. As we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the absence of anything to report on these statements is not a guarantee as to the Group's and Company's longer-term viability.

Corporate governance disclosures

We are required to perform procedures to identify whether there is a material inconsistency between the directors' corporate governance disclosures and the financial statements and our audit knowledge.

Based on those procedures, we have concluded that each of the following is materially consistent with the financial statements and our audit knowledge:

- the directors' statement that they consider that the annual report and financial statements taken as a whole is fair, balanced and understandable, and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy;
- the section of the annual report describing the work of the Audit Committee, including the significant issues that the audit committee considered in relation to the financial statements, and how these issues were addressed; and
- the section of the annual report that describes the review of the effectiveness of the Group's risk management and internal control systems.

We are required to review the part of the Corporate Governance Statement relating to the Group's compliance with the provisions of the UK Corporate Governance Code specified by the Listing Rules for our review. We have nothing to report in this respect.

7. We have nothing to report on the other matters on which we are required to report by exception

Under the Companies Act 2006, we are required to report to you if, in our opinion:

- adequate accounting records have not been kept by the parent Company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent Company financial statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

We have nothing to report in these respects.

8. Respective responsibilities

Directors' responsibilities

As explained more fully in their statement set out on **page 178**, the directors are responsible for: the preparation of the financial statements including being satisfied that they give a true and fair view; such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error; assessing the Group and parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and using the going concern basis of accounting unless they either intend to liquidate the Group or the parent Company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue our opinion in an auditor's report. Reasonable assurance is a high level of assurance, but does not guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

A fuller description of our responsibilities is provided on the FRC's website at **www.frc.org.uk/auditorsresponsibilities**

The Company is required to include these financial statements in an annual financial report prepared using the single electronic reporting format specified in the TD ESEF Regulation. This auditor's report provides no assurance over whether the annual financial report has been prepared in accordance with that format.

9. The purpose of our audit work and to whom we owe our responsibilities

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members, as a body, for our audit work, for this report, or for the opinions we have formed.

JEREMY HALL (SENIOR STATUTORY AUDITOR)
for and on behalf of KPMG LLP,
Statutory Auditor

Chartered Accountants
15 Canada Square
London
E14 5GL

13 September 2023

GROUP PRIMARY STATEMENTS

CONSOLIDATED INCOME STATEMENT
FOR THE YEAR ENDED 30 JUNE

	Note	2023 Underlying £m	2023 Specific adjusting items(**) £m	2023 Total £m	2022 – Restated* Underlying £m	2022 – Restated* Specific adjusting items(**) £m	2022 – Restated* Total £m
Continuing operations							
Revenue	6	445.2	–	445.2	380.2	–	380.2
Cost of sales		(318.9)	–	(318.9)	(260.7)	–	(260.7)
Gross profit		126.3	–	126.3	119.5	–	119.5
Administrative expenses		(91.7)	(35.9)	(127.6)	(90.8)	(11.8)	(102.6)
Impairment losses on trade receivables and contract assets	23	(1.8)	–	(1.8)	(1.2)	–	(1.2)
Other income		1.2	–	1.2	0.5	–	0.5
Operating profit/(loss)	4	34.0	(35.9)	(1.9)	28.0	(11.8)	16.2
Finance income		1.0	–	1.0	0.6	–	0.6
Finance costs		(7.1)	–	(7.1)	(4.4)	–	(4.4)
Net finance costs	10	(6.1)	–	(6.1)	(3.8)	–	(3.8)
Profit/(loss) before taxation		27.9	(35.9)	(8.0)	24.2	(11.8)	12.4
Income tax (expense)/credit	12	(7.3)	3.3	(4.0)	(6.5)	2.3	(4.2)
Profit/(loss) from continuing operations		20.6	(32.6)	(12.0)	17.7	(9.5)	8.2
Discontinued operation							
Profit from discontinued operation, net of tax	3	0.4	6.4	6.8	1.7	(1.3)	0.4
Profit/(loss) for the year		21.0	(26.2)	(5.2)	19.4	(10.8)	8.6
Profit/(loss) attributable to:							
Continuing operations							
– Owners of the parent		20.4	(32.6)	(12.2)	17.7	(9.5)	8.2
– Non-controlling interests	32	0.2	–	0.2	–	–	–
		20.6	(32.6)	(12.0)	17.7	(9.5)	8.2
Discontinued operation							
– Owners of the parent		0.4	6.4	6.8	1.7	(1.3)	0.4
Total							
–Owners of the parent		20.8	(26.2)	(5.4)	19.4	(10.8)	8.6
– Non-controlling interests	32	0.2	–	0.2	–	–	–
		21.0	(26.2)	(5.2)	19.4	(10.8)	8.6

Earnings per share – basic and diluted (Note 8)	2023 pence	2022 pence
(Loss)/earnings per share	(8.7)	13.8
Underlying earnings per share	33.4	31.2
(Loss)/earnings per share from continuing operations	(19.3)	13.2
Earnings per share from discontinued operation	10.9	0.6

* Previously certain costs, such as engineering software licenses and subscriptions and running costs related to testing and manufacturing facilities, have been allocated to administrative costs. These costs have been allocated to cost of sales in the current year as they are considered to directly relate to the delivery of revenue. Comparative amounts have been restated to allocate the costs on a consistent basis. As a result, cost of sales have increased by £10.0m, impairment losses on trade receivables and contract assets have increased by £1.2m, and administrative expenses have reduced by £11.2m. There is no impact on profit for the year or EPS.

** Specific adjusting items are disclosed separately in the financial statements where it is necessary to do so to provide further understanding of the financial performance. See Notes 2 and 7.

The notes on pages 197 to 270 form an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
FOR THE YEAR ENDED 30 JUNE

	Note	2023 £m	2022 £m
(Loss)/profit for the year		**(5.2)**	8.6
Other comprehensive (expense)/income			
Items that will not be reclassified to profit or loss:			
Remeasurements of the defined benefit pension scheme	34	**(5.0)**	5.2
Deferred tax on remeasurements of the defined benefit pension scheme	21	**1.2**	(1.6)
Total items that will not be reclassified to profit or loss		**(3.8)**	3.6
Items that are, or may be, subsequently reclassified to profit or loss:			
Currency translation on foreign currency net investments		**(6.4)**	6.5
Reclassification of foreign currency differences on disposal of foreign operation		**(0.9)**	–
Total items that may be subsequently reclassified to profit or loss		**(7.3)**	6.5
Total other comprehensive (expense)/income for the year (net of tax)		**(11.1)**	10.1
Total comprehensive (expense)/income for the year		**(16.3)**	18.7
Comprehensive (expense)/income attributable to:			
– Owners of the parent		**(16.5)**	18.7
– Non-controlling interests	32	**0.2**	–
		(16.3)	18.7

The notes on pages 197 to 270 form an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION
AS AT 30 JUNE

	Note	2023 £m	2022 £m
Assets			
Non-current assets			
Goodwill	15	96.1	90.6
Other intangible assets	16	35.4	23.1
Property, plant and equipment	17	35.3	47.0
Right-of-use assets	18	20.7	18.3
Retirement benefit surplus	34	12.6	15.2
Other receivables	23	2.4	2.5
Deferred tax assets	21	8.5	9.0
		211.0	205.7
Current assets			
Inventories	22	29.5	21.0
Trade, contract and other receivables	23	153.5	128.7
Derivative financial assets	27	2.3	0.8
Current tax assets		2.7	3.6
Cash and cash equivalents	25	49.8	49.4
Assets held for sale	19	–	9.6
		237.8	213.1
Total assets		448.8	418.8
Liabilities			
Current liabilities			
Borrowings	25	12.7	11.2
Lease liabilities	18	5.7	5.0
Trade, contract and other payables	24	105.0	78.2
Current tax liabilities		2.6	4.2
Derivative financial liabilities	27	1.0	5.1
Provisions	20	2.6	5.1
Liabilities directly associated with the assets held for sale	19	–	3.4
		129.6	112.2
Net current assets		108.2	100.9
Non-current liabilities			
Borrowings	25	99.2	74.7
Lease liabilities	18	19.4	18.3
Trade, contract and other payables	24	4.8	–
Deferred tax liabilities	21	15.5	12.7
Provisions	20	3.7	3.3
		142.6	109.0
Total liabilities		272.2	221.2
Net assets		176.6	197.6
Equity			
Share capital	29	15.6	15.6
Share premium	29	16.8	16.8
Other reserves	30	37.2	44.5
Retained earnings	31	106.6	120.5
Equity attributable to owners of the parent		176.2	197.4
Non-controlling interests	32	0.4	0.2
Total equity		176.6	197.6

The notes on pages 197 to 270 form an integral part of these consolidated financial statements. Approved by the Board of Ricardo plc on 12 September 2023 and signed on its behalf by:

GRAHAM RITCHIE
CHIEF EXECUTIVE OFFICER

IAN GIBSON
CHIEF FINANCIAL OFFICER

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
FOR THE YEAR ENDED 30 JUNE

	Note	Attributable to owners of the parent					Non-controlling interests £m	Total equity £m
		Share capital £m	Share premium £m	Other reserves £m	Retained earnings £m	Total £m		
At 1 July 2021		15.6	16.8	38.0	112.2	182.6	0.2	182.8
Profit for the year		–	–	–	8.6	8.6	–	8.6
Other comprehensive income for the year		–	–	6.5	3.6	10.1	–	10.1
Total comprehensive income for the year		–	–	6.5	12.2	18.7	–	18.7
Equity-settled transactions	35	–	–	–	1.6	1.6	–	1.6
Purchases of own shares to settle awards		–	–	–	(0.2)	(0.2)	–	(0.2)
Tax relating to share option schemes	21	–	–	–	(0.3)	(0.3)	–	(0.3)
Ordinary share dividends	9	–	–	–	(5.0)	(5.0)	–	(5.0)
At 30 June 2022		15.6	16.8	44.5	120.5	197.4	0.2	197.6
At 1 July 2022		**15.6**	**16.8**	**44.5**	**120.5**	**197.4**	**0.2**	**197.6**
Loss for the year		**–**	**–**	**–**	**(5.4)**	**(5.4)**	**0.2**	**(5.2)**
Other comprehensive expense for the year		**–**	**–**	**(7.3)**	**(3.8)**	**(11.1)**	**–**	**(11.1)**
Total comprehensive (expense)/income for the year		**–**	**–**	**(7.3)**	**(9.2)**	**(16.5)**	**0.2**	**(16.3)**
Equity-settled transactions	35	**–**	**–**	**–**	**1.4**	**1.4**	**–**	**1.4**
Tax relating to share option schemes	21	**–**	**–**	**–**	**0.7**	**0.7**	**–**	**0.7**
Purchases of own shares to settle awards		**–**	**–**	**–**	**(0.1)**	**(0.1)**	**–**	**(0.1)**
Ordinary share dividends	9	**–**	**–**	**–**	**(6.7)**	**(6.7)**	**–**	**(6.7)**
At 30 June 2023		**15.6**	**16.8**	**37.2**	**106.6**	**176.2**	**0.4**	**176.6**

The notes on pages 197 to 270 form an integral part of these consolidated financial statements.

CONSOLIDATED CASH FLOW STATEMENT
FOR THE YEAR ENDED 30 JUNE

	Note	2023 £m	2022 £m
Cash flows from operating activities			
(Loss)/profit before taxation		**(0.1)**	13.2
Adjustments for:			
– Share-based payments	35	**1.3**	1.3
– Unrealised foreign exchange losses/(gains)	27	**1.2**	(1.0)
– Losses on disposal of property, plant and equipment	4	**0.7**	0.1
– Gains on disposal of discontinued operation	3	**(7.4)**	–
– Net finance costs	10	**6.1**	3.8
– Depreciation, amortisation and impairment	4	**37.4**	25.1
Defined benefit pension scheme payments in excess of past service costs	34	**(1.8)**	(3.0)
Operating cash flows before movements in working capital		**37.4**	39.5
Changes in:			
– Inventories	22	**(9.0)**	(3.6)
– Trade, contract and other receivables	23	**(27.9)**	4.6
– Trade, contract and other payables	24	**27.7**	8.5
– Provisions	20	**(2.0)**	0.9
Cash generated from operations	2	**26.2**	49.9
Net interest paid		**(7.5)**	(3.5)
Income tax paid		**(4.6)**	(2.8)
Net cash generated from operating activities		**14.1**	43.6
Cash flows from investing activities			
Acquisitions of subsidiaries, net of cash acquired	14	**(24.5)**	(9.9)
Purchases of property, plant and equipment	17	**(4.9)**	(6.1)
Proceeds from disposal of property, plant and equipment		**–**	0.1
Proceeds from sale of discontinued operation, net of cash disposed	3	**13.1**	0.1
Fees in relation to sale of discontinued operation	3	**(0.8)**	–
Purchases of intangible assets and capitalised development costs	16	**(5.7)**	(8.0)
Net cash used in investing activities		**(22.8)**	(23.8)
Cash flows from financing activities			
Purchases of own shares to settle awards		**(0.2)**	(0.2)
Payments to settle derivatives		**(4.2)**	–
Principal element of lease payments	18	**(5.1)**	(4.6)
Proceeds from borrowings	25	**128.0**	13.0
Repayment of borrowings	25	**(103.0)**	(15.0)
Dividends paid to shareholders	9	**(6.7)**	(5.0)
Net cash generated from/(used in) financing activities		**8.8**	(11.8)
Effect of exchange rate changes on cash and cash equivalents		**(2.3)**	1.9
Net (decrease)/increase in cash and cash equivalents	25	**(2.2)**	10.1
Net cash and cash equivalents at 1 July		**39.4**	29.3
Net cash and cash equivalents at 30 June		**37.2**	39.4
At 1 July			
Cash and cash equivalents		**49.4**	42.0
Cash included in disposal group held-for-sale		**1.1**	–
Bank overdrafts		**(11.1)**	(12.7)
Net cash and cash equivalents at 1 July		**39.4**	29.3
At 30 June			
Cash and cash equivalents	25	**49.8**	49.4
Cash included in disposal group held for sale	25	**–**	1.1
Bank overdrafts	25	**(12.6)**	(11.1)
Net cash and cash equivalents at 30 June		**37.2**	(39.4)

The notes on pages 197 to 270 form an integral part of these consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. Principal accounting policies

This section describes the critical accounting judgements and estimates that management has identified as having a potentially material impact on the Group's consolidated financial statements and sets out our significant accounting policies. Where an accounting policy is generally applicable to a specific note to the financial statements, the policy is cross referenced. We have also detailed below the new accounting pronouncements that we will adopt in future years and our current view of the impact they will have on our financial reporting.

Ricardo plc, a public company limited by shares, is listed on the London Stock Exchange and incorporated and domiciled in the United Kingdom. The address of its registered office is Shoreham Technical Centre, Shoreham-by-Sea, West Sussex, BN43 5FG, England, United Kingdom, and its registered number is 222915.

(a) Basis of preparation

These consolidated financial statements of the Ricardo plc Group (the Group) have been prepared in accordance with UK-adopted international accounting standards. The financial statements have been prepared on a going concern basis under the historical cost convention, as modified by financial assets and financial liabilities which are measured at fair value through profit or loss. Derivative instruments that are hedge accounted are measured at fair value through other comprehensive income for the effective element of the hedge, with the ineffective element being charged to the profit or loss.

The principal accounting policies applied in the preparation of these financial statements have been consistently applied to the years ended 30 June 2022 and 30 June 2023.

Going concern

The Board of Ricardo plc has undertaken an assessment of the ability of the Group and Company to continue in operation and meet its liabilities as they fall due over the period of its assessment. In doing so, the Board considered events throughout the period of their assessment, including the availability and maturity profile of the Group's financing facilities and covenant compliance. These financial statements have been prepared on the going concern basis which the Directors consider appropriate for the reasons set out below.

The Group funds its operations through cash generated by the Group and has access to a £150m Revolving Credit Facility (RCF) with a £50m accordion which is linked to two covenants: Adjusted Leverage (defined as net debt divided by underlying EBITDA, adjusted for the impact of acquisitions and disposals, excluding the impact of IFRS 16, for the last twelve months); and Interest Cover (defined as underlying EBITDA, adjusted for the impact of acquisitions and disposals, excluding the impact of IFRS 16, for the last twelve months divided by net finance costs excluding pension and IFRS 16 interest). Covenant limits are a maximum of 3.0x for Adjusted Leverage and a minimum of 4.0x for Interest Cover. These covenants are tested at 30 June and 31 December each year until the debt matures in August 2026.

1. Principal accounting policies (continued)

(a) Basis of preparation (continued)

Net debt at 30 June 2023 was £62.1m, comprising cash and cash equivalents of £49.8m and borrowings, including hire purchase liabilities, but excluding IFRS 16 lease liabilities, of £111.9m. Adjusted Leverage was 1.4x and Interest Cover was 8.3x. As at the date of approval of these financial statements, the amount of RCF undrawn and available to the Group was £58.0m with total borrowing, including overdrafts, of £106.0m and cash and cash equivalents of £39.9m

The Directors have prepared a cash flow forecast which covers the period from the date of approval of these financial statements for a period of at least 12 months from the date of approval of the financial statements. In this forecast, the Directors have considered the impact of known risks, including the pace of technological change in the Automotive sector, driven by climate change, which continues to rapidly shift away from the traditional internal combustion engine towards more renewable propulsion methods, on the Group's results, operations and financial position in a severe but plausible downside scenario. The scenario includes lower gross margins and higher costs across the Business Units to account for global inflationary pressures and the removal of new or 'blue sky' revenue streams, together with:

- In Automotive & Industrial, flat revenue from established mobility solutions each year, together with a lower growth rate in emerging solution revenues
- Reduced revenue growth rates in Energy and Environment; Reduced revenue growth rates in Rail and a decline in EBITDA in FY 2023/24
- Decline in key programme volumes in Performance Products in FY 2023/24 with no revenue from new revenue streams in later years
- Delays in the ramp-up of production volumes in Defense with no revenue from new revenue streams in later years
- An increase of 10 working capital days for each operating segment compared with FY 2022/23

The scenario incorporates the appropriate reversal of discretionary bonus payments and setting appropriate levels of dividends, based on the sensitised results of the operating segments. Under this scenario, the Group's adjusted EBITDA is forecast to increase by 14% in FY 2023/24, be broadly flat in FY 2024/25 and then increase by an average of 12% over the final 3 years. The results showed that the Group would be able to continue operating well within its debt covenants and liquidity headroom under the downside scenario.

Following this assessment, the Directors are confident that the Group and Company will have sufficient funds to continue to meet its liabilities as they fall due for at least 12 months from the date of approval of the financial statements and therefore have prepared the financial statements on a going concern basis. Further information on the going concern of the Group can be found on page 108 in the Viability Statement.

(b) Basis of consolidation

The financial statements of the Group consolidate the results of the Company and its subsidiary entities, and include its share of its joint ventures' results accounted for under the equity method. Subsidiaries are all entities (including structured entities) over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group and are deconsolidated from the date that control ceases. Intercompany transactions and balances are eliminated on consolidation.

1. Principal accounting policies (continued)

(b) Basis of consolidation (continued)

The Group applies the acquisition method of accounting for business combinations. The consideration transferred for an acquisition is the fair value of the assets acquired and the liabilities assumed. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Changes in fair value of contingent consideration are included within specific adjusting items. Contingent consideration dependent upon the employment or retention of specific individuals is expensed over the specified period and included within specific adjusting items. Identifiable assets acquired, together with liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. Acquisition-related expenditure is expensed as incurred and recognised within specific adjusting items.

(c) Discontinued operations and assets held for sale

Non-current assets, or disposal groups comprising assets and liabilities, are classified as held-for-sale if it is highly probable that they will be recovered primarily through sale rather than through continuing use.

Such assets, or disposal groups, are measured at the lower of their carrying amount and fair value less costs to sell. Any impairment loss on a disposal group is allocated first to goodwill, and then to the remaining assets and liabilities on a pro rata basis, except that no loss is allocated to inventories, financial assets, deferred tax assets, employee benefit assets, investment property or biological assets, which continue to be measured in accordance with the Group's other accounting policies. Impairment losses on initial classification as held-for-sale or held-for-distribution and subsequent gains and losses on remeasurement are recognised in profit or loss.

Once classified as held-for-sale, intangible assets and property, plant and equipment are no longer amortised or depreciated, and any equity-accounted investee is no longer equity accounted.

A discontinued operation is a component of the Group's business, the operations and cash flows of which can be clearly distinguished from the rest of the Group and which:

- represents a separate major line of business or geographic area of operations;
- is part of a single co-ordinated plan to dispose of a separate major line of business or geographic area of operations; or
- is a subsidiary acquired exclusively with a view to resale.

Classification as a discontinued operation occurs at the earlier of disposal or when the operation meets the criteria to be classified as held-for-sale.

When an operation is classified as a discontinued operation, the comparative income statement of profit or loss statement of comprehensive income is re-presented as if the operation had been discontinued from the start of the comparative year.

(d) Management judgements and key accounting estimates

The preparation of financial statements under IFRS requires the Group's management to make judgements and estimates that affect the application of accounting policies and the reported amounts of assets, liabilities, revenues and costs. These judgements and estimates are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

1. Principal accounting policies (continued)

(d) Management judgements and key accounting estimates (continued)

Critical judgements in applying the Group's accounting policies

The following are the critical judgements, apart from those involving estimations (which are dealt with separately below), that the Directors have made in the process of applying the Group's accounting policies and that have the most significant effect on the amounts recognised in the financial statements:

Specific adjusting items: Reorganisation costs – **Note 2** and **Note 7**

Reorganisation costs include expenditure incurred as part of fundamental restructuring activities; significant impairments of property, plant and equipment and leased assets; significant losses on disposal of assets; and other items deemed to be one-off in nature. These costs are presented within specific adjusting items in the income statement. The classification and presentation of these items require significant judgement to determine the nature and intention of the transaction. Details of the Group's alternative performance measures and specific adjusting items are included in **Note 2** and **Note 7**.

Discontinued Operation – **Note 3**

Significant judgement was required to present intercompany transactions in such a way as to allow users of the financial statements to evaluate the financial effects of the discontinued operation. Management has elected to present these transactions in a way that reflects the continuance of these operations, as shown in **Note 3**. If all intercompany transactions were eliminated, profit before tax from the discontinued operation would be reduced by £2.0m in the prior year and £nil in the current year.

Revenue recognition on fixed price contracts – **Note 6**

The identification of and separate accounting for distinct performance obligations within the context of a contract is considered to be a critical judgement. Fixed price contracts often have multiple performance obligations that are indistinct from one another within the context of the contract. This is due to a homogeneous pattern of transfer of control to the customer who is unable to benefit from the performance of less than all of the promises set out in the contract. This is particularly the case where any intellectual property created is stipulated as not being owned by the customer until the full transaction price has been paid. These judgments determine the timing of revenue recognition and recognition of contract assets. If performance obligations were identified on a different basis, revenue and amounts recoverable on contracts may be materially reduced or increased.

Goodwill: allocation to CGUs – **Note 15**

Significant judgement is applied in order to allocate goodwill to cash-generating units (CGUs), or a group of CGUs, as a change in the allocation of goodwill would impact the result of the impairment review. As set out in **Note 1(l)**, for the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the CGUs, or groups of CGUs, that is expected to benefit from that business combination, at the lowest level at which goodwill is monitored for internal management purposes. Goodwill is allocated at the operating segment level, and if goodwill were allocated at a lower level, the results of impairment testing may be different. The Rail segment comprises several CGUs which have been grouped for impairment testing purposes as they are expected to benefit from the synergies of the relevant combinations.

1. Principal accounting policies (continued)

(d) Management judgements and key accounting estimates (continued)

Goodwill: allocation of assets to cash-generating units (CGUs) – **Note 15**

Certain property, plant and equipment and right-of-use assets are shared by the A&I Established and A&I Emerging businesses. These include the Shoreham, Detroit and Prague offices. These assets have a carrying value of £12.5m. Previously, these assets were allocated between the two A&I CGUs based on forecast revenue. Due to the decline in expected cash flows for the A&I Established CGU, arising from a shift in the technological landscape to renewable propulsion methods, the shared assets can no longer be allocated on a reasonable and consistent basis to the individual CGUs. The shared assets are therefore allocated, and tested for impairment, at the level of the A&I Established and A&I Emerging group of CGUs. This judgement impacts the result of the impairment review, and if a proportion of these assets were allocated directly to the A&I Established segment, it is likely that additional impairment would be recognised.

Recognition of capitalised development costs – **Note 16**

Judgement is required as to when development costs meet the criteria to be recognised as intangible assets. The majority of capitalised development costs relate to the development of software, products and other technology, tools and processes. These costs are recognised as an asset once it has been determined that the attributable expenditure can be measured reliably, that there is an intention and the necessary resources to complete development and that it is considered probable that the resulting asset will generate future economic benefits for the Group. Determining whether it is probable that the resulting asset will generate sufficient economic benefits in the future requires management judgement.

Key sources of estimation uncertainty

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods. The areas involving significant risk of a material adjustment to the carrying amounts of assets and liabilities within the next financial year are as follows:

Revenue recognition on fixed price contracts – **Note 6**

The majority of the Group's revenue is earned from contracts for the provision of consultancy services that are typically awarded on a fixed price basis. A small number of similar contracts are also entered into by Performance Products to design and set up production lines and supply chains. Services provided under a fixed price contract generally have a single distinct performance obligation, or a single distinct series of performance obligations, which is satisfied over time. For each distinct performance obligation recognised over time, revenue is recognised using an input method, based on total costs incurred to date as a percentage of total estimated costs to satisfy each performance obligation.

The percentage of completion basis of revenue recognition is determined as actual costs incurred as a proportion of total forecast contract costs to complete. This method places importance on the accuracy of uncertain estimates, including total costs to complete, the outcome of contract and technical risks, as well as the extent to which variation requests are recognised for proposed changes to the agreed schedule, price or scope of a contract under negotiation with a customer at the reporting date. Changes in these estimates may impact revenue recognised at the reporting date with the revenue recognition in the reporting period appropriately adjusted as required.

The actual outcome of wholly or partially unsatisfied performance obligations may differ to the estimate made at a reporting date and it is reasonably possible that outcomes on these contracts within the next reporting period could differ, adversely or favourably, in aggregate to those estimated. It is not possible to fully quantify the expected impact of this, but the estimated costs to complete reflect management's best estimate at that point in time and no individual estimate is expected to have a materially different outcome.

1. Principal accounting policies (continued)

(d) Management judgements and key accounting estimates (continued)

As set out further on pages **105** and **135**, management undertakes a process to assess the risks on inception of all fixed price contracts, then monitors and reviews the risks and performance of contracts as they progress to completion. The highest value, highest risk, most technically complex and financially challenging contracts to deliver, as measured against a number of quantitative and qualitative factors, are categorised as 'Red Category 4' contracts, which are subject to more frequent and senior levels of management review.

As at 30 June 2023, the number of live consulting contracts within the portfolio was in excess of 2,300 (2022: 2,500), with a total value in excess of £870m (2022: £850m). Of this portfolio of contracts, 8 contracts (2022: 9) were categorised as Red Category 4. At 30 June 2023, £1.5m (2022: £3.9m) of revenue had been recognised in respect of work performed on these where outcomes were subject to negotiation with customers. Management has made a specific judgement over the ability to recover each of the amounts under negotiation and has recognised provisions of £0.8m (2022: £2.9m) against this revenue, resulting in a net exposure of £0.7m (2022: £1.0m). The possible financial outcomes from these negotiations range from an upside of £0.8m, if management recovers the full £0.8m of revenue and potential negotiation upside, to a downside of £0.7m, if management is unsuccessful in recovering any of the £1.5m.

Carrying value of Goodwill – **Note 15**

In performing the impairment assessment of the carrying amount of goodwill, the recoverable amounts of the CGUs, or groups of CGUs, to which goodwill has been allocated are determined using value-in-use (VIU) calculations (see **Note 1(l)**).

The recoverable amount of each CGU, or group of CGUs, is calculated by assessing its value in use, which is determined by performing discounted future pre-tax cash flow calculations for a five-year period and projected into perpetuity. Significant judgements are used to estimate the operating cash flows, growth rates and pre-tax discount rates applied in computing the recoverable amounts of different CGUs, or groups of CGUs. The sensitivity of estimates used to calculate the value in use of each CGU, or group of CGUs, are discussed in **Note 15**.

Goodwill: Inclusion of Research and Development Expenditure Credits – **Note 15**

Certain UK-based CGUs benefit from Research and Development Expenditure Credits (RDEC), which are an enhanced tax relief on qualifying research and development expenditure. These cash flows are material to the A&I group of CGUs and have been included in the value-in-use calculations, taking into account known changes to legislation, on the basis that there is no indication that the UK government will withdraw this benefit. **Note 15** sets out the impact of the inclusion of RDEC in the value-in-use calculation.

Defined benefit obligation – **Note 34**

The Group operates a defined benefit pension scheme that provides benefits to a number of current and former employees. This scheme is closed to new entrants and the accrual of future benefits for active members ceased at the end of February 2010. The value of the deficit is particularly sensitive to the market value of the discount rates and actuarial assumptions related to mortality. The sensitivity of the defined benefit obligation to changes in the principal assumptions is set out in **Note 34**.

1. Principal accounting policies (continued)

(e) Research and development expenditure – Note 4

Research and development expenditure is recognised as an administrative expense in the income statement in the year in which it is incurred. Where the activity is performed for customers the cost is recognised as a cost of sale. Directly attributable development expenditure that meets the criteria for recognition as an intangible asset is described in **Note 16**.

(f) Government grants – Note 4

The Group receives income-related grants from various national and supranational government agencies, principally for credits in respect of qualifying research and development expenditure, together with funding of research and development and capital projects. A grant is recognised in the income statement when there is reasonable assurance that the Group will comply with its conditions and that the grant will be received. Grants are presented in the income statement as a deduction from the related expenses.

Grants contributing to the cost of an asset are deducted from the cost of the asset and reflected in depreciation throughout its useful life.

Grants are not normally received until after qualification conditions have been met and the related expenditure has been incurred. Where this is not the case, they are recorded within trade, contract and other payables either as payments received in advance on contracts or as deferred revenue.

(g) Revenue – Note 6

Principle approach

The Group principally earns revenue through the provision of consultancy services and bespoke products and recognises revenue based on the satisfaction of performance obligations in contracts with its customers. The core principle is that revenue is recognised in a manner that depicts the transfer of promised goods and services to customers in an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods and services.

A contract with a customer is considered to exist when the Group is in possession of documentation to provide an agreed scope of goods or services on mutually understood terms and conditions that are acceptable to the Group which, subject to the successful execution of the contract, is expected to be invoiced against and paid for by the customer. Each contract with a customer is assessed to identify the promises to transfer distinct goods or services, or a series of distinct goods or services, that are substantially the same and have the same pattern of transfer to the customer. Goods and services are distinct and accounted for as separate performance obligations if they are separately identifiable in the contract and if the customer can benefit from them, either on their own or together with other readily available resources.

The total transaction price for a contract is estimated as the amount of consideration to which the Group expects to be entitled in exchange for transferring the promised goods or services to the customer, excluding sales taxes. Where multiple distinct performance obligations are identified within a contract with a customer, the total transaction price is allocated to each of the distinct performance obligations in proportion to their relative stand-alone selling prices. Given the bespoke nature of many of the Group's products and services, which are designed or manufactured under contract to the customer's individual scope and specifications, there are typically no observable stand-alone selling prices. Instead, stand-alone selling prices are typically estimated based on expected costs plus contract margin.

1. Principal accounting policies (continued)

(g) Revenue – Note 6 (continued)

Costs of fulfilling performance obligations on existing contracts with customers are expensed as incurred. Costs incurred in advance of obtaining a new contract or an anticipated contract that directly relate to the fulfilment of specific performance obligations are initially recognised as an asset and subsequently expensed once the new contract is obtained or obtaining the contract is no longer anticipated. Incremental costs incurred to obtain new contracts with customers are recognised as an asset and amortised consistently with the recognition of revenue over the contract term, providing: the contract term is greater than one year; the costs are only incurred as a direct result of the new contract being obtained; and the costs do not directly relate to the fulfilment of specific performance obligations.

Costs incurred to obtain new contracts with customers are expensed when those costs are incurred irrespective of whether a contract is obtained from a customer.

Revenue is recognised as distinct performance obligations are satisfied, and as control of the goods or services is transferred to the customer. For each distinct performance obligation within a contract, the Group determines whether they are satisfied over time or at a point in time. Performance obligations are considered to be satisfied over time if the goods or services provided have no alternative use to the Group and there is an enforceable right to payment for performance completed to date, or the customer simultaneously receives and consumes the goods or services as the Group provides them.

Services provided under fixed price contracts

The majority of the Group's revenue is earned from contracts for the provision of consultancy services that are typically awarded on a fixed price basis. A small number of similar contracts are also awarded to Performance Products to design and set up production lines and supply chains. Services provided under a fixed price contract generally have a single distinct performance obligation, or a single distinct series of performance obligations, which is satisfied over time. For each distinct performance obligation recognised over time, revenue is recognised using an input method, based on total costs incurred to date as a percentage of total estimated costs to satisfy each performance obligation.

Revenue and attributable margin are calculated by reference to reliable estimates of transaction price and total expected costs, after making suitable allowances for technical and other risks. Revenue and associated margin are therefore recognised progressively as costs are incurred, and estimated costs to complete are updated regularly as anticipated risks are mitigated or unanticipated risks materialise. The Group has determined that this method faithfully depicts the Group's performance in transferring control of the services to the customer.

The transaction price generally does not include consideration resulting from contract modifications of distinct performance obligations, such as variation orders, until they have been approved by the customer. Variable consideration, such as for the achievement of performance targets or variation requests under negotiation with the customer at the reporting date, can be included in the transaction price together with the estimated costs to perform the associated obligations. These estimates of the expected value or most likely amount are recognised to the extent that it is highly probable that there will not be a significant reversal in the amount of cumulative revenue recognised in a future reporting period.

Changes in transaction price from contract modifications that do not create separate distinct performance obligations are added to the transaction price of pre-existing performance obligations to which the modification relates. Contract modifications for goods or services that do create separate distinct performance obligations are accounted for separately from pre-existing performance obligations, together with the expected costs to satisfy those separate distinct performance obligations.

1. Principal accounting policies (continued)

(g) Revenue – Note 6 (continued)

Contract assets arising from the recognition of revenue as and when performance obligations are satisfied are initially recognised as accrued revenue or amounts recoverable on contracts (AROC) within trade, contract and other receivables, and transferred to trade receivables when invoiced. Contract liabilities arising from amounts received from customers for services not yet performed are initially recognised as deferred revenue or payments received in advance on contracts (POA) within trade, contract and other payables, and transferred to revenue as and when performance obligations are satisfied.

A loss on a contract is recognised immediately when it becomes probable that the total estimated directly attributable costs to satisfy the contract will exceed the consideration receivable. Monthly reviews of contracts by local management, in conjunction with reviews by senior management of contracts deemed to be of higher risk, ensure that the Group identifies and immediately recognises expected losses on fixed price performance obligations within a contract.

Services provided under time and materials contracts

Certain contracts for the provision of consultancy services may be awarded on a time and materials basis. Services provided under a time and materials basis typically have a single distinct performance obligation to provide a variable amount of labour to the client at an agreed set of time-based labour rates, which represents the sales value. Revenue is therefore recognised over time based upon the agreed sales value of the time worked and costs incurred to date, as the customer simultaneously receives and consumes these services as the Group provides them.

Services provided under subscription and software support contracts

Other contracts primarily relate to annual subscriptions by customers to emergency response and support services for chemical incidents and crisis management. Subscription services are considered to be a single distinct performance obligation for which revenue is recognised at the agreed transaction price on a straight-line basis over the period of subscription.

Software maintenance and support services revenue is recognised separately from the supply of software products on a straight-line basis over the period of maintenance and support. Revenue derived from the supply of ad hoc software-related services, such as training and application engineering, is recognised at the agreed transaction price on a straight-line basis over a typically short period during which the obligation is performed.

Supply of manufactured or assembled products

The majority of the Group's revenue in Performance Products and Defense is earned from the supply of manufactured or assembled high-performance products, some of which are supplied with assurance-type warranties. Revenue for the supply of these products is measured at the agreed transaction price per unit that is expected to flow to the Group, and is recognised at the point in time that the Group has transferred control of the products to the customer, which is typically on delivery or collection. The point in time at which revenue is recognised can vary based on the specific intercompany terms present in a contract with a customer.

Revenue recognised from bill-and-hold arrangements occurs when all performance obligations have been satisfied and there is a substantive reason for the arrangement, which is typically that the customer has requested the products to be held by the Group until such times as delivery or collection is required by the customer. Revenue is recognised and billed under usual payment terms when the customer formally agrees to accept control of the bespoke products which cannot be sold to another customer and provided that the products have been separately identified and made available for delivery or collection.

1. Principal accounting policies (continued)

(g) Revenue – Note 6 (continued)

Supply of software products

The Group's software products are standard version-controlled computer aided design, engineering and analysis tools, available for general sale and are primarily sold through Performance Products. The majority of revenue is derived from new and renewed licences of these software products, for which the client has the right to access the product during the licence period, including rolling releases of the latest functionality. A new or renewed licence is considered to be a single distinct performance obligation for which revenue is recognised at the agreed transaction price on a straight-line basis over the licence period.

Perpetual licence sales provide the client with an indefinite right to use the product, excluding rolling releases of the latest functionality. Rolling releases are provided through the separate provision of maintenance and support services. The transaction price of these two distinct performance obligations are separately identifiable within a contract. Revenue is recognised for perpetual licence sales when the performance obligation is satisfied, being the point of delivery of the licence key to the customer.

(h) Specific adjusting items – Note 7

Specific adjusting items are disclosed separately in the financial statements where it is necessary to do so to provide further understanding of the financial performance of the Group. These items comprise the amortisation of acquired intangible assets, acquisition-related expenditure, reorganisation costs and other items that are included due to their significance, non-recurring nature or amount. Acquisition-related expenditure includes the costs of acquisitions, deferred and contingent consideration fair value adjustments (including the unwinding of discount factors), transaction-related fees and expenses, and post-deal integration costs. Reorganisation costs include costs arising from major restructuring activities, profits or losses on the disposal of businesses, and significant impairments of property, plant and equipment and right-of-use assets.

(i) Dividends – Note 9

Dividends are recognised as a liability in the year in which they are fully authorised. Interim dividends are recognised when paid.

(j) Net finance costs – Note 10

Finance income and finance costs are recognised in the income statement in the period in which they are incurred using the effective interest method.

(k) Income tax expense – Note 12

The tax expense for the year comprises current and deferred tax. Tax is recognised in the income statement, except to the extent that it relates to items recognised in other comprehensive income or directly in equity. The current tax charge is the expected tax payable on taxable income for the year, calculated using the average rate applicable for the year on the basis of the tax laws enacted or substantively enacted at the reporting date in the countries where the Group operates. The current tax charge also includes any adjustment to tax payable in respect of previous years.

Management periodically evaluates uncertain positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation and establishes provisions where appropriate on the basis of amounts expected to be paid to the relevant tax authorities. The Group submits annual claims in respect of the UK Government's Research and Development Expenditure Credit (RDEC) scheme. RDEC is taxable income and is a form of government grant that effectively gives corporation tax relief on qualifying research and development (R&D) expenditure. In accordance with IAS 20 Accounting for Government Grants and Disclosure of Government Assistance, credits receivable under the RDEC scheme are offset against the associated qualifying R&D expenditure incurred, both of which are included within operating profit.

The Group have provided for uncertain positions taken in the tax returns with respect to situations in which applicable tax regulation is subject to interpretation and establishes provisions where appropriate on the basis of amounts expected to be paid to the relevant tax authorities.

1. Principal accounting policies (continued)

(k) Income tax expense – Note 12 (continued)

Uncertain tax positions relate primarily to risks around transfer pricing and on-going tax audits. The Group's provision is based on experience of dealing with Tax Authorities in certain jurisdictions in which it operates and an estimate of the most likely outcomes in each territory.

(l) Goodwill – Note 15

Goodwill arises on the acquisition of subsidiaries and represents the excess of the consideration transferred and the fair value of contingent consideration, over the fair value of the identifiable assets acquired and liabilities assumed. Goodwill arising on acquisitions denominated in foreign currencies is retranslated using exchange rates prevailing at each reporting date.

Goodwill is recognised as an asset and is carried at cost less accumulated impairment losses. It is not subject to amortisation, but is reviewed for impairment annually, or more frequently if events or changes in circumstances indicate a potential impairment. For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the CGUs, or group of CGUs, that is expected to benefit from that business combination. Each CGU, or group of CGUs, to which goodwill is allocated represents the lowest level at which goodwill is monitored for internal management purposes and is not larger than an operating segment before aggregation.

When the Group changes the composition of its CGUs, it reallocates goodwill using a relative value approach at the date of the reorganisation, unless the entity can demonstrate that some other method provides a better allocation of goodwill to the reorganised units.

The Group's impairment review compares the carrying value of the goodwill to the recoverable amount of the CGU, or group of CGUs, to which the goodwill has been allocated. The recoverable amount is the higher of the value in use or the fair value less costs of disposal. Estimating the value in use requires the Directors to perform an assessment of the discounted future cash flows that the CGU, or group of CGUs, is able to generate. See Note 1(c) for discussion of the critical estimates involved in this assessment.

An impairment is deemed to have occurred where the recoverable amount of a CGU, or group of CGUs, is less than the carrying value of the allocated goodwill. Any impairment is recognised immediately in the income statement within specific adjusting items and is not subsequently reversed. On disposal of an operation, the attributable amount of goodwill is included in the determination of the gain or loss on disposal.

(m) Other intangible assets – see Note 16

Acquired intangible assets

Acquired intangible assets that are either separable or arising from contractual rights are recognised at fair value at the date of acquisition, and subsequently at amortised cost. Such intangible assets include client contracts and relationships, together with acquired software and technology. The fair value of acquired intangible assets is determined by use of appropriate valuation techniques.

Software

Purchased software is capitalised on the basis of the purchase price of the software product plus any external and internal costs subsequently incurred that are directly attributable to bring the software product to the condition necessary for it to be capable of operating in the manner intended.

Development costs

Directly attributable costs which are incurred in the development of certain assets are capitalised and amortised over their finite useful lives once the Group has determined that it has the intention and the necessary resources to complete the relevant project, that it is probable the resulting asset will generate economic benefits for the Group and the attributable expenditure can be reliably measured.

1. Principal accounting policies (continued)

(m) Other intangible assets – see Note 16 (continued)

Amortisation

Amortisation is typically calculated using the straight-line method to allocate the cost of intangible assets over their estimated useful lives, as follows:

- Acquisition-related intangible assets:
  - Customer contracts and relationships — Between 2 and 9 years
  - Software and technology — Between 5 and 10 years
- Software — Between 2 and 10 years
- Development costs — Between 3 and 5 years

For certain assets classified as development costs in the Group's Defense operating segment, amortisation is charged on a units of production basis, as this is considered to more accurately reflect the expected pattern of consumption of the future economic benefits embodied in the assets. Assets under construction are carried at cost less any impairment in value, and are included in the relevant asset category. Amortisation of these assets commences when they are available for their intended use or sale.

(n) Property, plant and equipment – see Note 17

Property, plant and equipment is stated at historical cost less depreciation. The gross cost of an item of property, plant and equipment is the purchase price and any costs directly attributable to bring the asset to the location and condition necessary for it to be capable of operating in the manner intended. Grants contributing to the cost of an asset are deducted from the cost of the asset and reflected in depreciation throughout its useful life.

Depreciation is typically calculated using the straight-line method to allocate the cost of items of property, plant and equipment less any residual value, over their estimated useful lives, as follows:

- Freehold land — Not depreciated
- Freehold buildings including improvements — Between 25 and 50 years
- Leasehold property improvements — Over the term of the lease
- Plant and machinery — Between 4 and 25 years
- Fixtures, fittings and equipment — Between 2 and 10 years

The residual values and useful lives of assets are reviewed, and adjusted if appropriate, at the end of each reporting period. For certain assets classified as plant and machinery in the Group's Defense operating segment, depreciation is charged on a units of production basis, as this is considered to more accurately reflect the expected pattern of consumption of the future economic benefits embodied in the assets.

Assets under construction are carried at cost less any impairment in value and are included in the relevant asset category. Depreciation of these assets commences when they are available for their intended use or sale.

Government Grants

Grants contributing to the cost of an asset are deducted from the cost of the asset and reflected in its depreciation throughout its useful life.

1. Principal accounting policies (continued)

(o) Leases – see Note 18

The Group's policy for leases is as follows:

Definition of a lease

Under IFRS 16, a contract is, or contains, a lease if the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration.

Lessee accounting

At the lease commencement date, a right-of-use asset is recognised for the leased item with a corresponding lease liability for any payments due. The right-of-use asset is initially measured at cost, being the present value of the lease payments paid or payable (net of any incentives received from the lessor), plus any initial direct costs and/or restoration costs.

Right-of-use assets are depreciated on a straight-line basis from the commencement date of the lease to the earlier of the end of the asset's useful life or the end of the lease term. The lease term is the non-cancellable period of the lease plus any periods for which the Group is 'reasonably certain' to exercise any extension options. If right-of-use assets are considered to be impaired, the carrying value is reduced accordingly.

For assets where the lessor transfers ownership of the underlying asset to the Group by the end of the lease term, or where the lease contains a purchase option at a nominal/ notional value, then these assets will be initially classified as property, plant and equipment, and subsequently follow the depreciation rules set out in Note 1(n).

The lease liability is initially measured at the value of future lease payments, discounted using the interest rate implicit in the lease. Where this rate is not determinable, the Group's incremental borrowing rate is used, which is then adjusted to reflect an estimate of the interest rate the Group would have to pay to borrow the amount necessary to obtain an asset of similar value, in a similar economic environment, and with similar terms and conditions.

After initial recognition, the lease liability is recorded at amortised cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate (e.g. an inflation related increase) or if the Group's assessment of the lease term changes. Any change in the lease liability as a result of these changes also results in a corresponding change in the recorded right-of-use asset.

Payments in respect of short-term and/or low-value leases are charged to the income statement on a straight-line basis over the lease term. The Group has classified the principal portion of lease payments within financing activities and the interest portion within operating activities within the consolidated cash flow statement,

Lessor accounting

The Group determines at inception of the lease whether the lease is a finance or an operating lease. When a lease transfers substantially all the risks and rewards of ownership of the underlying asset to the lessee then the lease is classified as a finance lease; otherwise, the lease is classified as an operating lease. Where the Group is an intermediate lessor, the interest in the head lease and the sub-lease is accounted for separately and the lease classification of a sub-lease (finance or operating) is determined by reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset.

Other sub-leased assets are all classified as operating leases, where payments received (net of any incentives granted by the Group) are recognised in the income statement on a straight-line basis over the lease term.

1. Principal accounting policies (continued)

(p) Provisions for liabilities and charges – see Note 20

Provisions are required for restructuring costs and employment-related benefits when the Group has a present legal or constructive obligation at the reporting date as a result of a past event and it is probable that settlement will be required of an amount that can be reliably estimated. Provisions for warranty costs are recognised at the date of sale of the relevant products, at the Directors' best estimate of the expenditure required to settle the Group's probable liability.

Other provisions reflect the Directors' best estimate of future obligations relating to legal claims and litigation, together with dilapidation costs for the maintenance of leasehold properties arising from past events such as lease renewals or terminations. These estimates are reviewed at the reporting date and updated as necessary.

(q) Deferred tax – Note 21

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax liabilities are not recognised if they arise from the initial recognition of goodwill. Deferred tax is not accounted for if it arises from the initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit and differences relating to investments in subsidiaries to the extent that it is not probable that they will reverse in the foreseeable future. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantively enacted at the reporting date.

Deferred tax assets are recognised only to the extent that it is probable that taxable profits will be available in the foreseeable future against which the asset can be utilised. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit will be realised within the foreseeable future.

(r) Inventories – Note 22

Inventories are stated at the lower of cost, including attributable overheads allocated on the basis of normal operating capacity, and net realisable value. Cost is calculated using the 'weighted average' method across the Group apart from Performance Products and Defense which are on a 'first-in, first-out' method.

(s) Trade, contract and other receivables – Note 23

Trade receivables are stated net of impairment and for the purposes of impairment testing include non-financial contract assets (amounts recoverable on contracts, AROC) and accrued revenue. These assets are assessed for impairment using the simplified approach to the expected credit loss (ECL) model, which applies a default rate' at the point of origination that increases as the unpaid asset ages. The simplified approach of IFRS 9 applies a default rate to trade receivables and contract assets. Although past experience of significant credit losses on these assets has been negligible, the impairment assessment considers both past experience and future expectations of credit losses. As a result of this assessment, the Group considers the risk of expected credit losses on contract assets to be immaterial.

In order to assess the ECL over the lifetime of the asset, a historical provision matrix is used to inform a group-wide 'default rate' which is adjusted for current and expected future economic conditions. To calculate the Group default rates a weighted average default rate for each business unit was taken. It is considered appropriate for the Group to use one set of default rates across the Group, as the customer base across the Group is sufficiently homogenous. Each business unit's customers are primarily comprised of large corporations and historical provision matrixes are sufficiently homogenous.

Trade receivables and contract assets are provided in full and subsequently written off when there is no reasonable expectation of recovery. Indicators that there may be no reasonable expectation of recovery could include, amongst others, evidence that the client has entered administration or liquidation proceedings, or the persistent failure of a client to enter into or adhere to a repayment plan. The 'general approach' is applied to the impairment of other financial assets, the amount of which is based on whether there has been a significant deterioration in the credit risk of a financial asset.

1. Principal accounting policies (continued)

(t) Trade, contract and other payables – Note 24

Trade payables are not interest-bearing and are stated at their nominal value.

(u) Net debt and borrowings – Note 25

Cash and cash equivalents in the Consolidated cash flow statement comprise cash balances and bank overdrafts repayable on demand, including cash and cash equivalents included in disposal groups held for sale. Bank overdrafts are shown within borrowings in current liabilities and bank loans and finance leases are shown within borrowings in either current liabilities or non-current liabilities depending on the maturity date.

Financial liabilities are classified as either amortised cost or fair value through profit and loss. Borrowings are recognised initially at fair value net of direct issue costs and subsequently at amortised cost. Differences between initial value and redemption value are recorded in the income statement over the period of the loan. The fair value of borrowings due for repayment after more than one year approximates to the carrying value as they are primarily floating rate loans where payments are reset to market rates at regular short-term intervals.

(v) Fair value of financial assets and liabilities – Note 28

The Group uses derivative financial instruments, including foreign exchange contracts, to mitigate currency exposures on trading transactions. Fair values of derivative financial instruments are based on the market values of similar instruments at the reporting date.

The Group uses the fair value of foreign currency swap contracts on intercompany loans as hedging instruments. The initial fair value is determined with reference to the relevant spot market exchange rate. The differential between the contracted strike rate and the discounted spot market exchange rate is defined as the movement in fair value. The movement of the hedge's fair value gains and losses on the remeasurement of cash flow derivatives are recognised in retained earnings through the income statement.

The Group hedges the entire carrying value of all intercompany loans denominated in foreign currencies, on which credit risk is considered to be immaterial. Changes in fair value of foreign currency swap, forward and option contracts that relate to hedged items are recognised in retained earnings through the income statement, together with the change in the fair value of the related hedge at the reporting date.

Where intercompany loans denominated in a foreign currency are neither planned nor likely to be settled in the foreseeable future, they are considered to form part of the net investment in the borrowing entity, and foreign exchange differences are recognised through other comprehensive income.

Short-term borrowings and deposits

The fair value of short-term deposits, loans and overdrafts approximates to the carrying amount because of the short maturity of these instruments.

Long-term borrowings

The fair value of borrowings approximates to the carrying amount as they are primarily floating rate loans where payments are reset to market rates at regular intervals.

Derivatives

Derivative financial instruments are initially recognised and measured at fair value on the date a derivative contract is entered into and subsequently measured at fair value on the reporting date. Fair value is estimated by discounting expected future contractual cash flows using prevailing interest rate curves. Amounts denominated in foreign currencies are valued at the exchange rate prevailing at the reporting date (Level 2 of the fair value hierarchy within IFRS 13 Fair Value Measurement). Measurement of all derivative financial instruments was taken to the income statement.

1. Principal accounting policies (continued)

(w) Retirement benefits – Note 34

The Group operates one defined benefit and several defined contribution pension schemes, the assets of which are held in separately administered funds. The defined benefit pension scheme is closed to new entrants and the accrual of future benefit for active members ceased at the end of February 2010. Payments to defined contribution pension schemes are charged as an expense as they fall due. Differences between contributions payable in the year and contributions actually paid are included in either accruals or prepayments. Payments to state-managed pension schemes are dealt with as payments to defined contribution pension schemes as the Group's obligations under the schemes are similar in nature.

For the defined benefit pension scheme, the cost of providing benefit is determined using the projected unit credit method, with actuarial valuations being carried out at each reporting date. Remeasurements are recognised in other comprehensive income except where they result from settlements or curtailments, in which case they are reported in the income statement.

Where necessary, past service costs are recognised immediately in the income statement at the earlier of when the plan amendment or curtailment occurs and when the related restructuring costs or termination benefit are recognised. The defined benefit obligation recognised represents the present value of the pension scheme liabilities net of the fair value of scheme assets. Any asset resulting from the calculation is limited to the future economic benefits available from either refund or reduction in future contributions to the plan.

The interest cost on the net defined benefit obligation for the year is determined by applying the discount rate used to measure the defined benefit obligation at the beginning of the year to the net defined benefit obligation at the end of the year and is included in finance costs.

(x) Share-based payments – Note 35

Equity-settled share-based payments are measured at fair value at the date of grant. The fair value determined at the grant date is expensed on a straight-line basis over the vesting period. The amount expensed is adjusted over the vesting period for changes in the estimate of the number of shares that will eventually vest, save for changes resulting from any market-related performance conditions.

Cash-settled share-based payments are measured at fair value at the date of grant and expensed over the vesting period until the vesting date with the recognition of a corresponding liability. The liability is remeasured to fair value at each reporting date up to and including the settlement date, with changes in fair value recognised in the income statement for the year. The amount expensed is adjusted over the vesting period for changes in the estimate of the number of shares that will eventually vest. Fair value is measured by using the Monte Carlo and Black Scholes models. The expected life used in the models are adjusted for the effects of exercise restrictions and behavioural considerations.

(y) Foreign currency

Transactions

The functional currency of the Company and the presentation currency of the Group is Pounds Sterling. The functional currency of each subsidiary is the currency of the primary economic environment in which the entity operates. Transactions in currencies other than the functional currency are recorded at prevailing exchange rates. At each reporting date, monetary assets and liabilities denominated in foreign currencies are retranslated at the rates prevailing on the reporting date. Non-monetary assets and liabilities denominated in foreign currencies are translated at the rates prevailing at the date when the transaction occurred. Gains and losses arising on retranslation and settlements are included in the income statement for the year.

1. Principal accounting policies (continued)
(y) Foreign currency (continued)
Consolidation

On consolidation the assets and liabilities of foreign operations, including goodwill and fair value adjustments, are translated into the presentation currency at exchange rates prevailing on the reporting date. Revenues and costs are translated at the average exchange rates of the year unless exchange rates fluctuate significantly. All resulting exchange differences are recognised in other comprehensive income and the translation reserve within equity. On disposal of an operation the related cumulative translation differences are recognised in the income statement as a component of the gain or loss arising on disposal.

(z) Recent accounting developments
Adopted by the Group

The following other standards, interpretations and amendments to existing standards became effective for periods commencing on or after 1 January 2022 and were adopted by the Group from 1 July 2022 and have not had a material impact on the Group:

	Effective date (period commencing)	Endorsed by UK
Issued IFRS		
Amendments and Interpretations to IFRS		
• IAS 37 Onerous Contracts: Cost of Fulfilling a Contract (Amendments to IAS 37)	1 Jan 2023	No
• IAS 1 Presentation of Financial Statements Disclosure of Accounting Policies	1 Jan 2023	Yes
• IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors Definition of Accounting Estimates	1 Jan 2023	Yes
• IAS 12 Income Taxes Deferred Tax related to Assets and Liabilities arising from a Single Transaction	1 Jan 2023	Yes
• IAS 16 Property, Plant and Equipment: Proceeds Before Intended Use (Amendments to IAS 16)	1 Jan 2023	No
• IFRS 3 Business Combinations: Reference to the Conceptual Framework	1 Jan 2023	No
• IFRS 17 Insurance Contracts including Initial Application of IFRS 17 and IFRS 9 comparative information and Amendments to IFRS 17	1 Jan 2023	Yes

1. Principal accounting policies (continued)
(z) Recent accounting developments (continued)
Issued standards, amendments and interpretations not yet effective
The following other standards, interpretations and amendments to existing standards have been issued but were not yet mandatory for the Group for the accounting period commencing on 1 July 2022 and are not expected to have a material impact on the Group:

	Effective date (period commencing)	Endorsed by UK
Issued IFRS		
• IAS 1 Presentation of Financial Statements and IFRS Practice Statement 2, Classification of Liabilities as Current and Non-Current (Amendments to IAS 1)	1 Jan 2024	No
• IAS 1 Presentation of Financial Statements and IFRS Practice Statement 2, Making Materiality Judgements	1 Jan 2024	No
• IAS 7 Statement of Cash Flows Supplier Finance Arrangements	1 Jan 2024	No
• IFRS 7 Financial Instruments: Disclosures Supplier Finance Arrangements	1 Jan 2024	No
• IFRS 16 Lease Liability in a Sale and Leaseback	1 Jan 2024	No

2. Alternative performance measures
Throughout this document the Group presents various alternative performance measures (APMs) in addition to those reported under IFRS. The measures presented are those adopted by the Chief Operating Decision Maker (CODM, deemed to be the Chief Executive Officer), together with the main Board, and analysts who follow us in assessing the performance of the business. Ricardo provides guidance to the investor community based on underlying results. Explanations of how they are calculated and how they are reconciled to an IFRS statutory measure are set out below.

The underlying results and other APMs may be considered in addition to, but not as a substitute for or superior to, information presented in accordance with IFRS.

(a) Group profit and earnings measures
Underlying profit before tax (PBT) and underlying operating profit: These measures are used by the Board to monitor and measure the trading performance of the Group. Underlying results include the benefits of the results of acquisitions and major restructuring programmes but exclude significant costs (such as the amortisation of acquired intangibles, acquisition-related expenditure, reorganisation costs and other specific adjusting items). Ricardo believes that the underlying results, when considered together with the reported results, provide investors, analysts and other stakeholders with helpful complementary information to better understand the financial performance and position of the Group.

The Group's strategy includes geographic and sector diversification, including targeted acquisitions and disposals. By excluding acquisition-related expenditure from underlying PBT and underlying operating profit, the Board has a clearer view of the performance of the Group and is able to make better operational decisions to support its strategy.

Acquisition-related expenditure includes the costs of acquisitions, deferred and contingent consideration fair value adjustments (including the unwinding of discount factors), transaction-related fees and expenses, and post-deal integration costs.

Reorganisation costs arising from major restructuring activities, profits or losses on the disposal of businesses, and significant impairments of property, plant and equipment, are excluded from underlying PBT and underlying operating profit as they are not reflective of the Group's trading performance in the year, as are any other specific adjusting items deemed to be one-off in nature.

2. Alternative performance measures (continued)

(a) Group profit and earnings measures (continued)

The related tax effects on the above and other tax items which do not form part of the underlying tax rate are also taken into account. Items are treated consistently year-on-year, and these adjustments are also consistent with the way that performance is measured under the Group's incentive plans and its banking covenants. A reconciliation is shown below. Further details of the nature of the specific adjusting items are given in Note 7.

Reconciliation of underlying profit to reported (loss)/profit

	2023			2022 – Restated*		
	Underlying £m	Specific adjusting items £m	Total £m	Underlying £m	Specific adjusting items £m	Total £m
Revenue	445.2	–	445.2	380.2	–	380.2
Cost of sales	(318.9)	–	(318.9)	(260.7)	–	(260.7)
Gross profit	126.3	–	126.3	119.5	–	119.5
Administrative expenses, impairment losses on trade receivables and contract assets, and other income	(92.3)	–	(92.3)	(91.5)	–	(91.5)
Amortisation of acquired intangibles	–	(4.6)	(4.6)	–	(4.5)	(4.5)
Acquisition-related expenditure	–	(6.2)	(6.2)	–	(0.8)	(0.8)
Impairment of non-financial assets	–	(18.7)	(18.7)	–	(2.0)	(2.0)
Reorganisation costs	–	(6.4)	(6.4)	–	(4.2)	(4.2)
ERP implementation costs	–	–	–	–	(0.6)	(0.6)
Other	–	–	–	–	0.3	0.3
Operating profit/(loss) from continuing operations	34.0	(35.9)	(1.9)	28.0	(11.8)	16.2
Net finance costs	(6.1)	–	(6.1)	(3.8)	–	(3.8)
Profit/(loss) before taxation from continuing operations	27.9	(35.9)	(8.0)	24.2	(11.8)	12.4
Income tax (expense)/credit	(7.3)	3.3	(4.0)	(6.5)	2.3	(4.2)
Profit/(loss) for the year from continuing operations	20.6	(32.6)	(12.0)	17.7	(9.5)	8.2
Profit for the year from discontinued operation, net of tax	0.4	6.4	6.8	1.7	(1.3)	0.4
Profit/(loss) for the year	21.0	(26.2)	(5.2)	19.4	(10.8)	8.6

* Costs of £10.0m have been reallocated from administrative expenses to cost of sales in the comparative period. See the Income Statement for further details.

Underlying earnings attributable to the owners of the parent/earnings per share: The Group uses underlying earnings attributable to the owners of the parent as the input to its adjusted EPS measure. This profit measure excludes the amortisation of acquired intangibles, acquisition-related expenditure, reorganisation costs and other specific adjusting items, but is an after-tax measure. The Board considers underlying EPS to be more reflective of the Group's trading performance in the year. A reconciliation between earnings attributable to the owners of the parent and underlying earnings attributable to the owners of the parent is shown in Note 8.

Organic growth/decline: Organic growth/decline is calculated as the growth/decline in the result for the current year compared to the prior year, after adjusting for the impact of acquisitions or disposals, to include the results of those acquisitions or disposals for an equivalent period in each financial year. See Note 14 for details of acquisitions during the year.

2. Alternative performance measures (continued)

(a) Group profit and earnings measures (continued)

Constant currency growth/decline: The Group generates revenues and profits in various territories and currencies because of its international footprint. Those results are translated on consolidation at the foreign exchange rates prevailing at the time. Constant currency growth/decline is calculated by translating the result for the prior year using foreign currency exchange rates applicable to the current year. This provides an indication of the growth/decline of the business, excluding the impact of foreign exchange. In the prior year, constant currency results were calculated by translating the result for the current year using foreign currency exchange rates applicable to the prior year. Using current year rates to restate prior year results is considered to provide a more useful comparison, since current year performance remains stated at actual rates.

Headline trading performance

	Underlying			Reported	
	External revenue £m	Operating profit £m	Profit before tax £m	Operating profit/(loss) £m	(Loss)/profit before tax £m
2023					
Total	**446.0**	**34.5**	**28.4**	**6.0**	**(0.1)**
Less: discontinued operation	**(0.8)**	**(0.5)**	**(0.5)**	**(7.9)**	**(7.9)**
Continuing operations	**445.2**	**34.0**	**27.9**	**(1.9)**	**(8.0)**
Less: performance of acquisitions	**(4.8)**	**(1.1)**	**(1.1)**	**4.4**	**4.4**
Continuing operations – organic	**440.4**	**32.9**	**26.8**	**2.5**	**(3.6)**
2022					
Total	387.3	30.1	26.3	17.0	13.2
Less: discontinued operation	(7.1)	(2.1)	(2.1)	(0.8)	(0.8)
Continuing operations	380.2	28.0	24.2	16.2	12.4
Continuing operations at current year exchange rates	392.2	29.2	25.4	17.0	13.2
Growth (%) – Total	15%	15%	8%	(65%)	(101%)
Growth (%) – Continuing operations	17%	21%	15%	(112%)	(165%)
Growth (%) – Continuing organic	16%	18%	11%	(85%)	(129%)
Constant currency growth (%) – Continuing operations	14%	16%	10%	(111%)	(161%)

Segmental underlying operating profit: This is presented in the Group's segmental disclosures and reflects the underlying trading of each segment, as assessed by the main Board. This excludes segment-specific amortisation of acquired intangibles, acquisition-related expenditure and other specific adjusting items, such as reorganisation costs. It also excludes unallocated Plc costs, which represent the costs of running the public limited company and specific adjusting items which are outside of the control of segment management. A reconciliation between segment underlying operating profit, the Group's underlying operating profit and operating profit is presented in Note 5.

(b) Cash flow measures

Cash conversion: A key measure of the Group's cash generation is the conversion of profit into cash. This is the reported cash generated from operations (defined as operating cash flow, less movements in net working capital and defined benefit pension deficit contributions) divided by earnings before interest, tax, depreciation and amortisation (EBITDA), expressed as a percentage.

Underlying cash conversion: This is underlying cash generated from operations (defined as reported cash generated from operations, adjusted for the cash impact of specific adjusting items) divided by underlying EBITDA (defined as reported EBITDA, adjusted for the impact of specific adjusting items). A reconciliation between the two is shown below.

2. Alternative performance measures (continued)

(b) Cash flow measures (continued)

Cash conversion

	2023			2022		
	Underlying £m	Specific adjusting items £m	Total £m	Underlying £m	Specific adjusting items £m	Total £m
Operating profit/(loss) from continuing operations	34.0	(35.9)	(1.9)	28.0	(11.8)	16.2
Operating profit from discontinued operation	0.5	7.4	7.9	2.1	(1.3)	0.8
Operating profit	34.5	(28.5)	6.0	30.1	(13.1)	17.0
Depreciation, amortisation and impairment	14.1	18.7	32.8	18.6	2.0	20.6
Amortisation of acquired intangibles	–	4.6	4.6	–	4.5	4.5
EBITDA	48.6	(5.2)	43.4	48.7	(6.6)	42.1
Movement in working capital	(12.8)	1.6	(11.2)	8.2	2.2	10.4
Pension deficit payments	(1.8)	–	(1.8)	(3.0)	–	(3.0)
Gain on disposal of discontinued operation	–	(7.4)	(7.4)	–	–	–
Losses on disposal of assets	0.1	0.6	0.7	0.1	–	0.1
Share based payments	1.3	–	1.3	1.3	–	1.3
Unrealised exchange losses/(gains)	1.2	–	1.2	(0.7)	(0.3)	(1.0)
Cash generated from operations	36.6	(10.4)	26.2	54.6	(4.7)	49.9
Cash conversion	75.3%		60.4%	112.1%		118.5%

The movement in working capital in relation to specific adjusting items for the current year includes trade and other payables of £5.3m and provisions of £0.1m in relation to specific adjusting items recognised as an expense during the current year which had not been paid at 30 June 2023, compared to £3.8m at the prior year end (see Note 7).

Net debt: is defined as current and non-current borrowings less cash and cash equivalents, including hire purchase agreements, but excluding any impact of other IFRS 16 lease liabilities. Management believes this definition is the most appropriate for monitoring the indebtedness of the Group and is consistent with the treatment in the Group's banking agreements. Further details are provided in Note 25.

(c) Tax measures

Underlying effective tax rate (ETR): The Group reports one adjusted tax measure, which is the tax rate on underlying profit before tax. This is the tax charge applicable to underlying profit before tax expressed as a percentage of underlying profit before tax.

(d) Other measures

Order book: The value of all unworked purchase orders and contracts received from customers at the reporting date, providing an indication of revenue that has been secured and will be recognised in future accounting periods – see Note 23. Management do not consider there to be a closely equivalent GAAP measure.

Order intake: The value of purchase orders and contracts received from customers during the period. The order intake for the current year was £522.0m (2022: £432.2m), including results of the discontinued operation. Management do not consider there to be a closely equivalent GAAP measure.

Headcount: Headcount is calculated as the number of colleagues on the payroll at the reporting date and includes subcontractors on a full-time equivalent basis. The number of employees disclosed in Note 33 is the average for the year.

FINANCIAL PERFORMANCE

The following disclosures provide further information about the drivers of the Group's financial performance in the year. This includes analysis of the respective contribution of the Group's reportable segments along with information about its operating cost base, net finance costs and tax. In addition, disclosure on earnings per share and the dividend is provided.

3. Discontinued operation

Discontinued operations and held for sale accounting policy – Note 1(c)

On 1 August 2022, the Group sold its Software business to a third party. At 30 June 2022, the Group had classified this business as held for sale following agreement of terms with a potential buyer, as a result of a strategic decision to focus on core lines of business. The results of the Software business have been presented as a discontinued operation.

Total consideration for the sale was £14.9m, of which £14.8m was satisfied in cash during the current year. The remaining £0.1m is reflected in other receivables. Additional consideration of up to £2.4m has not been recognised as performance conditions are not expected to be met. £7.5m of net assets were disposed of, and £0.9m of cumulative currency gains were reclassified to the income statement. £0.9m of costs directly attributable to the disposal were incurred during the current year.

Effect of disposal on the financial position of the Group

	£m
Other intangible assets	(7.2)
Property, plant and equipment	(0.1)
Trade, other and contract receivables	(1.6)
Cash and cash equivalents	(1.7)
Trade, other and contract payables	3.2
Net assets and liabilities	(7.4)
Consideration received, satisfied in cash	14.8
Cash and cash equivalents disposed of	(1.7)
Directly attributable fees	(0.8)
Net cash inflows	12.3

Result from discontinued operation

	2023 £m	2022 £m
Revenue	0.8	9.4
Inter-segment revenue*	–	(2.3)
External Revenue	0.8	7.1
Expenses	(0.3)	(4.1)
Elimination of inter-segment revenue net of recoverable expenses	–	2.0
Amortisation of intangible assets	–	(2.9)
External expenses	(0.3)	(5.0)
Underlying profit from operating activities	0.5	2.1
Income tax on underlying result	(0.1)	(0.4)
Underlying profit from operating activities, net of tax	0.4	1.7
Specific adjusting items	7.4	(1.3)
Income tax on specific adjusting items	(1.0)	–
Profit from discontinued operation, net of tax	6.8	0.4

* Subsequent to the disposal, the Group has continued to purchase software licenses from the discontinued operation and recharge the business for space in its Prague office. Although intra-group transactions have been fully eliminated in the consolidated financial results, management has elected to attribute the elimination of transactions between the continuing operations and the discontinued operation before the disposal in a way that reflects the continuance of these transactions subsequent to the disposal. Management believes this information to be useful to the users of the financial statements.

3. Discontinued operation (continued)

Cash from discontinued operation	2023 £m	2022 £m
Net cash from operating activities	0.5	4.5
Net cash from/(used in) investing activities	12.2	(3.2)
	12.7	1.3

The earnings per share related to the discontinued operation is shown in **Note 8**.

4. Operating (loss)/profit

***Research and development expenditure accounting policy* – Note 1(e)**
***Government grants accounting policy* – Note 1(f)**

Operating (loss)/profit, including the result of the discontinued operation, are stated after charging/(crediting) the following amounts:

	Note	2023 £m	2022 £m
Depreciation of property, plant and equipment	17	4.8	5.7
Impairment of property, plant and equipment	17	11.7	–
Depreciation of right-of-use assets	18	4.8	4.0
Impairment of right-of-use assets	18	–	0.6
Amortisation of other intangible assets	16	9.1	12.6
Impairment of other intangible assets	16	1.8	2.2
Impairment of goodwill	15	5.2	–
Repairs and maintenance on property, plant and equipment		8.9	12.3
Net impairment expense on trade receivables	23	1.8	1.3
Losses on disposal of property, plant and equipment		0.7	0.1
Research and Development Expenditure Credits (RDEC)		–	5.3
Research and development expenditure		9.1	6.0
Government grant income in respect of research and development expenditure		(6.8)	(2.5)

A government grant reversal of £0.5m (2022: £nil) related to grant income previously received in respect of the Netherlands NOW scheme was recognised in the current year.

5. Financial performance by segment

The segmental analysis helps explain the business in the way that it is monitored by management.

The Group's operating segments are being reported based on the financial information provided to the Chief Operating Decision Maker who is the Chief Executive Officer. The information reported includes financial performance but does not include the financial position of assets and liabilities. The operating segments were identified by evaluating the Group's products and services, processes, types of customers and delivery methods.

During the current year, the Automotive and Industrial segment (A&I) has been disaggregated into Automotive and Industrial – Emerging Mobility and Automotive and Industrial – Established Mobility. This split is reported to the CODM and reflects the revised organisational structure and operating model of the business unit.

The following summarises the operations in each of the Group's reportable segments:

- Energy and Environment (EE) – EE generates revenue from the provision of environmental consultancy services to customers across the world. Customers include governments, public agencies and private businesses;
- Rail – Rail generates revenue from through two separate operations: a consultancy unit that provides technical advice and engineering services; and a separate, independent entity, Ricardo Certification, that performs accredited assurance services;
- Automotive and Industrial – Emerging – A&I Emerging generates revenue through the provision of engineering, strategic consulting, and design, development and testing services, focused on in the design, building and testing of conventional powertrains. Customers include businesses in the automotive, aerospace, defence, off-highway and commercial, marine, and rail markets;
- Automotive and Industrial – Established – A&I Established generates revenue through the provision of engineering, strategic consulting, and design, development and testing services, focused on in power electronic systems and propulsion systems, software and digital technologies. Customers include businesses in the automotive, aerospace, defence, energy, off-highway and commercial, marine, motorcycle and light-personal transport, and rail markets;
- Defense – Defense provides engineering services, software and products to customers in the US defence market, aimed and protecting life and improving the operation, maintenance and support of complex systems; and
- Performance Products (PP) – PP manufactures, assembles and develops niche high-quality components, prototypes and complex products, including engines, transmissions and other precision and performance-critical products. Its customers manufacture low-volume, high-performance products in markets such as motorsport, automotive, aerospace, defence and rail.

The operations of the Group have been categorised into these segments due to the nature of their services, market sectors, client bases and distribution channels and operating across markets requiring adherence to regulatory frameworks that are similar in nature.

5. Financial performance by segment (continued)

Measurement of performance

Management monitors the financial results of its operating segments separately for the purpose of making decisions about allocating resources and assessing performance. Segmental performance is measured based on underlying operating profit, as this measure provides management with an overall view of how the different operating segments are managing their total cost base against the revenue generated from their portfolio of contracts.

There are varying levels of integration between the segments. The segments use EE for their specialist environmental knowledge. A&I and PP have various shared projects. There are also shared service costs between the segments. Inter-segment transactions are eliminated on consolidation. Inter-segment pricing is determined on an arm's length basis in a manner similar to transactions with third parties.

Included within Plc costs in the following tables are costs arising from a central Group function, including the costs of running the public limited company, which are not recharged to the other operating segments. Comparative figures for the year ended 30 June 2022 have been restated, reflecting the impact of the changes the Group made to its operating segments during the year ended 30 June 2023. The operating segment section of this Annual Report provides further detail on the segments' performance (see page 40 to 55).

	2023					
	Total segment revenue £m	Inter-segment revenue £m	Revenue from external customers £m	Underlying operating profit £m	Specific adjusting items (*) £m	Operating profit £m
Energy & Environment	89.6	(1.1)	88.5	16.0	(2.4)	13.6
Rail	74.1	(0.6)	73.5	8.0	(4.1)	3.9
Automotive and Industrial – Emerging	83.0	(0.7)	82.3	10.6	–	10.6
Defense	88.7	(0.1)	88.6	13.4	(0.1)	13.3
Performance Products	85.2	(0.5)	84.7	9.0	–	9.0
Automotive and Industrial – Established	28.6	(1.0)	27.6	(5.8)	(23.4)	(29.2)
Plc	–	–	–	(17.2)	(5.9)	(23.1)
Total continuing operations	449.2	(4.0)	445.2	34.0	(35.9)	(1.9)
Discontinued operation	0.8	–	0.8	0.5	7.4	7.9
Total	450.0	(4.0)	446.0	34.5	(28.5)	6.0
Net finance costs						(6.1)
Total loss before tax						(0.1)

5. Financial performance by segment (continued)

	2023			
		Capital expenditure		
	Depreciation, amortisation and impairment £m	Other intangible assets £m	Property, plant and equipment £m	Right-of-use assets £m
Energy & Environment	4.2	0.6	0.6	0.5
Rail	4.5	0.3	0.3	0.7
Automotive and Industrial – Emerging	3.3	2.7	3.1	1.0
Defense	1.8	0.4	0.4	–
Performance Products	0.9	0.6	0.6	–
Automotive and Industrial – Established	21.0	0.7	1.2	1.6
Plc	1.7	–	–	0.1
Total continuing operations	37.4	5.3	6.2	3.9
Discontinued operation	–	0.2	–	–
Total	37.4	5.5	6.2	3.9

	2022 – Restated **					
	Total segment revenue £m	Inter-segment revenue £m	Revenue from external customers £m	Underlying operating profit £m	Specific adjusting items (*) £m	Operating profit £m
Energy & Environment	68.2	(1.0)	67.2	11.0	(0.6)	10.4
Rail	74.6	(0.3)	74.3	9.4	(4.4)	5.0
Automotive and Industrial – Emerging	69.1	–	69.1	2.7	–	2.7
Defense	45.1	(0.1)	45.0	6.6	(0.4)	6.2
Performance Products	75.0	(1.3)	73.7	8.8	(0.6)	8.2
Automotive and Industrial – Established	54.1	(3.2)	50.9	4.9	(5.2)	(0.3)
Plc	–	–	–	(15.4)	(0.6)	(16.0)
Total continuing operations	386.1	(5.9)	380.2	28.0	(11.8)	16.2
Discontinued operation	9.4	(2.3)	7.1	2.1	(1.3)	0.8
Total	395.5	(8.2)	387.3	30.1	(13.1)	17.0
Net finance costs						(3.8)
Total profit before tax						13.2

5. Financial performance by segment (continued)

	2022 – Restated**			
		Capital expenditure		
	Depreciation, amortisation and impairment £m	Other intangible assets £m	Property, plant and equipment £m	Right-of-use assets £m
Energy & Environment	3.2	1.9	0.7	–
Rail	4.8	–	1.1	4.2
Automotive and Industrial – Emerging	–	2.0	1.4	–
Defense	1.7	0.4	0.1	–
Performance Products	0.8	(0.1)	0.6	–
Automotive and Industrial – Established	9.8	0.5	0.8	0.5
Plc	1.9	–	–	–
Total continuing operations	22.2	4.7	4.7	4.7
Discontinued operation	2.9	3.2	–	–
Total	25.1	7.9	4.7	4.7

* See **Note 7**

** Prior year amounts have been restated as follows:

- **Remove plc management charge:** Previously the costs of running the Group function, such as finance, IT, HR, marketing and legal, were allocated to the business units on the basis of revenue and headcount. These costs are no longer allocated as part of the operating segment underlying operating profit, reflecting the way that the results are reviewed by the CEO and the Board. Comparative results have been restated to reflect a change in the allocation of central costs.
- **Revised A&I operating segments:** For the year ended 30 June 2022, the Automotive and Industrial operating segment results were reported to the CEO (the Chief Operating Decision Maker) in total. For the year ended 30 June 2023 the results were reported separately to the CEO for Established Mobility and Emerging Mobility. Prior year comparative amounts have been restated to reflect this analysis.

The impact of these restatements on the underlying profit of the operating segments is shown below.

	Underlying operating profit: originally reported £m	Remove plc management charge £m	Revised A&I operating segments £m	Underlying operating profit: Restated £m
EE	9.1	1.9	–	11.0
Rail	7.7	1.7	–	9.4
A&I – Total	3.7	3.9	(7.6)	–
A&I – Emerging	–	–	2.7	2.7
Defense	5.9	0.7	–	6.6
PP	7.2	1.6	–	8.8
A&I – Established	–	–	4.9	4.9
Plc	(5.6)	(9.8)	–	(15.4)
Continuing operations	28.0	–	–	28.0
Discontinued operation	2.1	–	–	2.1
Total operating profit	30.1	–	–	30.1

6. Revenue

***Revenue accounting policy* – Note 1(g)**
***Key sources of estimation uncertainty: Revenue on fixed price contracts* – Note 1(d)**

	Continuing operations		Discontinued operations		Total	
	2023 £m	2022 Restated* £m	**2023 £m**	2022 £m	**2023 £m**	2022 Restated* £m
Revenue stream						
Service provided under:						
– fixed price contracts	**216.9**	198.5	**–**	–	**216.9**	198.5
– time and materials contracts	**81.1**	83.9	**–**	–	**81.1**	83.9
– subscription and software support contracts	**5.4**	5.2	**0.1**	0.6	**5.5**	5.8
Goods supplied:						
– manufactured and assembled products	**140.5**	90.7	**–**	–	**140.5**	90.7
– software products	**1.3**	1.2	**0.7**	6.5	**2.0**	7.7
Intellectual property	**–**	0.7	**–**	–	**–**	0.7
Total	**445.2**	380.2	**0.8**	7.1	**446.0**	387.3
Customer location						
United Kingdom	**137.4**	134.5	**0.3**	0.2	**137.7**	134.7
Europe	**78.5**	72.7	**0.1**	1.3	**78.6**	74.0
North America	**139.4**	88.3	**0.2**	1.9	**139.6**	90.2
Rest of Asia	**30.1**	30.7	**0.2**	2.8	**30.3**	33.5
Australia	**23.4**	22.2	**–**	–	**23.4**	22.2
China	**16.4**	20.9	**–**	0.9	**16.4**	21.8
Rest of the World	**20.0**	10.9	**–**	–	**20.0**	10.9
Total	**445.2**	380.2	**0.8**	7.1	**446.0**	387.3
Timing of recognition						
Over time	**304.6**	289.0	**0.8**	5.5	**305.4**	294.5
At a point in time	**140.6**	91.2	**–**	1.6	**140.6**	92.8
Total	**445.2**	380.2	**0.8**	7.1	**446.0**	387.3

* £19.4m of revenue in the prior year has been reclassified from services provided under fixed price contracts to services provided under time and materials contracts (recognised over time) in relation to ABS/ESC kits and spares supplied by the Defense operating segment.

Reported services provided under fixed price contracts in the prior year was £217.9m and has been restated to £198.5m. Services provided under time and materials contracts in the prior year was £64.5m and has been restated to £83.9m.

7. Specific adjusting items

***Specific adjusting items accounting policy* – Note 1(h)**
***Critical judgement on specific adjusting items: Reorganisation costs* –** *Note 1(d)*

Specific adjusting items are disclosed separately in the financial statements where it is necessary to do so to provide further understanding of the financial performance of the Group. These items comprise the amortisation of acquired intangible assets, acquisition-related expenditure, reorganisation costs and other items that are included due to their significance, non-recurring nature or amount. Acquisition-related expenditure is incurred by the Group to effect a business combination, including the costs associated with the integration of acquired businesses. Reorganisation costs relate to non-recurring expenditure incurred as part of fundamental restructuring activities, significant impairments of property, plant and equipment, and other items deemed to be one-off in nature.

	2023 £m	2022 £m
Continuing operations		
Amortisation of acquired intangibles	4.6	4.5
Acquisition-related expenditure	6.2	0.8
Reorganisation costs		
– Purchases and disposals	–	0.3
– Impairment of non-financial assets	18.7	2.0
– Other reorganisation costs	6.4	3.9
ERP implementation costs	–	0.6
Revaluation gain	–	(0.3)
Total specific adjusting items from continuing operations before tax	35.9	11.8
Tax credit on specific adjusting items	(3.3)	(2.3)
Total specific adjusting items from continuing operations after tax	32.6	9.5
Specific adjusting items from discontinued operations		
Disposal of discontinued operations	(7.4)	1.3
Tax on specific adjusting items from discontinued operations	1.0	–
Total specific adjusting items after tax	26.2	10.8

Amortisation of acquired intangible assets

On acquisition of a business, the purchase price is allocated to assets such as customer contracts and relationships. Amortisation occurs on a straight-line basis over the asset's useful economic life, which is between two to nine years. During the year, certain "customer contracts and relationships" intangible assets reached the end of their economic life, resulting in an overall decrease in amortisation charges compared to the prior year. This was offset by £0.8m of amortisation of customer relationships and modelling tools acquired as part of the acquisition of E3M and Aither (see **Note 14**).

Acquisition-related expenditure

The current year acquisition-related expenditure comprises:

- £0.4m of integration costs and an accrual for £0.4m of deferred consideration following the acquisition of Inside Infrastructure (2022: £0.4m),
- £0.2m of external fees and integration costs and an accrual for £0.9m of deferred consideration following the acquisition of E3 Modelling S.A. (see **Note 14**) (2022: £nil),
- £0.4m of external fees and integration costs and an accrual for £3.2m of deferred consideration following the acquisition of Aither pty. (see **Note 14**) (2022: £nil); and
- £0.7m of external fees in respect of other strategic projects (2022: £0.4m, including £0.1m retention amount paid to the former owners of PLC Consulting Pty Ltd).

7. Specific adjusting items (continued)

Reorganisation costs

Purchases and disposals

During the prior year a charge of £0.3m was recognised in relation to a reduction in the fair value of deferred consideration in respect of the sale of Ricardo's Detroit engine test business on 3 June 2020. The reduction in the fair value reflected lower levels of traditional engine testing work than originally forecast at the time the business was sold.

Impairment of non-financial assets

Impairment costs of £18.7m (2022: £2.0m) were recognised during the year – see **Note 15**.

Other reorganisation costs

Reorganisation costs include the following amounts:

- £4.7m (2022: £2.9m) in relation to the restructuring of the A&I Established business, including:
  - £1.1m (2022: £nil) loss on disposal of non-current assets and related decommissioning costs,
  - £0.2m of property exit costs (2022: £0.9m),
  - £1.0m (2022: £0.1m) of other costs in relation to the transformation of the A&I business, including the cost of contractors and other external fees, in addition to £2.4m of associated redundancy costs (2022: £2.3m, less £0.4m prior year credit).

This activity concluded in the current year.

- £1.5m (2022: £1.0m) in relation to the Rail and EE business. The current and prior year costs have been paid in the current year. This reflects the result of a significant review of the operational structure of the business, aimed at creating a more flexible and agile business, as the teams move towards working together as a combined Clean Energy and Environmental Services business. Costs incurred related to the exit of a number of senior positions in the organisation, including associated legal and external fees.

This activity concluded in the current year.

- £0.2m of central costs were incurred in relation to the restructuring of the Group. Future costs will be expected as part of the functional alignment across the Group.

These costs have been included within specific adjusting items as they are significant in quantum and would otherwise distort the underlying trading performance of the Group.

7. Specific adjusting items (continued)

ERP implementation costs

As a result of an IFRS Interpretations Committee (IFRIC) decision in March 2021, £0.6m of external costs incurred in the year ended 30 June 2022 in relation to the implementation of a new cloud-based ERP system within the PP segment were expensed in the comparative year. These costs were previously capitalised in line with prevailing practice at the time the costs were incurred. They have been classified as a specific adjusting item as they are not reflective of the underlying performance of the business in the year. The ERP system is expected to be utilised by the Group for at least five years.

Disposal of discontinued operation

During the current year, a gain on the disposal of the discontinued Software business of £7.4m was recognised (see **Note 3**). In the prior year, £1.3m of external fees related to the efforts to sell this business were recognised.

8. Earnings per share

Basic earnings per share is calculated by dividing the earnings attributable to ordinary shareholders by the weighted average number of shares outstanding during the year, excluding those held by an employee benefit trust for the Long-Term Incentive Plan (LTIP) and by the Share Incentive Plan (SIP) for the free share scheme which are treated as cancelled for the purposes of the calculation.

For diluted earnings per share, the weighted average number of ordinary shares in issue is adjusted to assume conversion of all dilutive potential ordinary shares. These include potential awards of LTIP shares and options granted to employees. The assumed proceeds from these is regarded as having been received at the average market price of ordinary shares during the year.

Reconciliations of the earnings and the weighted average number of shares used in the calculations are set out below. Underlying earnings per share is also shown because the Directors consider that this provides a useful indication of underlying performance and trends over time. There are no potentially dilutive shares (2022: Nil).

	2023 £m	2022 £m
(Loss)/earnings attributable to owners of the parent	**(5.4)**	8.6
Add back the net-of-tax impact of:		
– Amortisation of acquired intangibles	**3.5**	3.2
– Acquisition-related expenditure	**6.2**	0.8
– Asset purchases and disposals	**–**	0.3
– Other reorganisation costs and impairment	**22.9**	4.9
– ERP implementation costs	**–**	0.5
– Revaluation gain	**–**	(0.2)
– Discontinued operation	**(6.4)**	1.3
Underlying earnings attributable to owners of the parent	**20.8**	19.4

8. Earnings per share (continued)

	2023 Number of shares millions	2022 Number of shares millions
Basic weighted average number of shares in issue	62.2	62.2
Effect of dilutive potential shares	–	–
Diluted weighted average number of shares in issue	62.2	62.2

(Loss)/earnings per share	2023 pence	2022 pence
Basic	(8.7)	13.8
Diluted	(8.7)	13.8

Underlying earnings per share	2023 pence	2022 pence
Basic	33.4	31.2
Diluted	33.4	31.2

(Loss)/earnings per share from continuing operations	2023 pence	2022 pence
Basic	(19.3)	13.2
Diluted	(19.3)	13.2

Earnings per share from discontinued operation	2023 pence	2022 pence
Basic	10.9	0.6
Diluted	10.9	0.6

9. Dividends

Dividend accounting policy – Note 1(i)

	2023 £m	2022 £m
Final dividend for prior period: 7.49p per share (2022: 5.11p) per share	4.6	3.2
Interim dividend for current period: 3.35p per share (2022: 2.91p) per share	2.1	1.8
Equity dividends paid	6.7	5.0

On 6 September 2023 the Directors declared a final dividend of 8.61p per share, which will be paid gross on 24 November 2023 to holders of ordinary shares on the Company's register of members on 3 November 2023.

10. Net finance costs

Net finance costs accounting policy – Note 1(j)

	2023 £m	2022 £m
Finance income		
Bank interest receivable	**0.2**	0.3
Other interest receivable	**0.2**	–
Defined benefit pension financing income	**0.6**	0.2
Interest income on finance lease receivable	**–**	0.1
Total finance income	**1.0**	0.6
Finance costs		
Bank interest payable on borrowings	**(6.1)**	(3.5)
Interest expense on lease liabilities	**(0.9)**	(0.9)
Other interest payable	**(0.1)**	–
Total finance costs	**(7.1)**	(4.4)
Net finance costs	**(6.1)**	(3.8)

11. Auditor's remuneration

During the year the Group (including its subsidiaries) obtained the following services from the Group auditors and its associates:

Fees payable for services provided by the Company's auditor and its associates	2023 £'000	2022 £'000
Audit fees		
Statutory audit of the Company and its consolidated financial statements	**899**	771
Statutory audit of the Company's subsidiaries and their financial statements	**696**	539
Total audit fees	**1,595**	1,310
Non-audit fees		
Audit-related assurance services provided to the Company	**106**	65
Audit-related assurance services provided to the Company's subsidiaries	**18**	–
Total non-audit fees	**124**	65
Non-audit fees as a percentage of audit fees	**7.8%**	5.0%

11. Auditor's remuneration (continued)

Fees payable during the year to the Company's auditor and its associates for audit-related assurance services related to independent reviews, agreed-upon procedures and other services closely related to the audit of the Company and its subsidiaries. The prior year charge includes a £73,000 charge of additional fees in relation to the previous year's audit which were agreed during the prior year. Total audit fees have increased by 22% in the current year due to additional regulatory audit requirements.

Non-audit services comprised the Group's interim review and other audit-related assurance services.

12. Tax expense

Tax expense accounting policy – Note 1(k)

	2023 £m	2022 £m
Current income tax		
UK corporation tax	0.5	0.3
Adjustments in respect of prior years	(0.3)	–
Total UK tax	0.2	0.3
Foreign corporation tax	3.6	2.3
Overseas withholding tax suffered	0.8	0.1
Adjustments in respect of prior years	–	0.1
Total foreign tax	4.4	2.5
Total current tax	4.6	2.8
Deferred tax		
(Credit)/charge for the year	(0.3)	0.6
Adjustments in respect of prior years	0.8	1.2
Total deferred tax	0.5	1.8
Total taxation	5.1	4.6
Tax on items recognised in other comprehensive income	(1.2)	1.6
Tax on items recognised directly in equity	(0.7)	0.3

The tax charge attributed to the discontinued operation is shown in Note 3.

Tax on items recognised in other comprehensive income relate to the tax impact of remeasurements of the defined benefit pension scheme. Tax on items recognised directly in equity relate to equity-settled share-based payment transactions.

12. Tax expense (continued)
The main rate of UK corporation tax for the year ending 30 June 2023 is a weighted average of 20.5%. The Finance Act 2021, which was substantially enacted on 10 June 2021, announced that the main UK corporation tax rate would increase to 25% with effect from 1 April 2023. Deferred taxes in the UK have been measured at the corporation tax rate expected to apply at the time of the reversal of the timing difference. Overseas deferred taxes at the reporting date have been measured and reflected in these financial statements by using the enacted rate within each jurisdiction. The tax charge for the year is higher (2022: higher) than the standard rate of corporation tax in the UK. The differences are set out below:

	2023 £m	2022 £m
(Loss)/ profit before taxation	**(0.1)**	13.2
Multiplied by the standard rate of corporation tax in the UK of 20.5% (2022: 19%)	–	2.5
Effects of:		
Income not taxable	**(1.6)**	–
Expenses not deductible for tax purposes	**3.8**	2.0
Deferred tax recognised in OCI or Equity	**1.9**	(1.9)
Government tax incentives(1)	**(0.2)**	(0.3)
Other overseas taxes(2)	**1.2**	0.4
Adjustment to the IFRIC 23 provision	**(0.1)**	(0.4)
Adjustments in respect of prior years	**0.5**	1.2
Deferred tax – change in UK tax rate	**(0.7)**	0.5
Changes in corporation tax rates	**0.3**	0.6
Total taxation	**5.1**	4.6

(1) Primarily relates to R&D tax credits.
(2) Primarily relates to withholding taxes.

The Group operates in a number of countries and is subject to taxation in numerous jurisdictions. Legislation related to taxation is complex and management are required to make judgements based on appropriate professional advice, and amounts provided are accrued based on management's interpretation of country-specific tax laws. In particular, management applies judgement in respect of ongoing tax audits around the Group, which can take a significant amount of time to be agreed with Tax Authorities. The Group estimates and accrues taxes that will ultimately be payable when reviews or audits by Tax Authorities of tax returns are completed. These estimates include judgements about the position expected to be taken by each Tax Authority.

Income not taxable during the year relates to accounting profits arising from the sale of the Software business in Ricardo Investments Limited. Expenses not deductible relates to a variety of types of costs, but largely relates to acquisition related expenditure and impairments.

Management judgement has also been required to ensure that appropriate transfer pricing is applied on all intra-group transactions, and in determining the amounts that would be undertaken on an arm's length basis. As a result, actual liabilities could differ from the amounts provided which could have a consequent impact on the results and net position of the Group.

None of the amounts are individually material and therefore there is not a significant risk of material differences in future periods.

CAPITAL BASE

13. Non-current assets by geographical location (excluding deferred tax assets)

Asset location	Note	2023 £m	2022 £m
United Kingdom		**83.2**	103.1
Australia		**37.9**	31.5
Netherlands		**19.2**	20.4
North America		**17.8**	16.7
Rest of the World		**44.4**	25.0
Total		**202.5**	196.7
Goodwill	15	**96.1**	90.6
Other intangible assets	16	**35.4**	23.1
Property, plant and equipment	17	**35.3**	47.0
Right-of-use assets	18	**20.7**	18.3
Retirement benefit surplus	34	**12.6**	15.2
Other receivables	23	**2.4**	2.5
Total		**202.5**	196.7

14. Acquisitions

The revenue for the Group for the current year would have been £6.5m higher and the loss for the year reduced by £0.9m if the acquisition date for the business combinations in Note 14(a) and (b) had been 1 July 2022.

(a) Acquisition in the year to 30 June 2023 – Aither

On 10 March 2023, the Group acquired 90% of the issued share capital of Aither Pty Ltd (Aither), a leading Australian water and natural-resources advisory consultancy. The commitment to purchase the remaining amount gives rise to a financial liability (see below), therefore no non-controlling interest is recognised for the remaining 10% shareholding. Total amounts potentially payable in relation to the acquisition include the following:

- Initial cash consideration of £9.4m (AUD 17.2m), which includes an adjustment for cash and normalised net working capital of £0.1m (AUD 0.1m), paid in March 2023 and June 2023 respectively.
- An earn-out agreement based on the earnings before tax, depreciation and amortisation (EBITDA) for the ten months ended 31 December 2023 comprising two elements:
  - 90% earn-out payment to the vendors of the business, if they remain employed by the business at the earnout date.
  - 10% earn-out bonus to staff employed by the business from completion date and throughout the earnout period.

  This amount is considered to represent post-combination remuneration, in line with IFRS 3. The minimum value of this payment is nil and the maximum is £7.7m (AUD 14.7m).
  An expense of £3.1m has been recognised in the current year in respect of this post-combination remuneration, based on expected EBITDA for the period ended 31 December 2023.
- The purchase of the remaining 10% of share capital is expected to take place on the third anniversary of the acquisition, or the second anniversary by mutual agreement.
  - An amount of £0.8m (AUD 1.6m), with a present value of £0.6m (AUD 1.2m), is not linked to the continuing employment of the vendors or other performance conditions and has been treated as deferred consideration.
  - A further amount is based on the EBITDA of the most recently completed 12 months ended 31 December at the second-tranche purchase date. The minimum undiscounted value of this payment is £1.1m (AUD 2m) and the maximum is £4.6m (AUD 8.8m). This payment is linked to continuing employment of the vendor, and does not form part of the business combination and is considered to represent post-combination remuneration. An expense of £0.1m has been recognised in the current year in respect of this post-combination remuneration, based on expected EBITDA for the period ended 31 December 2025, and a discount rate of 12.8%.

14. Acquisitions (continued)
(a) Acquisition in the year to 30 June 2023 – Aither (continued)

The following table sets out the fair value of cash consideration payable to acquire Aither, together with the fair value of net assets acquired.

	Note	£m
Fair value of cash consideration		
Cash consideration		9.4
Deferred consideration		0.6
Total fair value of cash consideration		10.0
Fair value of identifiable net assets acquired		
Customer contracts	16	5.9
Property, plant and equipment – right of use	18	0.5
Trade, contract and other receivables		1.2
Cash and cash equivalents		0.6
Lease liability	18	(0.5)
Trade, contract and other payables		(1.0)
Deferred tax liabilities		(1.8)
Fair value of identifiable net assets acquired		4.9
Goodwill	15	5.1
Total fair value of cash consideration		10.0

The fair value of the identifiable net assets acquired were identified in accordance with the requirements of IFRS 3 Business Combinations and the sale and purchase agreement. The net assets acquired included trade, contract and other receivables with a gross and fair value of £1.2m (AUD 2.2m), all of which are expected to be collected.

Adjustments have been made for the recognition of customer-related intangible assets separable from goodwill amounting to £5.9m (AUD 10.7m), measured under the multi-period excess earnings method. The initial fair value reflects the discounted value of estimated cash flows arising from revenues from customer contracts and relationships, and reflects management's estimate of future performance at the point of acquisition. As the fair value of customer contracts and relationships is based on unobservable inputs, and the projected outcome is classified as a level 3 fair value estimate under the IFRS fair value hierarchy. Key assumptions included in the calculation of the valuation of the asset include the estimated revenues and associated EBITDA margin, the weighted average cost of capital used of 12.8%, as well as the rate of customer attrition over time. The valuation is sensitive to these assumptions, If revenues or EBITDA margin included in the valuation calculation were decreased, the weighted average cost of capital increased, or customer attrition accelerated, the valuation of the customer contracts intangible assets would be lower. The expected useful economic life of the asset is seven years. If the useful economic life was reduced, the amortisation charge for the year would be increased proportionately.

Goodwill arising on acquisition is considered to relate to the existence of a skilled assembled workforce, including skilled water-management consultants, developed expertise and processes, alongside synergies and growth opportunities in the water management-sector which can be achieved with the existing Energy and Environment operating business. These do not meet the criteria for recognition as intangible assets separable from goodwill. Goodwill is considered to benefit the entire Energy & Environment operating segment and therefore it is not considered possible to be allocated on a non-arbitrary basis below this level. None of the goodwill recognised on consolidation is expected to be deductible for tax purposes.

£0.3m of external fees in relations to the acquisition were included in specific adjusting items during the year (see **Note 7**). £2.7m of revenue and £0.1m profit after tax is included in the consolidated statement of comprehensive income in the current year in relation to Aither.

14. Acquisitions (continued)

(b) Acquisition in the year to 30 June 2023 – E3M

On 24 January 2023, the Group acquired 93% of the issued share capital of E3-Modelling S.A (E3M), an Energy and Environment consulting company based in Athens. The commitment to purchase the remaining amount gives rise to a financial liability, no non-controlling interest is recognised for the remaining 7% shareholding. Total amounts potentially payable in relation to the acquisition include the following:

- Initial cash consideration of £19.2m (EUR 21.9m), which includes an adjustment for cash and normalised net working capital of £0.2m (EUR 0.2m), paid in January 2023 and June 2023 respectively.
- An earn-out agreement based on the earnings before tax, depreciation and amortisation (EBITDA) for the twelve months ended 31 December 2023. This amount is considered to represent post-combination remuneration, in line with IFRS 3. The minimum value of this payment is nil and the maximum is £4.8m (EUR 5.4m). An expense of £0.9m has been recognised in the current year in respect of this post-combination remuneration, based on expected EBITDA for the period ended 31 December 2023.
- The purchase of the remaining 7% of share capital is expected to take place in January 2026.
  - An amount of £0.9m (EUR 1.0m), with a present value of £0.6m (EUR 0.7m), is not linked to the continuing employment of the vendors or other performance conditions and has been treated as deferred consideration.
  - A further amount is contingent on the EBITDA for the 12 months ended 31 December 2025. The minimum undiscounted value of this payment is £0.9m (EUR 1.0m) and the amount is uncapped, This payment is linked to continuing employment of the vendor, and does not form part of the business combination and is considered to represent post-combination remuneration. An expense of £0.1m has been recognised in the current year in respect of this post-combination remuneration, based on expected EBITDA for the period ended 31 December 2025, and a discount rate of 15.2%.

The following table sets out the fair value of cash consideration payable to acquire E3M, together with the fair value of net assets acquired.

	Note	£m
Fair value of cash consideration		
Cash consideration		19.2
Deferred consideration		0.6
Total fair value of consideration		**19.8**
Fair value of identifiable net assets acquired		
Software and technology	16	12.5
Property, plant and equipment	17	0.1
Trade, contract and other receivables		0.8
Cash and cash equivalents		3.6
Trade, contract and other payables		(2.7)
Deferred tax liabilities		(3.0)
Fair value of identifiable net assets acquired		**11.3**
Goodwill	15	8.5
Total fair value of cash consideration		**19.8**

The fair value of the identifiable net assets acquired were identified in accordance with the requirements of IFRS 3 Business Combinations and the sale and purchase agreement. The net assets acquired included trade, contract and other receivables with a gross and fair value of £0.8m (EUR 0.9m), all of which are expected to be collected.

14. Acquisitions (continued)

(b) Acquisition in the year to 30 June 2023 – E3M (continued)

Adjustments have been made for the recognition of modelling-tool related intangible assets separable from goodwill amounting to £12.5m (EUR 14.3m), measured under the multi-period excess earnings method. The initial fair value reflects the discounted value of estimated cash flows arising from revenues from the use of the model, and reflects management's estimate of future performance at the point of acquisition. As the fair value of modelling tools is based on these unobservable inputs, and the projected outcome is classified as a level 3 fair value estimate under the IFRS fair value hierarchy. Key assumptions included in the calculation of the valuation of the asset include the estimated revenues and associated operating expenses, the weighted average cost of capital used of 15.2%, as well as the ten-year period over which revenues are expected to occur. The valuation is sensitive to these assumptions, If revenues in the calculation of the valuation were decreased, operating expenses increased, the weighted average cost of capital increases, or the revenues maintained for a shorter period of time, the valuation of the modelling-tool would be lower. The expected useful economic life of the asset is ten years. If the useful economic life was reduced, the amortisation charge for the year would be increased proportionately.

Goodwill arising on acquisition is considered to relate to the existence of a skilled assembled workforce, including skilled consultants with expertise in digital modelling, alongside synergies and growth opportunities in the European energy and environment sector which can be achieved with the existing Energy and Environment operating business. These do not meet the criteria for recognition as intangible assets separable from goodwill. Goodwill is considered to benefit the entire Energy & Environment operating segment and therefore it is not considered possible to be allocated on a non-arbitrary basis below this level. None of these meet the criteria for recognition as intangible assets separable from goodwill. None of the goodwill recognised on consolidation is expected to be deductible for tax purposes.

£0.1m of external fees in relation to the acquisition were included in specific adjusting items during the year (see **Note 7**). £2.0m of revenue and £0.1m profit after tax is included in the consolidated statement of comprehensive income in the current year in relation to E3M.

(c) Acquisition in the year to 30 June 2022 – Inside Infrastructure

On 21 March 2022, the Group acquired the entire issued share capital of Inside Infrastructure Pty Ltd (Inside Infrastructure) for cash consideration of £5.6m (AUD 10.4m), which included an adjustment for cash and normalised net working capital of £0.5m (AUD 0.9m), paid during FY 2021/22. £0.6m (AUD 1.0m) of cash was acquired with the business.

Inside Infrastructure is an Australian technical advisory firm which specialises in water and sustainable resource management. The following tables set out the fair value of cash consideration payable to acquire Inside Infrastructure, together with the fair value of net assets acquired.

14. Acquisitions (continued)
(c) Acquisition in the year to 30 June 2022 – Inside Infrastructure (continued)

	Note	£m
Fair value of cash consideration		
Cash consideration		5.6
Total fair value of cash consideration		5.6
Fair value of identifiable net assets acquired		
Customer contracts	16	2.0
Property, plant and equipment – right of use	18	0.4
Trade, contract and other receivables		0.3
Cash and cash equivalents		0.6
Trade, contract and other payables		(0.5)
Lease liabilities	18	(0.4)
Deferred tax liabilities		(0.6)
Fair value of identifiable net assets acquired		1.8
Goodwill	15	3.8
Total fair value of cash consideration		5.6

The maximum contingent cash payable was £0.6m (AUD 1.0m). The amounts payable will be based on the achievement of annual performance targets measured against the earnings before interest, tax, depreciation and amortisation (EBITDA) of Inside Infrastructure for the year ended 30 June 2023. These payments were dependent upon the continuing employment of the sellers in the business, and were not considered to form part of the consideration for the acquisition. The sellers remained employed in the business and achieved their targeted EBITDA for the year ended 30 June 2023. As a result, £0.4m has been recognised within specific adjusting items in order to reflect an accrual for the fair value of the expected service received during the current year, in addition to £0.1m recognised in the prior year (see **Note 7**).

Adjustments were made to recognise customer-related intangible assets separable from goodwill amounting to £2.0m (AUD 3.6m). The fair value of the contingent cash consideration and provisional identifiable net assets acquired were identified in accordance with the requirements of IFRS 3 Business Combinations and the sale and purchase agreement. The fair value of net assets recognised has not been adjusted compared to the provisional values reported at 30 June 2022.

The goodwill arising on acquisition was ascribed to the existence of a skilled assembled workforce with expertise in water and sustainable resource management, and digital capability within the existing business. These do not meet the criteria for recognition as intangible assets separable from goodwill. Goodwill is considered to benefit the entire Energy & Environment operating segment and therefore it is not considered possible to be allocated on a non-arbitrary basis below this level. None of these meet the criteria for recognition as intangible assets separable from goodwill. None of the goodwill recognised on consolidation is expected to be deductible for tax purposes.

The net assets acquired included trade receivables with a gross and fair value of £0.3m (AUD 0.6m), all of which have been subsequently collected.

Acquisition-related expenditure of £0.3m representing transaction costs and costs incurred to integrate the business into the Group post-acquisition, plus £0.1m of amortisation on acquired intangibles, have been charged to the income statement for the year ended 30 June 2022 and are included as specific adjusting items in **Note 7**.

15. Goodwill and impairment of non-financial assets

***Goodwill accounting policy* – Note 1(l)**
***Critical judgement on carrying value of Goodwill: CGUs* – Note 1(d)**
***Key sources of estimation uncertainty on carrying value of Goodwill* – Note 1(d)**

Movement in goodwill	Note	2023 £m	2022 £m
At 1 July		**90.6**	84.7
Acquisition of business(1)	14	**13.6**	3.8
Impairment(2)		**(5.2)**	–
Exchange adjustments		**(2.9)**	2.1
At 30 June		**96.1**	90.6

The carrying value of goodwill and the key assumptions used in determining the recoverable amount of each CGU, or group of CGUs, are as follows:

	Carrying value		Pre-tax discount rate		Long-term growth rate	
	2023 £m	2022 £m	**2023 £m**	2022 £m	**2023 £m**	2022 £m
Rail	**44.4**	46.2	**13.5%**	12.3%	**2.9%**	3.1%
Automotive and Industrial – Established(2)	**–**	5.0	**14.9%**	13.0%	**(10.0%)**	(10.0%)
Automotive and Industrial – Emerging	**14.4**	14.6	**14.9%**	13.0%	**3.9%**	3.0%
Energy and Environment(1)	**32.7**	20.0	**16.9%**	13.8%	**4.0%**	2.8%
Defense	**3.5**	3.7	**14.0%**	13.8%	**3.3%**	–
Performance Products	**1.1**	1.1	**15.9%**	14.0%	**4.4%**	1.7%
At 30 June	**96.1**	90.6				

(1) As set out in further detail in **Note 14(a)** & **(b)**, the Group acquired Aither and E3M during the current year, adding goodwill of £5.1m and £8.5m respectively to the Energy and Environment CGU. During the prior year, the Group acquired Inside Infrastructure, adding £3.8m of goodwill to the Energy and Environment CGU.

(2) At 31 December 2022, as required by IAS 36, an assessment was carried out to identify whether any indicators existed that the Goodwill balances held by the Group may be impaired. Due to a significantly more challenging performance than expected in the Automotive and Industrial – Established Mobility (A&I Established) segment, an indicator of impairment was considered to exist and the recoverable amount of the cash-generating unit (CGU) was estimated.

The recoverable amount of the CGU was based on its value in use, determined by discounting the future cash flows expected to be generated from the continuing use of the CGU. Expected cash flows for the A&I Established business decreased compared to those expected at 30 June 2022, and the carrying amount of the CGU was therefore determined to be higher than its recoverable value of nil. As a result, an impairment charge of £17.7m was recognised to administrative expenses within specific adjusting items for the A&I Established operating segment. This assessment was updated at 30 June 2023 and a further £1.0m of assets were impaired.

15. Goodwill and impairment of non-financial assets (continued)

The £18.7m of assets written off include £5.2m of goodwill, £1.8m of intangible assets (primarily development costs, including calibration tools), and £11.7m of property, plant and equipment (including £2.8m of buildings and £5.2m of test assets). After recognising the impairment, the carrying value of non-current assets allocated to this CGU was £nil.

	£m
Goodwill	**5.2**
Other intangible assets	**1.8**
Property, plant and equipment	**11.7**
Total impairment	**18.7**

In addition, an estimate of recoverable value for the combined A&I Established and A&I Emerging businesses was calculated in order to assess the carrying value of the assets shared between these CGUs (see Note 1(d)). The carrying value of the shared assets, and the A&I Emerging assets were supported by this calculation with significant headroom, and no further impairment was recognised.

Key assumptions

The five-year plan and discounted cash flow calculations thereon are used to calculate a value in use which is compared to the carrying value of the goodwill and other non-financial assets allocated to each CGU, or group of CGUs at 30 June 2023. Impairment was recognised in relation to A&I Established (see above). No other impairment was considered necessary (2022: Nil). The five-year cashflow forecasts are based on the budget for the following year (year one) and the business plans for years two to five. The five-year plan is prepared by management, and is reviewed and approved by the Board. The five-year plan reflects past experience, management's assessment of the current contract portfolio, contract wins, contract retention, price increases, gross margin, as well as future expected market trends (including the impact of climate change, where relevant), adjusted to meet the requirements of IAS 36 Impairment of Assets.

The risks associated with climate change which have been incorporated into the five-year planning process include the known and expected increased regulation in relation the use of the internal combustion engine (ICE) and the impact that will have on our customers operating in this market. The five-year planning process takes into account the requirement to adapt our product and service portfolios in response to megatrends influenced by climate change. Some risks, such as the risk of sea level rise (see discussion of Principal Risks on **page 104** of the Annual Report) are expected to arise outside of the timeline of the five-year plan and are not considered sufficiently quantifiable to include in the longer-term element of the value-in-use calculation. No other individually significant key financial risks or expenditures have been identified and any additional costs of meeting our net zero objective are not expected to be significant. Due to regulatory and other changes in the market relating to ICE, a long-term decrease of 10% p.a. has been applied to established mobility cashflows.

Cash flows beyond year five are projected into perpetuity using a long-term growth rate, which is determined as being the lower of the planned compound annual growth rate in each CGUs, or group of CGUs, five-year plan and external third party forecasts of the prevailing inflation and economic growth rates for each of the territories in which each CGU, or group of CGUs, primarily operates.

15. Goodwill and impairment of non-financial assets (continued)
The cash flows are discounted at a pre-tax discount rate, which is derived from externally sourced data and reflects the current market assessment of the Group's time value of money and risks specific to each CGU.

Research and Development Expenditure Credits (RDEC) cashflows are included in the value-in-use calculations for A&I – Established, A&I – Emerging, Performance Products and Energy and Environment. They are material to the A&I Established and A&I Emerging groups of CGUs and have been included, taking into account known changes to legislation, on the basis that there is no indication that the UK government will withdraw this benefit.

Sensitivities

The value-in-use calculations were assessed for sensitivity to reasonably possible changes to assumptions. The change in pre-tax discount rate, growth rate, operating profit and working capital which would cause the unit's (or group of units') carrying amount to exceed its recoverable amount was identified and an assessment made as to whether that change was considered reasonably possible. In addition, a scenario was modelled for each of a 10% reduction in operating profit, a 10% increase in working capital movement, a 2% increase in the pre-tax discount rate and a 2% decrease in the long-term growth rate, and a scenario with each of these changes combined.

The following reasonably possible scenarios, resulting in carrying amount exceeding the recoverable amount of goodwill, were identified:

- The Rail group of CGUs recoverable value exceeds its carrying value by £6.7m.
  - An increase in the pre-tax discount rate of 1.0% would result in the carrying value of the Rail groups of CGUs to exceed its recoverable value.
  - A decrease in the long-term growth rate of 1.1% would result in the carrying value of the Rail groups of CGUs to exceed its recoverable value.
  - A decrease in operating profit 6% would result in the carrying value of the Rail groups of CGUs to exceed its recoverable value.
- The Performance Products CGU recoverable value exceeds its carrying value by £8.5m
  - A reduction in operating profit of 9% would result in the carrying value of performance products CGU exceeding its recoverable value.

No other reasonably possible changes to individual assumptions were identified which would cause the carrying amount of a unit's (or group of units') goodwill to exceed its recoverable amount.

16. Other intangible assets

Other intangible assets accounting policy – Note 1(m)
Critical judgement on recoverability of capitalised development costs – Note 1(d)

	Acquired intangible assets				
	Customer contracts and relationships £m	Software and technology £m	Software £m	Development costs £m	Total £m
Cost					
At 1 July 2021	38.0	2.1	23.6	43.2	106.9
Acquisition of business [1]	2.0	–	–	–	2.0
Additions	–	–	0.6	7.3	7.9
Disposals	–	–	(1.5)	(17.4)	(18.9)
Reclassified to held-for-sale	–	–	–	(14.0)	(14.0)
Reclassifications	–	–	0.2	(0.7)	(0.5)
Exchange rate adjustments	1.1	–	0.4	2.1	3.6
At 30 June 2022	41.1	2.1	23.3	20.5	87.0
At 1 July 2022	**41.1**	**2.1**	**23.3**	**20.5**	**87.0**
Acquisition of business [1]	**5.9**	**12.5**	**–**	**–**	**18.4**
Additions	**–**	**–**	**0.1**	**5.4**	**5.5**
Disposals	**–**	**–**	**(0.8)**	**(0.1)**	**(0.9)**
Exchange rate adjustments	**(1.6)**	**(0.2)**	**(0.2)**	**(0.4)**	**(2.4)**
At 30 June 2023	**45.4**	**14.4**	**22.4**	**25.4**	**107.6**
Accumulated amortisation					
At 1 July 2021	27.8	2.0	19.5	23.7	73.0
Charge for the period	4.5	–	1.5	6.6	12.6
Impairment charge	–	–	0.2	2.0	2.2
Disposals	–	–	(1.4)	(17.4)	(18.8)
Reclassified to held-for-sale	–	–	–	(7.0)	(7.0)
Exchange rate adjustments	0.8	0.1	0.3	0.7	1.9
At 30 June 2022	33.1	2.1	20.1	8.6	63.9
At 1 July 2022	**33.1**	**2.1**	**20.1**	**8.6**	**63.9**
Charge for the period	**4.0**	**0.5**	**1.3**	**3.3**	**9.1**
Impairment charge [2]	**–**	**–**	**0.3**	**1.5**	**1.8**
Disposals	**–**	**–**	**(0.8)**	**(0.1)**	**(0.9)**
Reclassifications	**–**	**–**	**–**	**(0.3)**	**(0.3)**
Exchange rate adjustments	**(1.1)**	**–**	**(0.2)**	**(0.1)**	**(1.4)**
At 30 June 2023	**36.0**	**2.6**	**20.7**	**12.9**	**72.2**
Net book value					
At 1 July 2021	10.2	0.1	4.1	19.5	33.9
At 30 June 2022	8.0	–	3.2	11.9	23.1
At 30 June 2023	**9.4**	**11.8**	**1.7**	**12.5**	**35.4**

(1) See **note 14**
(2) See **note 15**

16. Other intangible assets (continued)
Customer contracts and relationships were primarily identified as part of the prior year acquisition of Inside Infrastructure (see **Note 14**) and previous acquisitions LR Rail and Transport Engineering. The assets specific to previous acquisitions have carrying values of £0.8m (2022: £2.1m) and £1.7m (2022: £3.9m) and have remaining amortisation periods of one year. Customer contracts and relationships identified as part of the acquisition of Inside Infrastructure (see **Note 14(c)**) have a carrying value of £1.5m (2022: £2.0m) and a remaining amortisation period of five years.

Software which is not acquired through business combinations primarily comprises costs that have been capitalised in respect of an internally developed ERP system. The ERP system has a carrying value of £nil (2022: £0.7m) and has been fully amortised. Software includes £nil (2022: £0.1m) in respect of assets under construction which are not being amortised until the assets are made available for use.

Development costs are incurred to develop and regularly update a suite of simulation and analysis software tools used in the Automotive sector, but also with applications in other sectors. These assets were classified as held-for sale at the year-end as part of the Software disposal group in the prior year (see **Note 19**). Following a detailed review of the asset base against the future strategy, assets relating to technologies and areas that the A&I business will no longer focus on or invest in were identified and derecognised, as no significant further economic benefits are expected to arise from these assets, resulting in a charge to the income statement of £nil (2022: £2.0m) (see **Note 7**).

Development costs include a patented system that combines anti-lock braking and electronic stability control (ABS brake kits) to mitigate rollover fatalities commonly associated with the High Mobility Multipurpose Wheeled Vehicle (HMMWV or Humvee). This asset has a carrying value of £1.3m (2022: £1.7m). Development costs also include £5.4m (2022: £nil) of additions related to customer contracts relationships associated with the Aither acquisition (see **Note 14(a)**.

In addition, development costs include £6.1m (2022: £4.6m) in respect of assets under construction which are not being amortised until the assets are made available for use. Development costs under construction include new technology, tools and processes in the A&I and EE segments.

The amortisation charge of £9.1m (2022: £12.6m) is comprised of £3.5m (2022: £4.0m) included within cost of sales and £5.6m (2022: £8.6m) included within administrative expenses in the income statement, of which £4.6m (2022: £4.5m) relates to acquired intangible assets and is presented within specific adjusting items, as set out in **Note 7**.

17. Property, plant and equipment

Property, plant and equipment accounting policy – Note 1(n)

	Freehold land and buildings £m	Leasehold properties £m	Plant and machinery £m	Fixtures, fittings and equipment £m	Total £m
Cost					
At 1 July 2021	32.0	4.3	82.2	24.1	142.6
Additions	0.2	0.5	2.1	1.9	4.7
Disposals	(0.1)	(0.4)	(4.9)	(4.4)	(9.8)
Reclassified to held-for-sale	–	–	–	(0.3)	(0.3)
Reclassifications	(0.1)	(0.1)	0.7	(0.1)	0.4
Exchange rate adjustments	1.5	0.1	0.4	0.7	2.7
At 30 June 2022	33.5	4.4	80.5	21.9	140.3
At 1 July 2022	**33.5**	**4.4**	**80.5**	**21.9**	**140.3**
Acquisition of business	**–**	**–**	**0.1**	**–**	**0.1**
Additions	**0.2**	**0.5**	**3.4**	**2.1**	**6.2**
Disposals	**(0.2)**	**(0.4)**	**(3.2)**	**(1.7)**	**(5.5)**
Reclassifications	**0.3**	**0.1**	**(0.4)**	**0.1**	**0.1**
Exchange rate adjustments	**(0.5)**	**0.1**	**(0.1)**	**(0.2)**	**(0.7)**
At 30 June 2023	**33.3**	**4.7**	**80.3**	**22.2**	**140.5**
Accumulated depreciation and impairment					
At 1 July 2021	13.5	2.4	61.8	18.0	95.7
Charge for the period	0.5	0.3	3.1	1.8	5.7
Disposals	(0.1)	(0.3)	(4.8)	(4.4)	(9.6)
Reclassified from held-for-sale	–	–	–	(0.2)	(0.2)
Reclassifications	–	(0.1)	–	–	(0.1)
Exchange rate adjustments	1.1	–	0.1	0.6	1.8
At 30 June 2022	15.0	2.3	60.2	15.8	93.3
At 1 July 2022	**15.0**	**2.3**	**60.2**	**15.8**	**93.3**
Charge for the period	**0.6**	**0.5**	**2.0**	**1.7**	**4.8**
Impairment	**2.8**	**0.3**	**7.8**	**0.8**	**11.7**
Disposals	**(0.2)**	**(0.3)**	**(2.5)**	**(1.6)**	**(4.6)**
Reclassifications	**–**	**–**	**0.3**	**–**	**0.3**
Exchange rate adjustments	**(0.3)**	**0.2**	**(0.1)**	**(0.1)**	**(0.3)**
At 30 June 2023	**17.9**	**3.0**	**67.7**	**16.6**	**105.2**
Net book value					
At 1 July 2021	18.5	1.9	20.4	6.1	46.9
At 30 June 2022	18.5	2.1	20.3	6.1	47.0
At 30 June 2023	**15.4**	**1.7**	**12.6**	**5.6**	**35.3**

17. Property, plant and equipment (continued)
Prior year plant and machinery additions are presented net of a £1.5m government grant.

The carrying value of assets under construction included in property, plant and equipment amounts to £1.1m (2022: £4.1m). The prior year value of assets under construction included £2.3m relating to test cells and related equipment.

At 30 June 2023, the Group had plant and machinery financed through a hire-purchase agreement and secured on the asset (see **Note 25**) with a carrying value of £0.3m (2022: £0.6m). As disclosed in **Note 36**, a guarantee was provided to the Ricardo Group Pension Fund (RGPF) of £2.8m in respect of certain contingent liabilities that may arise, which have been secured on freehold land and buildings with a carrying value of £12.1m (2022: £14.8m).

At 30 June 2023, contracts had been placed for future capital expenditure, which have not been provided for in the financial statements, amounting to £0.6m (2022: £1.1m).

£0.3m of ABS brake kit tooling costs previously classified to development costs have been reclassified to plant and machinery to more accurately reflect the nature of the assets (see also **Note 16**).

18. Right-of-use assets, lease liabilities and lease receivables

Leases accounting policy – Note 1(o)

(a) Leasing activities as lessee
The Group leases various office premises and technical centres, vehicles and other equipment.

Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose any covenants. Leased assets may not be used as security for borrowing purposes. Property lease terms range from one to 21 years, with an average of five years, and may have extension or termination options. The impact of exercising these options, where not currently considered reasonably certain, is quantified below. There are several property subleases within the Group – see **Note 18(b)** below. Other lease terms range from one to five years, with an average of three years. Where leases are short-term and/or leases of low-value items, the Group has elected not to recognise right-of-use assets and lease liabilities for these leases.

18. Right-of-use assets, lease liabilities and lease receivables (continued)

(a) Leasing activities as lessee (continued)

(i) Right-of-use assets

Information about leases for which the Group is a lessee is presented below.

	Property £m	Plant and machinery £m	Fixtures, fittings and equipment £m	Total £m
Cost				
At 1 July 2021	33.9	0.9	0.6	35.4
Arising on acquisition	0.4	–	–	0.4
Additions	4.1	0.2	0.4	4.7
Disposals	(6.2)	(0.2)	–	(6.4)
Remeasurements	(2.0)	–	–	(2.0)
Exchange rate adjustments	0.5	–	–	0.5
At 30 June 2022	30.7	0.9	1.0	32.6
At 1 July 2022	**30.7**	**0.9**	**1.0**	**32.6**
Arising on acquisition	**0.5**	**–**	**–**	**0.5**
Additions	**3.5**	**0.3**	**0.1**	**3.9**
Disposals	**(2.3)**	**(0.4)**	**(0.3)**	**(3.0)**
Remeasurements	**2.9**	**0.1**	**(0.1)**	**2.9**
Exchange rate adjustments	**(0.2)**	**–**	**–**	**(0.2)**
At 30 June 2023	**35.1**	**0.9**	**0.7**	**36.7**
Accumulated depreciation and impairment				
At 1 July 2021	15.1	0.6	0.2	15.9
Charge for the period	3.5	0.3	0.2	4.0
Impairment loss	0.6	–	–	0.6
Disposals	(6.2)	(0.2)	–	(6.4)
Exchange rate adjustments	0.2	–	–	0.2
At 30 June 2022	13.2	0.7	0.4	14.3
At 1 July 2022	**13.2**	**0.7**	**0.4**	**14.3**
Charge for the period	**4.3**	**0.3**	**0.2**	**4.8**
Disposals	**(2.3)**	**(0.4)**	**(0.3)**	**(3.0)**
Exchange rate adjustments	**(0.1)**	**–**	**–**	**(0.1)**
At 30 June 2023	**15.1**	**0.6**	**0.3**	**16.0**
Net book value				
At 1 July 2021	18.8	0.3	0.4	19.5
At 30 June 2022	17.5	0.2	0.6	18.3
At 30 June 2023	**20.0**	**0.3**	**0.4**	**20.7**

In the prior period, an impairment charge of £0.6m was recognised in respect of the decision to reduce occupancy of the Prague office. The charge reflects a reduction in the carrying value for part of the site to value-in-use based on expected sublease income, which is expected to be higher than the fair value less costs of disposal. These costs are recognised within administrative expenses and included in "Reorganisation costs: Other reorganisation costs" within specific adjusting items (**Note 7**).

18. Right-of-use assets, lease liabilities and lease receivables (continued)

(a) Leasing activities as lessee (continued)

Other reassessments of lease terms resulted in a remeasurements which increased both right-of-use assets and lease liabilities by £2.9m (2022: £(2.0m)). In the current year, these reassessments included a remeasurement related to rent review for midlands Technical Centre of £1.2m and increase in capacity and extension of lease term for Troy Technical Centre £1.3m.

The net book value of Property above is shown net of £0.8m (2022: £0.8 m) in respect of consideration received as part of a historical sale and leaseback transaction, deemed to be an incentive for extending the lease term.

The lessee's incremental borrowing rate applied to lease liabilities recognised in the statement of financial position at the date of initial application vary due to length and geographical location and are as follows:

- Property – 1.4% to 7.9%
- Plant and machinery – 0.6% to 9.9%
- Fixtures, fittings and equipment – 0.9% to 4.3%

The following amounts are included in the income statement relating to short-term and low value leases:

	2023 £m	2022 £m
Short-term leases	0.5	0.7

As at 30 June 2023, potential future cash outflows of £4.4m (undiscounted) (2022: £4.4m) have not been included in the lease liability because it is not reasonably certain that the leases will be extended, or not terminated.

(ii) Lease liabilities

Movement in lease liability	Note	2023 £m	2022 £m
At 1 July		23.3	24.3
Arising on acquisition		0.5	0.4
New leases		3.8	4.7
Interest	10	0.9	0.9
Payments		(6.0)	(5.4)
Remeasurements		2.9	(2.0)
Exchange rate adjustments		(0.3)	0.4
At 30 June		25.1	23.3

Maturity of lease liability	2023 £m	2022 £m
Current liabilities – maturing within one year	5.7	5.0
Non-current liabilities – maturing after one year	19.4	18.3
At 30 June	25.1	23.3

The maturity analysis of this liability is shown **Note 28(c)**.

18. Right-of-use assets, lease liabilities and lease receivables (continued)

(b) Leasing activities as lessor

The Group subleases out several parts of its leased property. All subleases are classified as operating leases from a lessor perspective with the exception of one sublease, which the Group has classified as a finance sublease.

For significant subleases, a dilapidations provision is put in place to minimise the risk related to the value of the residual asset. Information about leases for which the Group is a lessor is presented below.

(i) Finance lease

During the year, the Group recognised finance income of £0.1m (2022: £0.1m) relating to its lease receivable. The following table sets out the movements in the lease receivable balance during the year.

Movement in lease receivable	Note	2023 £m	2022 £m
At 1 July		2.1	2.0
Interest	10	–	0.1
Receipts		(0.2)	(0.2)
Exchange rate adjustments		–	0.2
At 30 June		**1.9**	2.1

The following table sets out a maturity analysis of lease receivable, showing the undiscounted lease payments to be received after the reporting date:

Maturity of lease receivable	2023 £m	2022 £m
Less than one year	0.2	0.2
One to two years	0.2	0.2
Two to three years	0.2	0.2
Three to four years	0.2	0.2
Four to five years	0.2	0.2
More than five years	1.5	1.8
Undiscounted lease receivable	**2.5**	2.8
Unearned finance income	(0.6)	(0.7)
Net investment in the lease	**1.9**	2.1

This is a back-to-back lease with a right-of-use asset. As a finance lease this is included in other receivables. See Note 23.

(ii) Operating lease

During the year, the Group recognised rental income of £0.6m (2022: £0.5m) relating to operating leases.

The following table sets out a maturity analysis of lease payments, showing the undiscounted lease payments to be received after the reporting date.

Operating lease income	2023 £m	2022 £m
Less than one year	0.5	0.4
One to two years	0.4	0.4
Two to three years	0.3	0.4
Three to four years	–	0.3
	1.2	1.5

19. Disposal group held for sale and non-current assets held for sale

***Discontinued operations and held for sale accounting policy* – Note 1(c)**

The Group's software business was classified as held for sale at 30 June 2022. The sale completed on 1 August 2022 – see **Note 3**.

The fair value less costs to dispose of the disposal group is considered to exceed its carrying value immediately prior to its classification as held for sale. No impairment loss was therefore recognised on reclassification of the disposal group as held for sale.

The value of assets and liabilities included in the disposal group are as follows:

	Note	2023 £m	2022 £m
Other intangible assets	16	–	7.0
Property, plant and equipment	17	–	0.1
Trade, contract and other receivables	23	–	1.4
Cash and cash equivalents	25	–	1.1
Assets held for sale		–	9.6
Trade, contract and other payables	24	–	3.4
Liabilities held for sale		–	3.4

Movements on non-current assets held for sale are as follows:

Movements on non-current assets held for sale	Note	Other intangible assets £m	Property, plant and equipment £m	Total £m
At 1 July 2021		–	–	–
Transferred from non-current assets		7.0	0.1	7.1
At 30 June 2022		7.0	0.1	7.1
At 1 July 2022		**7.0**	**0.1**	**7.1**
Additions		**0.2**	**–**	**0.2**
Exchange adjustments		**0.1**	**–**	**0.1**
Assets disposed of	3	**(7.3)**	**(0.1)**	**(7.4)**
At 30 June 2023		**–**	**–**	**–**

20. Provisions for liabilities and charges

Provisions for liabilities and charges accounting policy – Note 1(p)

	Warranty £m	Restructuring costs £m	Employment-related benefits £m	Other £m	Total £m
At 1 July 2021	3.4	1.7	1.8	0.5	7.4
Charged to the income statement	1.9	2.2	0.5	0.2	4.8
Utilised in the period	(1.5)	(1.5)	(0.3)	–	(3.3)
Released in the period	(0.4)	–	–	(0.1)	(0.5)
Exchange rate adjustments	–	0.1	–	(0.1)	–
At 30 June 2022	3.4	2.5	2.0	0.5	8.4
At 1 July 2022	**3.4**	**2.5**	**2.0**	**0.5**	**8.4**
Charged to the income statement	**1.6**	**3.0**	**0.3**	**0.1**	**5.0**
Utilised in the period	**(0.6)**	**(4.5)**	**(0.1)**	**(0.4)**	**(5.6)**
Released in the period	**(1.2)**	**(0.2)**	**–**	**–**	**(1.4)**
Exchange rate adjustments	**–**	**–**	**(0.1)**	**–**	**(0.1)**
At 30 June 2023	**3.2**	**0.8**	**2.1**	**0.2**	**6.3**

	2023 £m	2022 £m
Current	**2.6**	5.1
Non-current	**3.7**	3.3
At 30 June	**6.3**	8.4

The warranty provision reflects the Directors' best estimate of the cost required to fulfil the Group's assurance-type warranty obligations within a number of contracts. Subsequent to their initial recognition, warranty provisions are utilised or released over the periods of the various warranty obligations, which are expected to be less than five years.

The prior provision for restructuring costs included amounts payable to former employees who have been made redundant, primarily as part of the reorganisation of our A&I and Rail segments, as set out in further detail in **Note 7**. The element of the provision relating to redundancy costs was partially utilised during the year with the remaining balance expected to be utilised in less than one year. A provision for additional work to take test assets out of service is also included above.

Employment-related benefits are statutory provisions which include long-service awards and termination indemnity schemes. The timing of the cash outflows is dependent upon the retirement or attrition of employees, but is predominantly expected to be more than five years.

Other provisions primarily comprise of dilapidation and restoration costs for leasehold property. Dilapidation and restoration costs reflects management's best estimate of future obligations relating to the maintenance and restoration of leasehold properties arising from past contractual commitments to new, extended or terminated lease agreements. Restoration costs expected at the commencement of the lease are included within the right-of-use asset value (see **Note 18(a)**). The timing of the cash outflows is dependent upon the remaining term of the associated leases and are subject to negotiation.

21. Deferred tax

This note explains how our Group deferred tax charge arises and also provides information on our expected future tax charges and sets out the tax assets held across the Group together with our view on whether or not we expect to be able to make use of these in the future.

Deferred tax accounting policy – Note 1(q)

Non-current	2023 £m	2022 £m
Assets	**8.5**	9.0
Liabilities	**(15.5)**	(12.7)
At 30 June	**(7.0)**	(3.7)

	Accelerated capital allowances £m	Defined benefit obligation £m	Tax losses and credits £m	Unrealised capital gains £m	Other £m	Total £m
At 1 July 2021	(5.5)	(1.3)	7.7	(0.7)	(0.1)	0.1
Arising on acquisition	–	–	–	–	(0.6)	(0.6)
Charged to income statement	(1.1)	(0.9)	(1.5)	–	1.7	(1.8)
Charged to other comprehensive income	–	(1.6)	–	–	–	(1.6)
Charged directly to equity	–	–	–	–	(0.3)	(0.3)
Exchange rate adjustments	–	–	–	–	0.5	0.5
At 30 June 2022	(6.6)	(3.8)	6.2	(0.7)	1.2	(3.7)
At 1 July 2022	**(6.6)**	**(3.8)**	**6.2**	**(0.7)**	**1.2**	**(3.7)**
Arising on acquisition	**–**	**–**	**–**	**–**	**(4.7)**	**(4.7)**
Charged to income statement	**(0.1)**	**(0.6)**	**(4.2)**	**–**	**4.4**	**(0.5)**
Credited to other comprehensive income	**–**	**1.2**	**–**	**–**	**–**	**1.2**
Credited directly to equity	**–**	**–**	**–**	**–**	**0.7**	**0.7**
Exchange rate adjustments	**0.1**	**–**	**0.3**	**–**	**(0.4)**	**–**
At 30 June 2023	**(6.6)**	**(3.2)**	**2.3**	**(0.7)**	**1.2**	**(7.0)**

On 30 June 2023, a deferred tax liability of £0.3m is recognised on temporary differences associated with the undistributed earnings of subsidiaries. The Group controls the timing of payment of these undistributed earnings and would suffer a withholding tax charge on these, when remitted to the United Kingdom.

A deferred tax asset continues to be recognised in the United States as at 30 June 2023 in respect of historic research and development claims (R&D credits) that can be utilised against future taxable profits. These R&D credits carry a 20-year statute of limitation and must be utilised within that period. The carrying value of the R&D credits recognised at 30 June 2023 is £1.5m (USD 1.9m) (2022: £4.3m (USD 5.7m). The Directors have performed an assessment and consider that it is probable that future taxable profits will be available in the United States against which the carrying value of the recognised deferred tax asset for the R&D credits can be utilised in the foreseeable future. This assessment was based on a review of the projected annual profit before tax of the consolidated tax group in the United States, based upon the latest Board-approved budgets and business plans for the next three years, together with long-term growth assumptions based on prevailing inflation and economic growth rates. Based on the 'base case' assumptions, the entire deferred tax asset is forecast to be fully utilised by no later than 30 June 2025. The assessment was subject to reverse-stress testing, the results of which did not change management's view of the recoverability of the asset.

In addition, a deferred tax asset continues to be recognised in China as at 30 June 2023 in respect of local tax losses that be can be utilised against future taxable profits. Losses carry a 5 year expiry window from the year subsequent to the year in which the loss was incurred. The carrying value of the tax losses recognised as at 30 June 2023 is £0.6m (2022: £0.3). The Directors have performed an assessment and consider that it is probable that future taxable profits will be available in China against which the carrying value of the recognised deferred tax asset on losses can be utilised in the foreseeable future.

21. Deferred tax (continued)

With respect to the UK, during the year, trading losses on which a deferred tax asset was recognised in the prior year have been fully utilised to offset taxable trading profits in the UK. As such no deferred tax asset is recognised on UK tax losses as at 30 June 2023 (2022: £1.0m). A deferred tax asset has not been recognised on capital losses of £0.3m.

The tax losses incurred in Germany as at 30 June 2023, for which no deferred tax asset has been provided, amounts to £31m (EUR 36m) (2022: £31m, EUR 36m). Due to the restructuring in Germany and the reduction in activity in Germany in recent years, the Directors consider it unlikely that sufficient future taxable profits will be available in Germany in the foreseeable future against which the carrying value of the brought forward deferred tax asset can be utilised.

WORKING CAPITAL

22. Inventories

***Inventories accounting policy* – Note 1(r)**

	2023 £m	2022 £m
Raw materials and consumables	**21.8**	15.6
Work in progress	**6.2**	4.2
Finished goods	**1.5**	1.2
At 30 June	**29.5**	21.0

Inventories of £90.8m (2022: £53.8m) were recognised as an expense during the year and included in cost of sales. During the year £1.6m (2022: £0.5m) of inventory was written down and also included in cost of sales.

23. Trade, contract and other receivables

Trade, contract and other receivables mainly consist of amounts owed to us by customers and amounts that we pay to our suppliers in advance. The note also includes contract assets, which represent an asset for accrued revenue in respect of goods or services delivered to customers for which a trade receivable does not yet exist.

***Trade, contract and other receivables accounting policy* – Note 1(s)**
***Critical judgements – Impairment of financial assets* – Note 1(c)**

	Note	2023 £m	2022 £m
Trade receivables		**74.4**	61.8
Less: provision for impairment of trade receivables		**(2.5)**	(3.3)
Trade receivables – net		**71.9**	58.5
Contract assets:			
– Amounts recoverable on contracts ('AROC')		**55.3**	52.7
– Accrued revenue		**1.1**	0.3
Prepayments		**11.4**	5.7
Lease receivable	18	**1.9**	2.1
Other receivables		**14.3**	11.9
At 30 June		**155.9**	131.2
Current		**153.5**	128.7
Non-current		**2.4**	2.5
At 30 June		**155.9**	131.2

23. Trade, contract and other receivables (continued)

Contract assets arise from the recognition of revenue as and when performance obligations are satisfied, initially recognised as accrued revenue or amounts recoverable on contracts (AROC). The carrying amount of AROC at year-end has increased from £52.7m to £55.3m due to a change in the mix of projects of different sizes and at different stages of completion. AROC is presented net of a provision for impairment of contract assets of £0.3m (2022: £2.1m). Amounts are transferred to trade receivables when the right to consideration becomes unconditional. Typically this is once specified billing milestones are approved by the customer. Payment terms typically range from immediate payment to 90 days after the invoice date, and standard payment terms are 30 days after the invoice date. The revenue recognised in the year from wholly or partially satisfied distinct performance obligations in previous years is £25.9m (2022: £26.2m). This is primarily due to the impact of variation orders and cancellations for changes in scope and transaction price on contracts. Information about the Group's exposure of its trade receivables to credit and market risk is included in Notes 28(d) and 28(e).

Included within prepayments are £1.2m (2022: £1.1m) of assets recognised from the costs to obtain or fulfil an expected contract with a customer. No revenue has been recognised on these costs. An asset has been recognised because the costs directly related to an anticipated contract, they will be used in satisfying performance obligations in the future and the cost are expected to be recoverable.

The £2.4m (2022: £2.5m) non-current asset relates to other receivables. £1.7m (2022: £2.0m) of this relates to the IFRS 16 lease receivable as disclosed in **Note 18**. £0.7m (2022: £0.5m) relates to other receivables.

The movement on the provision for impairment of trade receivables is as follows. The impairment charge is shown net of the release of impairment charge for items subsequently paid.

Provision for impairment of trade receivables	Note	2023 £m	2022 £m
At 1 July		**3.3**	3.3
Net impairment to the income statement	4	**1.8**	1.3
Amounts utilised		**(2.5)**	(1.5)
Exchange rate adjustments		**(0.1)**	0.2
At 30 June		**2.5**	3.3

Order book

Order book comprises the value of all unworked purchase orders and contracts received from customers at the reporting date and provides an indication of the amount of revenue that has been secured and will be recognised in future accounting periods. Order book represents the transaction price allocated to wholly and partially unsatisfied distinct performance obligations, as defined by IFRS 15 Revenue from Contracts with Customers. The periods from 30 June in which the distinct performance obligations are expected to be satisfied, excluding the order book of the discontinued operation, are as follows:

	2023 £m	2022 £m
Less than 6 months	**165.5**	161.9
6 to 12 months	**83.9**	73.9
Over 12 months	**145.9**	104.2
At 30 June	**395.3**	340.0

24. Trade, contract and other payables

Trade, contract and other payables mainly consist of amounts owed to suppliers that have been invoiced or are accrued and contract liabilities relating to consideration received from customers in advance. They also include taxes and social security amounts due in relation to the Group's role as an employer.

Trade, contract and other payables accounting policy – Note 1(t)

	2023 £m	2022 £m
Trade payables	28.1	17.8
Accruals	28.4	27.2
Contract liabilities:		
– Payments received in advance on contracts ('POA')	34.7	20.5
– Deferred revenue	4.0	2.7
Tax and social security payable	8.8	8.2
Other payables	5.8	1.8
At 30 June	**109.8**	78.2
Current	105.0	78.2
Non-current	4.8	–
At 30 June	**109.8**	78.2

Revenue recognised in the year from contract liabilities at the beginning of the year was £24.7m (2022: £17.1m). Contract liabilities primarily relate to the Group's obligation to perform services, which are paid by customers in advance of those services being provided. Contract liabilities have increased due to changes in the mix of contracts containing upfront payment terms.

NET DEBT AND FINANCIAL RISK MANAGEMENT

25. Net debt and borrowings

The objectives when managing capital are to safeguard the ability to continue as a going concern in order to provide returns for shareholders, benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. Capital is monitored on the basis of the gearing ratio, which is calculated as net debt divided by total capital.

The majority of the Group's cash is held in bank deposits. The Group's sources of borrowing for funding and liquidity purposes come from the Group's £150.0m multi-currency revolving credit facility and through short-term overdraft facilities.

Accounting policy – Note 1(u)

The disclosures in this note include certain Alternative Performance Measures ('APMs'). For more information on the APMs used by the Group, including definitions, please refer to **Note 2**.

(a) Gearing ratio

	2023 £m	2022 £m
Net debt	62.1	35.4
Total equity	176.6	197.6
Total capital	**238.7**	233.0
At 30 June	**26.0%**	15.2%

25. Net debt and borrowings (continued)

(b) Net debt

Analysis of net debt	Note	2023 £m	2022 £m
Current assets – cash and cash equivalents			
Cash and cash equivalents		**49.8**	49.4
Cash included in disposal group held-for-sale	19	**–**	1.1
Total cash and cash equivalents		**49.8**	50.5
Current liabilities – borrowings			
Bank overdrafts repayable on demand		**(12.6)**	(11.1)
Hire purchase liabilities maturing within one year		**(0.1)**	(0.1)
Total current borrowings		**(12.7)**	(11.2)
Non-current liabilities – borrowings			
Hire purchase liabilities maturing after one year		**–**	(0.2)
Bank loans maturing after one year		**(99.2)**	(74.5)
Total non-current borrowings		**(99.2)**	(74.7)
At 30 June		**(62.1)**	(35.4)
Total cash and cash equivalents at 30 June		**49.8**	50.5
Total borrowings at 30 June		**(111.9)**	(85.9)
At 30 June		**(62.1)**	(35.4)

Movement in net debt	2023 £m	2022 £m
At 1 July	**(35.4)**	(46.9)
Net (decrease)/ increase in cash and cash equivalents and bank overdrafts	**(2.2)**	10.1
Repayments of hire purchase	**0.2**	0.1
Proceeds from bank loans	**(128.0)**	(13.0)
Repayments of bank loans	**103.0**	15.0
Amortisation of bank loan fees	**0.3**	(0.7)
At 30 June	**(62.1)**	(35.4)

At the year-end, the Group had current hire-purchase liabilities of £0.1m and non-current hire-purchase liabilities of £nil. This hire-purchase agreement has an implicit rate of interest of 2.4%. The future undiscounted minimum lease payments due within one year is £0.1m and due after one year is £nil.

At the year-end, the Group held total banking facilities of £166.1m (2022: £216.8m), which included committed facilities of £150.0m (2022: £200.0m). The committed facility consists of a £150.0m multi-currency Revolving Credit Facility (RCF) which provides the Group with committed funding through to July 2026. In addition, the Group has uncommitted facilities including overdrafts of £16.1m (2022: £16.8m), which mature throughout this and the next financial year and are renewable annually.

Non-current bank loans comprise committed facilities of £99.2m (2022: £74.5m), net of direct issue costs, which were drawn primarily to fund acquisitions and general corporate purposes. These are denominated in Pounds Sterling and have variable rates of interest dependent upon the Group's adjusted leverage, which range from 1.65% to 2.45% above SONIA (2022: 1.4% to 2.2% above SONIA).

25. Net debt and borrowings (continued)

Adjusted leverage is defined in the Group's banking documents as being the ratio of total net debt to adjusted EBITDA. Adjusted EBITDA is further defined as being earnings before interest, tax, depreciation, impairment and amortisation, excluding the impact of IFRS 16, adjusted for any one-off, non-recurring, exceptional costs and acquisitions or disposals during the relevant period. At the reporting date, the Group has an adjusted leverage of 1.4x, which attracts a rate of interest of SONIA plus 1.85% (2022: SONIA plus 1.65%). The Group has banking facilities for its UK companies which together have a net overdraft limit, but the balances are presented on a gross basis in the financial statements.

26. Reconciliation of movements of liabilities to cash flows arising from financing activities

	Borrowings Note 25 £m	Lease liabilities Note 18 £m	Total £m
At 1 July 2021	88.9	24.3	113.2
Changes from financing cash flows (see Cash Flow Statement)			
– Proceeds from loans and borrowings	13.0	–	13.0
– Repayment of hire purchase liability	(0.1)	–	(0.1)
– Repayment of bank loan	(15.0)	–	(15.0)
– Movement in bank overdraft	(1.6)	–	(1.6)
– Repayment of lease liabilities	–	(4.6)	(4.6)
Total changes from financing cash flows	(3.7)	(4.6)	(8.3)
Effect of changes in foreign exchange rates	–	0.4	0.4
Other changes			
Liability related			–
– Arising on acquisition	–	0.4	0.4
– New leases	–	4.7	4.7
– Remeasurements	–	(2.0)	(2.0)
– Interest expense	3.5	0.9	4.4
– Interest paid	(2.8)	(0.8)	(3.6)
Total other changes	0.7	3.2	3.9
At 30 June 2022	85.9	23.3	109.2
At 1 July 2022	**85.9**	**23.3**	**109.2**
Changes from financing cash flows (see Cash Flow Statement)			
– Proceeds from loans and borrowings	**128.0**	**–**	**128.0**
– Repayment of hire purchase liability	**(0.2)**	**–**	**(0.2)**
– Repayment of bank loan	**(103.0)**	**–**	**(103.0)**
– Movement in bank overdraft	**1.5**	**–**	**1.5**
– Repayment of lease liabilities	**–**	**(5.1)**	**(5.1)**
Total changes from financing cash flows	**26.3**	**(5.1)**	**21.2**
Effect of changes in foreign exchange rates	**–**	**(0.3)**	**(0.3)**
Other changes			
Liability related			
– Arising on acquisition	**–**	**0.5**	**0.5**
– New leases	**–**	**3.8**	**3.8**
– Remeasurements	**–**	**2.9**	**2.9**
– Interest expense	**6.1**	**0.9**	**7.0**
– Interest paid	**(6.4)**	**(0.9)**	**(7.3)**
Total other changes	**(0.3)**	**7.2**	**6.9**
At 30 June 2023	**111.9**	**25.1**	**137.0**

27. Fair value of financial assets and liabilities

Fair value of financial assets and liabilities accounting policy – Note 1(v)

There are no differences between the fair value of financial assets and liabilities and their carrying value. The Group holds the following financial instruments:

	Note	2023 £m	2022 £m
Financial assets			
Amortised cost:			
– Trade receivables – net	23	**71.9**	58.5
– Lease receivable	23	**1.9**	2.1
– Other receivables	23	**14.3**	11.9
– Cash and cash equivalents	25	**49.8**	49.4
Fair value through profit or loss (FVTPL)			
– Fair value hedging instruments		**2.3**	0.8
		140.2	122.7
Financial liabilities			
Amortised cost:			
– Borrowings	25	**111.9**	85.9
– Lease payables	18	**25.1**	23.3
– Trade payables	24	**28.1**	17.8
– Other payables	24	**5.8**	1.8
Fair value through profit or loss (FVTPL)			
– Fair value hedging instruments		**1.0**	5.1
At 30 June		**171.9**	133.9

A net derivative financial gain of £5.6m (2022: loss £4.2m) was recognised in the year related to foreign exchange contracts (see also **Note 28(g)**):

	2023 £m	2022 £m
Foreign exchange swap contract assets:		
– Fair value losses	**(0.7)**	(5.4)
– Fair value gains	**7.1**	0.9
Foreign exchange swap contract liabilities:		
– Fair value losses	**(1.0)**	(0.6)
– Fair value gains	**0.2**	0.9
	5.6	(4.2)

28. Financial risk management

The financial risks faced by the Group comprise capital risk, liquidity risk, credit risk and market risk (comprising interest rate risk and foreign exchange risk). The Board reviews and agrees policies for managing each of these risks. The Group have no material exposure to commodity price fluctuations and this situation is not expected to change in the foreseeable future.

The financial instruments of the Group comprise floating rate borrowings, the main purpose of which is to raise finance for the Group's operations, and foreign exchange contracts used to manage currency risks.

28. Financial risk management (continued)

(a) Objectives, policies and strategies

The objectives when managing capital are to safeguard the ability to continue as a going concern in order to provide returns for shareholders, benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

(b) Capital risk

Capital is monitored on the basis of the gearing ratio. This ratio is calculated as net debt divided by total capital. Net debt is calculated as borrowings less cash and cash equivalents. Total capital is calculated as equity, plus net debt. Please see Note 25.

(c) Liquidity risk

The Group's policy towards managing its liquidity risks is to maintain a mix of short- and medium-term borrowing facilities. Short-term flexibility is provided by bank overdraft facilities. In addition, the Group maintains medium-term borrowing facilities in order to provide the appropriate level of finance to support current and future working capital requirements. As the cash profile on large contracts can vary significantly, the Group seeks committed facilities that provide sufficient headroom against forecast requirements to mitigate its exposure.

The tables below analyse the Group's external non-derivative financial liabilities into relevant maturity groupings, based on the remaining period at the reporting date to the contractual maturity date. All amounts disclosed in the tables below are the contractual undiscounted cash flows. These amounts approximate to their carrying amount as the impact of discounting on trade payables that mature after more than one year is insignificant and borrowings that mature after more than one year are primarily floating rate bank loans where payments are reset to market rates at regular short-term intervals.

Not included within the tables below are the following financial liabilities:

- Derivative financial liabilities as their contractual maturities are not considered to be essential for an understanding of the timing of the cash flows; and
- Other payables as the phasing of these liabilities is not contractually defined;

Maturity of trade payables	2023 £m	2022 £m
Within one month	**25.1**	14.3
After one month and within three months	**3.0**	3.5
At 30 June	**28.1**	17.8

Maturity of borrowings	2023 £m	2022 £m
Overdrafts repayable on demand	**12.6**	11.1
Within 12 months:		
– Hire purchase liabilities	**0.1**	0.1
After 12 months and within 5 years:		
– Hire purchase liabilities	**–**	0.2
– Bank loans	**99.2**	74.5
At 30 June	**111.9**	85.9

Maturity of undiscounted lease liability	2023 £m	2022 £m
Within one year	**5.8**	5.1
Between one and five years	**15.3**	13.0
After five years	**7.4**	8.5
Finance portion of net liability	**(3.4)**	(3.3)
At 30 June	**25.1**	23.3

28. Financial risk management (continued)

(d) Credit risk

The Group is exposed to credit risk in respect of its trade receivables, which are stated net of provision for impairment (see Note 1(s)). Exposure to this risk is mitigated by careful evaluation of the granting of credit and the use of credit insurance where practicable. Concentrations of credit risk with respect to trade receivables are limited due to the Group's customer base being large and unrelated.

Expected credit loss assessment	Weighted – average loss rate %	Gross carrying amount £m	Impairment loss allowance £m
At 30 June 2022			
Not overdue not impaired	0.25%	47.4	(0.4)
Overdue but not impaired:			
Less than 30 days overdue	2.00%	7.7	(0.2)
31–60 days overdue	5.00%	1.3	(0.1)
61–90 days overdue	10.00%	1.0	(0.1)
91–120 days overdue	20.00%	0.9	(0.2)
121–180 days overdue	25.00%	0.5	(0.1)
181–365 days overdue	50.00%	0.3	(0.2)
Over 365 days overdue	75.00%	2.7	(2.0)
		61.8	(3.3)
At 30 June 2023			
Not overdue not impaired	**0.25%**	**56.7**	**(0.1)**
Overdue but not impaired:			
Less than 30 days overdue	**2.00%**	**10.3**	**(0.2)**
31–60 days overdue	**5.00%**	**1.9**	**(0.1)**
61–90 days overdue	**10.00%**	**1.3**	**(0.1)**
91–120 days overdue	**20.00%**	**0.7**	**(0.1)**
121–180 days overdue	**25.00%**	**1.4**	**(0.6)**
181–365 days overdue	**50.00%**	**1.1**	**(0.5)**
Over 365 days overdue	**75.00%**	**1.0**	**(0.8)**
		74.4	**(2.5)**

The Group's customers include the world's major transportation original equipment manufacturers, tier 1 suppliers, energy companies and government agencies. Revenue by customer location is disclosed within Note 6 and trade receivables are derived from these customer groups and locations.

The Group has limited experience of bad debts with any of these customers. Of the total net trade receivables balance as at 30 June 2023, £25.3m as received in July 2023 (2022: £25.9m). Trade receivables and contract assets are provided in full when there is no reasonable expectation of recovery. There were no such balances in the current or prior year.

An analysis of net trade receivables by currency is as follows:

Analysis of net trade receivables by currency	2023 £m	2022 £m
Pounds Sterling	**33.7**	25.7
US Dollars	**17.2**	15.5
Chinese Renminbi	**3.1**	6.2
Euros	**6.7**	5.6
Australian Dollars	**1.8**	1.5
Other currencies	**9.4**	4.0
At 30 June	**71.9**	58.5

28. Financial risk management (continued)

(d) Credit risk (continued)

The Group is exposed to bank credit risk in respect of money held on deposit and certain derivative transactions entered into with banks. Exposure to this form of risk is mitigated as material transactions are only undertaken with bank counterparties that have high credit ratings assigned by international credit-rating agencies. The Group further limits risk in this area by setting an overall credit limit for all transactions with each bank counterparty in accordance with the institution's credit standing.

Maximum exposure to counterparty risk	2023 £m	2022 £m
Cash and cash equivalents (including held-for-sale disposal group)	49.8	50.5
Derivative financial assets	2.3	0.8
At 30 June	**52.1**	**51.3**

Analysis of cash and cash equivalents by geographic location (including held-for-sale disposal group)	2023 £m	2022 £m
United Kingdom	15.2	19.6
Asia	11.4	8.5
Europe	8.3	5.6
Australia	4.4	5.0
North America	3.9	4.8
Rest of the World	6.6	7.0
At 30 June	**49.8**	**50.5**

(e) Market risk

Interest rate risk

The Group's borrowings and cash balances held at floating interest rates are exposed to cash flow interest rate risk. The exposure to interest rate movements is not currently hedged as the variable rates of interest are largely dependent upon the adjusted leverage of the Group. The effect of any foreseen changes in the underlying reference interest rate remain unhedged, although the policy is reviewed on an ongoing basis. The Group's lease assets and liabilities are held at fixed interest rates.

Financial assets and liabilities by interest type	2023 £m	2022 £m
Financial assets		
• Fixed rate	1.9	2.1
• Floating rate	26.8	28.7
• Interest-free	111.5	91.9
At 30 June	**140.2**	**122.7**
Financial liabilities		
• Fixed rate	25.2	23.6
• Floating rate	112.5	86.1
• Interest-free	34.2	24.2
At 30 June	**171.9**	**133.9**

28. Financial risk management (continued)

(e) Market risk (continued)

Foreign exchange risk

The Group faces currency exposures on trading transactions undertaken by its subsidiaries in foreign currencies and balances arising therefrom, and on the translation of profits earned in, and net assets of, overseas subsidiaries primarily in the US, Europe, China and Australia. The carrying amounts of the Group's foreign currency denominated monetary assets and liabilities are:

	Assets		Liabilities	
Foreign currency denominated assets and liabilities	**2023 £m**	2022 £m	**2023 £m**	2022 £m
US Dollar	**29.9**	24.4	**13.5**	10.1
Euro	**16.7**	12.9	**10.8**	12.8
Chinese Renminbi	**8.7**	13.5	**1.3**	1.6
Australian Dollar	**6.7**	6.7	**5.5**	1.5

The following foreign exchange differences were (charged)/credited to the income statement for the Group:

Foreign exchange gains/(losses) on financial assets and liabilities	Note	**2023 £m**	2022 £m
Derivative contracts measured at FVTPL			
• Foreign exchange contract assets	27	**6.4**	(4.5)
• Foreign exchange contract liabilities	27	**(0.8)**	0.3
Other financial assets		**(6.3)**	1.8
Other financial liabilities		**0.8**	2.8
		0.1	0.4

The Group does not undertake any speculative currency transactions.

The Group use derivative financial instruments primarily to manage currency risk on its US Dollar, Euro, Chinese Renminbi, Japanese Yen, Hong Kong Dollar and Australian Dollar denominated receivables from its subsidiaries, in addition to managing transactional exposures relating to customer contracts denominated in foreign currencies.

(f) Sensitivity analysis of financial instruments to market risk

Exchange rate sensitivity

The Group has financial assets and liabilities denominated in foreign currencies, principally in US Dollars, Euros, Chinese Renminbi and Australian Dollars, which are not in the functional currency of the entity that holds them. A 20% change in the value of the US Dollar, Euro, Chinese Renminbi or Australian Dollar would have an immaterial impact on the value of these financial instruments at the year-end.

Interest rate sensitivity

A reasonably possible change of 2 percentage point in interest rates at the reporting date would have increased (decreased) profit or loss by the amounts shown below, based on the value of the Group's floating rate financial instruments at the year-end.

A 2 percentage points sensitivity is deemed to be appropriate as interest charges on the Group's loans are based on SONIA, and are therefore considered reasonably possible to be subjected to fluctuations in interest rates in the foreseeable future.

Impact of interest rate movements	**2023 Decrease in profit before tax £m**	2022 Decrease in profit before tax £m
2pp increase in interest rates	**(0.9)**	(1.5)

28. Financial risk management (continued)

(g) Cash flow derivatives

The Group employs derivative financial instruments, including foreign exchange contracts, to mitigate currency exposures on trading transactions that could affect the income statement. Changes in the fair value of effective derivative foreign exchange swap contracts designated as hedge accounted under IFRS 9 are recognised in other comprehensive income, with any ineffective amount recognised in the income statement. Any other changes in the fair value of derivative foreign exchange forward and option contracts are recognised in the income statement. No derivative transactions were designated as hedge accounted in the current year.

Cash flows expected to occur from derivative financial instruments used by the Group for hedging purposes are set out below, which will be largely offset by cash flows expected to occur from hedged items.

Affecting the income statement	2023 £m	2022 £m
Within three months	22.4	23.8
After three months and within twelve months	12.8	9.1
After twelve months	16.5	10.5
	51.7	43.4

EQUITY

29. Share capital and share premium

Share capital – ordinary shares of 25p each	2023 Number	2022 Number	2023 £m	2022 £m
Allotted, called up and fully paid				
At 1 July	62,218,280	62,218,280	15.6	15.6
At 30 June	62,218,280	62,218,280	15.6	15.6

No dividends were paid for interim and final dividends in respect of shares held by an Employee Benefit Trust (EBT) in relation to the LTIP. There were 2,816 such shares at 30 June 2023 (2022: 8,795 shares).

Share premium	2023 £m	2022 £m
At 1 July and 30 June	16.8	16.8

30. Other reserves

The merger reserve represents the amount by which the fair value of the shares issued as consideration for historic acquisitions exceeded their nominal value, offset by the goodwill on these acquisitions, and the premium on a placing share issue, net of directly attributable costs. The translation reserve comprises cumulative foreign exchange differences arising from the translation of financial statements of foreign operations on consolidation.

	Merger reserve £m	Translation reserve £m	Total £m
At 1 July 2021	24.5	13.5	38.0
Exchange rate adjustments	–	6.5	6.5
At 30 June 2022	24.5	20.0	44.5
At 1 July 2022	24.5	20.0	44.5
Exchange rate adjustments	–	(6.4)	(6.4)
Reclassification on disposal of foreign operation	–	(0.9)	(0.9)
At 30 June 2023	24.5	12.7	37.2

31. Retained earnings

	Note	2023 £m	2022 £m
At 1 July		**120.5**	112.2
(Loss)/profit for the period		**(5.4)**	8.6
Remeasurements of the defined benefit pension scheme	34	**(5.0)**	5.2
Deferred tax on remeasurements of the defined benefit pension scheme	21	**1.2**	(1.6)
Ordinary share dividends	9	**(6.7)**	(5.0)
Purchases of own shares to settle awards		**(0.1)**	(0.2)
Tax credit relating to share option schemes		**0.7**	(0.3)
Equity-settled transactions	35	**1.4**	1.6
At 30 June		**106.6**	120.5

32. Non-controlling interests

In the opinion of the Directors, the comprehensive income for the year and equity at the reporting date which is attributable to non-controlling interests is not considered to be material. Non-controlling interests are listed in **Note 37**.

EMPLOYEES

33. Employee numbers and costs

Employee numbers and costs, including the discontinued operation, are as follows:

Staff costs	Note	2023 £m	2022 £m
Wages and salaries (including redundancy and termination costs)		**173.4**	164.4
Social security costs		**19.2**	16.6
Pensions costs – defined contribution schemes		**12.9**	10.2
Share-based payments	35	**1.3**	1.4
Total staff costs		**206.8**	192.6

Average monthly number of employees (including Executive Directors)	2023	2022
Energy and Environment	**862**	729
Rail	**531**	566
Automotive and Industrial	**902**	969
Defense	**206**	182
Performance Products	**351**	411
Plc and Board	**59**	58
Total average number of employees	**2,911**	2,915

Key management compensation	2023 £m	2022 £m
Short-term employee benefits	**4.6**	4.6
Share-based payments	**1.0**	1.0
Post-employment benefits	**0.3**	0.2
Termination benefits	**0.6**	1.0
	6.5	6.8
Key management personnel services provided by a separate management entity	**0.1**	–
Total key management compensation	**6.6**	6.8

Key management personnel are the Board of Directors, together with the Managing Directors who have the authority and responsibility for planning, directing and controlling the Group's activities and resources within the market sectors in which the Group operates. The remuneration received by all Executive and Non-Executive Directors during the year is disclosed in the Directors' Remuneration Report on **page 137**.

34. Retirement benefits

Retirement benefits accounting policy – **Note 1(w)**
Key sources of estimation uncertainty on defined benefit obligations – **Note 1(d)**

The Group operates a defined benefit pension scheme, the Ricardo Group Pension Fund (RGPF), which closed to future accrual on 28 February 2010. Responsibility for the governance of the RGPF – including investment decisions and contribution schedules – lies with the Board of Trustees, with the assets held in the fund governed by local regulations and practice in the United Kingdom. The Board of Trustees must be comprised of representatives of the Group and RGPF participants in accordance with the RGPF's regulations. The last approved triennial valuation of the RGPF was completed with an effective date of 5 April 2020 and was approved on 30 November 2021. At the effective date, the assets of the RGPF had a market value of £135.8m and were sufficient to cover 84% of the benefit that had accrued to members when assessed on the Trustees' prudent funding basis. Based on the recovery plan agreed following the 2020 valuation annual contributions due to the RGPF during the year ending 30 June 2023 will be £1.8m. The next triennial valuation with an effective date of 5 April 2023 is being discussed by the Group and the Trustees in 2023 and is expected to be completed in 2024. The IAS 19 Employee Benefits valuation was completed as at 30 June 2023. The pension costs relating to the RGPF were assessed using the projected unit credit method, in accordance with the advice of Mercer, qualified actuaries.

From June 2016, the Group and Trustees decided to introduce a 'retirement flexibility' option to the RGPF, which allows members to transfer out their benefit at retirement. The Group continues to make no allowance within the defined benefit obligation as at 30 June 2023 for members who may elect to transfer out their benefits at retirement. This assumption will be reviewed on an ongoing basis and may change in future as experience emerges as to the level of members who elect to transfer out their benefits at retirement.

The post-retirement mortality assumptions for the current year have been reviewed and use mortality tables known as the SAPS 'Series 3' tables (2022: SAPS 'Series 3'), with an 85% (2022: 85%) multiplier for males and an 84% (2022: 84%) multiplier for females, both applicable to the 'standard' version of the table. The future improvements component has been updated to be in line with the Continuous Mortality Investigation (CMI) 2022 projection model with an 'S-kappa' smoothing parameter of 7, an initial addition to mortality improvements of 0.5%, a 25% weighting on 2022 data and no weighting on 2021 or 2020 data (2022: CMI 2021 with 'S-kappa' smoothing parameter of 7, an initial addition to mortality improvements of 0.5% and no weighting on 2021 or 2020 data). The latest available CMI model will be used at each year-end to provide the most accurate representation of the defined benefit obligation. The use of a 1.25% long-term trend is consistent with the prior year. The "core" version of the CMI 2022 projection model has been used. Due to uncertainties regarding the impact of the COVID-19 pandemic on future mortality trends, this excludes any allowance for population data across 2020 and 2021, and includes a reduced 25% weighting (rather than a full weighting) to 2022 population experience. We will continue to monitor this in the future and have disclosed the sensitivity the defined benefit obligation had to mortality below. Under these principal mortality assumptions, the expected future life expectancy from age 65 is as follows:

	2023		2022	
Age	**Males**	**Females**	Males	Females
65 now	**23.1**	**25.5**	23.6	26.0
65 in 20 years	**24.3**	**26.9**	25.0	27.4

Other principal assumptions	**2023 % p.a.**	2022 % p.a.
Discount rate	**5.40%**	3.85%
RPI inflation rate	**3.30%**	3.25%

34. Retirement benefits (continued)

Other assumptions	2023 %	2022 %
Rate of increase in pensions in payment accrued p.a.		
– Pre 1 July 2002 (pensioner/deferred for current year)	**3.75% / 3.65%**	3.70% / 3.60%
– Post 1 July 2002 (pensioner/deferred for current year)	**3.10% / 2.85%**	3.15% / 2.80%
– Post 88 GMP (pensioner/deferred for current year)	**2.10% / 2.05%**	2.10% / 2.05%
Rate of increase in deferred pension revaluation p.a.	**2.70%**	2.70%
Percentage of pension to be commuted for lump sum at retirement	**15.00%**	15.00%

	2023			2022 Restated*		
Scheme assets	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	**14.3**	**–**	**14.3**	15.1	–	15.1
Debt	**73.0**	**–**	**73.0**	82.4	–	82.4
Cash and other	**0.9**	**0.3**	**1.2**	9.7	0.4	10.1
Property fund	**7.8**	**–**	**7.8**	9.8	–	9.8
Investment funds	**8.3**	**–**	**8.3**	9.7	–	9.7
At 30 June	**104.3**	**0.3**	**104.6**	126.7	0.4	127.1

* 2022 has been restated to reclassify the property fund from Unquoted to Quoted

The pension scheme has not invested in any of the company's own financial instrument nor in properties or other asset used by the company. An annuity policy represents the value of an annuity purchased in the name of the Trustee, which provides the pension benefits for one member. The annuity policy has been valued by a qualified actuary based on the related obligations. The portfolio was able to maintain the same long-term objective despite the market moves and collateral calls. Strategic positioning was adjusted during the year as a greater strategic allocation to LDI funds was required to maintain the desired level hedging.

Movements in the fair value of scheme assets and present value of the defined benefit surplus/(obligation) were as follows:

	2023			2022		
Scheme movements	Fair value of plan assets £m	Present value of obligation £m	Net total £m	Fair value of plan assets £m	Present value of obligation £m	Net total £m
At 1 July	**127.1**	**(111.9)**	**15.2**	156.1	(149.3)	6.8
Finance income/(expense)	**4.8**	**(4.2)**	**0.6**	2.9	(2.7)	0.2
Total credit/(charge) to the income statement	**4.8**	**(4.2)**	**0.6**	2.9	(2.7)	0.2
Return on plan assets excluding finance income	**(22.6)**	**–**	**(22.6)**	(28.1)	–	(28.1)
Effect of change in demographic assumptions	**–**	**1.7**	**1.7**	–	(0.1)	(0.1)
Effect of change in financial assumptions	**–**	**18.9**	**18.9**	–	39.5	39.5
Effect of experience adjustments	**–**	**(3.0)**	**(3.0)**	–	(6.1)	(6.1)
Total remeasurements in other comprehensive income	**(22.6)**	**17.6**	**(5.0)**	(28.1)	33.3	5.2
Contributions from sponsoring companies	**1.8**	**–**	**1.8**	3.0	–	3.0
Benefit payments from plan assets	**(6.5)**	**6.5**	**–**	(6.8)	6.8	–
Total cash flows	**(4.7)**	**6.5**	**1.8**	(3.8)	6.8	3.0
Total movements	**(22.5)**	**19.9**	**(2.6)**	(29.0)	37.4	8.4
At 30 June	**104.6**	**(92.0)**	**12.6**	127.1	(111.9)	15.2

34. Retirement benefits (continued)

The sensitivity of the defined benefit scheme to changes in principal assumptions:	Change in assumption	2023 Impact on present value of obligation	2022 Impact on present value of obligation
Discount rate	-0.25%	**Increase by £2.8m**	Increase by £4.0m
Inflation rate	+0.25%	**Increase by £1.7m**	Increase by £2.3m
Post-retirement mortality assumptions	-1 year	**Increase by £2.8m**	Increase by £4.6m

The above sensitivity analysis is based on a change in an assumption while holding all other assumptions constant. In practice this is unlikely to occur and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions, the same method has been applied as when calculating the pension liability recognised within non-current liabilities. The methods and types of assumptions used in preparing the sensitivity analysis did not change when compared to the previous year. Exposure to significant risks from the RGPF are as follows:

Risks	Impact
Asset volatility	The RGPF liabilities are calculated using a discount rate set with reference to corporate bond yields. If the RGPF assets underperform this yield, the deficit will increase. The RGPF holds a significant proportion of equities and a diversified range of growth funds, which are expected to outperform corporate bonds in the long-term while providing volatility and risk in the short-term. The Directors are of the view that due to the long-term nature of the RGPF liabilities and the strength of the supporting Group, this is an appropriate strategy to manage the RGPF efficiently.
Corporate bond yields	A decrease in corporate bond yields will increase RGPF liabilities, although this will be partially offset by an increase in the value of the RGPF's bond holdings. Recent events, including the war in Ukraine and recent increases in interest rates by central banks including the Bank of England primarily aimed at controlling price inflation, have caused volatility in the market, which may continue to affect corporate bond yields, with a corresponding impact on discount rates as described above. The pension scheme has not invested in any of the company's own financial instrument nor in properties or other asset used by the company. Corporate bond yields increased significantly between 30 June 2022 and 30 June 2023, resulting in a corresponding increase in the discount rate used to calculate the pension scheme liability, which significantly reduced the value of the liability between these two dates. The scheme's assets are predominantly invested in government bonds and corporate bonds in order to reduce the sensitivity of the scheme's funding level to changes in fixed interest yields, resulting in the value of scheme's assets also reducing significantly due to these increases in bond yields.
Inflation	Although there are some caps in place to protect the RGPF against extreme inflation, increases in the level of inflation will lead to higher liabilities.
Post-retirement mortality assumptions	The RGPF provides benefits for the life of the members, therefore improvements in post-retirement mortality assumptions will result in an increase in the RGPF's liabilities.

The weighted average duration of the defined benefit obligation is 12.0 (2022: 13.0) years.

Expected maturity of undiscounted pension benefits	2023 £m	2022 £m
Less than one year	**5.0**	4.8
Between one and two years	**5.1**	4.9
Between two and five years	**16.2**	15.6
Between five and ten years	**30.3**	29.0

Amounts charged to the income statement in respect of the defined benefit obligation	Note	2023 £m	2022 £m
Net financing income	10	**(0.6)**	(0.2)
Total		**(0.6)**	(0.2)

35. Share-based payments

Accounting policy – Note 1(x)

The Group operates the following share-based payment schemes: an equity-settled and a cash-settled Long-Term Incentive Plan (LTIP); a Deferred Share Bonus Plan (DBP) and an equity-settled all-employee Share Incentive Plan (SIP). The general terms and conditions, including vesting requirements and performance conditions for the equity-settled LTIP, the DBP and the equity-settled SIP are described in the Directors' Remuneration Report. The LTIP, DBP and SIP require shareholder approval for the issue of shares. There were no awards outstanding in relation to the SIP at the year-end.

One third (2022: one third) of awards granted under the LTIP and DBP Matching Awards are dependent on a Total Shareholder Return (TSR) performance condition. As relative TSR is defined as a market condition under IFRS 2 Share-based Payment, this requires the valuation model used to take into account the anticipated performance outcome. The TSR element of the charge to the income statement has been calculated using the Monte Carlo model and the earnings per share (EPS) element has been calculated using the share price at grant date. The following assumptions are used for the plan cycles commencing in these years:

	2023	2022
Weighted average share price at date of award (pence)	**443p**	420p
Expected volatility	**52.0%**	54.0%
Expected life (years)	**3**	3
Risk-free rate	**4.3%**	0.6%
Dividend yield	**0.0%**	0.0%
Possibility of ceasing employment before vesting	**13.0%**	10.0%
Weighted average fair value per LTIP as a percentage of a share at date award	**91.4%**	86.4%

Expected volatility was determined by calculating the historical volatility of the Company's share price over the three financial years preceding the date of award. The share-based payments charge of £1.3m (2022: £1.4m) disclosed in Note 34 was all in respect of equity-settled schemes.

Equity-settled Long-Term Incentive Plan

The current LTIP is described in the Directors' Remuneration Report. Awards are forfeited if the employee leaves the Group before the awards vest, unless they are considered 'good leavers'.

Outstanding	**2023 Shares allocated[1]**	2022 Shares allocated[1]
At 1 July	**1,699,535**	1,210,262
Awarded	**961,963**	772,799
Lapsed	**(802,157)**	(261,164)
Vested	**(23,514)**	(22,362)
At 30 June	**1,835,827**	1,699,535

(1) Shares allocated excludes dividend roll-up.

The outstanding LTIP awards had a weighted average contractual life of 1.6 years (2022: 1.6 years). The weighted average exercise price during the current year was 462p (2022: 375p). During the prior year, the Group utilised existing shares held in order to settle vested awards.

35. Share-based payments (continued)

Cash-settled Long-Term Incentive Plan

The cash-settled LTIP has the same performance conditions as the equity-settled LTIP but the award is settled in cash rather than by share issue.

Outstanding	2023 Shares allocated(1)	2022 Shares allocated(1)
At 1 July	**56,950**	21,748
Awarded	**44,515**	41,702
Vested	**–**	(6,500)
Lapsed	**(5,199)**	–
At 30 June	**96,266**	56,950

(1) Shares allocated excludes dividend roll-up.

The outstanding LTIP awards had a weighted average contractual life of 1.8 years (2022: 2.2 years). The weighted average exercise price during the current year was nil (2022: 380p).

Deferred Share Bonus Plan

The Deferred Share Bonus Plan is described in the Directors' Remuneration Report.

Outstanding	2023 Shares allocated(1)	2022 Shares allocated(1)
At 1 July	**60,413**	107,883
Awarded	**112,101**	15,410
Forfeited	**(42,823)**	(27,320)
Dividend shares awarded in the year	**2,872**	756
Vested	**(24,847)**	(36,316)
At 30 June	**107,716**	60,413

(1) Shares allocated excludes dividend roll-up.

The outstanding DBP awards had a weighted average contractual life of 1.4 years (2022: 0.9 years). The weighted average exercise price during the current year was 444p (2022: 427). During the year, the Group utilised existing shares held to settle vested awards.

UNRECOGNISED ITEMS AND UNCERTAIN EVENTS

36. Contingent liabilities

In the ordinary course of business, the Group has £13.4m (2022: £11.4m) of possible obligations for bonds, guarantees and counter-indemnities placed with the Group's banking and other financial institutions and primarily relating to performance under contracts with customers. These possible obligations are contingent on the outcome of uncertain future events which are considered unlikely to occur. The Group is also involved in commercial disputes and litigation with some customers, which is also in the normal course of business. Whilst the result of such disputes cannot be predicted with certainty, the ultimate resolution of these disputes is not expected to have a material effect on the Group's financial position or results.

In July 2013, a guarantee was provided to the Ricardo Group Pension Fund (RGPF) of £2.8m in respect of certain contingent liabilities that may arise, which have been secured on specific land and buildings (see **Note 17**). The outcome of this matter is not expected to give rise to any material cost to the Group. In October 2018, a further guarantee was provided to the RGPF for an amount that shall not exceed the employers' liability were a debt to arise under Section 75 of the Pensions Act 1995. In November 2021 the guarantee was extended for a further 3 years and will now terminate on 5 April 2026. The outcome of this matter is not expected to give rise to any material cost to the Group on the basis that the Group continues as a going concern.

OTHER

37. Related undertakings of the Group

UK subsidiaries

Subsidiary or related undertaking	Registered office	Company Number	Principal activities
Ricardo Investments Limited*	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	02251330	Holding Company and Management Services
Ricardo EMEA Limited∞	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	09461485	Holding Company and Management Services
Ricardo UK Limited	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	02815682	Automotive & Industrial Consulting, Strategic Consulting, Defence Consulting and Performance Products
Ricardo Asia Limited∞	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	03143661	Automotive & Industrial Consulting, Rail Consulting and Business Development
Power Planning Associates Limited∞	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	03419816	Holding Company
Ricardo-AEA Limited	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	08229264	Energy & Environmental Consulting
Cascade Consulting (Environment & Planning) Limited∞	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	04176068	Energy & Environmental Consulting
Ricardo Innovations Limited∞	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	08977105	Energy & Environmental Consulting
Ricardo Rail Limited	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	03226319	Rail Consulting
Ricardo Certification Limited∞	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	09481761	Independent Assurance
Ricardo Software Limited	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	07527490	Dormant
Ricardo Strategic Consulting Limited	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	03696451	Dormant
Ricardo Consulting Engineers Limited∞	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	05891521	Automotive & Industrial Consulting
Ricardo Technology Limited	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	02924157	Dormant
Ricardo Transmissions Limited	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	01498115	Dormant
Ricardo Pension Scheme (Trustees) Limited	Shoreham Technical Centre, Old Shoreham Road, Shoreham-by-Sea, West Sussex, BN43 5FG, United Kingdom†	02376569	Dormant

37. Related undertakings of the Group (continued)

Overseas subsidiaries

Subsidiary or related undertaking	Registered office	Country	Principal activities
Ricardo Energy Environment and Planning Pty Ltd	Grant Thornton Australia Limited, Level 17, 383 Kent Street, Sydney, NSW, 2000, Australia	Australia	Energy & Environmental Consulting
Ricardo Australia Pty Ltd*	Mills Oakley FAO: Thomas Kannan, Level 7, 151 Clarence Street, Sydney NSW 2000, Australia	Australia	Holding Company and Rail Consulting
Ricardo Rail Australia Pty Ltd	Suite 2.01, Level 2, Tower B, The Zenith, 821 Pacific Highway, Chatswood, New South Wales, 2067, Australia	Australia	Rail Consulting
Inside Infrastructure Pty Ltd[(*)]	Level 1, 101 Flinders Street, Adelaide, SA 5000, Australia	Australia	Energy & Environmental Consulting
Aither Pty Ltd (90%)[(1)]	O'Connells OBM Pty Ltd, Level 1, 20 Creek Street, Brisbane QLD 4000	Australia	Energy & Environmental Consulting
Ricardo Canada, Inc*	2600-160 Elgin Street, Ottawa, Ontario, Canada, K0A 1C3	Canada	Business Development
Ricardo Shanghai Company Limited*	Unit DEF, 10F, Building H, No. 2337 Gudai Road, Minhang District, Shanghai 201100, PR China	China	Automotive & Industrial Consulting, Rail Consulting and Business Development
Chongqing Transportation Railway Safety Assessment Center Limited (60%)[(2)]	No. 2 Yangliu Road, Mid Huangshan Street, New North District,Chongqing, 401123, PR China	China	In Liquidation
Ricardo Beijing Company Limited	Room 1215, 11th Floor, No. 63 East 3rd Riding Middle Road, Chaoyang District, Beijing, China	China	Independent Assurance
Ricardo Prague s.r.o.*	Palác Karlín, Thámova 11-13, 186 00 Praha 8, Czech Republic	Czechia	Automotive & Industrial Consulting
Ricardo Certification Denmark ApS	Høffdingsvej 34, 2500 Valby, Copenhagen, Denmark	Denmark	Independent Assurance
Ricardo GmbH*	Güglingstraße 66, 73529, Schwäbisch Gmünd, Germany	Germany	Automotive & Industrial Consulting and Business Development
Ricardo Strategic Consulting GmbH	Güglingstraße 66, 73529, Schwäbisch Gmünd, Germany	Germany	Strategic Consulting and Environmental Consulting
E3 Modelling SA (93%)[(3)]	70-72 Panormou st., Athens 115 23, -Greece	Greece	Energy & Environmental Consulting
Ricardo Hong Kong Limited	Room 12101, 12/F, YF, Life Tower, 33 Lockhart Road, Wanchai, Hong Kong	Hong Kong	Rail Consulting
Ricardo India Private Limited[(4)]	306, Corporate One Building, Plot No. 5, Jasola District Centre, New Delhi 110025, India	India	Business Development, Strategic Consulting and Environmental Consulting
Ricardo Italia s.r.l.	Via Giovanni Pascoli 47, 47853, Cerasolo, Coriano, Rimini, Italy	Italy	Automotive & Industrial Consulting
Ricardo Japan K.K.*	18th Floor, Shin Yokohama Square Building, 2-3-12 Shin Yokohama, Kohoku-ku, Yokohama-shi, Kanagawa, 222-0033, Japan	Japan	Rail Consulting and Business Development
Ricardo Nederland B.V.	Daalsesingel 51A, 3511 SW, Utrecht, The Netherlands	Netherlands	Rail Consulting
Ricardo Certification B.V.	Daalsesingel 51A, 3511 SW, Utrecht, The Netherlands	Netherlands	Independent Assurance
Ricardo Technical Consultancy LLC (49%)[(5)]	Palm Tower, Block B, 15th Floor, P.O. Box 26600, West Bay, Doha, Qatar	Qatar	Independent Assurance
Ricardo Environment Arabia LLC[(6)]	Bahrain Tower, Building Number 8953, 2393, King Fahd Road, Olaya, 12214, Kingdom of Saudi Arabia	Saudi Arabia	Dormant
Ricardo-AEA Limited Saudi Branch	Bahrain Tower, 2nd Floor, King Fahad Road, PO Box 8953, Riyadh, 12214-2393 Kingdom of Saudi Arabia	Saudi Arabia	Dormant

37. Related undertakings of the Group (continued)

Subsidiary or related undertaking	Registered office	Country	Principal activities
Ricardo Singapore Pte Limited	141 Middle Road, 5-6 GSM Building, 188976, Singapore	Singapore	Rail Consulting
Ricardo South Africa (Pty) Ltd (formerly PPA Energy (Pty) Ltd)	111 Pretoria Road, Rynfield, Benoni, Johannesburg, 1501, South Africa	South Africa	Energy & Environmental Consulting
Ricardo Consulting SL	Agustín de Foxá 29, 9B, 28036, Madrid, Spain	Spain	Energy & Environmental Consulting and Rail Consulting
Ricardo Certification Iberia SL	Agustín de Foxá 29, 9B, 28036, Madrid, Spain	Spain	Independent Assurance
Ricardo Rail (Taiwan) Ltd	11F-2 (Westside), No.51, Hengyang Rd., Zhongzheng Dist., Taipei City 10045, Taiwan (R.O.C.)	Taiwan	Independent Assurance
Ricardo (Thailand) Ltd (49%)(7)	140/36 ITF Tower 17th Floor, Silom Road, Kwang Surawong, Khet bangrak, Bangkok, 10500, Thailand	Thailand	In Liquidation
Ricardo Gulf Technical Consultancy LLC (49%)(8)	Abu Dhabi Island, Corniche Street, G5, Block 17, Floor 11, Office 1108, Unit Building / Mesmak Real Estate Company, United Arab Emirates	UAE	Energy & Environmental Consulting
Ricardo Defense Systems LLC	35860 Beattie Dr, Sterling heights, Michigan, 48312, United States	USA	Defence Manufacture
Ricardo Defense, Inc.	175 Cremona Drive, Suite 140, Goleta, California, 93117, United States	USA	Defence Consulting
C2D Joint Venture (33.3%)(9)	175 Cremona Drive, Suite 140, Goleta, California, 93117, United States	USA	Defence Consulting
Ricardo, Inc.	Detroit Technical Campus, 40000 Ricardo Drive, Van Buren Township, Detroit, Michigan, 48111-1641, United States	USA	Automotive & Industrial Consulting, Strategic Consulting and Rail Consulting
Ricardo US Holdings, Inc.	Detroit Technical Campus, 40000 Ricardo Drive, Van Buren Township, Detroit, Michigan, 48111-1641, United States	USA	Holding Company
Ricardo Real Estate LLC	Detroit Technical Campus, 40000 Ricardo Drive, Van Buren Township, Detroit, Michigan, 48111-1641, United States	USA	Property Investment Company
Ricardo Software, Inc.	Detroit Technical Campus, 40000 Ricardo Drive, Van Buren Township, Detroit, Michigan, 48111-1641, United States	USA	Dormant
CDQ Joint Venture (50%)(10)	175 Cremona Drive, Suite 140, Goleta, California, 93117, United States	USA	Dormant

* Wholly owned direct subsidiary of Ricardo plc
† Registered in England and Wales
∞ These companies have claimed exemption from audit per 479A of the Companies Act 2006.
(1) While 93% of the Share Capital of E3 Modelling SA is owned by Ricardo Investments Limited, the commitment to purchase the remaining 7% shareholding is considered to give rise to a financial liability and therefore no non-controlling interest is recognised in respect of this investment – see **Note 14**.
(2) 60% owned by Ricardo Beijing Company Limited; 40% owned by Chongqing Science & Technology Testing Center Limited.
(3) While 90% of the Share Capital of Aither Pty Ltd is owned by Ricardo Australia Pty Ltd, the commitment to purchase the remaining 10% shareholding is considered to give rise to a financial liability and therefore no non-controlling interest is recognised in respect of this investment – see **Note 14**.
(4) 99% owned by Ricardo plc; 1% owned by Ricardo UK Limited.
(5) 49% of share capital and 97% of retained earnings owned by Ricardo Rail Limited; 51% of share capital and 3% of retained earnings owned by Pro-Partnership LLC.
(6) 15% owned by Ricardo plc; 85% owned by Ricardo-AEA Limited.
(7) 49% of share capital and 92.5% of retained earnings owned by Ricardo Hong Kong Limited; 51% of share capital and 7.5% of retained earning owned by First Asia Industries Limited.
(8) 49% of share capital and 80% of retained earnings owned by Ricardo-AEA Limited; 51% of share capital and 20% of retained earnings owned by SSD Commercial Investment
(9) 33.3% owned by Ricardo Defense, Inc.; 33.3% owned by DG Technologies; 33.3% owned by Claxton Logistics Services LLC.
(10) 50% owned by Ricardo Defense, Inc.; 50% owned by DG Technologies.

37. Related undertakings of the Group (continued)

In the opinion of the Directors, the comprehensive income for the year and equity at the reporting date which is attributable to non-controlling interests is not considered to be material. Non-controlling interests are set out above in Footnotes (1) to (10).

38. Related parties' transactions

Key management personnel are the Board of Directors, together with the Managing Directors who have the authority and responsibility for planning, directing and controlling the Group's activities and resources within the market sectors in which the Group operates. This is set out in **Note 33**.

The remuneration received by all Executive and Non-Executive Directors during the year is disclosed in the Directors' Remuneration Report on **page 138**.

The Ricardo Pension Scheme (Trustees) Limited is a related party to the Group. Amounts paid to the Group's retirement payments are set out in **Note 34**.

39. Events after the reporting date

There were no events to report after the reporting date.

COMPANY PRIMARY STATEMENTS

COMPANY STATEMENT OF FINANCIAL POSITION OF RICARDO PLC
AS AT 30 JUNE

	Note	2023 £m	2022 £m
Assets			
Non-current assets			
Intangible assets	2	0.4	0.7
Property, plant and equipment	3	3.9	4.1
Right-of-use assets	4	5.8	5.2
Retirement benefit surplus	11c	12.6	15.2
Investments	5	103.1	103.1
Other receivables	7	116.4	115.0
Deferred tax assets	6	1.6	1.5
		243.8	244.8
Current assets			
Other receivables	7	24.1	22.2
Derivative financial assets	11f	2.3	0.8
Current tax assets		0.3	–
Cash and cash equivalents		1.9	2.1
		28.6	25.1
Total assets		272.4	269.9
Liabilities			
Current liabilities			
Borrowings	8	4.2	6.7
Lease liabilities	9	0.9	0.8
Trade and other payables	10	114.3	98.0
Current tax liabilities		–	0.3
Derivative financial liabilities	11f	1.0	5.1
		120.4	110.9
Net current liabilities		(91.8)	(85.8)
Non-current liabilities			
Lease liabilities	9	6.1	5.7
Deferred tax liabilities	6	4.1	4.9
		10.2	10.6
Total liabilities		130.6	121.5
Net assets		141.8	148.4
Equity			
Share capital		15.6	15.6
Share premium		16.8	16.8
Other reserves		23.5	23.5
Retained earnings		85.9	92.5
Total equity		141.8	148.4

The Ricardo plc Company statement of financial position has been prepared in accordance with Financial Reporting Standard 101 Reduced Disclosure Framework (FRS 101). The notes on pages 273 to 281 form an integral part of these financial statements.

The Company has not presented its own Income Statement and Statement of Comprehensive Income as permitted by Section 408 of the Companies Act 2006. The Company's profit for the year was £1.9m (2022: £13.0m). The financial statements of Ricardo plc (registered number 222915) on pages 271 to 281 were approved by the Board of Directors on 12 September 2023 and signed on its behalf by:

GRAHAM RITCHIE
CHIEF EXECUTIVE OFFICER

IAN GIBSON
CHIEF FINANCIAL OFFICER

COMPANY STATEMENT OF CHANGES IN EQUITY OF RICARDO PLC
FOR THE YEAR ENDED 30 JUNE

	Share capital £m	Share premium £m	Other reserves £m	Retained earnings £m	Total £m
At 1 July 2021	15.6	16.8	23.5	79.9	135.8
Profit for the year	–	–	–	13.0	13.0
Other comprehensive income for the year	–	–	–	3.1	3.1
Total comprehensive income for the year	–	–	–	16.1	16.1
Equity-settled transactions	–	–	–	1.7	1.7
Purchases of own shares to settle awards	–	–	–	(0.2)	(0.2)
Ordinary share dividends	–	–	–	(5.0)	(5.0)
At 30 June 2022	15.6	16.8	23.5	92.5	148.4
At 1 July 2022	**15.6**	**16.8**	**23.5**	**92.5**	**148.4**
Profit for the year	**–**	**–**	**–**	**1.9**	**1.9**
Other comprehensive expense for the year	**–**	**–**	**–**	**(3.8)**	**(3.8)**
Total comprehensive expense for the year	**–**	**–**	**–**	**(1.9)**	**(1.9)**
Equity-settled transactions	**–**	**–**	**–**	**1.4**	**1.4**
Purchases of own shares to settle awards	**–**	**–**	**–**	**(0.1)**	**(0.1)**
Tax relating to share option schemes	**–**	**–**	**–**	**0.7**	**0.7**
Ordinary share dividends	**–**	**–**	**–**	**(6.7)**	**(6.7)**
At 30 June 2023	**15.6**	**16.8**	**23.5**	**85.9**	**141.8**

COMPANY NOTES TO THE FINANCIAL STATEMENTS OF RICARDO PLC

1. Principal accounting policies

Basis of preparation

Notwithstanding net current liabilities of £91.8m (2022: £85.8m) the financial statements of Ricardo plc have been prepared on a going concern basis, as discussed in the viability statement on page 108. These financial statements were prepared in accordance with Financial Reporting Standard 101 Reduced Disclosure Framework ("FRS 101"). In preparing these financial statements, the Company applies the recognition, measurement and disclosure requirements of UK-adopted international accounting standards in conformity with the requirements of the Companies Act 2006 but makes amendments where necessary in order to comply with Companies Act 2006 and has set out below where advantage of the FRS 101 disclosure exemptions has been taken. The accounting policies set out below have been applied consistently to all years presented in these financial statements. The following exemptions available under FRS 101 have been applied:

- Paragraphs 45(b) and 46 to 52 of IFRS 2 Share-based Payment (details of the number and weighted average exercise prices of share options and how the fair value of goods and services received was determined).
- IFRS 7 Financial Instruments: Disclosures.
- Paragraphs 91 to 99 of IFRS 13 Fair Value Measurement (disclosure of valuation techniques and inputs used for fair value measurement of assets and liabilities).
- Paragraph 38 of IAS 1 Presentation of Financial Statements to present comparative information in respect of:
  - paragraph 73(e) of IAS 16 Property, Plant and Equipment; and
  - paragraph 118(e) of IAS 38 Intangible Assets.
- The following paragraphs of IAS 1 Presentation of financial statements:
  - 10(d) (statement of cash flows);
  - 16 (statement of compliance with all IFRS);
  - 38(a) (requirement for minimum of two primary statements, including cash flow statements);
  - 38(b)-(d) (additional comparative information);
  - 111 (cash flow statement information); and
  - 134–136 (capital management disclosures).
- IAS 7 Statement of Cash Flows (the Company has not published its individual cash flow statement as its liquidity, solvency and financial adaptability are dependent on the Group rather than its own cash flows).
- Paragraphs 30 and 31 of IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors (requirement for the disclosure of information when an entity has not applied a new IFRS that has been issued and is not yet effective).
- Paragraph 17 of IAS 24 Related Party Disclosures (key management compensation) and the requirements of IAS 24 Related Party Disclosures to disclose related party transactions entered into between two or more members of the Group, provided that any subsidiary which is party to the transaction is wholly-owned by such a member.

Significant accounting policies

The significant accounting policies applied in the preparation of these individual financial statements are set out below. These policies have been applied consistently to all the years presented, unless otherwise stated.

1. Principal accounting policies (continued)

Investments

Investments in subsidiaries are stated at cost less any impairment in value. The Company evaluates the carrying value of investments at the end of each financial year to determine if there has been an impairment in value, which would result in the inability to recover the carrying amount. When it is determined that the carrying value exceeds the recoverable amount, the excess is written-off to comprehensive income.

Amounts owed by subsidiary undertakings

The majority of the Company's financial assets are amounts owed by subsidiary undertakings. These are measured initially at fair value, and subsequently at amortised cost. The general approach is applied to the impairment of financial assets, recognising a loss allowance for expected credit losses (ECL). Where the credit risk has not increased significantly since initial recognition the loss allowance are measured as 12-month ECL. For balances repayable on demand, or where the credit risk has increased significantly since initial recognition, a lifetime ECL is measured. ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Company expects to receive, therefore considering future expectations). ECLs are discounted at the effective interest rate of the financial asset.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECL, the Company considers the available cash and cash equivalents within the subsidiary, the net current assets of the undertaking and future cash generation.

Assets are provided in full and subsequently written off when there is no reasonable expectation of recovery. Indicators that there may be no reasonable expectation of recovery could include, amongst others, evidence that the subsidiary has entered liquidation proceedings, or no reasonable expectation that sufficient future cash generation to repay the loan will occur in the subsidiary undertaking.

Other significant accounting policies

Other significant accounting policies are consistent with the Group financial statements.

Judgements in applying accounting policies and key sources of estimation uncertainties

The preparation of financial statements under FRS 101 requires the Company's management to make judgements and estimates that affect the application of accounting policies and the reported amounts of assets, liabilities, revenues and costs. These judgements and estimates are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The key area of judgment that has the most significant effect on the amounts recognised in the financial statements is the review of financial assets for impairment. Management has applied judgement to when determining the credit risk of fellow Group undertakings and their ability to repay loans.

The area involving significant risk of a material adjustment to the carrying amounts of assets and liabilities due to estimate uncertainty within the next financial year is the Company's defined benefit obligation. This risk is the same as that of the Group and is explained in **Note 1(d)** to the Group financial statements. Another area of estimation uncertainty is management's assessment of the Company's investments to determine whether an indicator of impairment exists. Where applicable, management then evaluates the carrying value of investments against their value in use to determine if there has been an impairment in value, which would result in the inability to recover the carrying amount. The value in use is estimated using a discounted cash flow methodology. A pre-tax discount rate is used to discount the cash flows, which are derived from externally sourced data reflecting the current market assessment of these investments.

1. Principal accounting policies (continued)

The basis for the projected cash flows is the Group's five-year plan, which is prepared by management and reviewed and approved by the Board. The plan reflects past experience and management's assessment of the current contract portfolio, contract wins, contract retention, price increases, and gross margin, as well as future expected market trends. Cash flows after the five-year plan are projected into perpetuity using a growth rate based on inflation and an average long-term economic growth rate for the territory.

Changes in accounting policies

Several other standards, interpretations and amendments to existing standards became effective on 1 July 2021 as detailed in **Note 1(z)** to the Group financial statements; none of these had a material impact on the Company.

2. Intangible assets

	Software £m
Cost	
At 1 July 2021	9.7
Disposals	(0.2)
At 30 June 2022	9.5
At 1 July 2022	**9.5**
Disposals	**(0.8)**
At 30 June 2023	**8.7**
Accumulated amortisation	
At 1 July 2021	8.6
Charge for the period	0.4
Disposals	(0.2)
At 30 June 2022	8.8
At 1 July 2022	**8.8**
Charge for the period	**0.3**
Disposals	**(0.8)**
At 30 June 2023	**8.3**
Net book value	
At 1 July 2021	1.1
At 30 June 2022	0.7
At 30 June 2023	**0.4**

Software includes £nil (2021: £0.1m) in respect of assets under construction which are not being amortised until the assets are made available for use.

3. Property, plant and equipment

	Land and property £m	Fixtures, fittings and equipment £m	Total £m
Cost			
At 1 July 2021	6.7	1.4	8.1
At 30 June 2022	6.7	1.4	8.1
At 1 July 2022	**6.7**	**1.4**	**8.1**
At 30 June 2023	**6.7**	**1.4**	**8.1**
Accumulated depreciation and impairment			
At 1 July 2021	2.9	0.7	3.6
Charge for the period	0.2	0.2	0.4
At 30 June 2022	3.1	0.9	4.0
At 1 July 2022	**3.1**	**0.9**	**4.0**
Charge for the period	**0.1**	**0.1**	**0.2**
At 30 June 2023	**3.2**	**1.0**	**4.2**
Net book value			
At 1 July 2021	3.8	0.7	4.5
At 30 June 2022	3.6	0.5	4.1
At 30 June 2023	**3.5**	**0.4**	**3.9**

A contingent liability of up to £2.8m which is associated with a guarantee provided to the Ricardo Group Pension Fund in July 2013 is secured on specific land and buildings. Further detail is given in **Note 36** to the Group financial statements.

4. Leases

a) As a lessee

The Company leases one office premises and technical centre, with a remaining lease term of 3 years. The lease agreement does not impose any covenants. The leased asset may not be used as security for borrowing purposes.

Right-of-use assets

	Property £m	Motor Vehicles £m	Total £m
Cost			
At 1 July 2021	7.6	–	7.6
Additions	–	0.1	0.1
At 30 June 2022	7.6	0.1	7.7
At 1 July 2022	**7.6**	**0.1**	**7.7**
Additions	**–**	**0.1**	**0.1**
Remeasurements	**1.1**	**–**	**1.1**
At 30 June 2023	**8.7**	**0.2**	**8.9**
Accumulated depreciation and impairment			
At 1 July 2021	1.9	–	1.9
Charge for the period	0.6	–	0.6
At 30 June 2022	2.5	–	2.5
At 1 July 2022	**2.5**	**–**	**2.5**
Charge for the period	**0.6**	**–**	**0.6**
At 30 June 2023	**3.1**	**–**	**3.1**
Net book value			
At 1 July 2021	5.7	–	5.7
At 30 June 2022	5.1	0.1	5.2
At 30 June 2023	**5.6**	**0.2**	**5.8**

See Note 9 Lease liabilities for details of the associated lease liabilities.

b) As a lessor

The Company subleases part of its right of use property with a remaining term of 3 years. This lease is classified as an operating lease.

During the year the Company recognised rental income of £0.4m (2022: £0.3m) on these subleases.

The following table sets out a maturity analysis of lease payments, showing the undiscounted lease payments to be received after the reporting date.

Operating lease	2023 £m	2022 £m
Less than one year	**0.4**	0.4
One to five years	**1.6**	1.0
Total	**2.0**	1.4

5. Investments

	Shares in subsidiaries £m
Cost and Net Book Value	
At 1 July 2021	103.1
At 30 June 2022	103.1
At 1 July 2022	**103.1**
At 30 June 2023	**103.1**

The Directors consider that the fair value of investments is not less than the carrying value. Details of the Company's subsidiaries and related undertakings are shown in **Note 37** to the Group financial statements.

6. Deferred tax

Movement in deferred tax balance	2023 £m	2022 £m
At 1 July	**(3.4)**	(0.9)
Charged to income statement	**(1.0)**	(0.5)
Credited/(charged) to other comprehensive income	**1.2**	(2.0)
Credited directly to equity	**0.7**	–
At 30 June	**(2.5)**	(3.4)

Balance comprised of:	2023 £m	2022 £m
Accelerated capital allowances	**(0.3)**	(0.3)
Defined benefit obligation	**(3.3)**	(3.9)
Tax losses and credits	**(0.3)**	0.3
Unrealised capital gains	**(0.6)**	(0.6)
Other	**2.0**	1.1
At 30 June	**(2.5)**	(3.4)

Non-current:	2023 £m	2022 £m
Assets	**1.6**	1.5
Liabilities	**(4.1)**	(4.9)
At 30 June	**(2.5)**	(3.4)

7. Other receivables

	2023 £m	2022 £m
Amounts owed by subsidiaries	**137.2**	134.3
Prepayments	**1.8**	1.5
Other receivables	**1.5**	1.4
At 30 June	**140.5**	137.2
Current	**24.1**	22.2
Non-current	**116.4**	115.0
At 30 June	**140.5**	137.2

£17.4m (2022: £9.8m) of the amounts owed by subsidiaries are due for repayment within the next 12 months and the remaining £119.8m (2022: £124.5m) have no fixed repayment date.

Non-current trade and other receivables consist of amounts owed by subsidiaries which are neither planned nor likely to be settled in the foreseeable future. £108.8m (2022: £113.8m) of the amounts owed by subsidiaries carry interest at rates between 2.0% and 5.0% (2022: 2.0% and 5.0%) with the remaining £28.4m (2022: £20.5m) being interest-free. All amounts owed by subsidiaries are unsecured, and expected credit losses are considered to be immaterial.

8. Borrowings

	2023 £m	2022 £m
Current liabilities – borrowings		
Bank overdrafts repayable on demand	**4.2**	6.7
At 30 June	**4.2**	6.7

The Company has the same banking facilities as the Group. See **Note 25** to the Group financial statements.

9. Lease liabilities

Movement in lease liability	2023 £m	2022 £m
At 1 July	**6.5**	6.9
Additions	**0.1**	0.1
Remeasurement	**1.1**	–
Interest	**0.3**	0.3
Payments	**(1.0)**	(0.8)
At 30 June	**7.0**	6.5

	2023 £m	2022 £m
Current liabilities – maturing within one year	**0.9**	0.8
Non-current liabilities – maturing after one year	**6.1**	5.7
At 30 June	**7.0**	6.5

9. Lease liabilities (continued)

Maturity of undiscounted lease liability	2023 £m	2022 £m
Within one year	1.0	0.8
Between one and five years	3.8	3.2
After five years	3.7	4.0
Finance portion of net liability	(1.5)	(1.5)
At 30 June	**7.0**	6.5

10. Trade and other payables

	2023 £m	2022 £m
Trade payables	0.8	0.4
Tax and social security payable	0.9	0.6
Amounts owed to subsidiaries	108.8	92.8
Accruals	3.6	4.1
Other payables	0.2	0.1
At 30 June	**114.3**	98.0

All amounts owed to subsidiaries are unsecured. £104.1m (2022: £86.0m) of the amounts owed to subsidiaries carry interest at rates between 2.0% and 5.0% (2022: 2.0% and 3.1%) and have no fixed repayment date. £4.7m (2022: £6.8m) of the amounts owed to subsidiaries are interest-free and due for repayment within the next 12 months.

11. Other information

(a) Company audit fee

Fees payable to the Company's auditor for the audit of the Company's annual financial statements totalled £0.9m (2022: £0.8m). Fees payable to KPMG LLP and its associates for non-audit services to the Company are not required to be disclosed because the Group financial statements disclose such fees on a consolidated basis (see Note 11 to the Group financial statements).

(b) Director's emoluments

The remuneration received by all Executive and Non-Executive Directors during the year is disclosed in the Directors' Remuneration Report on page 137.

(c) Employees and defined benefit obligation

During the year the Company employed an average of 51 (2022: 50) employees.

The Company operates a defined benefit pension scheme, the Ricardo Group Pension Fund (RGPF). This is disclosed in Note 34 to the Group financial statements together with the accounting policy and key accounting estimates.

(d) Share capital, share premium and other reserves

See Notes 29 and 30 to the Group financial statements.

11. Other information (continued)

(e) Contingent liabilities

Contingent liabilities exist in the form of guarantees provided in the ordinary course of business to certain subsidiaries to give assurance of their contractual and financial commitments. None of these arrangements are expected to give rise to any material cost to the Company.

In July 2013, a guarantee was provided to the Ricardo Group Pension Fund (RGPF) of £2.8m in respect of certain contingent liabilities that may arise, which have been secured on specific land and buildings. The outcome of this matter is not expected to give rise to any material cost to the Group. In October 2018, a further guarantee was provided to the RGPF for an amount that shall not exceed the employers' liability were a debt to arise under Section 75 of the Pensions Act 1995. In November 2021 the guarantee was extended for a further 3 years and will now terminate on 5 April 2026. The outcome of this matter is not expected to give rise to any material cost to the Group on the basis that the Group continues as a going concern.

(f) Derivative financial assets and liabilities

The Company has the same derivative financial assets and liabilities as the Group. These are disclosed in Note 27 to the Group financial statements.

(g) Related party transactions

The Company has taken the exception under FRS 101 not to disclose related party transactions entered into between two or more members of the Group, nor to disclose key management compensation. Directors' emoluments are referenced in **Note 11(b)**.

OTHER INFORMATION

CORPORATE INFORMATION

Group General Counsel and Company Secretary
Harpreet Sagoo

Registered office
Ricardo plc
Shoreham Technical Centre Shoreham-by-Sea
West Sussex BN43 5FG

Registered Company number
222915

Registrars
Link Asset Services
The Registry
34 Beckenham Road
Beckenham
Kent BR3 4TU

Independent auditors
KPMG LLP
15 Canada Square London
E14 5GL

Stockbrokers
Investec Investment Banking 2 Gresham Street
London EC2V 7QP
Tel: 0207 597 5000

Liberum Capital Limited Ropemaker Place
25 Ropemaker Street
London EC2Y 9LY
Tel: 0203 100 2000

Website: www.ricardo.com/en
A PDF version of this Annual Report & Accounts can be downloaded from the Investors page of our website.

Key dates
Annual General Meeting: 16 November 2023

Shareholder services
Link Asset Services provide a share portal service, which allows shareholders to access a variety of services online, including: viewing shareholdings; buying and selling shares online; registering change of address details; and bank mandates to have dividends paid directly into your bank account. Any shareholder who wishes to register with Link Asset Services to take advantage of this service should visit **www.linkassetservices.com/shareholders**

Shareholder enquiries
Tel: 0870 162 3131 (from the UK)
Tel: +44 208 639 3131 (from outside the UK)

Principal bankers
Lloyds Bank plc 3rd Floor
10 Gresham Street London
EC2V 7AE

HSBC Bank plc First Point Buckingham Gate
London Gatwick Airport West Sussex
RH16 0NT

Financial advisors
NM Rothschild & Sons New Court St Swithin's Lane
London
EC4P 4DU

GLOSSARY

Term	Definition
Cash conversion	Statutory cash conversion is calculated as cash generated from operations divided by earnings before interest, tax, depreciation and amortisation (EBITDA)
Constant currency organic growth/ decline	The Group generates revenues and profits in various territories and currencies because of its international footprint. Those results are translated on consolidation at the foreign exchange rates prevailing at the time. Constant currency organic growth/decline is calculated by translating the result for the current year using foreign currency exchange rates applicable to the prior year. This provides an indication of the growth/decline of the business, excluding the impact of foreign exchange.
EBITDA	Earnings before interest, tax, depreciation, impairment and amortisation
ESG	Environmental, Social and Governance
FY	Financial Year
GHG	Greenhouse gases
Headcount	Headcount is calculated as the number of colleagues on the payroll at the reporting date and includes subcontractors on a full-time equivalent basis.
ISO 9001	International standard for Quality Management Systems
ISO 14001	International standard for Environmental Management Systems
ISO 27001	International standard for Information Security Management Systems
ISO 45001	International standard for Occupational Health and Safety Management Systems
Net debt	Net debt is defined as current and non-current borrowings less cash and cash equivalents, including hire purchase agreements, but excluding IFRS 16 lease liabilities. Management believes this definition is the most appropriate for monitoring the indebtedness of the Group and is consistent with the treatment in the Group's banking agreements.
Order book	The value of all unworked purchase orders and contracts received from clients at the reporting date, providing an indication of revenue that has been secured and will be recognised in future accounting periods.
Order intake	The value of purchase orders and contracts received from clients during the period.
Organic growth/ decline	Organic growth/decline is calculated as the decline in the result for the current year compared to the prior year, after adjusting for the performance of acquisitions or disposals, to include the results of those acquisitions for an equivalent period in each financial year.
Organic result	The organic result for the prior year includes the performance of acquisitions for an equivalent period to FY 2019/20.
REEP	Ricardo Energy, Environment and Planning, formerly PLC Consulting Pty Ltd, acquired 31 July 2019
RRA	Ricardo Rail Australia, formerly Transport Engineering Pty Ltd, acquired 31 May 2019
SBTi	Science Based Targets initiative.
Scope 1 Emissions	Direct emissions from owned or controlled sources
Scope 2 Emissions	Indirect emissions from the generation of purchased energy.
Scope 3 Emissions	All indirect emissions (not included in scope 2) that occur in the value chain, including both upstream and downstream emissions.
TCFD	Task Force on Climate-Related Financial Disclosures: An organisation of 31 members aiming to develop guidelines for voluntary climate-centred financial disclosures across industries.
Underlying	Underlying measures exclude the impact on statutory measures of specific adjusting items. Underlying measures are considered to provide a more useful indication of underlying performance and trends over time.

NOTES

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Ricardo plc
Shoreham-by-Sea
West Sussex
BN43 5FG

+44 (0)1273 455611
www.ricardo.com/en