1 March 2023

This announcement contains inside information for the purposes of Article 7 of the Market Abuse Regulation (EU) 596/2014 as it forms part of UK domestic law by virtue of the European Union (Withdrawal) Act 2018 ("MAR"), and is disclosed in accordance with the Company's obligations under Article 17 of MAR.

Ricardo plc

Interim Report for the six months ended 31 December 2022 (HY 2022/23)

A good set of results, whilst also transforming our business.

HIGHLIGHTS

- A good set of underlying results for the Group in line with the Board's expectation
- Record high order book in excess of £410m
    - Continued strong growth across our Environmental and Energy-Transition portfolio, in line with strategic focus
    - Defense and Performance Products providing long-term visibility and financial resilience in our Established Mobility portfolio
- Improvement in underlying financial metrics overall
    - Strong order intake from continuing operations of £292.8m, a 42% increase on prior period
    - Revenue up 17%, underlying operating profit up 28%
    - Net debt reduced to £31.4m, with continued strong underlying cash conversion of 97%
- Market dynamics impacting the overall A&I business
    - Prioritising capital allocation towards Emerging to position the business for long-term growth
    - Accelerating restructuring in Established to optimise performance, with £18.7m of impairment and restructuring charges booked in the period (cash cost: £2.7m)
- Meaningful strategic progress accelerating our portfolio transformation
    - Disposal of Ricardo Software (£12m cash inflow after fees)
    - Acquisition of E3-Modelling after period end
- Increased interim dividend of 3.35p declared
- On track to deliver our full year expectations

	Reference		**HY 2022/23**	HY 2021/22	**Growth/ (decline)%**
Continuing operations					
Order intake		£m	**292.8**	206.1	**42.1**
Order book		£m	**414.4**	311.0	**33.2**
Revenue		£m	**212.7**	182.0	**16.9**
Underlying	*(1)*				
- Operating profit		£m	**12.5**	9.8	**27.6**
- Operating profit margin		%	**5.9**	5.4	**0.5pp**
- Profit before tax		£m	**9.9**	8.0	**23.8**
Reported					
- Operating (loss)/profit		£m	**(9.9)**	6.4	**(254.7)**
- Operating (loss)/profit margin		%	**(4.7)**	3.5	**(8.2pp)**
- (Loss)/profit before tax		£m	**(12.5)**	4.6	**(371.7)**
Total					
Underlying cash conversion	*(1) & (3)*	%	**97.1**	161.9	**(64.8pp)**
Cash conversion	*(3)*	%	**59.7**	167.6	**(107.9pp)**
Basic underlying earnings per share	*(1) & (2)*	p	**12.2**	10.6	**15.1**
Basic reported (loss)/earnings per share		p	**(13.2)**	5.6	**(335.7)**
Closing					
Net debt (comparative as at 30 June 2022)	*(4)*	£m	**31.4**	35.4	**(11.3)**
Headcount	*(5)*	no.	**2,873**	2,869	**0.1**
Dividend proposed per share		p	**3.35**	2.91	**15.1**

References are defined in the glossary of terms below.

Commenting on the results, Graham Ritchie, Chief Executive Officer, said:

"We have made good progress in the first half of the year delivering in line with the Board's expectations whilst also accelerating our portfolio transformation. As a result, our Group expectations for the full year remain unchanged. Our very strong order intake demonstrates the meaningful progress we are making against our sharpened strategy. The good revenue and profit growth is centred on our environmental and energy-transition services and our established US Department of Defense (DoD) programme, along with our continued focus on driving operational excellence.

There is still some economic uncertainty, with ongoing market dynamics impacting the performance of our A&I business, and particularly within our established portfolio. As a result we have taken decisive action to accelerate our restructuring programme in A&I to ensure that we are well positioned to improve ongoing cyclical resilience and deliver long-term sustainable growth.

We have also continued our progress in transitioning our portfolio to high growth, high margin, low capital solutions, demonstrated by our recent acquisition.

We are confident that the actions we are taking in delivering our short-term performance are aligned with our global long-term growth drivers, supporting Ricardo's ambition – to become a world-leading strategic and engineering consultancy in environmental and energy-transition solutions.

At our Capital Markets event in 2022, we set out Ricardo's sharpened strategy, and we are looking forward to hosting a follow-up event in May 2023 to provide further details on the progress we have made one year on."

About Ricardo plc

Ricardo plc is a global strategic, environmental, and engineering consulting company, listed on the London Stock Exchange. With over 100 years of engineering excellence and close to 3,000 employees in more than 20 countries, we provide exceptional levels of expertise in delivering innovative cross-sector sustainable outcomes to support energy transition and scarce resources, environmental services together with safe and smart mobility. Our global team of consultants, environmental specialists, engineers and scientists support our customers to solve the most complex and dynamic challenges to help achieve a safe and sustainable world.

Visit www.ricardo.com

Analyst and investor presentation

There will be a presentation for analysts relating to the Group's interim results for the six months ended 31 December 2022 at 9:30am on Wednesday 1 March 2023. A recording of the presentation will be available online to all investors from Wednesday 1 March 2023 at https://ricardo.com/investors/financial-reporting/results-presentations.

Further enquiries:

Ricardo plc		
Ian Gibson	Tel:	01273 455611
Natasha Perfect	Website:	www.ricardo.com
SEC Newgate		
Elisabeth Cowell	Tel:	020 7680 6882
Ian Silvera	E-mail:	ricardo@secnewgate.co.uk

Cautionary Statement

Glossary of terms

Cross-referenced to superscript in the financial tables and commentary

(1) Underlying measures exclude the impact on statutory measures of specific adjusting items as set out in Note 9. Underlying measures are considered to provide a more useful indication of underlying performance and trends over time.

(2) Underlying earnings from continuing operations also exclude a tax credit to statutory earnings of £0.5m (HY 2021/22: £0.9m) for the specific adjusting items described in Note 9.

(3) Cash conversion is a key measure of the Group's cash generation and measures 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.

(4) Net debt, as set out in Note 14, is defined as current and non-current borrowings less cash and cash equivalents, including hire purchase agreements, but excluding any impact of 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.

(5) Headcount is calculated as the number of employees on the payroll at the reporting date and includes subcontractors on a full-time equivalent basis.

(6) Constant-currency growth/decline is calculated by translating the result for the prior period using foreign currency exchange rates applicable to the current period. This provides an indication of the growth/decline of the business, excluding the impact of foreign exchange. See also Note 4.

Trading summary

Overall, Ricardo has performed in line with the Board's expectations in HY 2022/23. Revenue from continuing operations, excluding Ricardo Software, which was sold in August 2022, was £212.7m, an increase of 17% on the prior period (HY 2021/22) (12% on a constant-currency basis). Underlying operating profit from continuing operations was £12.5m and underlying profit before tax from continuing operations was £9.9m, representing growth of 28% and 24% on the prior period respectively (20% and 16% on a constant-currency basis). The underlying results are reflective of strong order intake in the period. The Group won £292.8m of new orders from continuing operations, up 42% on the prior period and 34% on the six months to 30 June 2022.

Reported operating loss from continuing operations, after taking specific adjusting items into consideration, was £9.9m (HY 2021/22: profit £6.4m) and reported loss before tax from continuing operations was £12.5m (HY 2021/22: profit £4.6m). HY 2022/23 reported operating profit and profit before tax included £18.3m 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 £0.7m were booked in A&I Established and Rail. In addition, £2.0m of amortisation on acquired intangibles and £1.4m of acquisition related expenditure were booked in the period. This was partially offset by a £7.5m gain on the disposal of Ricardo Software.

Net debt at 31 December 2022 was £31.4m, a reduction of £4.0m 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 was broadly neutral with underlying cash conversion of 97%. Reported cash conversion was 60%, after taking into account the cash impact of specific adjusting items.

Headline trading performance

		Underlying[1]		Reported	
	External revenue	**Operating profit**	**Profit before tax**	**Operating (loss)/profit**	**(Loss)/profit before tax**
	£m	**£m**	**£m**	**£m**	**£m**
HY 2022/23					
Total	**213.5**	**13.0**	**10.4**	**(1.9)**	**(4.5)**
Less: discontinued operation	**(0.8)**	**(0.5)**	**(0.5)**	**(8.0)**	**(8.0)**
Continuing operations (a)	**212.7**	**12.5**	**9.9**	**(9.9)**	**(12.5)**
Less: performance of acquisitions	**(2.0)**	**(0.5)**	**(0.5)**	**(0.4)**	**(0.4)**
Continuing operations - organic (b)	**210.7**	**12.0**	**9.4**	**(10.3)**	**(12.9)**
HY 2021/22					
Total	185.5	10.5	8.7	6.5	4.7
Less: discontinued operation	(3.5)	(0.7)	(0.7)	(0.1)	(0.1)
Continuing operations (a)	182.0	9.8	8.0	6.4	4.6
Continuing operations at current year exchange rates	190.3	10.4	8.5	6.8	4.9
Growth (%) - Total	15	24	20	(129)	(196)
Growth (%) - Continuing operations	17	28	24	(255)	(372)
Growth (%) - Continuing organic	16	22	18	(261)	(380)
Constant-currency growth(6) (%) – Continuing operations	12	20	16	(246)	(355)

References in superscript are defined in the glossary of terms.

(a) *Growth from continuing operations excludes the results of the Software operating segment which was sold on 1 August 2022 (see Note 6).*

(b) *Organic growth excludes the performance of current year acquisitions from results of FY 2022/23.*

HY 2022/23 includes the results of Inside Infrastructure Pty Ltd (Inside Infrastructure), which was acquired in March 2022. Inside Infrastructure contributed £2.0m of revenue and £0.5m of underlying operating profit and £0.5m of underlying profit before tax.

Ricardo Software contributed £0.8m of revenue and £0.5m of underlying operating profit and profit before tax in the current period (HY 2021/22: revenue of £3.5m, and £0.7m of underlying operating profit and underlying profit before tax. The current period includes the benefit of not charging £0.3m of amortisation, as the business was classified as held for sale during July 2022. The reported operating profit and profit before tax from the discontinued operation of £8.0m in the current period includes the £7.5m gain recognised on its sale. £0.6m of external fees in relation to the sale process were recognised in the prior period within reported operating profit and profit before tax.

Operating segments summary: Order intake and revenue

	HY 2022/23		HY 2021/22 Restated*		HY 2021/22 at constant-currency[6]	
	Order intake	**Revenue**	Order intake	Revenue	Order intake	Revenue
	£m	**£m**	£m	£m	£m	£m
EE	**57.4**	**38.2**	38.5	30.9	38.9	31.1
Rail	**44.8**	**36.1**	41.5	37.4	43.1	39.2
A&I - Emerging	**50.7**	**43.9**	49.5	25.0	53.1	30.7
Environmental and Energy Transition	**152.9**	**118.2**	129.5	93.3	135.1	101.0
Defense	**46.4**	**41.0**	15.8	21.5	18.3	24.9
PP	**77.0**	**38.5**	33.8	38.4	33.8	38.4
A&I - Established	**16.5**	**15.0**	27.0	28.8	28.0	26.0
Established Mobility	**139.9**	**94.5**	76.6	88.7	80.1	89.3
Operating segments - continuing operations	**292.8**	**212.7**	206.1	182.0	215.2	190.3
Plc costs	**-**	**-**	-	-	-	-
Total - continuing operations	**292.8**	**212.7**	206.1	182.0	215.2	190.3
Discontinued operation	**0.5**	**0.8**	4.5	3.5	5.1	4.0
Total	**293.3**	**213.5**	210.6	185.5	220.3	194.3

References in superscript are defined in the glossary of terms.

Operating segments summary: Operating profit

	HY 2022/23		HY 2021/22 Restated*		HY 2021/22 at constant-currency[6]	
	Underlying[1] operating profit/(loss) £m	**Underlying[1] operating profit/(loss) margin %**	Underlying[1] operating profit/(loss) £m	Underlying[1] operating profit/(loss) margin %	Underlying[1] operating profit/(loss) £m	Underlying[1] operating profit/(loss) margin %
EE	**6.4**	**16.8**	5.1	16.5	5.1	16.4
Rail	**3.6**	**10.0**	4.6	12.3	4.9	12.5
A&I - Emerging	**6.6**	**15.0**	(1.3)	(5.2)	(1.4)	(4.6)
Environmental & Energy Transition	**16.6**	**14.0**	8.4	9.0	8.6	8.5
Defense	**5.7**	**13.9**	3.1	14.4	3.5	14.1
PP	**3.6**	**9.4**	4.5	11.7	4.5	11.7
A&I - Established	**(4.8)**	**(32.0)**	0.9	3.1	0.9	3.5
Established Mobility	**4.5**	**4.8**	8.5	9.6	8.9	10.0
Operating segments - continuing operations	**21.1**	**9.9**	16.9	9.3	17.5	9.2
Plc costs	**(8.6)**	**-**	(7.1)	-	(7.1)	-
Total - continuing operations	**12.5**	**5.9**	9.8	5.4	10.4	5.5
Discontinued operation	**0.5**	**62.5**	0.7	20.0	0.2	5.0
Total	**13.0**	**6.1**	10.5	5.7	10.6	5.5

References in superscript are defined in the glossary of terms.

**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 £4.5m for HY 2021/22. There is no impact on the Group's operating profit.*

In addition the discontinued operation was previously reported within the PP operating segment. 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 7.

Environmental and Energy-Transition portfolio

- Order intake: up 18% (constant-currency: up 13%)
- Revenue: up 27% (constant-currency: up 17%)
- Underlying operating profit: up 98% (constant-currency: up 93%)
- Underlying operating profit margin: 14.0% (HY 2021/22: 8.5% at constant-currency)

Energy & 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, waste resource management and air quality services.

There was good growth in the Automotive and Industrial Emerging Mobility (A&I Emerging) business. Order intake was similar to the prior period. Revenue and underlying operating profit both increased, driven by demand for electronic and battery 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 similar to the prior year and Rail enters the second half of the year with a strong order book. £0.3m of restructuring costs were recognised in Rail in the period relation to the ongoing restructuring of its operating structure, aimed at creating a more streamlined and customer-focused business. These costs were recognised as specific adjusting items.

Established Mobility portfolio

- Order intake: up 83% (constant-currency: up 75%)
- Revenue: up 7% (constant-currency: up 6%)
- Underlying operating profit: down 47% (constant-currency: down 49%)
- Underlying operating profit margin: 4.8% (HY 2021/22: 10.0% at constant-currency)

Defense performed very strongly in the period, with significant growth in order intake, revenue and underlying operating profit. Defense received £28.0m (USD35.9m) of orders for the Anti-lock braking systems/electronic stability control (ABS/ESC) retrofit programme in the period. Together with new vehicle kits, Defense delivered 3,956 kits in HY 2022/23 (HY 2021/22: 1,786 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 £77.0m of orders in HY 2022/23, more than double the order intake achieved in the prior period. This reflects a number of new long-term contract wins in the period. Revenue was in line with the prior period and profit reduced, driven by a combination of supply chain challenges, which led to some inefficiency, and higher energy and operating costs.

Orders and 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 £4.8m in the period, compared to a £0.9m profit in HY 2021/22, on a constant-currency basis. Given the performance of the business and the accelerating technological changes facing the segment, a non-cash impairment charge of £17.7m 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, £1.0m of costs relating to restructuring and asset disposals were recognised during the period. Restructuring actions, including further headcount reductions are being accelerated. These actions are focused on returning the business to profitability, with further costs to come in the second half of the financial year (see Note 17). On a reported basis, after including the impairment charge and restructuring costs, the operating loss in A&I Established was £23.5m.

Cash performance

- Net debt: down 11% to £31.4m (HY 2021/22: £35.4m)

The Group had a net cash inflow for the period of £4.0m. The Group received £12.3m of cash proceeds, net of fees and cash disposed, for the sale of Ricardo Software (£0.4m of fees in relation to the sale incurred in FY 2021/22 were also paid during the current period). In addition, £0.9m was paid to external advisors on other M&A and strategic projects. £2.7m was paid out in relation to the ongoing restructuring actions in A&I Established and £0.6m was paid in relation to the ongoing management restructuring in Rail. £0.2m was paid as the final element of the exit settlement for the Group's former CEO. Excluding these specific adjusting items, the Group had a cash outflow of £3.5m. Underlying working capital was broadly neutral. The composition of net debt is defined in Note 14.

Specific adjusting items

As set out in more detail in Note 9, the Group's total underlying profit before tax excludes £14.9m of costs incurred during the period that have been charged to the income statement as specific adjusting items (HY 2021/22: £4.0m). 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.

	HY 2022/23 **£m**	HY 2021/22 Restated* £m
Underlying[1] profit before tax from continuing operations	**9.9**	8.0
Amortisation of acquired intangibles	**(2.0)**	(2.2)
Acquisition-related expenditure	**(1.4)**	(0.5)
Restructuring costs		
- A&I: change in fair value of contingent consideration	**-**	(0.3)
- A&I: restructuring costs	**(0.4)**	0.1
- A&I: asset impairment and decommissioning	**(18.3)**	-
- Rail: restructuring costs	**(0.3)**	-
ERP implementation costs	**-**	(0.5)
Total specific adjusting items from continuing operations	**(22.4)**	(3.4)
Reported (loss)/profit before tax from continuing operations	**(12.5)**	4.6
Specific adjusting items from discontinued operation		
Gain on disposal and external fees relating to the disposal	**7.5**	(0.6)

**Acquisition-related expenditure of £0.6m in the prior period has been re-presented as part of the result of the discontinued operation.*

References in superscript are defined in the glossary of terms

Amortisation of acquired intangibles was £2.0m in the period, compared to £2.2m in HY 2021/22. The current period charge includes £0.2m in relation to the amortisation of customer relationships acquired as part of the Inside Infrastructure acquisition.

Acquisition-related costs of £1.4m were incurred in the period (HY 2021/22: £0.5m). These included an accrual of £0.2m for deferred consideration in relation to the acquisition of Inside Infrastructure (acquired in March 2022), together with £0.2m of post-deal integration costs, £0.1m of external fees paid in respect of the acquisition of E3 Modelling S.A. (E3M) and £0.9m of external fees in relation to other M&A and strategic projects. Costs in the prior period reflected £0.3m of M&A fees and integration costs for Inside Infrastructure and £0.2m of fees in relation to other strategic projects.

Restructuring costs

A&I: Change in fair value of contingent consideration: In the prior period charge a 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: Restructuring costs: £0.4m of restructuring costs were booked in A&I Established in the period, which included £0.1m of redundancy and onerous contract costs in relation to the actions taken at the end of the prior year-end and £0.2m of external consultancy fees. These major restructuring activities will continue into the second half of FY 2022/23 with further costs and headcount reductions expected. The total cash cost of these actions, including redundancy and associated external incremental change management costs, is expected to be in the region of £5m.

On 21 February 2023, following the period-end, it was announced that certain staff are to leave the business as part of these restructuring activities. The announcement creates a constructive obligation that satisfies the IFRS criteria for recognising a provision as at the date of the announcement. This represents a non-adjusting event after the reporting date. The costs relating to this element of the restructuring, which form part of the £5m total cost, are in the region of £1.5m.

A&I: Asset impairment and decommissioning: Goodwill and asset impairment charges of £17.7m were recognised in the period within the A&I Established operating segment. As a result of the performance of this segment in HY 2022/23, 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 £10.7m of property, plant and equipment. In addition, £0.6m of loss on disposal was recognised during the period for under-utilised engine testing assets in the UK associated with the restructuring actions above.

A review for indicators of impairment in the Group's other cash-generating units (CGUs) was performed. No indicators of impairment were found to exist for the other CGUs.

Rail: Restructuring costs: A charge of £0.3m was recognised in Rail in respect of the restructuring of the senior management structure, which commenced in the second half of FY 2021/22. This process will continue into the second half of FY 2022/23, with further costs expected.

ERP system implementation costs: In the prior period, due to the result of guidance being issued following a recent IFRS Interpretations Committee (IFRIC) decision, £0.5m of external costs incurred in FY 2020/21 in relation to the implementation of a new cloud-based ERP system within the PP operating segment were expensed in the period. These costs were previously capitalised in line with prevailing practice at the time the costs were incurred. They were classified as a specific adjusting item as they are not reflective of the underlying performance of the business in the period.

Gain on sale of Ricardo Software (recognised within the discontinued operation): A net gain of £7.5m was recognised in the current period 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. £0.8m 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 twelve-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 £5.9m (HY 2021/22: £6.2m) before government grant income of £2.2m (HY 2021/22: £1.2m). Development costs capitalised in this period were £1.9m (HY 2021/22: £3.5m, including development costs capitalised in Ricardo Software of £1.5m), reflecting continued investment in electrification and alternative fuels technology 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 £2.4m (HY 2021/22: £2.6m), 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 £0.5m (HY 2021/22: £0.3m) and finance costs were £3.1m (HY 2021/22: £2.1m) for the period, giving net finance costs of £2.6m (HY 2020/21: £1.8m). The increase in costs reflects an increase in the SONIA interest rate during the current period.

Taxation

The underlying effective tax rate was 26.0% for the period (HY 2021/22: 24.4%). The reported effective tax rate was negative 80%% (HY 2021/22: 25.9%). The current period rate is impacted by the impairment charge recognised during the period, which does not attract tax relief. Excluding this impairment, the effective tax rate is 27.5%.

Earnings per share

Basic loss per share was (13.2)p (HY 2021/22: 5.6p). The Directors consider that underlying earnings per share provides a more useful indication of underlying performance and trends over time. Underlying basic earnings per share for the period was 12.2p (HY 2021/22: 10.6p). 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 10.

Dividend

As set out in more detail in Note 11, the Board has declared an interim dividend of 3.35p per share (HY 2021/22: 2.91p). The dividend will be paid gross on 11 April 2023 to holders of ordinary shares on the Company's register of members on 10 March 2023.

Banking facilities

Net debt at 31 December 2022 comprised cash and cash equivalents of £52.1m, and borrowing and overdrafts, including hire purchase liabilities and net of capitalised debt issuance costs, of £83.5m.

The Group funds its operations via a Revolving Credit Facility (RCF) of £150m, with a £50m accordion, which provides committed funding through to August 2026, alongside the Group's uncommitted overdraft facilities of £16m. At 31 December 2022, the amount undrawn on the RCF was £75.0m. This, together with the cash held of £52.1m, and £6.8m of unutilised overdraft facilities, provided the Group with total cash and liquidity of £133.9m.

The Group's Adjusted Leverage ratio (defined as net debt over EBITDA for the last twelve months, excluding the impact of specific adjusting items and IFRS 16 *Leases*) was 0.8x as at 31 December 2022. The Adjusted Leverage covenant is a maximum of 3.0x.

The Interest Cover ratio (defined as EBITDA for the last twelve months, excluding the impact of specific adjusting items and IFRS 16, over net finance costs), was 9.5x at 31 December 2022. The Interest Cover covenant limit is a minimum of 4.0x.

Further details are provided in Note 14.

Foreign exchange

On consolidation, revenue and costs are translated at the average exchange rates for the period. The Group is exposed to movements in the Pound Sterling exchange rate, principally from work carried out with customers that transact in Euros, US Dollars, Australian Dollars and Chinese Renminbi. Compared to the prior period, the average value of the Pound Sterling weakened by 14% against the US Dollar, 1% against the Euro, 6% against the Australian Dollar and 7% the Chinese Renminbi. Had the prior period results been translated at current period exchange rates, revenue from continuing operations would have been £8.3m (5%) higher, underlying operating profit would have been £0.6m (6%) higher and underlying profit before tax would have been £0.5m (6%) 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 period was £109.2m (FY 2021/22: £127.1m) and the present value of the scheme's obligations was £96.3m (FY 2021/22: £111.9m). The value of the scheme's assets reduced over the period 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 31 December 2022 was £12.9m (FY 2021/22: £15.2m). Ricardo paid £0.9m of cash contributions into the scheme during the period (HY 2021/22: £2.1m).

Appointment of new Chair of the Board

Mark Clare joined the Group as Chair of the Board in November 2022. Mark succeeds Sir Terry Morgan CBE, who gave notice of his intention to retire in February 2022 and resigned at the Annual General Meeting on 17 November 2022. Mark joined the Board on 1 November as a non-executive director and Deputy Chair of Ricardo. At the conclusion of the Annual General Meeting on 17 November 2022, Mark became the Chair of the Board. The Board would like to welcome Mark and thank Sir Terry for his service over the past 9 years.

Acquisition of E3-Modelling

Following the period end, 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 twelve 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 value paid for the 7% stake will be determined based on the EBITDA achieved in the 12 months to 31 December 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.

Group Outlook

Our half-year underlying results are in line with our expectations.

The remainder of the year looks positive with a record high order book driven by the strong demand for our Environmental and Energy-Transition portfolio and an excellent team in place. We continue to expect the A&I Established business to be challenging in the near term whilst we accelerate our restructuring plans to increase our focus on business improvements.

Macro-economic uncertainties remain and we continue to navigate our supply chain in order to ensure that we are able to meet demand. Nevertheless, we are confident in the delivery of our full year expectations.

By order of the Board:

Graham Ritchie
Chief Executive Officer

Ian Gibson
Chief Financial Officer

28 February 2023

Environmental and Energy-Transition portfolio

ENERGY & ENVIRONMENT (EE)

Energy and Environment (EE) works with clients across a wide variety of sectors and geographies to help provide solutions for their major energy and environmental challenges. We have a broad range of environmental skills, plus a strong energy and carbon capability to support the energy transition.

Financial and operational highlights

		Historical rates		Constant-currency[6]	
	HY 2022/23	HY 2021/22 Restated*	Change %	HY 2021/22 Restated*	Change %
Order intake (£m)	**57.4**	38.5	49.1	38.9	47.6
Order book (£m)	**74.6**	56.1	33.0	56.2	32.7
Revenue (£m)	**38.2**	30.9	23.6	31.1	22.8
Underlying[1] operating profit (£m)	**6.4**	5.1	25.5	5.1	25.5
Underlying[1] operating profit margin (%)	**16.8**	16.5	0.3pp	16.4	0.4pp
Headcount[5] (no.)	**800**	714	12.0		

References in superscript are defined in the glossary of terms above.

**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 segment underlying operating profit shown above by £0.8m for HY 2021/22.*

Performance

The strength of EE's market position supported a strong first half, particularly in Air Quality, Energy & Carbon Regulation, Sustainable Transport and Waste & Resource Management. Order intake for the period was strong at £57.4m, growth of 48% on the prior period on a constant-currency basis. Revenue and underlying operating profit grew by 23% and 26%, respectively, on a constant-currency basis, as a result of strong demand across multiple services, segments and geographies. Underlying operating profit margin was 16.8%, a 0.4ppts improvement on the prior period, on a constant-currency basis.

The Middle East has been a major success. Our waste team has won new projects ranging from supporting the development of circular-economy strategies to practical engineering solutions that focus on the sustainable management of significant volumes of construction and demolition waste over the next 25 years. We have seen a significant scale of new orders in the Middle East – our growing reputation for managing air-quality monitoring networks and modelling complex data sets has bought recognition in the UAE, Qatar and Saudi Arabia.

The HY 2022/23 results include order intake of £1.7m, revenue of £2.0m and underlying operating profit of £0.5m from Inside Infrastructure, which was acquired in March 2022. HY 2022/23 was a very successful period for the business. Since its acquisition, the business has grown, particularly within the mining and water utility sectors in South Australia. The growth reflects the benefits of its complementary portfolio, with collaborative developments across our water and our environment and planning solutions. The team has also secured its first hydrogen agreement to support the development of a 250MW Green Hydrogen Project in South Australia.

Our team in Europe goes from strength to strength, which is assisting our ongoing and growing portfolio of work for the European Commission while also leading to opportunities across Europe and in Latin America – for example, supporting the design of integrated public transport systems in Mexican cities.

Our Air Quality Inventories team has secured a major contract with the Department for Environment, Food and Rural Affairs (Defra) in the UK for further development of a Scenario Modelling Tool (SMT), a digital solution that will be adapted to reflect the range of available emissions interventions over the coming years.

RAIL

Rail provides expert independent assurance and engineering consultancy services to help clients navigate the industry's operational, commercial and regulatory demands.

Financial and operational highlights

		Historical rates		Constant-currency[6]	
	HY 2022/23	HY 2021/22 Restated*	Change %	HY 2021/22 Restated*	Change %
Order intake (£m)	**44.8**	41.5	8.0	43.1	3.9
Order book (£m)	**114.0**	99.7	14.3	105.7	7.9
Revenue (£m)	**36.1**	37.4	(3.5)	39.2	(7.9)
Underlying[1] operating profit (£m)	**3.6**	4.6	(21.7)	4.9	(26.5)
Underlying[1] operating profit margin (%)	**10.0**	12.3	(2.3pp)	12.5	(2.5pp)
Headcount[5] (no.)	**533**	560	(4.8)		

References in superscript are defined in the glossary of terms above.

**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 segment underlying operating profit shown above by £0.8m for HY 2021/22.*

Performance

The Rail results reflect a mixed half for the business in HY 2022/23. Overall order intake was robust at £44.8m, 4% up on the prior period on a constant-currency basis. HY 2022/23 included large project extensions in the Middle East and Australia. As at 31 December 2022, the order book was £114.0m, an increase of £8.3m over the prior period, on a constant-currency basis. Revenue was £36.1m, a reduction of 8% compared to the prior period, on a constant-currency basis. Revenue reduced in Australia as some larger projects ended towards the end of FY 2021/22. New project extensions were secured towards the end of HY 2022/23, with the order intake reflecting a pivoting of the business to new customers and territories.

The period-on-period reduction in underlying operating profit and underlying operating profit margin was linked to the reduction in revenue and investment in business development capability. In general, utilisation levels remained solid. The restructuring of the Rail management structure, which started in the second half of FY 2021/22, continued in HY 2022/23. The business is seeing benefit from the actions through a more streamlined and customer-focused structure, with clearer accountability on a geographic basis. These actions will continue into the second half of FY 2022/23. £0.3m of redundancy costs were recognised in the period as specific adjusting items. The cash cost of the actions in HY 2022/23 was £0.6m.

In Europe, our team was awarded Designated Body (DeBo) status in Ireland in November. DeBo recognition means we can now offer clients a broader accredited assurance service in line with the portfolio we offer in established markets: UK, Netherlands, Belgium, Denmark and Spain.

In North America, we were appointed to provide Systems Integration Verifier Services for the extension of Ottawa's O-Train system. This light-rail project will involve major civil engineering works, new vehicles and signalling technologies. We will be responsible for helping oversee the smooth integration of each system.

In South America, we were appointed to support a new monorail in Panama. 'Line 3' will connect Panama City to urban centres in Panama Oeste. We will provide specialist systems analysis for the Phase One construction.

AUTOMOTIVE AND INDUSTRIAL - EMERGING MOBILITY (A&I EMERGING)

Automotive and Industrial Emerging is a trusted engineering partner for the next generation of mobility. A&I Emerging leverage their expertise in power electronic systems and propulsion systems, software and digital technologies for connected, autonomous vehicles and sustainable, light urban mobility.

Financial and operational highlights

	HY 2022/23	Historical rates HY 2021/22 Restated*	Historical rates Change %	Constant-currency[6] HY 2021/22 Restated*	Constant-currency[6] Change %
Order intake (£m)	**50.7**	49.5	2.4	53.1	(4.5)
Order book (£m)	**62.1**	46.1	34.7	48.2	28.8
Revenue (£m)	**43.9**	25.0	75.6	30.7	43.0
Underlying[1] operating profit/(loss) (£m)	**6.6**	(1.3)	607.7	(1.4)	571.4
Underlying[1] operating profit margin (%)	**15.0**	(5.2)	20.2pp	(4.6)	19.6pp
Headcount[5] (no.)	**543**	544	(0.2)		

References in superscript are defined in the glossary of terms above.

**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 total A&I (including A&I Established) underlying operating profit by £1.8m for HY 2021/22. In addition, £0.3m of HY 2021/22 revenue has been reanalysed to discontinued operations, reducing revenue by that amount. See Note 7 to the condensed interim financial statements.*

Performance

In HY 2022/23, A&I Emerging saw good growth in key financial metrics. Order intake was £50.7m, a decline of 5% on a constant-currency basis, with some change in the mix of work won period-on-period. In HY 2022/23, the business won several multi-million pound contracts in the fuel cell, power-electronics and battery applications for commercial trucking, battery systems for passenger vehicles and advanced propulsion systems for aerospace applications. The prior period order intake included large wins in motorcycles and vehicle integration. A&I Emerging accounted for 75% of total A&I order intake in HY 2022/23 (HY 2021/22: 65%, on a constant-currency basis).

Revenue grew by £13.2m (43%) on a constant-currency basis, with significant projects being worked in the electrification, aerospace and vehicle integration spaces.

Underlying operating profit grew by £8.0m, on a constant-currency basis (from a loss in the previous period). The increase in the profitability of the business was driven by the revenue growth, combined with better alignment of skillsets in the engineering workforce, and indirect cost benefits from the restructuring actions that were implemented at the end of FY 2021/22 (refer to the A&I Established operating segment review for further details). The underlying operating profit margin was 15.0% in HY 2022/23, compared to negative 4.6% in the prior period, on a constant-currency basis.

Attracting and retaining talent in key emerging technology fields remains a key focus for the A&I Emerging business. We have enhanced our talent development and retention programme, with positive impacts in both reducing the time to acquire talent and voluntary attrition.

Established Mobility portfolio

DEFENSE

Defense has gained significant insights into the needs of armed forces and provides solutions to meet the challenges our clients face in the integration of logistics and field support for complex and diverse systems.

Financial and operational highlights

		Historical rates		Constant-currency[6]	
	HY 2022/23	HY 2021/22 Restated*	Change %	HY 2021/22 Restated*	Change %
Order intake (£m)	**46.4**	15.8	193.7	18.3	153.6
Order book (£m)	**46.7**	20.8	124.5	23.5	98.7
Revenue (£m)	**41.0**	21.5	90.7	24.9	64.7
Underlying[1] operating profit (£m)	**5.7**	3.1	83.9	3.5	62.9
Underlying[1] operating profit margin (%)	**13.9**	14.4	(0.5pp)	14.1	(0.2pp)
Headcount[5] (no.)	**208**	179	16.2		

References in superscript are defined in the glossary of terms above.

**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 underlying operating profit shown above by £0.3m for HY 2021/22.*

Performance

Defense's order intake grew significantly by £28.1m (154%) on a constant-currency basis in HY 2022/23, driven by £28.0m (USD35.9m) of orders to retrofit Antilock Brake System/Electronic Stability Control (ABS/ESC) kits, which improve the safety of operation of the US Army's High Mobility Multi-purpose Wheeled Vehicle (HMMWV) fleet.

Revenue increased by 65% period-on-period on a constant-currency basis. Revenue growth was driven by increased ABS/ESC volumes – in total, we delivered 3,956 ABS/ESC kits in HY 2022/23, a record six-months for this programme, compared to 1,786 in the previous period, which included both retrofit kits and kits for new production vehicles. In addition, revenue from our Technical Solutions consultancy services also increased.

Underlying operating profit was £5.7m, an increase of 63% compared to HY 2021/22 on a constant-currency basis. Underlying operating-profit margin was broadly stable at 13.9% on a constant-currency basis. Our technical services continue to have high levels of direct utilisation, which has driven strong underlying profit.

The Field Support Solutions offering continues to expand and we are working side by side with US soldiers to ensure that they are trained to safely operate and maintain their vehicles.

Alongside the continuing delivery of the Ricardo-produced ABS/ESC system – which integrates a complete set of solutions to the architecture of the vehicles, thereby ensuring the safety of both soldiers and operators during critical missions – Defense is also focusing on the development of software that improves energy usage and fuel management in near real time for the US Department of Defense's decarbonisation strategy. Additionally, we have applied our existing software IP to impact climate strategy and strategy integration across the digital engineering ecosystem.

PERFORMANCE PRODUCTS (PP)

Performance Products (PP) is responsible for the manufacture and assembly of niche high-quality products, including engines, transmissions, electric drive units and other performance-critical driveline and powertrain products.

Financial and operational highlights

	HY 2022/23	Historical rates		Constant-currency(6)	
		HY 2021/22 Restated*	Change %	HY 2021/22 Restated*	Change %
Order intake (£m)	**77.0**	33.8	127.8	33.8	127.8
Order book (£m)	**89.4**	45.5	96.5	45.5	96.5
Revenue (£m)	**38.5**	38.4	0.3	38.4	0.3
Underlying(1) operating profit (£m)	**3.6**	4.5	(20.0)	4.5	(20.0)
Underlying(1) operating profit margin (%)	**9.4**	11.7	(2.3pp)	11.7	(2.3pp)
Headcount(5) (no.)	**341**	321	6.2		

References in superscript are defined in the glossary of terms above.

**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 segment underlying operating profit shown above by £0.7m for HY 2021/22.*

Performance

PP delivered a good performance and has increased its order intake from continuing operations to £77.0m in HY 2022/23, more than double the order intake achieved in the prior period. HY 2022/23 includes multi-year contract awards from two customers (one existing customer contract extension and one new to the business) to manufacture high performance transmissions.

Revenue from continuing operations in HY 2022/23 was £38.5m, in line with the prior period. McLaren engine volumes increased modestly year-on-year, with revenue also increasing due to the higher volume and mix of engines sold. Transmission volumes and revenue reduced in the period as a result of the timing of demand on one of the major transmission programmes. Industrial engineering revenue was maintained period-on-period.

Underlying operating profit from continuing operations was £3.6m, a reduction of £0.9m compared to the prior period, driven by a mixture of increased operating costs (including energy and staff costs). Underlying operating profit margin was 9.4%, compared to 11.7% in the prior period.

We are continuing 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 Electric vehicle (EV) production and concept work around battery systems and electric machines.

Our motorsport engineering and manufacturing capabilities continued to operate at the highest tiers in motorsport, with a particular focus on next-generation technology. During the year, we worked with Hyundai (on its hybrid-powered Rally 1 car), DS (on its the all-electric Formula E race car), Porsche (in GT racing), and with our long-standing customer in Formula 1.

Furthermore, we have maintained our level of support to the UK Ministry of Defence, providing key spare components and precision machined components to the aerospace industry under our AS9100 certification. The strong outlook across all our key business areas of high-performance automotive, motorsport, defence and aerospace were reflected in the strong order intake for the period.

COVID-19, and subsequently the conflict in Ukraine continued to cause some disruption in the supply chain. However, our rigorous process management and tools ensured that client deliveries were not affected.

AUTOMOTIVE AND INDUSTRIAL – ESTABLISHED MOBILITY (A&I ESTABLISHED)

With over a century of propulsion design and development, A&I Established deploys innovative simulation, model and test-based approaches to increase product efficiency and robustness, whilst reducing development cost and time for our global clients.

Financial and operational highlights

		Historical rates		Constant-currency[6]	
	HY 2022/23	HY 2021/22 Restated*	Change %	HY 2021/22 Restated*	Change %
Order intake (£m)	**16.5**	27.0	(38.9)	28.0	(41.1)
Order book (£m)	**27.6**	42.8	(35.5)	43.8	(37.0)
Revenue (£m)	**15.0**	28.8	(47.9)	26.0	(42.3)
Underlying[1] operating (loss)/profit (£m)	**(4.8)**	0.9	(633.3)	0.9	(633.3)
Underlying[1] operating profit margin (%)	**(32.0)**	3.1	(35.1pp)	3.5	(35.5pp)
Headcount[5] (no.)	**378**	409	(7.6)		

References in superscript are defined in the glossary of terms above.

**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 total A&I (including A&I Emerging) underlying operating profit by £1.8m for HY 2021/22. In addition, £0.3m of HY 2021/22 revenue has been reanalysed to discontinued operations, reducing revenue by that amount. See Note 7 to the condensed interim financial statements.*

Performance

Performance in Established Mobility has been challenging in HY 2022/23, reflecting economic uncertainty and the continuing shifting customer demand away from established technologies to electrification and alternative fuels, particularly in the passenger car market. The business continues to position itself to deliver high-efficiency internal combustion engine (ICE) and emissions-compliant capabilities to support the market through its global transition towards electrification and alternative fuels.

A&I Established order intake was £16.5m, a decline of £11.5m (41%) on the prior period, on a constant-currency basis. Revenue declined by 42% in HY 2022/23, on a constant-currency basis. The declines in order intake and revenue reflected lower demand in the period for traditional ICE and calibration work.

Underlying operating profit decreased from a £0.9m profit, on a constant-currency basis, in HY 2021/22 to a £4.8m loss in HY 2022/23. The underlying operating margin was negative 32.0% in HY 2022/23, compared to positive 3.5% in the prior period, on a constant-currency basis. The reduction in profitability reflected the decline in revenue and overcapacity in the engineering workforce.

During HY 2022/23, headcount reductions (announced at the end of FY 2021/22) were enacted (primarily within senior management and administrative roles), underutilised properties were downsized or exited and underutilised tangible assets relating to certain testing capability that is no longer core to the business' ongoing strategy were closed. £1.0m of restructuring costs and losses on disposal of assets were recorded as specific adjusting items in the period. The cash cost of the restructuring activities was £2.7m in the period (HY 2021/22: £1.3m).

Although these actions led to a reduction in the overall A&I Established cost base compared to the prior period, the savings could not compensate for the reduction in revenue, which was higher than anticipated. At the period end, following a reassessment of the value in use of the segment, goodwill, intangible assets and additional property, plant and equipment were impaired, resulting in a charge of £17.7m, also recognised within specific adjusting items. After taking the impairments and restructuring charges into consideration, the reported operating loss for the segment was £23.5m (HY 2021/22: £0.7m profit).

The restructuring process will continue into the second half of FY 2022/23 and will be primarily focused on better aligning the capabilities in our engineering function with anticipated customer needs (see Note 17).

Condensed interim financial statements

Condensed consolidated income statement

for the six months ended 31 December (unaudited)

	2022			2021 - Restated*		
	Underlying	**Specific adjusting items(**)**	**Total**	Underlying	Specific adjusting items(**)	Total
	£m	**£m**	**£m**	£m	£m	£m
Continuing operations						
Revenue	**212.7**	**-**	**212.7**	182.0	-	182.0
Cost of sales	**(152.6)**	**-**	**(152.6)**	(128.5)	-	(128.5)
Gross profit	**60.1**	**-**	**60.1**	53.5	-	53.5
Administrative expenses	**(47.9)**	**(22.4)**	**(70.3)**	(44.0)	(3.4)	(47.4)
Other income	**0.3**	**-**	**0.3**	0.3	-	0.3
Operating profit/(loss)	**12.5**	**(22.4)**	**(9.9)**	9.8	(3.4)	6.4
Finance income	**0.5**	**-**	**0.5**	0.3	-	0.3
Finance costs	**(3.1)**	**-**	**(3.1)**	(2.1)	-	(2.1)
Net finance costs	**(2.6)**	**-**	**(2.6)**	(1.8)	-	(1.8)
Profit/(loss) before taxation	**9.9**	**(22.4)**	**(12.5)**	8.0	(3.4)	4.6
Income tax	**(2.6)**	**0.5**	**(2.1)**	(1.9)	0.9	(1.0)
Profit/(loss) from continuing operations	**7.3**	**(21.9)**	**(14.6)**	6.1	(2.5)	3.6
Discontinued operation						
Profit/(loss) from discontinued operation, net of tax	**0.4**	**6.1**	**6.5**	0.5	(0.6)	(0.1)
Profit/(loss) for the period	**7.7**	**(15.8)**	**(8.1)**	6.6	(3.1)	3.5
Profit/(loss) attributable to:						
Continuing operations						
- Owners of the parent	**7.2**	**(21.9)**	**(14.7)**	6.1	(2.5)	3.6
- Non-controlling interests	**0.1**	**-**	**0.1**	-	-	-
Discontinued operation						
- Owners of the parent	**0.4**	**6.1**	**6.5**	0.5	(0.6)	(0.1)
Total						
- Owners of the parent	**7.6**	**(15.8)**	**(8.2)**	6.6	(3.1)	3.5
- Non-controlling interests	**0.1**	**-**	**0.1**	-	-	-
	7.7	**(15.8)**	**(8.1)**	6.6	(3.1)	3.5

Earnings per share - basic and diluted	**2022 pence**	2021 pence
Total (loss)/earnings per share	**(13.2)**	5.6
Underlying earnings per share	**12.2**	10.6
(Loss)/earnings per share from continuing operations	**(23.6)**	5.8
Earnings/(loss) per share from discontinued operation	**10.5**	(0.2)

* *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 period 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 £4.9m, and administrative expenses have reduced by the same amount. There is no impact on profit for the period or EPS. In addition comparative information has been re-presented due to a discontinued operation. See Note 6.*

** *Specific adjusting items are disclosed separately in the condensed interim financial statements where it is necessary to do so to provide further understanding of the financial performance of the Group. Further details are given in Note 4 and Note 9.*

Condensed consolidated statement of comprehensive income

for the six months ended 31 December (unaudited)

	2022	2021
	£m	£m
(Loss)/profit for the period	**(8.1)**	3.5
Other comprehensive (expense)/income		
Items that will not be reclassified to profit or loss:		
Remeasurements of the defined benefit pension scheme	**(3.5)**	0.6
Deferred tax on remeasurements of the defined benefit pension scheme	**0.9**	(0.1)
Total items that will not be reclassified to profit or loss	**(2.6)**	0.5
Items that are, or may be, subsequently reclassified to profit or loss:		
Currency translation on foreign currency net investments	**0.9**	(0.1)
Reclassification of foreign currency differences on disposal of foreign operation	**(0.9)**	-
Total items that may be subsequently reclassified to profit or loss	**-**	(0.1)
Total other comprehensive (expense)/income for the period (net of tax)	**(2.6)**	0.4
Total comprehensive (expense)/income for the period	**(10.7)**	3.9
Comprehensive (expense)/income attributable to:		
- Owners of the parent	**(10.8)**	3.9
- Non-controlling interests	**0.1**	-
	(10.7)	3.9

The accompanying notes are an integral part of these condensed interim financial statements.

Condensed consolidated statement of financial position

	Note	**31 December 2022 Unaudited £m**	30 June 2022 Audited £m
Assets			
Non-current assets			
Goodwill	*13*	**86.3**	90.6
Other intangible assets	*13*	**19.2**	23.1
Property, plant and equipment	*13*	**35.0**	47.0
Right-of-use assets		**20.1**	18.3
Retirement benefit surplus		**12.9**	15.2
Other receivables		**2.5**	2.5
Deferred tax assets		**9.2**	9.0
		185.2	205.7
Current assets			
Inventories		**24.5**	21.0
Investments		**0.2**	-
Trade, contract and other receivables		**143.0**	128.7
Derivative financial assets		**0.9**	0.8
Current tax assets		**3.6**	3.6
Cash and cash equivalents	*14*	**52.1**	49.4
Assets held for sale	*6*	**-**	9.6
		224.3	213.1
Total assets		**409.5**	418.8
Liabilities			
Current liabilities			
Borrowings	*14*	**9.4**	11.2
Lease liabilities		**5.1**	5.0
Trade, contract and other payables		**93.2**	78.2
Current tax liabilities		**3.7**	4.2
Derivative financial liabilities		**1.3**	5.1
Provisions		**3.9**	5.1
Liabilities directly associated with the assets held for sale	*6*	**-**	3.4
		116.6	112.2
Net current assets		**107.7**	100.9
Non-current liabilities			
Borrowings	*14*	**74.1**	74.7
Lease liabilities		**19.8**	18.3
Deferred tax liabilities		**12.4**	12.7
Provisions		**3.5**	3.3
		109.8	109.0
Total liabilities		**226.4**	221.2
Net assets		**183.1**	197.6
Equity			
Share capital		**15.6**	15.6
Share premium		**16.8**	16.8
Other reserves		**44.5**	44.5
Retained earnings		**105.9**	120.5
Equity attributable to owners of the parent		**182.8**	197.4
Non-controlling interests		**0.3**	0.2
Total equity		**183.1**	197.6

The accompanying notes form an integral part of these condensed interim financial statements.

Condensed consolidated statement of changes in equity

for the six months ended 31 December (unaudited)

	Attributable to owners of the parent						
	Share capital £m	**Share premium £m**	**Other reserves £m**	**Retained earnings £m**	**Total £m**	**Non-controlling interests £m**	**Total equity £m**
At 1 July 2022	**15.6**	**16.8**	**44.5**	**120.5**	**197.4**	**0.2**	**197.6**
Loss for the period	**-**	**-**	**-**	**(8.2)**	**(8.2)**	**0.1**	**(8.1)**
Other comprehensive expense for the period	**-**	**-**	**-**	**(2.6)**	**(2.6)**	**-**	**(2.6)**
Total comprehensive (expense)/income for the period	**-**	**-**	**-**	**(10.8)**	**(10.8)**	**0.1**	**(10.7)**
Equity-settled transactions	**-**	**-**	**-**	**1.1**	**1.1**	**-**	**1.1**
Purchases of own shares to settle awards	**-**	**-**	**-**	**(0.2)**	**(0.2)**	**-**	**(0.2)**
Ordinary share dividends	**-**	**-**	**-**	**(4.7)**	**(4.7)**	**-**	**(4.7)**
At 31 December 2022	**15.6**	**16.8**	**44.5**	**105.9**	**182.8**	**0.3**	**183.1**
At 1 July 2021	15.6	16.8	38.0	112.2	182.6	0.2	182.8
Profit for the period	-	-	-	3.5	3.5	-	3.5
Other comprehensive (expense)/income for the period	-	-	(0.1)	0.5	0.4	-	0.4
Total comprehensive (expense)/income for the period	-	-	(0.1)	4.0	3.9	-	3.9
Equity-settled transactions	-	-	-	0.8	0.8	-	0.8
Purchases of own shares to settle awards	-	-	-	(0.1)	(0.1)	-	(0.1)
Ordinary share dividends	-	-	-	(3.2)	(3.2)	-	(3.2)
At 31 December 2021	15.6	16.8	37.9	113.7	184.0	0.2	184.2

The accompanying notes form an integral part of these condensed interim financial statements.

Condensed consolidated statement of cash flows
for the six months ended 31 December (unaudited)

	Note	2022 £m	2021 £m
Cash flows from operating activities			
(Loss)/profit before taxation		**(4.5)**	4.7
Adjustments for:			
- Share-based payments		**1.0**	0.7
- Fair value losses on derivative financial instruments		**0.2**	0.6
- Losses on disposal of property, plant and equipment		**0.6**	-
- Gains on disposal of discontinued operation		**(7.5)**	-
- Net finance costs		**2.6**	1.8
- Depreciation, amortisation and impairment		**27.2**	11.1
Defined benefit pension scheme payments		**(0.9)**	(2.1)
Operating cash flows before movements in working capital		**18.7**	16.8
Changes in:			
- Inventories		**(3.4)**	(3.2)
- Trade, contract and other receivables		**(14.4)**	6.5
- Trade, contract and other payables		**15.3**	9.8
- Provisions		**(1.1)**	(0.4)
Cash generated from operations		**15.1**	29.5
Net interest paid		**(3.8)**	(1.8)
Income tax paid		**(3.7)**	(2.4)
Net cash generated from operating activities		**7.6**	25.3
Cash flows from investing activities			
Acquisitions of subsidiaries, net of cash acquired		**-**	(4.9)
Purchases of property, plant and equipment		**(2.7)**	(2.6)
Proceeds from sale of discontinued operation, net of cash disposed	*6*	**13.1**	-
Fees in relation to sale of discontinued operation	*6*	**(0.8)**	-
Purchases of intangible assets and capitalised development costs		**(2.2)**	(3.5)
Net cash generated from/(used in) investing activities		**7.4**	(11.0)
Cash flows from financing activities			
Purchases of own shares to settle awards		**(0.2)**	(0.1)
Payments to settle derivatives		**(4.3)**	-
Principal element of lease payments		**(2.4)**	(2.7)
Principal element of lease receivables		**-**	0.1
Proceeds from borrowings	*14*	**85.0**	10.0
Repayment of borrowings	*14*	**(85.0)**	-
Dividends paid to shareholders	*11*	**(4.7)**	(3.2)
Net cash (used in)/generated from financing activities		**(11.6)**	4.1
Effect of exchange rate changes on cash and cash equivalents		**0.1**	0.2
Net increase in cash and cash equivalents		**3.5**	18.6
Net cash and cash equivalents at 1 July		**39.4**	29.3
Net cash and cash equivalents at 31 December		**42.9**	47.9
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 31 December			
Cash and cash equivalents	*14*	**52.1**	56.8
Bank overdrafts	*14*	**(9.2)**	(8.9)
Net cash and cash equivalents at 31 December		**42.9**	47.9

The accompanying notes form an integral part of these condensed interim financial statements.

Condensed interim financial statements

1. General information

Ricardo plc (the Company), 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.

The condensed interim financial statements were approved for issue by the Board of Directors on 28 February 2023. These condensed interim financial statements have not been audited, but they have been subject to an independent review by KPMG LLP (KPMG), whose independent review report is included at the end of this report.

2. Basis of preparation

These condensed interim financial statements of the Company and its subsidiaries (together, the Group) for the six months ended 31 December 2022 do not comprise statutory accounts within the meaning of Section 434 of the Companies Act 2006. They have been prepared in accordance with the *Disclosure Guidance and Transparency Rules* of the United Kingdom's Financial Conduct Authority and IAS 34 *Interim Financial Reporting*, as adopted for use in the UK.

These condensed interim financial statements should be read in conjunction with the financial statements for the year ended 30 June 2022 within the *Annual Report & Accounts* 2021/22, which were prepared in accordance with International Financial Reporting Standards (IFRS), IFRS Interpretations Committee (IFRS IC) interpretations adopted by the UK and the Companies Act 2006 applicable to companies reporting under IFRS. The *Annual Report & Accounts 2021/22*, which was approved by the Board of Directors on 13 September 2022 and delivered to the Registrar of Companies. The report of the auditors on those statutory accounts was unqualified, did not contain an emphasis of matter paragraph and did not contain any statement under Section 498 of the Companies Act 2006.

The accounting policies adopted within this Interim Report are consistent with the *Annual Report & Accounts 2021/22* except for the requirements of IAS 34 *Interim Financial Reporting* in respect of income tax. Taxes on income in the interim period are accrued using the tax rate that would be applicable to expected total annual profit or loss.

In the context of the challenging economic environment in the automotive sector 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 condensed interim 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 and has access to a £150.0m Committed Revolving Credit Facility (RCF) with an additional uncommitted £50.0m accordion. The facility expires in August 2026 and there are two financial covenants, Interest Cover (defined as EBITDA for the last twelve months, excluding the impact of specific adjusting items and IFRS 16 *Leases*, over net finance costs, excluding IFRS 16 interest), and Adjusted Leverage Ratio (defined as net debt over EBITDA for the last twelve months, excluding the impact of specific adjusting items and IFRS 16) both of which are tested at 30 June and 31 December each year. The threshold for the Adjusted Leverage Ratio is a maximum of 3.0x for each test date. The threshold for the Interest Cover is a minimum of 4.0x for each test date.

At the reporting date, the Group had an adjusted leverage of 0.8x and interest cover was 9.5x. As at the date of approval of these condensed interim financial statements, the amount of the RCF undrawn and available to the Group was £50m, with total borrowing, including overdrafts and hire purchase liabilities, of £111m and cash and cash equivalents of £47m.

The Directors have prepared a cash flow forecast which covers at least 12 months from the date of approval of these condensed interim financial statements. In this forecast, the directors have considered the impact of known risks on the Group's results, operations and financial position, including 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. A severe but plausible downside scenario has been prepared, which models the impact of ongoing challenges in the A&I Established operating segment, lower growth rates in higher performing segments, delays in starting new projects and the removal of new, as yet unproven, revenue streams. This scenario models a reduction of 20% in the Group's organic EBITDA (excluding acquisitions made after the period end) in FY 2022/23, with a further 3% reduction in FY 2023/24 and no growth in FY 2024/25. The downside scenario also includes higher net working capital days over the period. The modelled downside scenario incorporates some mitigating actions which are within the control of the Group, such as setting appropriate levels of dividends, the non-payment of discretionary bonuses and a reduction in non-essential capital expenditure. Although headroom under the Group's banking covenants is reduced under this downside scenario, the Group (and Company) is expected to operate within its committed facilities and covenant requirements during the forecast period.

In addition, a separate scenario was run to assess the impact on liquidity and covenant headroom of the acquisition completed after the period-end. After factoring in the acquisition, excluding any potential synergy benefits, headroom under both covenants is reduced but no covenants are breached.

Consequently, 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 condensed interim financial statements and therefore have prepared the condensed interim financial statements on a going concern basis.

3. Seasonality

Based upon management's experience, higher levels of revenue and profit are expected in the second half of each financial year. This is typically due to lower levels of annual leave and a greater number of chargeable hours, which equates to higher revenues on a predominantly fixed cost base, and therefore higher profits.

4. 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. Explanations of how they are calculated and how they are reconciled to an IFRS statutory measure are set out below.

(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. They exclude certain items which the Board believes distort the trading performance of the Group. These include the amortisation of acquired intangible assets, acquisition-related expenditure, costs related to implementation and configuration of purchased software services, restructuring costs, and other specific adjusting items.

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.

Costs related to implementation and configuration of purchased software services are excluded from underlying PBT and operating profit as they are not considered to be reflective of the Group's trading performance in the year. The costs relate to software which is expected to be utilised over multiple years.

Condensed interim financial statements

Restructuring costs arising from major reorganisation activities, profits or losses on the disposal of businesses, and significant impairments of intangible assets and 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.

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 9.

Reconciliation of underlying profit before tax to reported profit before tax

	2022			2021 - Restated*		
	Underlying	**Specific adjusting items**	**Total**	Underlying	Specific adjusting items	Total
	£m	**£m**	**£m**	£m	£m	£m
Revenue	**212.7**	**-**	**212.7**	182.0	-	182.0
Cost of sales	**(152.6)**	**-**	**(152.6)**	(128.5)	-	(128.5)
Gross profit	**60.1**	**-**	**60.1**	53.5	-	53.5
Administrative expenses and other income	**(47.6)**	**-**	**(47.6)**	(43.7)	-	(43.7)
Amortisation of acquired intangibles	**-**	**(2.0)**	**(2.0)**	-	(2.2)	(2.2)
Acquisition-related expenditure	**-**	**(1.4)**	**(1.4)**	-	(0.5)	(0.5)
Restructuring costs	**-**	**(19.0)**	**(19.0)**	-	(0.2)	(0.2)
ERP implementation costs	**-**	**-**	**-**	-	(0.5)	(0.5)
Operating profit/(loss) from continuing operations	**12.5**	**(22.4)**	**(9.9)**	9.8	(3.4)	6.4
Net finance costs	**(2.6)**	**-**	**(2.6)**	(1.8)	-	(1.8)
Profit/(loss) before taxation from continuing operations	**9.9**	**(22.4)**	**(12.5)**	8.0	(3.4)	4.6
Income tax (expense)/credit	**(2.6)**	**0.5**	**(2.1)**	(1.9)	0.9	(1.0)
Profit/(loss) for the period from continuing operations	**7.3**	**(21.9)**	**(14.6)**	6.1	(2.5)	3.6
Profit/(loss) for the period from discontinued operation, net of tax	**0.4**	**6.1**	**6.5**	0.5	(0.6)	(0.1)
Profit/(loss) for the period	**7.7**	**(15.8)**	**(8.1)**	6.6	(3.1)	3.5

** Costs of £4.9m have been reallocated from administrative expenses to cost of sales in the comparative period. See the Income Statement for further details.*
In addition the prior period has been restated to present discontinued operations separately from continuing operations. See Note 6.

Underlying earnings attributable to the owners of the parent: 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, restructuring 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 than reported EPS. 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 10.

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 period using foreign currency exchange rates applicable to the current period. This provides an indication of the growth/decline of the business, excluding the impact of foreign exchange.

Condensed interim financial statements

Headline trading performance

		Underlying		Reported	
	External revenue	**Operating profit**	**Profit before tax**	**Operating (loss)/profit**	**(Loss)/profit before tax**
	£m	**£m**	**£m**	**£m**	**£m**
2022					
Total	**213.5**	**13.0**	**10.4**	**(1.9)**	**(4.5)**
Less: discontinued operation	**(0.8)**	**(0.5)**	**(0.5)**	**(8.0)**	**(8.0)**
Continuing operations	**212.7**	**12.5**	**9.9**	**(9.9)**	**(12.5)**
Less: performance of acquisitions	**(2.0)**	**(0.5)**	**(0.5)**	**(0.4)**	**(0.4)**
Continuing operations - organic	**210.7**	**12.0**	**9.4**	**(10.3)**	**(12.9)**
2021 – restated*					
Total	185.5	10.5	8.7	6.5	4.7
Less: discontinued operation	(3.5)	(0.7)	(0.7)	(0.1)	(0.1)
Continuing operations	182.0	9.8	8.0	6.4	4.6
Continuing operations at current year exchange rates	190.3	10.4	8.5	6.8	4.9
Growth (%) - Total	15	24	20	(129)	(196)
Growth (%) - Continuing operations	17	28	24	(255)	(372)
Growth (%) - Continuing organic	16	22	18	(261)	(380)
Constant-currency growth (%) – Continuing operations	12	20	16	(246)	(355)

** See note to income statement*

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 restructuring 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 7.

(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.

Cash conversion

		2022			2021 - Restated*	
	Underlying	**Specific adjusting items**	**Total**	Underlying	Specific adjusting items	Total
	£m	**£m**	**£m**	£m	£m	£m
Operating profit/(loss) from continuing operations	**12.5**	**(22.4)**	**(9.9)**	9.8	(3.4)	6.4
Operating profit from discontinued operation	**0.5**	**7.5**	**8.0**	0.7	(0.6)	0.1
Operating profit/(loss)	**13.0**	**(14.9)**	**(1.9)**	10.5	(4.0)	6.5
Depreciation, amortisation and impairment	**7.5**	**17.7**	**25.2**	9.2	(0.3)	8.9
Amortisation of acquired intangibles	**-**	**2.0**	**2.0**	-	2.2	2.2
EBITDA	**20.5**	**4.8**	**25.3**	19.7	(2.1)	17.6
Movement in working capital	**(0.9)**	**(2.7)**	**(3.6)**	13.0	(0.3)	12.7
Pension deficit payments	**(0.9)**	**-**	**(0.9)**	(2.1)	-	(2.1)
Gain on disposal of discontinued operation	**-**	**(7.5)**	**(7.5)**	-	-	-
Losses on disposal of property, plant and equipment	**-**	**0.6**	**0.6**	-	-	-
Share based payments	**1.0**	**-**	**1.0**	0.7	-	0.7
Unrealised exchange losses	**0.2**	**-**	**0.2**	0.6	-	0.6
Cash generated from operations	**19.9**	**(4.8)**	**15.1**	31.9	(2.4)	29.5
Cash conversion	**97.1%**		**59.7%**	161.9%		167.6%

Net debt: is defined as current and non-current borrowings less cash and cash equivalents, including hire purchase agreements, but excluding any impact of 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.

(c) Tax measures

Underlying effective tax rate (ETR): We report 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.

The current period rate is impacted by the impairment charge recognised during the period, which does not attract tax relief. Excluding this impairment, the effective tax rate is 27.5%.

5. Critical judgements and key sources of estimation uncertainty

Critical judgements: allocation of assets to cash-generating units (CGUs)

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 £11.9m. 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 assets were allocated directly to the A&I Established segment, it is likely that additional impairment would be recognised.

See Note 13 for further discussion.

Key sources of estimation uncertainty: Revenue recognition on fixed price contracts

As set out in Note 1d to the Group annual financial statements 2021/22, 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 31 December 2022, seven contracts (30 June 2022: nine) were risk-categorised as Red Category 4. At 31 December 2022, £3.6m (30 June 2022: £3.9m) of revenue had been recognised in respect of work performed on these contracts 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 £3.5m (30 June 2022: £2.9m) against these amounts, resulting in a net exposure of £0.1m (30 June 2022: £1.0m). The possible financial outcomes from these negotiations range from an upside of £3.5m, if management recovers the full £3.6m of revenue and potential negotiation upside, to a downside of £0.1m, if management is unsuccessful in recovering any of the £3.6m.

6. Discontinued operation

On 23 May 2022, the Group classified its Software segment 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 and the prior year results restated to reflect this presentation. On 1 August 2022, the business was sold to a third party.

Total consideration for the sale was £14.9m, of which £14.8m was satisfied in cash in the current period. 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. £0.8m of costs directly attributable to the disposal were incurred in the current period.

Condensed interim financial statements

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

	Note	**2022 £m**	2021 £m
Revenue		**0.8**	4.6
Inter-segment revenue*		**-**	(1.1)
External revenue		**0.8**	3.5
Expenses		**(0.3)**	(2.9)
Elimination of inter-segment revenue net of recoverable expenses*		**-**	1.6
Amortisation of intangible assets		**-**	(1.5)
External expenses		**(0.3)**	(2.8)
Underlying profit from operating activities		**0.5**	0.7
Income tax on underlying result		**(0.1)**	(0.2)
Underlying profit from operating activities, net of tax		**0.4**	0.5
Specific adjusting items	*9*	**7.5**	(0.6)
Income tax on specific adjusting items		**(1.4)**	-
Profit/(loss) from discontinued operation, net of tax		**6.5**	(0.1)

** 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.*

Cash from/(used in) discontinued operation

	2022 £m	2021 £m
Net cash from operating activities	**0.5**	0.8
Net cash from/(used in) investing activities	**12.2**	(1.5)
	12.7	(0.7)

7. Financial performance by segment

The Group's operating segments are being reported based on the financial information provided to the Chief Operating Decision Maker (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.

The Group reports the following segments: Energy & Environment (EE); Rail; Automotive and Industrial Emerging (A&I Emerging); Automotive and Industrial Established (A&I Established); Defense; and Performance Products (PP).

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 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.

Revenue

	2022			2021 - Restated**		
	Total segment revenue	**Inter-segment revenue**	**Revenue from external customers**	Total segment revenue	Inter-segment revenue	Revenue from external customers
	£m	**£m**	**£m**	£m	£m	£m
Energy & Environment	**38.7**	**(0.5)**	**38.2**	31.4	(0.5)	30.9
Rail	**36.5**	**(0.4)**	**36.1**	37.4	-	37.4
Automotive and Industrial - Emerging	**43.9**	**-**	**43.9**	25.2	(0.2)	25.0
Defense	**41.0**	**-**	**41.0**	21.5	-	21.5
Performance Products	**38.8**	**(0.3)**	**38.5**	38.7	(0.3)	38.4
Automotive and Industrial - Established	**15.3**	**(0.3)**	**15.0**	29.1	(0.3)	28.8
Plc	**-**	**-**	**-**	-	-	-
Total continuing operations	**214.2**	**(1.5)**	**212.7**	183.3	(1.3)	182.0
Discontinued operation	**0.8**	**-**	**0.8**	4.6	(1.1)	3.5
Total	**215.0**	**(1.5)**	**213.5**	187.9	(2.4)	185.5

Condensed interim financial statements

Profit/(loss) before tax

	2022			2021 - Restated**		
	Underlying operating profit	**Specific adjusting items (*)**	**Operating profit**	Underlying operating profit	Specific adjusting items (*)	Operating profit
	£m	**£m**	**£m**	£m	£m	£m
Energy & Environment	**6.4**	**(0.4)**	**6.0**	5.1	(0.2)	4.9
Rail	**3.6**	**(2.0)**	**1.6**	4.6	(1.8)	2.8
Automotive and Industrial - Emerging	**6.6**	**-**	**6.6**	(1.3)	-	(1.3)
Defense	**5.7**	**(0.1)**	**5.6**	3.1	(0.2)	2.9
Performance Products	**3.6**	**-**	**3.6**	4.5	(0.5)	4.0
Automotive and Industrial - Established	**(4.8)**	**(18.7)**	**(23.5)**	0.9	(0.2)	0.7
Plc	**(8.6)**	**(1.2)**	**(9.8)**	(7.1)	(0.5)	(7.6)
Total continuing operations	**12.5**	**(22.4)**	**(9.9)**	9.8	(3.4)	6.4
Discontinued operation	**0.5**	**7.5**	**8.0**	0.7	(0.6)	0.1
Total operating profit/(loss)	**13.0**	**(14.9)**	**(1.9)**	10.5	(4.0)	6.5
Net finance costs			**(2.6)**			(1.8)
Total (loss)/profit before tax			**(4.5)**			4.7

** See Note 9*
*** Prior year costs have been restated as follows:*

- **Software discontinued operation**: The Software business was previously aggregated as part of the PP operating segment. Prior period amounts have been restated to reflect the disaggregation of the discontinued amount.
- **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 this change in the allocation of central costs.
- **Continuance of transactions related to discontinued operations:** Prior year amounts have been restated to present the following amounts in a way that reflects the expected continuance of these transactions:
    - A&I underlying operating profit increased, and Software profit increased, by £0.3m to reflect costs that will not be charged to the Software business on an ongoing basis.
    - A&I underlying operating profit increased, and Software profit increased, by £0.2m to reflect a true-up for the cost of Software license fees purchased by A&I from Software.
- **Revised A&I operating segments:** For HY 2021/22, the Automotive and Industrial operating segment results were reported to the CEO (the Chief Operating Decision Maker) in total. For HY 2022/23 the results were reported separately to the CEO for Established Mobility and Emerging Mobility. Prior period comparative amounts have been restated to reflect this analysis.

Condensed interim financial statements

The impact of these restatements on the operating segments is shown below.

	Underlying operating profit: originally reported	Software discontinued operation as reported	Remove plc management charge	Continuance of transactions related to discontinued operations	Revised A&I operating segments	Underlying operating profit: Restated
	£m	£m	£m	£m	£m	£m
EE	4.3	-	0.8	-	-	5.1
Rail	3.8	-	0.8	-	-	4.6
A&I - Total	(1.7)	-	1.8	(0.5)	0.4	-
A&I - Emerging	-	-	-	-	(1.3)	(1.3)
Defense	2.8	-	0.3	-	-	3.1
PP	3.9	(0.1)	0.7	-	-	4.5
A&I - Established	-	-	-	-	0.9	0.9
Plc	(2.6)	-	(4.5)	-	-	(7.1)
Continuing operations	**10.5**	**(0.1)**	**(0.1)**	**(0.5)**	**-**	**9.8**
Discontinued operation	-	0.1	0.1	0.5	-	0.7
Total operating profit	**10.5**	**-**	**-**	**-**	**-**	**10.5**

8. Revenue

	Continuing operations		Discontinued operation		Total	
	2022	2021 Restated*	**2022**	2021 Restated*	**2022**	2021 Restated*
	£m	£m	**£m**	£m	**£m**	£m
Revenue stream						
Service provided under:						
- fixed price contracts	**99.7**	89.7	**-**	-	**99.7**	89.7
- time and materials contracts	**45.5**	41.6	**-**	-	**45.5**	41.6
- subscription and software support contracts	**2.7**	2.8	**0.1**	0.9	**2.8**	3.7
Goods supplied:						
- manufactured and assembled products	**64.2**	46.9	**-**	-	**64.2**	46.9
- software products	**0.5**	0.3	**0.7**	2.6	**1.2**	2.9
Intellectual property	**0.1**	0.7	**-**	-	**0.1**	0.7
Total	**212.7**	182.0	**0.8**	3.5	**213.5**	185.5
Customer location						
United Kingdom	**64.0**	66.5	**0.3**	0.1	**64.3**	66.6
Europe	**35.2**	40.4	**0.1**	0.7	**35.3**	41.1
North America	**68.8**	38.4	**0.2**	0.9	**69.0**	39.3
Rest of Asia	**15.4**	10.4	**0.2**	1.4	**15.6**	11.8
Australia	**11.2**	11.8	**-**	-	**11.2**	11.8
China	**10.0**	9.9	**-**	0.4	**10.0**	10.3
Rest of the World	**8.1**	4.6	**-**	-	**8.1**	4.6
Total	**212.7**	182.0	**0.8**	3.5	**213.5**	185.5
Timing of recognition						
Over time	**148.0**	135.0	**0.8**	3.5	**148.8**	138.5
At a point in time	**64.7**	47.0	**-**	-	**64.7**	47.0
Total	**212.7**	182.0	**0.8**	3.5	**213.5**	185.5

**£9.2m of revenue in the prior period has been reclassified from services provided under fixed price contracts and £1.2m of revenue in the prior period has been reclassified from services provided under time and materials contracts (recognised over time) to goods supplied: manufactured and assembled products (recognised at a point in time) in relation to ABS/ESC kits and spares supplied by the Defense operating segment.*

This restatement impacts the disclosure by revenue stream and timing of recognition only. There is no change to the total amount of revenue recognised in either period, or to the primary statements.

Services provided under fixed price contracts in the prior period was £98.9m and has been restated to £89.7m. Services provided under time and materials contracts in the prior period was £42.8m and has been restated to £41.6m.

Goods supplied: manufactured and assembled products in the prior period was £36.5m and has been restated to £46.9m. Additionally the timing of recognition, 'over time' in the prior period was £145.4m and has been restated to £135.0m and 'at a point in time' in the prior period was £36.6m and has been restated to £47.0m.

9. Specific adjusting items

Specific adjusting items are disclosed separately in the financial statements where it is necessary to do so in order to provide further understanding of the financial performance of the Group. These items comprise the amortisation of acquired intangible assets, acquisition-related expenditure, costs related to implementation and configuration of purchased software services, restructuring costs and other non-recurring items that are included due to the significance of their 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. Costs related to implementation and configuration of purchased software services are excluded as they relate to software which is expected to be utilised over multiple years. Restructuring costs relate to non-recurring expenditure incurred as part of fundamental restructuring activities, significant impairments of intangible assets and property, plant and equipment, and other items deemed to be one-off in nature.

	2022 £m	2021 Restated* £m
Continuing operations		
Amortisation of acquired intangibles	**2.0**	2.2
Acquisition-related expenditure	**1.4**	0.5
Restructuring costs		
- Purchases and disposals	**-**	0.3
- Other restructuring costs	**19.0**	(0.1)
ERP implementation costs	**-**	0.5
Total specific adjusting items from continuing operations before tax	**22.4**	3.4
Tax credit on specific adjusting items	**(0.5)**	(0.9)
Total specific adjusting items from continuing operations after tax	**21.9**	2.5
Specific adjusting items from discontinued operation		
Disposal of discontinued operation	**(7.5)**	0.6
Tax on specific adjusting items from discontinued operation	**1.4**	-
Total specific adjusting items after tax	**15.8**	3.1

**Acquisition-related expenditure of £0.6m in the prior period has been re-presented as part of the result of the discontinued operation.*

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 period, 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 period. This was partially offset by £0.2m of amortisation of customer relationships acquired as part of the acquisition of Inside Infrastructure Pty Ltd (Inside Infrastructure) in March 2022.

Acquisition-related expenditure

The current period acquisition-related expenditure comprises £0.2m of integration costs and an accrual for £0.2m of deferred consideration following the acquisition of Inside Infrastructure, £0.1m in relation to the acquisition of E3 Modelling S.A. (see Note 17) and £0.9m of external fees in respect of other strategic projects, The comparative period cost included £0.3m of acquisition and integration costs for Inside Infrastructure and £0.2m of external fees in respect of other strategic projects.

Restructuring costs

Purchases and disposals

In the prior period charge a 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 reflects lower levels of traditional engine testing work than originally forecast at the time the business was sold.

Other restructuring costs

In the current period, £1.0m of costs have been recognised in relation to the restructuring of the A&I Established business, including £0.7m loss on disposal of non-current assets and related decommissioning costs and £0.2m of external consultancy fees. These major restructuring activities will continue into the second half of FY 2022/23 with further costs expected (see Note 17).

Impairment costs of £17.7m were recognised in the period within the A&I Established operating segment – see Note 13.

£0.3m of restructuring costs have been recognised in relation to the Rail business. This reflects the result of a significant review of the operational structure of the business, aimed at creating a more flexible and agile business. Costs incurred related to the exit of a number of senior positions in the organisation, including associated legal and external fees. The review will continue into the second half of FY 2022/23.

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.

In the prior period, a credit of £0.1m was recognised to reflect the difference between actual and previously provided costs.

ERP implementation costs

As a result of an IFRS Interpretations Committee (IFRIC) decision in March 2021, £0.5m of external costs incurred in FY 2020/21 in relation to the implementation of a new cloud-based ERP system within the PP segment were expensed in the comparative period. 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 period. The ERP system is expected to be utilised by the Group for at least five years.

Disposal of discontinued operation

In the current period, a gain on the disposal of the discontinued Software business of £7.5m was recognised (see Note 6). In the prior period, £0.6m of external fees related to the efforts to sell this business were recognised.

10. Earnings per share

	2022 £m	2021 £m
(Loss)/earnings attributable to owners of the parent	**(8.2)**	3.5
Add back the net-of-tax impact of:		
- Amortisation of acquired intangibles	**1.7**	1.7
- Acquisition-related expenditure	**1.3**	0.3
- Asset purchases and disposals	**-**	0.2
- Other restructuring costs	**18.9**	(0.1)
- ERP implementation costs	**-**	0.4
- Discontinued operations	**(6.1)**	0.6
Underlying earnings attributable to owners of the parent	**7.6**	6.6

	2022 Number of shares millions	2021 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

Earnings per share - basic and diluted	2022 pence	2021 pence
Total (loss)/earnings per share	**(13.2)**	5.6
Underlying earnings per share	**12.2**	10.6
(Loss)/earnings per share from continuing operations	**(23.6)**	5.8
Earnings/(loss) per share from discontinued operation	**10.5**	(0.2)

Underlying earnings per share is shown in addition to reported earnings per share because the Directors consider that this provides a more useful indication of underlying performance and trends over time than reported earnings per share alone.

There are no potentially dilutive shares (2021: Nil).

11. Dividends

	2022 £m	2021 £m
Final dividend for prior period: 7.49p per share (2021: 5.11p) per share	**4.7**	3.2

On 28 February 2023 the Directors declared an interim dividend of 3.35p per share, which will be paid gross on 11 April 2023 to holders of ordinary shares on the Company's register of members on 10 March 2023.

12. Fair value of financial assets and liabilities

There are no differences between the fair value of financial assets and liabilities included within the following categories in the Condensed Consolidated Statement of Financial Position and their carrying value:

- Trade, contract and other receivables;
- Investments;
- Derivative financial assets;
- Cash and cash equivalents;
- Trade, contract and other payables; and
- Derivative financial liabilities

Derivative financial assets of £0.9m (30 June 2022: £0.8m) and derivative financial liabilities of £1.3m (30 June 2022: £5.1m) relate to foreign exchange forward and swap contracts, which are Level 2 of the fair value hierarchy within IFRS 13 *Fair Value Measurement*. 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 and payables from its subsidiaries, in addition to managing transactional exposures relating to customer contracts denominated in foreign currencies. It is the Group's policy not to undertake any speculative currency transactions.

13. Impairment of non-financial assets

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. No other indicators of impairment were considered to exist.

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. 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 (2021: £nil). See below for additional discussion on the calculation of the value in use, and the allocation of assets to the CGU.

The £17.7m of assets written off include £5.2m of goodwill, £1.8m of intangible assets (primarily development costs, including calibration tools), and £10.7m 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	**10.7**
Total impairment	**17.7**

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 5). 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.

Value in use

Cash flow assumptions

The cashflow forecasts used to calculate the value in use are based on the forecast for the remainder of the current year (year one) and the business plan for years two to five. The business plan was prepared by management and reviewed and approved by the Board. The business 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*. As at 31 December 2022, the factors above were reassessed and expected cash flows for the A&I Established CGU adjusted accordingly. This resulted in a significant decrease in expected cash flows compared to those anticipated at 30 June 2022, arising from deteriorating customer demand for internal combustion engine (ICE) related work during the first six months of the year, and a move towards more sustainable propulsion methods.

Other key assumptions

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. Due to regulatory and other changes in the market relating to ICE, a long-term decrease of 10% p.a. has been applied to A&I Established business.

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.

	Pre-tax discount rate		**Long-term growth rate**	
	31 December 2022	30 June 2022	**31 December 2022**	30 June 2022
	£m	£m	**£m**	£m
Automotive and Industrial - Established	**14.9%**	13.0%	**(10.0%)**	(10.0%)

14. Net debt

Net debt is defined as current and non-current borrowings less cash and cash equivalents, including hire purchase agreements, but excluding any impact of IFRS 16 lease liabilities. Management believe 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.

Analysis of net debt

	31 December 2022 £m	30 June 2022 £m
Current assets - cash and cash equivalents		
Cash and cash equivalents	**52.1**	49.4
Cash included in disposal group held-for-sale	**-**	1.1
Total cash and cash equivalents	**52.1**	50.5
Current liabilities - borrowings		
Bank overdrafts repayable on demand	**(9.2)**	(11.1)
Hire purchase liabilities maturing within one year	**(0.2)**	(0.1)
Total current borrowings	**(9.4)**	(11.2)
Non-current liabilities - borrowings		
Hire purchase liabilities maturing after one year	**(0.1)**	(0.2)
Bank loans maturing after one year	**(74.0)**	(74.5)
Total non-current borrowings	**(74.1)**	(74.7)
At the end of the period	**(31.4)**	(35.4)
Total cash and cash equivalents	**52.1**	50.5
Total borrowings	**(83.5)**	(85.9)
At the end of the period	**(31.4)**	(35.4)

Movement in net debt

	31 December 2022 £m	30 June 2022 £m
At 1 July	**(35.4)**	(46.9)
Net increase in cash and cash equivalents and bank overdrafts	**3.5**	10.1
Repayments of hire purchase	**-**	0.1
Proceeds from bank loans	**(85.0)**	(13.0)
Repayments of bank loans	**85.0**	15.0
Amortisation of facility fees	**(0.1)**	(0.7)
New facility arrangement fees	**1.2**	-
Write-off previous facility fees	**(0.6)**	-
At the end of the period	**(31.4)**	(35.4)

Net debt at 31 December 2022 was £31.4m (2021 £35.4m). As reported to the Board on a monthly basis, there is sufficient headroom in our banking facilities. At 31 December 2022 the Group held total facilities of £166.0m (30 June 2022: £216.8m). The committed facility consists of a £150.0m multi-currency Revolving Credit Facility (RCF) with an additional uncommitted £50.0m accordion which provides the Group with committed funding through to August 2026. In addition, the Group has uncommitted facilities including overdrafts of £16.0m (30 June 2022: £16.8m), which mature throughout this and the next financial year, and are renewable annually.

Non-current bank loans comprise committed facilities of £74.0m (30 June 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 (30 June 2022: 1.4% to 2.2% above SONIA).

Adjusted Leverage is defined in the Group's banking documents as being the ratio of total net debt to adjusted EBITDA for the last twelve months, excluding IFRS 16 *Leases*. Adjusted EBITDA is further defined as being operating profit before interest, tax, depreciation and amortisation, adjusted for any one-off, non-recurring, exceptional costs and acquisitions or disposals during the relevant period. The Adjusted Leverage covenant is 3.0x for each test date. At the reporting date, the Group has an Adjusted Leverage of 0.8x (30 June 2022: 0.8x) which gives rise to an applicable interest rate of SONIA plus 1.65% (30 June 2022: SONIA plus 1.4%). The only other financial covenant is Interest Cover (defined as adjusted EBITDA over net finance costs, excluding pension and IFRS 16 interest, for the last twelve months over), which is set at 4.0x for each test date. At the reporting date, the Group has Interest Cover of 9.5x.

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 condensed interim financial statements.

15. Contingent liabilities

In the ordinary course of business, the Group has £13.1m (FY 2021/22: £11.4m) of possible obligations for bonds, guarantees and counter-indemnities placed with our banking and other financial institutions, 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. 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 employer's liability were a debt to arise under Section 75 of the Pensions Act 1995. The guarantee will terminate on 5 April 2023. 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.

16. Principal risks and uncertainties

The Board regularly reviews its principal risks and uncertainties. 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 of the Board in all strategic decisions. In the most recent risk review cycle, risks were reviewed which relate to customers and markets; contracts; people; cyber and information security; technology; compliance with laws and regulations; the defined benefit pension scheme; and financing. The approach to mitigation of these principal risks is discussed on pages 58 to 61 of the Group's *Annual Report & Accounts 2021/22*, and the Directors have concluded that the disclosure remains appropriate. These principal risks and uncertainties should be read in conjunction with the Trading Summary and Operating Segments Review for the six months ended 31 December 2022 included within this Interim Report.

17. Events after the reporting date

E3-Modelling acquisition

On 24 January 2023, the Group completed the acquisition of a 93% shareholding of E3-Modelling S.A, an Energy and Environment consulting company based in Athens. The initial consideration for the business was £19m (EUR 22m), with potential deferred consideration of up to £5m (EUR 5m), based on earnings before interest, depreciation and tax (EBITDA) for the twelve months ended 31 December 2021. There is a commitment to acquire the remaining 7% stake in January 2025. The value paid for the 7% stake will be determined based on the EBITDA achieved in the 12 months to 31 December 2025. The minimum cash consideration for the remaining 7% stake is £2m (EUR 2m) and is reduced by 50% if the owners are not retained in the business. Estimated net assets acquired, excluding acquired intangibles, were £2m.

Acquisition accounting is expected to be completed in the period to 30 June 2023.

A&I Established restructuring

The restructuring of the A&I Established business is being accelerated through the second half of FY 2022/23 which will result in further headcount reductions. The total cash cost of these actions, including redundancy and associated external incremental change management costs, is expected to be in the region of £5m.

On 21 February 2023, following the year-end, it was announced that certain staff are to leave the business as part of these restructuring activities. The announcement creates a constructive obligation that satisfies the IFRS criteria for recognising a provision as at the date of the announcement. This represents a non-adjusting event after the reporting period under IFRS. The costs relating to this element of the restructuring, which form part of the £5m total cost, are in the region of £1.5m.

Statement of Directors' responsibilities

The Directors confirm that to the best of their knowledge:

- the condensed interim financial statements, which have been prepared in accordance with International Accounting Standard (IAS) 34 *Interim Financial Reporting* as adopted for use in the UK, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group

- the highlights, trading summary and operating segments review within this Interim Report includes a fair review of the information required by:

  (a) DTR 4.2.7R of the *Disclosure Guidance and Transparency Rules*, being an indication of important events that have occurred during the first six months of the financial year and their impact on the condensed interim financial statements; and a description of the principal risks and uncertainties for the remaining six months of the financial year; and

  (b) DTR 4.2.8R of the *Disclosure Guidance and Transparency Rules*, being related party transactions that have taken place in the first six months of the financial year and that have materially affected the financial position or performance of the Group during that period and any changes in the related party transactions described in the last annual report that could do so.

By order of the Board:

Graham Ritchie Chief Executive Officer	Ian Gibson Chief Financial Officer

28 February 2023

Independent review report to Ricardo plc

Conclusion

We have been engaged by Ricardo plc (the Company) to review the condensed set of financial statements in the Interim Report for the six months ended 31 December 2022, which comprises the condensed consolidated income statement, the condensed consolidated statement of comprehensive income, the condensed consolidated statement of financial position, the condensed consolidated statement of changes in equity, the condensed consolidated statement of cash flows and the related explanatory notes.

Based on our review, nothing has come to our attention that causes us to believe that the condensed set of financial statements in the Interim Report for the six months ended 31 December 2022 are not prepared, in all material respects, in accordance with IAS 34 Interim Financial Reporting as adopted for use in the UK and the Disclosure Guidance and Transparency Rules (the DTR) of the UK's Financial Conduct Authority (the UK FCA).

Basis for conclusion

We conducted our review in accordance with International Standard on Review Engagements (UK) 2410 Review of Interim Financial Information Performed by the Independent Auditor of the Entity (ISRE (UK) 2410) issued for use in the UK. A review of interim financial information consists of making enquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. We read the other information contained in the Interim Report and consider whether it contains any apparent misstatements or material inconsistencies with the information in the condensed set of financial statements.

A review is substantially less in scope than an audit conducted in accordance with International Standards on Auditing (UK) and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusions relating to going concern

Based on our review procedures, which are less extensive than those performed in an audit as described in the 'Basis for conclusion' section of this report, nothing has come to our attention that causes us to believe that the directors have inappropriately adopted the going concern basis of accounting, or that the directors have identified material uncertainties relating to going concern that have not been appropriately disclosed.

This conclusion is based on the review procedures performed in accordance with ISRE (UK) 2410. However, future events or conditions may cause the group to cease to continue as a going concern, and the above conclusions are not a guarantee that the group will continue in operation.

Directors' responsibilities

The Interim Report is the responsibility of, and has been approved by, the directors. The directors are responsible for preparing the Interim Report in accordance with the DTR of the UK FCA.

As disclosed in note 2, the annual financial statements of the group are prepared in accordance with UK-adopted international accounting standards.

The directors are responsible for preparing the condensed set of financial statements included in the Interim Report in accordance with IAS 34 as adopted for use in the UK.

In preparing the condensed set of financial statements, the directors are responsible for assessing the group'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 the directors either intend to liquidate the group or to cease operations, or have no realistic alternative but to do so.

Our responsibility

Our responsibility is to express to the company a conclusion on the condensed set of financial statements in the Interim Report based on our review. Our conclusion, including our conclusions relating to going concern, are based on procedures that are less extensive than audit procedures, as described in the 'Basis for conclusion' section of this report.

The purpose of our review work and to whom we owe our responsibilities

This report is made solely to the company in accordance with the terms of our engagement to assist the company in meeting the requirements of the DTR of the UK FCA. Our review has been undertaken so that we might state to the company those matters we are required to state to it in this 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 for our review work, for this report, or for the conclusions we have reached.

Jeremy Hall
for and on behalf of KPMG LLP
Chartered Accountants
15 Canada Square
London
E14 5GL

28 February 2023