

Preliminary results 2021

Renishaw plc

21 October 2021

Preliminary announcement of results for the year ended 30 June 2021

Summary

- Revenue was £565.6m, 11% higher than 2020 revenue of £510.2m.
- A positive year of recovery.
- Strong growth in APAC throughout the year, with improving sales in EMEA and Americas in H2.
- Manufacturing technologies (formerly Metrology) revenue increased by 11% to £526.2m, with:
 - record demand for encoders, driven by booming semiconductor and electronics capital investment;
 - rising sales of flexible gauging and machine tool products, especially in the consumer electronics sector; and
 - lower additive manufacturing sales, in line with expectations following restructuring in 2020.
- Analytical instruments and medical devices (formerly Healthcare) revenue increased by 12% to £39.4m, with:
 - general recovery in spectroscopy investment and increasing adoption of the Virsa™ Raman Analyzer; and
 - growth in neurological products, as we support large pharmaceutical customers with clinical trials using our unique drug delivery technology.
- Adjusted* profit before tax of £119.7m (2020: £48.6m), an increase of 146%.
- Statutory profit was £139.4m compared with £3.2m last year.
- Our Fit for the Future initiative drove productivity improvements.
- Adjusted profit before tax for the year increased to 21% of revenue (2020: 10%); for H2 it was 25%.
- Strong balance sheet, with net cash and bank deposits of £215.0m at 30 June 2021, compared with £120.4m at 30 June 2020.
- Our priorities during this pandemic continue to be the health and welfare of our employees, their families and the wider communities in which we operate, and to maintain high service levels to our global customer base.
- A formal sale process, which commenced in March 2021, was concluded in July with no suitable offers that satisfactorily met the interests of all stakeholders.

“We have recovered well and our employees have shown great resilience in maintaining supply and excellent levels of support to our customers around the world. I am excited about our new products in development and the opportunities presented by global market trends.”

Sir David McMurtry, Executive Chairman

	2021	2020	Change
Revenue (£m)	565.6	510.2	+11%
Adjusted* profit before tax (£m)	119.7	48.6	+146%
Adjusted* earnings per share (pence)	139.4	51.0	+4,256%
Dividend per share (pence)	66.0	0.0	
Statutory profit before tax (£m)	139.4	3.2	
Statutory earnings per share (pence)	153.2	0.4	

*Note 28, 'Alternative performance measures', defines how adjusted profit before tax, adjusted earnings per share, adjusted operating profit and revenue at constant exchange rates are calculated.

COMMENTARY BY THE CHAIRMAN

Introduction

It has been a positive year of recovery and I am pleased to report that our revenue for the 2021 year was £565.6m, 11% higher than the 2020 revenue of £510.2m (13% higher at constant exchange rates). This was against a backdrop of improving economic conditions. Adjusted* profit before tax amounted to £119.7m (2020: £48.6m), an increase of 146%. Statutory profit before tax was £139.4m (2020: £3.2m). Both revenue and Adjusted profit before tax are consistent with the guidance provided in July.

We achieved good revenue growth in our APAC region, where we continue to see strong demand for our encoder product lines which are benefiting from increased investments in the semiconductor and electronics capital equipment markets. Our EMEA and Americas regions both achieved modest revenue growth, with the first half of the year mirroring the second half of 2020 due to the pandemic, but with strong growth in the second half of 2021. They have continued to be affected by the ongoing uncertainty caused by the pandemic and consequent challenges to key sectors, particularly aerospace.

Our Fit for the Future initiative, which began in 2020, has focused on productivity and has reduced our cost base. This is reflected in the much-improved profitability compared to last year. The initiative resulted in a number of actions including a resizing of the business, a restructure of our Additive Manufacturing (AM) business, and a focus on prioritising significant design projects.

In March, Renishaw announced that John Deer (our Non-executive Deputy Chairman), and I, had indicated to the Board our intention to sell our entire combined shareholdings in the Company; together, we own approximately 53% of the issued share capital of the Company. Having considered various options with our advisers, the Board unanimously agreed that it would be appropriate to investigate the sale of the Company and therefore launch a formal sale process (FSP).

Throughout this process, we considered the interests of all our stakeholders and looked for a buyer who would respect the unique heritage and culture of Renishaw, its commitment to the local communities where we operate, and who would enable the Company to prosper in the long term.

The Board, together with our advisers, carefully reviewed a number of proposals from potential buyers. We unanimously concluded that none would meet the Board's objectives of delivering an outcome that satisfactorily met the interests of all stakeholders. We therefore announced in July 2021 that we had unanimously decided to conclude the FSP and that John and I had indicated to the Board that we remain committed to Renishaw.

Reacting to a new world

The pandemic has resulted in profound changes to our society, the business environment and business practices. Many of these changes will be with us for the long term and we recognise the risks and the opportunities that this brings to our business.

Across the world the pandemic is accelerating trends around digitalisation, automation, near-shoring, remote working and sustainability. For Renishaw this presents significant positive opportunities, as our products are well placed to support our customers as they respond to these new challenges. We recognise that the workplace has changed and that it is possible for many roles to successfully combine remote and site-based working. We have therefore implemented a hybrid working policy in the UK, where non-manufacturing employees will split their week between on-site and home working.

As a business we also recognise the increased need for sustainability and the need to accelerate our own work in this area. We have made significant efforts to reduce our carbon emissions in recent years. However, like many organisations there is much more that we must do to meet the challenges of climate change and we are currently developing a Net Zero strategy.

Corporate governance

We remain committed to high standards of corporate governance and considering key stakeholders when making decisions, in the belief this will protect our business and its long-term sustainable success.

Our culture

The ongoing pandemic has continued to affect our business and employees around the world. Despite this challenging environment we remain resilient, and our people have continued to maintain supply and excellent levels of support to our customers around the world, many of whom are in critical global supply chains. I would again like to thank our people for demonstrating professionalism and dedication, despite the ever-changing circumstances, and the challenges that many have faced in their own personal lives due to the pandemic.

These challenges have highlighted the importance of our strong working culture at Renishaw and we are pleased to have started the process of communicating how our core business values of inspiration, involvement, innovation and integrity help to support our new purpose and vision. These values embody our culture, where our people are encouraged:

- to be innovative and challenge convention;
- to always act with integrity;
- to inspire each other, our customers and our wider communities; and
- to be fully involved and support each other in contributing to the success of Renishaw and our communities.

We will achieve this by embedding these values within the business through leadership and processes that recognise and reward behaviours that embody our four values.

Values workshops hosted by our global values ambassadors have been held in the UK and across our regions. These communicated our values, demonstrated how they can be applied to everyone's role, how they will support our purpose and vision, and helped us understand what these values mean to our people.

Our value of involvement supports our commitment to equality and diversity initiatives at all levels of the company. Our UK Diversity & Inclusion group led initiatives during the year, including celebrating our first Inclusion Week, where we focused on the meaning of inclusion, gender, cultural awareness and mental health.

Dividend

Given the uncertain trading conditions last year, there were no dividends in respect of 2020.

With improved profits and cash balances this year, we have reinstated the dividend programme, with an interim dividend of 14.0 pence net per share paid on 6 April 2021. The Board is pleased to propose a final dividend of 52.0 pence net per share.

Sir David McMurtry
Executive Chairman
21 October 2021

COMMENTARY BY THE CHIEF EXECUTIVE

Introduction

There has been a good recovery for our business, and I am proud of our people who have again risen to the challenges faced. During the second half of the year we started to see a recovery in some of our key markets, and we ended the year dealing with the demands of a record order book and supplying our customers in the face of global supply chain challenges. We have recruited strongly in our manufacturing operations to increase capacity, and our logistics teams have responded admirably to another challenging period.

Our customers have appreciated our support. This has left us in a very strong position to grow with them as they now experience new opportunities arising from the recovery in their markets.

During the year, I spent time with all our global employees communicating our new purpose, vision and strategy, and how every individual can help to deliver on these. Together, we are in a strong position to innovate and transform capabilities in manufacturing, science and healthcare, through unparalleled levels of precision, productivity and practicality, and help our customers create the products, materials and therapies that will define our world in the decades to come.

As Sir David has already mentioned, in March we launched an FSP for the Company. However, having received no proposals that the Board felt satisfactorily met the interests of all our stakeholders, we announced the closure of the process in July. I am delighted that the founders have indicated their continuing commitment to Renishaw, and it continues to be very much business as usual for the Board and our employees as we focus on delivering our strategy for success.

COVID-19 pandemic

Our priorities during this pandemic continue to be the health and welfare of our employees, their families and the wider communities in which we operate, and to maintain high service levels to our global customer base.

We have a wide range of robust COVID-secure working practices in place to protect against the spread of the virus. Within the UK, where we have higher numbers of employees, we have introduced twice-weekly self-testing for all employees who are working on-site. All our manufacturing facilities around the world are operating as normal, and we have maintained supply to customers. Like many other manufacturers our lead times have increased due to global shortages of certain components and materials.

Many of our non-manufacturing employees have worked remotely throughout the pandemic, and while this has generally been a positive experience in terms of productivity, we recognise the benefits of in-person collaboration. We have therefore agreed a hybrid working policy, initially in the UK.

The pandemic has brought forward many digital initiatives, including the expansion of the use of digital collaborative tools for customer support, and the use of marketing automation, virtual exhibitions and webinars to ensure a supply of high-quality sales opportunities.

Performance overview

As already outlined by Sir David, we have seen good growth in revenue and Adjusted operating profit for the Group. There was notably strong growth for our position encoder product line due to demand from the semiconductor and electronics sectors, which were boosted by high pandemic-related demand for products including laptops and games consoles. Most of our other lines also grew due to a strong global recovery in the second half of the year. We achieved good revenue growth in our APAC region, with a particularly strong recovery in China based on general demand across multiple sectors.

Revenue

We achieved revenue for the year ended 30 June 2021 of £565.6m, compared with £510.2m last year. As previously communicated, we have worked closely with key customers throughout the pandemic to ensure that we were in a position to meet their requirements when economic conditions improved, and we are now benefiting from that approach. While the challenges remain, we are well placed to take advantage of the opportunities presented by the global economic recovery.

The split of our revenue by region is shown in the table below:

	2021 £m	2020 £m	Change %	Constant fx change %
APAC	274.8	227.7	+21	+23
EMEA	169.1	167.2	+1	+1
Americas	121.7	115.3	+6	+9
Total Group revenue	565.6	510.2	+11	+13

Profit and earnings per share

Our Adjusted* profit before tax for the year was £119.7m compared with £48.6m last year. Adjusted* earnings per share was 132.0p compared with 51.0p last year.

Statutory profit before tax for the year was £139.4m compared with £3.2m last year. Statutory earnings per share was 153.2p compared with 0.4p last year.

This year's tax charge is £28.0m (2020: £2.9m) representing a tax rate of 20.1% (2020: 91.0%). For further details on the tax rate see note 8.

Manufacturing technologies

During the year, we used the launch of our purpose, vision and strategy to rename our operating segments to better reflect the business. Our Manufacturing technologies business consists of Industrial Metrology, Position Measurement and Additive Manufacturing (AM) product groups. Revenue from our Manufacturing technologies business for the year (formerly 'Metrology') was £526.2m compared with £475.2m last year. While the pandemic continues to affect some of our key sectors, primarily aerospace, in the second half of the year we have seen a strong recovery in sales and orders for most of the product lines which make up this segment. The strongest recovery has been in APAC, where we have seen strong growth over the last year but there are positive signs of returning confidence in all our regions.

We have seen growth in demand for most of our Manufacturing technologies products, notably in our machine tool product line, our gauging product line, and our optical, laser and magnetic encoder product lines. The encoder product lines have all experienced record sales due to strong investment in the semiconductor and electronics capital equipment markets. Our co-ordinate measuring machine (CMM) product line experienced reduced demand in the first half of the year due to the challenges in some sectors, particularly aerospace. However, our strong portfolio of measurement products and global customer base means that we are already benefiting from a recovery in sector investments, and the CMM line full-year revenue was only slightly below last year.

Our AM product line revenue was also lower than last year but was in line with our expectations following the restructuring of the business in 2020. Demand for the RenAM 500Q multi-laser system was affected by the challenging market conditions, especially within the aerospace sector. With the benefits of our multi-laser systems for high-quality, productive metal part manufacture now being proven with key customers, and the soon-to-be-available Flex system (for rapidly changing between differing materials during process prove-out), we are well placed to benefit from an improvement in market conditions and the expansion of AM into new applications.

The geographical analysis of Manufacturing technologies revenue is set out below:

	2021 £m	2020 £m	Change %
APAC	262.2	213.6	+23
EMEA	150.6	152.5	-1
Americas	113.4	109.1	+4
Total Manufacturing technologies revenue	526.2	475.2	+11

Adjusted* operating profit for our Manufacturing technologies business was £112.6m (2020: £50.3m).

We continued to invest in R&D, with total gross engineering costs of £70.6m compared with £75.9m in 2020.

We launched a number of new products during the year. Our machine tool product line introduced the second-generation NC4+ Blue non-contact tool setting system, with ultra-compact design and measurement repeatability down to ± 0.5 microns. Within our position encoder product line, a significant addition was the FORTiS™ enclosed linear absolute encoder for harsh production environments, including machine tools.

Analytical instruments and medical devices

Revenue from this business for the year was £39.4m, an increase of 12% on last year. We saw growth in our spectroscopy and neurological product lines, notably the latter, which experienced record sales during the year, boosted by hospitals in key markets restarting elective surgery as COVID-19 patient numbers fell.

While there remain challenges, confidence has returned to all our key markets. Funds for capital expenditure projects which were postponed last year are being released and we are seeing a good recovery in industrial and academic research budgets which will benefit our spectroscopy and neurological lines.

Adjusted* operating profit was £5.9m, compared with £1.4m last year.

We continued to invest in R&D, with total gross engineering costs in this business segment of £6.0m compared with £6.5m in 2020.

During the year, our neurological product line agreed to work with a major pharmaceutical company on a programme for a new candidate drug using our drug delivery system. The rapid growth of potential gene therapy treatments for neurological diseases and disorders is also generating significant interest in our delivery device.

The spectroscopy product line introduced a new Particle Analysis software module for our inVia™ Raman spectrometer system, which enables multiple spectra captured on filter paper to be automatically analysed and categorised by shape, size and chemistry. This has applications for the detection of microplastics in drinking water.

Strategy and markets

Our overarching strategy to deliver our purpose and vision is based on creating strong market positions with patented and innovative products and processes; cost-effective in-house manufacturing that delivers high-quality products; strong global support to ensure our customers achieve success; support services that ensure an efficient, intelligent and responsible business; and fostering a culture that allows us to attract and retain talented and motivated people who will deliver our strategy. This strategy underpins all our product lines, for which we also have individual commercial and product strategies.

From transport to agriculture, electronics to neurosurgery, our vision is to innovate and transform capabilities in manufacturing and healthcare through unparalleled levels of precision, productivity and practicality. In a world of increasingly scarce resources this is especially important to help our customers to develop products and processes that are sustainable, deliver higher levels of performance through increased efficiency, make intelligent use of data, and are customised to suit individual requirements.

We continue to see external market growth drivers that are creating positive opportunities for our business. These include global skills shortages, digitalisation, near-shoring and reshoring, sustainable manufacturing, population growth and increasing life expectancy.

Focused investment for long-term growth

We strongly believe in our long-term strategy of delivering sustainable growth through:

- investments in R&D that are focused on products that deliver unparalleled levels of precision, productivity and practicality;
- investments in in-house manufacturing that give us control over quality, delivery and costs; and
- investments in our global marketing and distribution infrastructure.

However, with the global economic uncertainties during the year, our short-term focus has been on maximising the benefits of the investments we have made over the past few years and clearly prioritising those 'flagship' projects that either bring faster revenue benefits or are strategically important to the business. The launch of the FORTiS encoder is a good example of this.

We continue to invest to improve productivity through development programmes for our people, our Workday® human resources system, and the planned deployment of Microsoft Dynamics 365 enterprise resource planning and customer relationship management application.

Working capital

Inventories increased to £113.6m from £105.5m at the beginning of the year, as a result of the higher trading levels and our decision to increase safety stock levels of critical components, where possible, to mitigate the risk of supply chain disruption.

Trade receivables increased from £105.1m to £114.7m in line with increased sales. There was an improvement in debtor days to 61 at the end of the year, compared with 76 at the end of last year, which includes a currency translation gain of £7.8m. There have been no significant bad debts during the year.

As a result of our strong trading performance, reduced levels of capital expenditure, and the decision not to propose a final dividend for 2020, we have healthy net cash and bank deposit balances at 30 June 2021 of £215.0m (2020: £120.4m), and a corresponding improvement in our liquidity position over the year.

Sustainability and community

We reduced our market-based statutory greenhouse gas (GHG) emissions by 5%, and introduced a new Group policy to only use electricity from certified renewable sources, where possible. Despite the pandemic we still reached more than 5,000 children with new virtual education outreach programmes, including interactive workshops and work experience weeks, and we assisted local organisations through charitable donations and practical support.

Our people

Our workforce at the end of June 2021 was 4,664 (2020: 4,463), an increase of 5%. During the year, 40 apprentices and graduates were taken on as part of our ongoing commitment to train and develop skilled resource for the Group in the future. We also took on 19 industrial placements in the year.

During the year we continued to face challenges. This included the pandemic, tough trading conditions, lower headcount (due to the redundancies and recruitment freeze in 2020) which increased pressures in some areas of the business, and the formal sale process. There were also huge demands placed on our manufacturing operations as we saw a strong recovery in demand accompanied by global shortages of key components.

It is testament to the continuing resilience, skill and dedication of our people that during the year they supplied and supported our customers, introduced innovative new products, progressed key projects that will underpin the future of our business, and supported each other and our local communities. They truly demonstrated our four core values, while continuing to help Renishaw deliver on our purpose and vision, and as a Board we are truly grateful for their contributions during another challenging year.

Brexit

To mitigate against the potential impacts of the UK leaving the EU, we have taken actions in recent years including establishing a warehouse in Ireland, expanding our existing warehouse in Germany, and increasing the inventory of certain finished goods and components at sites within the EU and the UK. Although there have been some delays at the UK borders for shipments into the EU since 1 January 2021, the measures that we have taken have minimised the impact on customer service.

Outlook

The 2022 financial year has started with a strong first quarter and we currently have a record order book. We expect demand from the semiconductor and electronics sectors to remain strong and that there will continue to be a recovery in the machine tool and coordinate measuring machine markets. In our Analytical instruments and medical devices markets, we have seen confidence return and capital expenditure projects released.

The Board continues to be confident in our long-term prospects, due to our strong financial position, the high quality of our people, our innovative product pipeline, extensive global sales and marketing presence and relevance to high-value manufacturing.

Will Lee

Chief Executive

21 October 2021

* Note 28, Alternative performance measures, defines how Adjusted profit before tax, Adjusted earnings per share, Adjusted operating profit and Revenue at constant exchange rates are calculated.

COMMENTARY BY THE GROUP FINANCE DIRECTOR

Revenue for the year amounted to £565.6m, an increase of 11% compared with £510.2m last year. We achieved strong revenue growth in our APAC region, largely driven by increased investments in the semiconductor and electronics capital equipment markets. We also saw growth in the Americas and EMEA regions, with a notable increase in demand in the second half of the year as the economies continued to recover from the pandemic.

In our Manufacturing technologies business (previously Metrology), revenue increased by 11% to £526.2m, compared with £475.2m last year. We have seen growth in demand for many of these products, notably in our machine tool product line and our encoder product lines, mostly as a result of the continuing recovery in the semiconductor and electronics capital equipment market.

Revenue in our Analytical instruments and medical devices business also increased to £39.4m, compared with £35.0m last year.

	2021 revenue at actual exchange rates £m	Change from 2020 %	2020 revenue at actual exchange rates £m	Underlying change at constant exchange rates %
APAC	274.8	+21	227.7	+23
EMEA	169.1	+1	167.2	+1
Americas	121.7	+5	115.3	+9
Total Group revenue	565.6	+11	510.2	+13

Operating costs

Our Fit for the Future initiative implemented last year resulted in actions which improved productivity and reduced our cost base. These included a resizing of the business, a restructure of our AM product line, and a focus on prioritising design projects to accelerate the market launch of significant products.

As a result, underlying labour costs (excluding bonuses and grants) were £208.2m this year compared to £225.8m last year, with an average headcount of 4,437 (2020: 4,797). This year's total labour cost (see note 3) includes £1.0m of global job retention grant income (2020: £4.5m), all of which originated overseas this year, a £3.5m 'thank you' payment for employees to recognise their exceptional efforts during the pandemic, and performance bonuses totalling £13.2m (2020: £nil). Given the increase in demand in the second half of the year we have recruited over 300 manufacturing staff to ensure we have sufficient capacity to meet demand.

Certain other operating costs, such as travel and exhibitions, are around £6.3m lower this year compared to last year due to restrictions resulting from the pandemic. We expect these costs to increase as restrictions are lifted, although we do not expect travel to return to pre-pandemic levels as the use of online meetings has proven an effective tool for many communications and is aligned with our environmental aims.

Production costs, as a % of sales, reduced by 1% to 35% (see note 4). This is the result of both cost reductions and improved manufacturing efficiencies.

Impairments of £4.7m have been recognised in the year, relating to investments, loans and finance leases with an associate company (see note 13 for further detail). No further significant asset impairments have been recognised this year, as a result of improving macroeconomic conditions and upward demand trends across most of our geographic areas and business units. In the previous year, we impaired £9.9m of capitalised development costs (aside from restructuring costs).

Research and development

We remain committed to our long-term strategy of delivering growth through the development and introduction of innovative and patented products. During the year we incurred research and development expenditure of £58.6m, compared with £66.6m last year (see note 4). This reduction is consistent with our expectations given the focus on flagship projects. We also incurred £18.0m (2020: £15.8m) on other engineering expenditure, to support existing products and technologies.

We have launched new products during the year, notably the FORTiS enclosed optical encoder which provides high-performance measurement in harsh environments, including machine tools and semiconductor wafer dicing.

Profit and tax

Adjusted profit before tax amounted to £119.7m compared with £48.6m in 2020, an increase of 146%. Statutory profit before tax was £139.4m compared with £3.2m in the previous year.

Items excluded from Adjusted profit before tax are as follows:

- £23.8m of restructuring costs in 2020 which have not repeated this year;
- gains of £23.0m from forward contracts deemed ineffective for cash flow hedging (2020: £21.6m loss); and
- third-party fees relating to the FSP of £3.2m (2020: £nil).

Further details of alternative performance measures are provided in note 28.

Adjusted operating profit in our Manufacturing technologies business was £112.6m compared with £50.3m last year, while in our Analytical instruments and medical devices business, Adjusted operating profit was £5.9m compared with £1.4m last year. These improvements result from revenue growth and the reduced cost base described earlier.

The overall effective rate of tax was 20.1% (2020: 91.0%). We operate in many countries around the world and the overall effective tax rate is a result of the combination of the varying tax rates applicable throughout these countries. The reduction in the year-on-year rate is primarily due to the derecognition of deferred tax assets in 2020. Note 8 provides further analysis of the effective tax rate.

Cash and liquidity

We have achieved an improvement in our liquidity position during the year, with net cash and bank deposit balances at 30 June 2021 of £215.0m (2020: £120.4m). This is mostly a result of our strong trading performance and reduced levels of capital expenditure and dividends paid this year.

We disclose details of 'severe but plausible' scenario forecasts used in our going concern assessment in note 1 and conclude that we have a reasonable expectation that we will retain a liquid position and be able to continue in operation for at least the next 12 months.

Consolidated balance sheet

Additions to property, plant and equipment and vehicles totalled £10.9m, of which £1.0m was spent on property and £9.9m on plant and machinery, IT equipment and infrastructure, and vehicles. The lower expenditure this year is in line with our expectations following significant infrastructure investments in recent years.

Within working capital, inventories increased to £113.6m from £105.5m at the beginning of the year, primarily as a result of the higher trading levels. We continue to focus on inventory management while remaining committed to our policy of holding sufficient finished goods to ensure customer delivery performance, given our short order book. Given recent global shortages, we have also increased safety stock levels of some critical components to mitigate the risk of supply chain disruption.

Trade receivables increased from £105.1m to £114.7m due to increased revenue and including a currency translation gain of £7.8m.

There was an improvement in debtor days to 61 at the end of the year, compared with 76 at the end of last year. We have also seen a reduction in the provision for expected credit losses, from 1.5% of gross trade receivables at 30 June 2020, to 0.3% at 30 June 2021, resulting from the economic recovery we are now experiencing across our regions.

Total equity at the end of the year was £703.3m, compared with £546.9m at 30 June 2020, primarily as a result of profit for the year of £111.5m and cash flow hedging reserve gains of £41.8m.

Capital allocation strategy

The Board regularly reviews the capital requirements of the Group, in order to maintain a strong financial position to protect the business and provide flexibility to fund future growth.

We have consistently applied our capital allocation strategy for many years. We are committed to investment in the R&D of new products, manufacturing processes and global support infrastructure in order to generate growth in future returns and to improve productivity while managing expenditure appropriate to trading conditions. This is evidenced in the year by continued investments in capital and R&D.

Actual and forecast returns, along with our strong financial position, support our progressive dividend policy, which aims to increase the dividend per share while maintaining a prudent level of dividend cover. In exceptional circumstances the Board may deem it appropriate to not pay a dividend. This was the case in 2020, where no final dividend was proposed as a result of global uncertainty arising from the COVID-19 pandemic.

Pensions

At the end of the year our defined benefit pension schemes, now closed for future accrual, showed a deficit of £23.7m, compared with a deficit of £64.9m at 30 June 2020. Defined benefit pension schemes' assets at 30 June 2021 increased to £231.4m from £188.6m at 30 June 2020, primarily as a result of strong investment performance.

Pension scheme liabilities decreased from £253.5m to £232.6m, on an IAS 19 basis (excluding the effect of IFRIC 14 and the asset ceiling). This primarily reflects the net effect of:

- an increase in the discount rate of the UK scheme;
- an increase in RPI for the UK and Irish schemes;
- an increase in CPI for the UK scheme; and
- a £14.3m reduction due to an adjustment discussed further below.

According to the terms of the current deficit funding plan, the Company is paying £8.7m each year into the scheme until 1 October 2023. The agreement will continue until 30 June 2031 and any outstanding deficit will be paid at that time. The agreement will end sooner if the actuarial deficit (calculated on a self-sufficiency basis) is eliminated in the meantime. The present value of the expected payments totalled £19.2m at 30 June 2021, relative to the net asset position of £3.3m. This has resulted in an additional £22.4m liability being recognised according to the asset ceiling and IFRIC 14.

In October 2020, the Trustees of the Renishaw Pension Fund ('the UK defined benefit scheme') notified the Company of a difference between the calculated estimate of liabilities in the scheme for administration purposes and for accounting purposes. Differing legal interpretations of the Trust Deed and Rules were subsequently concluded by legal firms instructed by the Trustees and the Company, mostly relating to the periods over which revaluation and late retirement factors are applied, with significant differences in the financial impact noted. Consequently, in April 2021, the Trustees and the Company jointly instructed Queen's Counsel to opine on a legal interpretation of the Trust Deed and Rules that both parties would accept. This resulted in another interpretation of the Trust Deed and Rules which is now the accepted legal position, with a £14.3m reduction in liabilities calculated on this basis. This change in liability estimate in the year relates to benefits for some members payable in future years, and has been accounted for within the 'Remeasurement of defined benefit pension scheme liabilities' in the Consolidated statement of other comprehensive income and expense.

See note 22 for further details on employee benefits.

Treasury policies

Our treasury policies are designed to manage the financial risks that arise from operating in a number of foreign currencies, to maximise interest income on cash deposits, and to ensure that appropriate funding arrangements are available for each of our companies.

We use forward exchange contracts to hedge a proportion of anticipated foreign currency cash inflows and the translation of foreign currency denominated intercompany balances. There are forward contracts in place to hedge against our Euro, US Dollar and Japanese Yen cash inflows and to offset movements on Renishaw plc's Euro, US Dollar and Japanese Yen intercompany balances. We do not speculate with derivative financial instruments.

Most of these forward contracts are subject to hedge accounting under IFRS 9 'Financial Instruments'. The hedged item in these contracts is the revenue forecasts of Renishaw plc and Renishaw UK Sales Limited, and during the year these forecasts were increased due to the improved economic conditions, such that all forward contracts have passed hedge effectiveness testing in the year. Gains and losses which recycle through the Consolidated income statement as a result of contracts previously found to be ineffective are excluded from adjusted profit measures. See note 24 for further details on financial instruments and note 28 on alternative performance measures.

Earnings per share and dividend

Adjusted earnings per share is 132.0p compared with 51.0p last year, while statutory earnings per share is 153.2p compared with 0.4p last year.

We reinstated the dividend programme during the year and paid an interim dividend of 14.0 pence net per share (2020: nil) on 6 April 2021 and are pleased to propose a final dividend of 52.0 pence net per share in respect of the year (2020: nil).

Looking forward

We continue to see external market growth drivers that are creating opportunities for our business. These include global skills shortages, digitalisation, near-shoring and reshoring, sustainable manufacturing, population growth and increasing life expectancy. These opportunities support a core objective of investing in research and development to deliver patented and innovative products and processes, helping our customers improve efficiency and reduce both waste and cost. With these growth opportunities in mind, we have secured planning permission to increase production capacity at our Miskin site in South Wales, UK.

Thanks to our highly-skilled and committed people we have remained resilient throughout the pandemic and our financial position has strengthened further during the year. This, combined with our future opportunities and strategic objectives, gives us confidence in the long-term prospects of our business.

Allen Roberts
Group Finance Director
21 October 2021

PRINCIPAL RISKS AND UNCERTAINTIES

Our performance is subject to a number of risks – the principal risks, factors impacting on them and mitigations are ranked in the table below, as well as an indication of the movement of the risk in the last year, our appetite towards that risk, and how the risk links to our strategy. The Board has conducted a robust assessment of the principal risks facing the business.

Appetite:

- **Low:** Minimal risk exposure is considered the safest approach, which may mean lower returns.
- **Medium:** A balanced approach which carefully considers the risks and rewards.
- **High:** Greater risk tolerance, which may involve maximum risk for maximum return.

Link to strategy:

- **SM:** Sales & Marketing
- **E:** Engineering
- **P:** Our People
- **M:** Manufacturing
- **SS:** Support Services

Industry fluctuations					
Movement: stable risk		Risk ranking: 1	Appetite: High	Link to strategy: SM, M, E	Risk owner: Chief Executive
Risk description	Potential impact	Developments this year	What we are doing to manage this risk		
We are exposed to the cyclical nature of demand from aerospace, automotive and consumer electronics industries, which may be more severe if the downcycles of these key industries coincide.	<ul style="list-style-type: none"> – Increased competition on prices. – Loss of market share. – Reduced revenue, profit and cash generation. 	COVID-19 has had a severe impact on many industries, but particularly the aerospace and automotive industries. However, the impact of this risk on the Group has been less significant than initially predicted.	<ul style="list-style-type: none"> – Closely monitoring market developments. – Expanding our range in order to meet the demands of a number of different industry sectors and markets. – Identifying and meeting the needs of emerging markets, for example in robotic automation. – Maintaining a strong balance sheet with the ability to flex manufacturing resource levels. 		
People					
Movement: stable risk		Risk ranking: 2	Appetite: Medium	Link to strategy: P	Risk owner: Head of Group HR
Risk description	Potential impact	Developments this year	What we are doing to manage this risk		
<p>Our people drive the success of our business.</p> <p>Inability to attract, retain and develop key talent at all levels of the organisation could mean we fail to successfully deliver on our strategic goals.</p>	<ul style="list-style-type: none"> – Loss of expertise, skills and specialist talent could affect delivery of objectives. – Poor retention and engagement could slow the delivery of our strategic objectives and product delivery. – Failure to develop future leaders, insufficient talent progression. – Loss of market share, reduced revenue, poor customer service and reduced profit. 	Lockdown and remote working have affected employee availability, attendance, and engagement. This has had an adverse impact in some areas, but we have also seen a positive impact where employees have been able to engage and interact in new and different ways. Our employees have benefited from the ability of our systems and processes to support home working, as well as improvements in recruitment and retention, and development of talent.	<ul style="list-style-type: none"> – Establishing continuity plans to enable rapid adaptation to changing circumstances. – Advancing our direct employee engagement through multi-media communications, promoting wellbeing, evolving feedback mechanisms, and further developing our inclusion strategy enabling equal opportunities to grow and develop. – Continued investment in our STEM and Early Career programmes, as well as talent development and succession planning. – Targeted approach to attract, reward, and retain our talent globally. 		

Supply chain dependencies			
Movement: decreased risk Risk ranking: 3 Appetite: Low Link to strategy: M Risk owner: Head of Group Manufacturing			
Risk description	Potential impact	Developments this year	What we are doing to manage this risk
We are exposed to the risk that some components we source are provided by single-source suppliers and we are vulnerable to an interruption in supply. While we duplicate key processes at more than one manufacturing location, significant disruption at a single site could compromise our ability to supply products to customers.	<ul style="list-style-type: none"> – Inability to fulfil customer orders leading to a reduction in revenue and profits, and damage to reputation. – Failure to meet contractual requirements. – Increased costs of alternative sourcing or redesign. – Loss of market share. 	This risk has increased temporarily due to COVID-19 and the resulting global supply chain uncertainties faced by most manufacturing organisations. Manufacture of cables in India was adversely affected by the brief shutdown in that market. Once production resumed, this was sustained by the extraordinary efforts of local employees. Contingency plans were implemented in Ireland and with a third-party supplier to ensure ongoing supply. We have reviewed and increased inventory where appropriate.	<ul style="list-style-type: none"> – Continued focus on, and review of, sourcing of key components. – Increase in buffer inventory. – Cost-effective alternative sources of supply actively sought to reduce dependency on single-source suppliers. – Specifications are reviewed and updated where necessary to facilitate alternative sourcing.
Innovation strategy			
Movement: stable risk Risk ranking: 4 Appetite: High Link to strategy: E Risk owner: Executive Chairman /Director of Group Technology			
Risk description	Potential impact	Developments this year	What we are doing to manage this risk
Failure to innovate to create new cutting-edge, high-quality products, or failing to protect the intellectual property that underpins these products, which allows us to differentiate ourselves from our competitors. As a business driven by innovation, there is a higher risk with new ventures outside our traditional field of expertise where the science and engineering are less proven.	<ul style="list-style-type: none"> – Failing to meet customer needs for high-quality and complex products. – Loss of market share. – Reduced revenue, profit and cash generation. – Failing to recover investment in R&D. 	Remote working has had a minor impact on innovation and project delivery. We have seen slight delays in some flagship projects.	<ul style="list-style-type: none"> – R&D projects are better prioritised and rationalised and regularly reviewed against milestones. Flagship projects are receiving greater focus from management and the Board. – Medium to long-term R&D strategies are monitored regularly by the Board and the Executive Committee. – Market developments are closely monitored and product development is based on input from customers. – Patent and intellectual property protection are core to new product development.
Economic and political uncertainty			
Movement: stable risk Risk ranking: 5 Appetite: High Link to strategy: All Risk owner: Chief Executive			
Risk description	Potential impact	Developments this year	What we are doing to manage this risk
As a global business, we may be affected by political, economic or regulatory developments in countries that we operate in. This could include a global recession, Brexit, and US/China trade relations.	<ul style="list-style-type: none"> – Increased competition on prices. – Loss of financial and physical assets in a region. – Supply issues leading to failures to meet contractual obligations. – Reduced revenue, profit and cash generation. 	COVID-19 has had a severe impact across the globe from a health and economic perspective. Developments relating to US/China relations, and supply chain issues following Brexit, have also affected the business to varying degrees during the financial year.	<ul style="list-style-type: none"> – Monitoring external economic and commercial environments and identifying relevant headwinds. – Maintaining sufficient headroom in our cash balances. – Increase in buffer inventory. – Closely monitoring all markets in which we operate.

Route to market / customer satisfaction model					
Movement: stable risk		Risk ranking: 6	Appetite: Medium	Link to strategy: SM	Risk owner: Chief Executive
Risk description	Potential impact	Developments this year	What we are doing to manage this risk		
Inherent complexity in the move to systems integration and the sale of capital goods.	<ul style="list-style-type: none"> – Low capital efficiency – high people costs and low productivity. – Higher engineering and distribution costs. – Adversely affects customer satisfaction levels, revenue and profits. 	COVID-19 gave us an opportunity to review and refine our approach to the sale of capital goods. We have now streamlined our product portfolio and are working with third parties to streamline our existing sales network.	<ul style="list-style-type: none"> – Closely monitoring customer feedback. – Reviewing our strategy for this area of the business. – Collaborating with complementary third parties. – Adopting new approaches to the sale of capital goods. 		
Capital allocation					
Movement: decreased risk		Risk ranking: 7	Appetite: Medium	Link to strategy: E	Risk owner: Group Finance Director
Risk description	Potential impact	Developments this year	What we are doing to manage this risk		
Failure to properly allocate budget between core and emerging activities.	<ul style="list-style-type: none"> – Investing in declining or less profitable areas at the expense of more profitable and strategically important areas. – Reduced profits. – Loss of market share. 	We have continued to successfully ensure that our expenditure is controlled, including the prioritisation of flagship projects and monitoring labour costs versus target for all areas of the business. In the first half of the year, we finalised the rightsizing activities as part of our Fit for the Future initiative.	<ul style="list-style-type: none"> – Defining, prioritising and developing strategies for all core and emerging areas of the business. – Greater scrutiny of all expenditure, including regular reporting on labour costs and capital expenditure. – Regular reporting of cash balances. – Tracking of performance objectives including regular reporting on flagship project progress. 		
Competitive activity					
Movement: stable risk		Risk ranking: 8	Appetite: Low	Link to strategy: All	Risk owner: Chief Executive
Risk description	Potential impact	Developments this year	What we are doing to manage this risk		
Failure to adapt to market and/or technological changes.	<ul style="list-style-type: none"> – Reduced revenue, profits and cash generation. – Loss of market share. – Erosion of prices. – Loss of reputation as a leader in innovation. 	COVID-19 has accelerated business change in many areas and we have seen technology requirements developing more quickly.	<ul style="list-style-type: none"> – We are diversified across a range of products, industries and geographies. – Closely monitoring market developments, particularly across our core product areas. – Local sales and engineering support to quickly identify changing local needs. – Strong historic and ongoing commitment to R&D investment to continue to build our product portfolio. 		

Exchange rate fluctuations			
Movement: stable risk Risk ranking: 9 Appetite: Medium Link to strategy: SM Risk owner: Group Finance Director			
Risk description	Potential impact	Developments this year	What we are doing to manage this risk
Due to the global nature of our operations, with over 90% of the revenue generated outside the UK, we are exposed to volatility in exchange rates that could have a significant impact on our results. We are exposed to exchange rate risks, including currency cash flow, currency translation risk and the currency risk on intercompany balances.	<ul style="list-style-type: none"> – Significant variations in profit. – Reduced cash generation. – Increased competition on product prices. 	Sterling has strengthened against our major trading currencies, particularly against the US Dollar and Japanese Yen. Ongoing uncertainty caused by economic conditions and the impact of the pandemic could give rise to further volatility.	<ul style="list-style-type: none"> – Rolling forward contracts for cash flow hedges in accordance with Board-approved policy. – One-month forward contracts to manage risks on intercompany balances. – Currency pricing reviews with some large customers. – Tracking of overseas net assets value compared to the market capitalisation. – Obtaining input from external sources including our banks.
Loss of manufacturing output			
Movement: increased risk Risk ranking: 10 Appetite: Low Link to strategy: M Risk owner: Head of Group Manufacturing			
Risk description	Potential impact	Developments this year	What we are doing to manage this risk
Manufacturing output can be adversely affected by factors including environmental hazards, technical delays or outages, plant or equipment failure, inadequate resourcing levels, or factors affecting the workforce such as a pandemic.	<ul style="list-style-type: none"> – Inability to fulfil customer orders leading to a reduction in revenue and profits, and damage to reputation. – Increased costs of alternative sourcing or redesign. – Impact on maintenance of buffer inventory. – Loss of market share. 	Our manufacturing division has responded well to the pandemic across all markets, although the relatively short notice of a lockdown in India did have an impact on the supply of cables across the Group.	<ul style="list-style-type: none"> – Duplication of high-dependency processes such as component manufacturing and finishing, electronic printed circuit board assembly, and microelectronics assembly across multiple manufacturing locations. – Ensuring we have flexible manufacturing capacity and sufficient resilience across our manufacturing sites. – Standardised approaches to assembly, annual risk assessments and business continuity planning. – Reviewing and maintaining business interruption and other insurance cover.
IT transformation failure			
Movement: stable risk Risk ranking: 11 Appetite: Low Link to strategy: All Risk owner: Director of Group Operations			
Risk description	Potential impact	Developments this year	What we are doing to manage this risk
The upgrade of our IT systems to Microsoft Dynamics 365, to remove legacy systems and ensure our business is better integrated, could impact our business if there are major technical issues, or if it is poorly integrated. This risk could also result in problems if there are significant delays to the programme or it runs significantly over budget.	<ul style="list-style-type: none"> – Major disruption to our systems (including our financial and HR systems) causing delay to our operations. – Affect our ability to process or issue invoices and customer orders, or to procure goods and services. – Increased costs, including to fix technical issues and restore or upgrade other affected systems. – Project delay would leave us supporting 	In the short term, remote working has had an impact on the ability to meet milestones and carry out appropriate testing. However, these delays are expected to be made up for in the longer-term timeframe of the project.	<ul style="list-style-type: none"> – Risk assessments carried out for all key systems likely to be affected by the upgrade. – A clear roadmap with measurable milestones. – Assigning project managers who have clear oversight of the project and any issues. – Promptly identifying and dealing with any significant issues.

	legacy systems for longer than desired.		
Cyber			
Movement: stable risk		Risk ranking: 12	Appetite: Low
		Link to strategy: All	Risk owner: Director of Group Operations
Risk description	Potential impact	Developments this year	What we are doing to manage this risk
External and internal threat which could result in a loss of data including intellectual property, or our ability to operate our systems which could severely affect our business.	<ul style="list-style-type: none"> – Loss of intellectual property and/or commercially sensitive data. – Inability to access, or disruption to, our systems leading to reduced service to customers. – Financial loss and reputational damage. – Impact on decision-making due to lack of clear and accurate data, or disruption caused by the lack of service. 	With remote working, we have had to increase vigilance and awareness of potential cyber risks. We are continuing to see attempted phishing attacks but are managing these well.	<ul style="list-style-type: none"> – Substantial resilience and back-up built into our systems which are continuously updated in line with current threats and industry best practice. – Cyber risks and security are regularly discussed at Board meetings. – Physical, logical and control measures are deployed to protect our information and systems, and external penetration testing is conducted as appropriate. – Regular security awareness training is conducted, including in relation to the specific risks associated with remote working.
Pensions			
Movement: stable risk		Risk ranking: 13	Appetite: Low
		Link to strategy: P	Risk owner: Group Finance Director
Risk description	Potential impact	Developments this year	What we are doing to manage this risk
Investment returns and actuarial assumptions of our defined benefit schemes are subject to economic and social factors outside our control.	<ul style="list-style-type: none"> – Any deficit may require additional funding in the form of supplementary cash payments to the plans or the provision of additional security. – Significant management time. – External support costs. 	Strong asset growth (net of scheme funding and pensions payments) of £33.8m. A change in the estimate of benefits for some members of the UK defined benefit pension scheme has resulted in a reduction in scheme liabilities.	<ul style="list-style-type: none"> – Recovery plan for the UK defined benefit scheme implemented in June 2019 with the aim of funding to self-sufficiency by 2031. – Active engagement with the Trustees on investment strategy. – The Trustees operate in line with a statement of investment principles. – The Company and Trustees seek appropriate independent professional advice when necessary.
Non-compliance with laws and regulations			
Movement: stable risk		Risk ranking: 14	Appetite: Low
		Link to strategy: All	Risk owner: General Counsel & Company Secretary/Director of Renishaw Neuro Solutions
Risk description	Potential impact	Developments this year	What we are doing to manage this risk
We operate in a large number of territories and in some highly-regulated sectors. We are subject to a wide variety of laws and regulations, including those relating to anti-bribery, anti-money laundering, sanctions, competition law, privacy, health and safety, product safety, and medical devices. There is a risk that somewhere in the Group we may not be fully compliant with these laws and regulations.	<ul style="list-style-type: none"> – Damage to reputation and loss of future business. – Potential penalties and fines, and cost of investigations. – Management time and attention in dealing with reports of non-compliance. – Inability to attract and retain talent. 	The forum previously established to focus on high-risk areas including competition law, anti-bribery, and sanctions, has continued to meet during the year. We have reviewed our current policies and have promoted communication and training for our employees.	<ul style="list-style-type: none"> – Whistleblowing hotline available for use by all employees. – Regular compliance training for all employees. – Controls in place to mitigate some of the risks (including insurance cover), and audits conducted to review some of these controls. – Implementation of a global GDPR programme (and its equivalent in non-EU countries).

Product failure			
Movement: stable risk		Risk ranking: 15	Appetite: Low
		Link to strategy: E, M	Risk owner: Director of Corporate Development/Head of QA RA & Clinical Affairs
Risk description	Potential impact	Developments this year	What we are doing to manage this risk
<p>The quality of our products could be adversely affected by internal threats, such as inadequate quality management procedures or external threats such as substandard resourcing from third-party suppliers.</p> <p>This risk is particularly notable in our neurological products, where failure could result in significant personal injury claims.</p>	<ul style="list-style-type: none"> – Damage to reputation. – Claims, including personal injury. – Potential penalties and fines, and cost of investigations. – Inability to fulfil customer orders leading to a reduction in sales. 	<p>The pandemic limited the ability of our engineers to conduct on-site product assessments for customers. Where the use of the neurosurgical robot has continued during the pandemic, servicing and surgical support has continued to be provided.</p> <p>The risk of failure of a new or existing product has not increased this year.</p>	<ul style="list-style-type: none"> – Rigorous internal product development and testing procedures (during development, manufacturing and release) to international standards where applicable, to ensure high levels of quality assurance. – Extensive interaction with customers and regulators to obtain and address feedback. – Regular monitoring of third-party suppliers to ensure incoming parts and sub-contract activity meet requirements. – Liability is limited by our terms and conditions of sale and we have liability insurance in place. For clinical studies, we have separate trial insurance in place.

CONSOLIDATED INCOME STATEMENT

for the year ended 30 June 2021

from continuing operations	Notes	2021 £'000	2020 £'000
Revenue	2	565,559	510,215
Cost of sales	4	(269,852)	(271,633)
Gross profit		295,707	238,582
Distribution costs		(110,087)	(123,276)
Administrative expenses		(69,257)	(58,584)
Restructuring costs	29	-	(23,797)
Gains/(losses) from the fair value of financial instruments	24	21,978	(26,631)
Operating profit		138,341	6,294
Financial income	5	3,406	913
Financial expenses	5	(3,991)	(4,840)
Share of profits of associates and joint ventures	13	1,683	841
Profit before tax	6	139,439	3,208
Income tax expense	8	(27,980)	(2,920)
Profit for the year		111,459	288
Profit attributable to:			
Equity shareholders of the parent company		111,459	288
Non-controlling interest	25	-	-
Profit for the year		111,459	288
Dividend per share arising in respect of the year	25	pence 66.0	pence 0.0
Dividend per share paid in the year	25	14.0	46.0
Earnings per share (basic and diluted)	7	153.2	0.4

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME AND EXPENSE
for the year ended 30 June 2021

	notes	2021 £'000	2020 £'000
Profit for the year		111,459	288
Other items recognised directly in equity:			
Items that will not be reclassified to the Consolidated income statement:			
Current tax on contributions to defined benefit pension schemes		1,653	-
Deferred tax on contributions to defined benefit pension schemes		(1,653)	-
Remeasurement of defined benefit pension scheme liabilities	22	33,285	(23,978)
Deferred tax on remeasurement of defined benefit pension scheme liabilities		(6,052)	5,484
Total for items that will not be reclassified		27,233	(18,494)
Items that may be reclassified to the Consolidated income statement:			
Exchange differences in translation of overseas operations	25	(14,752)	3,369
Exchange differences in translation of overseas joint venture	25	(728)	186
Current tax on translation of net investments in foreign operations	25	735	-
Deferred tax on translation of net investments in foreign operations	25	735	(403)
Effective portion of changes in fair value of cash flow hedges, net of recycling	25	51,590	13,924
Deferred tax on effective portion of changes in fair value of cash flow hedges	25	(9,790)	(1,978)
Total for items that may be reclassified		27,790	15,098
Total other comprehensive income and expense, net of tax		55,023	(3,396)
Total comprehensive income and expense for the year		166,482	(3,108)
Attributable to:			
Equity shareholders of the parent company		166,482	(3,108)
Non-controlling interest	25	-	-
Total comprehensive income and expense for the year		166,482	(3,108)

CONSOLIDATED BALANCE SHEET

at 30 June 2021

	notes	2021 £'000	2020 £'000
Assets			
Property, plant and equipment	10	246,242	270,049
Right-of-use assets	11	12,429	12,672
Intangible assets	12	43,795	43,364
Investments in associates and joint ventures	13	16,634	16,604
Long-term loans to associates and joint ventures	13	-	2,818
Finance lease receivables	14	6,241	4,801
Deferred tax assets	9	21,292	39,641
Derivatives	24	12,484	1,242
Total non-current assets		359,117	391,191
Current assets			
Inventories	16	113,563	105,497
Trade receivables	24	114,661	105,077
Finance lease receivables	14	1,763	1,982
Contract assets		332	606
Short-term loans to associates and joint ventures	13	598	318
Current tax		1,600	3,878
Other receivables	24	30,021	23,196
Derivatives	24	9,639	3,758
Pension scheme cash escrow account	22	10,578	10,568
Bank deposits	15	120,000	10,000
Cash and cash equivalents	15,24	95,008	110,386
Total current assets		497,763	375,266
Current liabilities			
Trade payables	24	24,715	16,998
Contract liabilities	18	6,120	5,976
Current tax		4,680	2,905
Provisions	17	6,259	5,591
Derivatives	24	5,594	22,546
Lease liabilities	20	3,904	4,241
Borrowings	21	992	1,061
Other payables	19	51,716	34,372
Total current liabilities		103,980	93,690
Net current assets		393,783	281,576
Non-current liabilities			
Lease liabilities	20	8,658	8,925
Borrowings	21	6,457	10,482
Employee benefits	22	23,698	64,895
Deferred tax liabilities	9	10,402	499
Derivatives	24	355	41,102
Total non-current liabilities		49,570	125,903
Total assets less total liabilities		703,330	546,864
Equity			
Share capital	25	14,558	14,558
Share premium		42	42
Own shares held	25	(404)	(404)
Currency translation reserve	25	3,719	17,729
Cash flow hedging reserve	25	11,345	(30,455)
Retained earnings		674,603	546,100
Other reserve	25	44	(129)
Equity attributable to the shareholders of the parent company		703,907	547,441
Non-controlling interest	25	(577)	(577)
Total equity		703,330	546,864

These financial statements were approved by the Board of Directors on 21 October 2021 and were signed on its behalf by:

Sir David McMurtry **Allen Roberts**
Directors

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
for the year ended 30 June 2021

Year ended 30 June 2020	Share capital £'000	Share premium £'000	Own Shares Held £'000	Currency translation reserve £'000	Cash flow hedging reserve £'000	Retained earnings £'000	Other reserve £'000	Non-controlling interest £'000	Total £'000
Balance at 1 July 2019	14,558	42	(404)	14,577	(42,401)	597,784	(302)	(577)	583,277
Profit for the year	-	-	-	-	-	288	-	-	288
Other comprehensive income and expense (net of tax)									
Remeasurement of defined benefit pension scheme liabilities	-	-	-	-	-	(18,494)	-	-	(18,494)
Foreign exchange translation differences	-	-	-	2,965	-	-	-	-	2,965
Relating to associates and joint ventures	-	-	-	187	-	-	-	-	187
Changes in fair value of cash flow hedges	-	-	-	-	11,946	-	-	-	11,946
Total other comprehensive income and expense	-	-	-	3,152	11,946	(18,494)	-	-	(3,396)
Total comprehensive income and expense	-	-	-	3,152	11,946	(18,206)	-	-	(3,108)
Share-based payments charge	-	-	-	-	-	-	173	-	173
Dividends paid	-	-	-	-	-	(33,478)	-	-	(33,478)
Balance at 30 June 2020	14,558	42	(404)	17,729	(30,455)	546,100	(129)	(577)	546,864
Year ended 30 June 2021									
Profit for the year	-	-	-	-	-	111,459	-	-	111,459
Other comprehensive income and expense (net of tax)									
Remeasurement of defined benefit pension scheme liabilities	-	-	-	-	-	27,233	-	-	27,233
Foreign exchange translation differences	-	-	-	(13,282)	-	-	-	-	(13,282)
Relating to associates and joint ventures	-	-	-	(728)	-	-	-	-	(728)
Changes in fair value of cash flow hedges	-	-	-	-	41,800	-	-	-	41,800
Total other comprehensive income and expenses	-	-	-	(14,010)	41,800	27,233	-	-	55,023
Total comprehensive income and expenses	-	-	-	(14,010)	41,800	138,692	-	-	166,482
Share-based payments charge	-	-	-	-	-	-	173	-	173
Dividends paid	-	-	-	-	-	(10,189)	-	-	(10,189)
Balance at 30 June 2021	14,558	42	(404)	3,719	11,345	674,603	44	(577)	703,330

More details of share capital and reserves are given in note 25.

CONSOLIDATED STATEMENT OF CASH FLOW

for the year ended 30 June 2021

	Notes	2021 £'000	2020 £'000
Cash flows from operating activities			
Profit for the year		111,459	288
Adjustments for:			
Depreciation of property, plant and equipment and right of use assets	10,11	28,780	30,578
Loss on sale of property, plant and equipment		31	22
Impairment of property, plant and equipment	10	-	2,590
Amortisation of development costs	12	9,019	16,861
Impairment of development costs	12	1,092	15,881
Amortisation of other intangibles	12	1,205	1,566
Loss on disposal of other intangibles		-	53
Impairment of other intangibles	12	-	1,600
Impairment of goodwill	12	-	808
Share of profits from associates and joint ventures	13	(1,683)	(841)
Profit on disposal of investment in associate		-	(1,053)
Fair value gain on revaluation of investment in associate		-	(2,775)
Impairment of investment in associate	13	1,674	257
Impairment of long-term loan to associate	13	2,633	1,297
Remeasurement of defined benefit pension scheme liabilities from GMP equalisation	22	78	-
Financial income	5	(3,406)	(913)
Financial expenses	5	3,991	4,840
(Gains)/losses from the fair value of financial instruments	28	(22,995)	21,609
Share-based payment expense	23	173	173
Tax expense	8	27,980	2,920
		48,572	95,473
(Increase)/decrease in inventories		(8,066)	23,529
(Increase)/decrease in trade and other receivables		(25,703)	16,342
Increase/(decrease) in trade and other payables		27,216	(11,297)
Increase in provisions	17	668	2,745
		(5,885)	31,319
Defined benefit pension contributions	22	(8,866)	(11,816)
Income taxes paid		(9,991)	(10,605)
Cash flows from operating activities		135,289	104,659
Investing activities			
Purchase of property, plant and equipment	10	(10,873)	(38,657)
Sale of property, plant and equipment		33	3,633
Development costs capitalised	12	(9,844)	(17,405)
Purchase of other intangibles	12	(3,000)	(3,338)
(Increase)/decrease in bank deposits	15	(110,000)	42,500
Interest received	5	625	835
Dividend received from associates and joint ventures	13	-	512
Purchase of additional shareholding in joint venture	13	(749)	-
Proceeds from sale of shares in associate		-	986
Cash flows from investing activities		(133,808)	(10,934)
Financing activities			
Increase in borrowings	21	636	1,894
Repayment of borrowings	21	(3,477)	(1,136)
Interest paid	5	(386)	(1,315)
Repayment of principal of lease liabilities	20	(4,815)	(4,130)
Dividends paid	25	(10,189)	(33,478)
Cash flows from financing activities		(18,231)	(38,165)
Net increase in cash and cash equivalents		(16,750)	55,560
Cash and cash equivalents at beginning of the year		110,386	54,326
Effect of exchange rate fluctuations on cash held		1,372	500
Cash and cash equivalents at end of the year	15	95,008	110,386

NOTES (FORMING PART OF THE FINANCIAL STATEMENTS)

1. Accounting policies

Basis of preparation

Renishaw plc (the Company) is a company incorporated in England and Wales. The Group financial statements consolidate those of the Company and its subsidiaries (together referred to as the Group) and equity account the Group's interest in associates and joint ventures.

The financial information set out in the announcement does not constitute the Group's statutory accounts for the years ended 30 June 2021 or 30 June 2020. The financial information for the year ended 30 June 2020 is derived from the statutory accounts for that year, which have been delivered to the Registrar of Companies. The auditor reported on those accounts; their report was unqualified, did not draw attention to any matters by way of emphasis without qualifying their report and did not contain a statement under s498 (2) or (3) Companies Act 2006. In respect of the year ended 30 June 2021, an unqualified auditor's report was signed on 21 October 2021. The statutory accounts will be delivered to the Registrar of Companies following the Group's annual general meeting. The consolidated financial statements are presented in Sterling, which is the Company's functional currency and the Group's presentational currency, and all values are rounded to the nearest thousand (£'000).

The accounting policies set out below have, unless otherwise stated, been applied consistently to all periods presented in these Group financial statements. Judgements made by the Directors, in the application of these accounting policies, that have a significant effect on the financial statements and estimates with a significant risk of material adjustment in the next year are noted below.

Critical accounting judgements and estimation uncertainties

The preparation of financial statements in conformity with adopted IFRS requires management to make judgements, estimates and assumptions that affect the application of policies and reported amounts of assets and liabilities, income and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis.

The areas of key estimation uncertainty and critical accounting judgement that have a significant risk of causing a material adjustment to the carrying amount of assets and liabilities in the next financial year are summarised below, with further details included within accounting policies as indicated.

Item	Key judgements (J) and estimates (E)
Cash flow hedges	E – Estimates of highly probable forecasts of the hedged item
Research and development costs	J – Whether a project meets the criteria for capitalisation
Goodwill and capitalised development costs	E – Estimates of future cash flows for impairment testing
Inventories	E – Determination of net realisable value
Defined benefit pension schemes	E – Valuation of defined benefit pension schemes' liabilities
Taxation	E – Estimates of future profits to utilise deferred tax assets

New, revised or changes to existing accounting standards

The following accounting standard amendments became effective as at 1 January 2020 and have been adopted in the preparation of these financial statements, with effect from 1 July 2020:

- amendments to IFRS 3 Definition of a Business;
- amendments to IFRS 7, IFRS 9 and IAS 39 Interest Rate Benchmark Reform;
- amendments to IAS 1 and IAS 8 Definition of Material;
- amendments to References to the Conceptual Framework for Financial Reporting; and
- amendments to IFRS 16 COVID-19-Related Rent Concessions.

These have not had a material impact on these financial statements.

Going concern

In preparing these financial statements, the Directors have adopted the going concern basis. The decision to adopt the going concern basis was made after considering:

- the Group's business model and key markets;
- the Group's risk management processes and principal risks;
- the Group's financial resources and strategies; and

– the process undertaken to review the Group's viability, including scenario testing which included considering the potential future impact of COVID-19 on the Group.

In the viability review the Directors assessed the period to 31 October 2024, using the 'highly probable' revenue forecasts used by the Group for hedge accounting, and 'severe but plausible' downside scenarios. In making the going concern assessment, the Directors used the same forecasts but assessed the period to 31 October 2022.

The scenarios were:

Base scenario – pessimistic revenue forecast from the Group's business plan, with overheads, capital expenditure, and other cash outflows following the route of the optimistic revenue forecast from the same business plan. Essentially, this means continuing to plan for the growth in the business plan, including the costs that would need to be incurred in the period to 31 October 2022 to achieve revenue growth in following years, while assuming that revenue growth is at the lowest end of our corporate view. The pessimistic revenue forecasts are used as the 'highly probable' revenue forecasts used in hedge accounting. For context, revenue in the first year of the base scenario is a small increase over 2021's revenue of £565.6m.

The 'severe but plausible' scenarios then took the base scenario ('scenario 1') and considered the further effect of:

- 2) Supply-chain disruption causing a loss in revenue, due to not being able to fulfil all orders and some permanent loss of customers if this disruption caused them to move to our competitors;
- 3) Industry fluctuations and/or macroeconomic conditions causing revenue to significantly reduce;
- 4) Supply-chain disruption occurring at the same time as the industry fluctuations and/or macroeconomic conditions, combining scenarios 2 and 3;
- 5) Industry fluctuations and/or macroeconomic conditions causing revenue to significantly reduce, and also causing a significant deterioration in debtor days; and
- 6) Supply-chain disruption and economic uncertainty result in a significant rise in material costs, and therefore a fall in gross margin.

In all six scenarios, the Group had significant positive cash balances throughout the period to 31 October 2022.

For our other principal risks, no further separate scenarios were modelled. For risks such as People, Innovation strategy, and Capital allocation, the Directors felt that if these risks crystallised they would result in the restriction of longer-term growth rather than having a significant financial effect in the short term. For other principal risks, the Directors considered that the existing scenarios sufficiently modelled a range of outcomes, including what would happen if multiple risks crystallised at the same time, and that the outcomes of other risks crystallising would be no worse than the existing scenarios.

Emerging risks of climate change and changing work patterns have also been reviewed by the Directors when considering the impact and likelihood of principal risks crystallising.

We also performed reverse stress testing to identify what would need to happen in the period to 31 October 2022 to result in the Group having negative cash balances. We found that this would occur if revenue fell to £12m per month before mitigating actions were taken; this is considerably lower than forecast, and well below the lowest revenue months experienced in the height of the pandemic.

In making their going concern assessment, the Directors also considered the strong demand currently being experienced, and that the pandemic has accelerated trends such as digitisation, near-shoring, and remote working, which the business is well-placed to benefit from. The assessment further considered the strong working capital position, with cash and bank deposit balances of £215m at 30 June 2021.

Based on this assessment, incorporating a review of the current position, the scenarios, principal risks and mitigation, the Directors have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period to 31 October 2022. Accordingly, they continue to adopt the going concern basis in preparing these financial statements.

Basis of consolidation

Subsidiaries – subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed to or has rights to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. In assessing control, the Group takes into consideration potential voting rights that are exercisable. The acquisition date is the date on which control is transferred to the acquirer. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases. Losses applicable to the non-controlling interests in a subsidiary

are allocated to the non-controlling interests even if doing so causes the non-controlling interests to have a deficit balance.

Application of the equity method to associates and joint ventures – associates and joint ventures are accounted for using the equity method (equity accounted investees) and are initially recognised at cost. The Group's investment includes goodwill identified on acquisition, net of any accumulated impairment losses.

The consolidated financial statements include the Group's share of the total comprehensive income and equity movements of equity accounted investees, from the date that significant influence commences until the date that significant influence ceases. When the Group's share of losses exceeds its interest in an equity accounted investee, the Group's carrying amount is reduced to nil and recognition of further losses is discontinued except to the extent that the Group has incurred legal obligations or made payments on behalf of an investee.

Transactions eliminated on consolidation – intragroup balances and transactions, and any unrealised income and expenses arising from intragroup transactions, are eliminated. Unrealised gains arising from transactions with equity accounted investees are eliminated against the investment to the extent of the Group's interest in the investee. Unrealised losses are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

Foreign currencies

Consolidation – overseas subsidiaries' results are translated into Sterling at weighted average exchange rates for the year by translating each overseas subsidiary's monthly results at exchange rates applicable to each of the respective months. Assets and liabilities denominated in foreign currencies at the balance sheet date are translated into Sterling at the foreign exchange rates prevailing at that date. Differences on exchange resulting from the translation of overseas assets and liabilities are recognised in Other comprehensive income and are accumulated in equity.

Transactions and balances – monetary assets and liabilities denominated in foreign currencies are reported at the rates prevailing at the time, with any gain or loss arising from subsequent exchange rate movements being included as an exchange gain or loss in the Consolidated income statement. Foreign currency differences arising from transactions are recognised in the Consolidated income statement.

Separately disclosed items

The directors consider that certain items should be separately disclosed to aid users' understanding of the Group's performance.

Gains and losses from the fair value of financial instruments are therefore separately disclosed in the Consolidated income statement, where these gains and losses relate to certain forward currency contracts that are not effective for hedge accounting. Restructuring costs are also separately disclosed where significant costs have been incurred in rationalising and reorganising our business as part of a Board-approved strategy and relate to matters that do not frequently recur.

These items are also excluded from Adjusted profit before tax, Adjusted operating profit and Adjusted earnings per share measures, as explained in note 28 Alternative Performance Measures.

Alternative performance measures

The financial statements are prepared in accordance with adopted IFRS and applied in accordance with the provisions of the Companies Act 2006. In measuring our performance, the financial measures that we use include those which have been derived from our reported results in order to eliminate factors which distort year-on-year comparisons.

These are considered non-GAAP financial measures. We believe this information, along with comparable GAAP measurements, is useful to stakeholders in providing a basis for measuring our operational performance. The Board use these financial measures, along with the most directly comparable GAAP financial measures, in evaluating our performance (see note 28).

Revenue

The Group generates revenue from the sale of manufacturing technologies and analytical instruments and medical devices goods, capital equipment and services. These can be sold both on their own and together.

a) Sale of goods, capital equipment and services

The Group's contracts with customers consist both of contracts with one performance obligation and contracts with multiple performance obligations.

For contracts with one performance obligation, revenue is measured at the transaction price, which is typically the contract value except for customers entitled to volume rebates, and recognised at the point in time when control of the product transfers to the customer. This point in time is typically when the products are made available for collection by the customer, collected by the shipping agent, or delivered to the customer, depending upon the shipping terms applied to the specific contract.

Contracts with multiple performance obligations typically exist where, in addition to supplying product, we also supply services such as user training, servicing and maintenance, and installation services. Where the installation service is simple, does not include a significant integration service and could be performed by another party then the installation is accounted for as a separate performance obligation. Where the contracts include multiple performance obligations, the transaction price is allocated to each performance obligation based on the relative stand-alone selling prices, the assessment of which is documented in the Key judgement. The revenue allocated to each performance obligation is then recognised when, or as, that performance obligation is satisfied. For installation, this is typically at the point in time in which installation is complete. For training, this is typically the point in time at which training is delivered. For servicing and maintenance, the revenue is recognised evenly over the course of the servicing agreement except for ad-hoc servicing and maintenance which is recognised at the point in time in which the work is undertaken.

b) Sale of software

The Group provides software licences and software maintenance to customers, sold both on their own and together with associated products. Where the software licence and/or maintenance is provided as part of a contract that provides customers with software licences and other goods and services then the transaction price is allocated on the same basis as described in a) above.

The Group's distinct software licences provide a right of use, and therefore revenue from software licences is recognised at the point in time in which the licence is supplied to the customer. Revenue from software maintenance is recognised evenly over the term of the maintenance agreement.

c) Extended warranties

The Group provides standard warranties to customers that address potential latent defects that existed at point of sale and as required by law (assurance-type warranties). In some contracts, the Group also provides warranties that extend beyond the standard warranty period and may be sold to the customer (service-type warranties).

Assurance-type warranties continue to be accounted for by the Group under IAS 37 'Provisions, Contingent Liabilities and Contingent Assets'. Service-type warranties are accounted for as separate performance obligations and therefore a portion of the transaction price is allocated to this element, and then recognised evenly over the period in which the service is provided.

d) Contract balances

Contract assets represent the Group's right to consideration in exchange for goods and services that have been transferred to a customer, and mainly includes accrued revenue in respect of goods and services provided to a customer but not yet fully billed. Contract assets are distinct from receivables, which represent the Group's right to consideration that is unconditional.

Contract liabilities represent the Group's obligation to transfer goods or services to a customer for which the Group has either received consideration or consideration is due from the customer.

e) Disaggregation of revenue

The Group disaggregates revenue from contracts with customers between: goods, capital equipment and installation, and aftermarket services; reporting segment; and geographical location.

Management believe these categories best depict how the nature, amount, timing and uncertainty of the Group's revenue is affected by economic factors.

Financial instruments and fair value measurements

The Group measures financial instruments such as forward exchange contracts at fair value at each balance sheet date in accordance with IFRS 9 'Financial Instruments'. Fair value, as defined by IFRS 13 'Fair Value Measurement', is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Note 24, Financial instruments, provides detail on the IFRS 13 fair value hierarchy.

Trade and other current receivables are initially recognised at fair value and are subsequently held at amortised cost less any provision for bad and doubtful debts and expected credit losses according to IFRS 9. Loans to associates and joint ventures are initially recognised at fair value and are subsequently held at amortised cost. Trade and other current payables are initially recognised at fair value and are subsequently held at amortised cost.

Financial liabilities in the form of loans are initially recognised at fair value and are subsequently held at amortised cost. Financial liabilities are assessed for embedded derivatives and whether any such derivatives are closely related. If not closely related, such derivatives are accounted for at fair value in the Consolidated income statement.

Foreign currency derivative cash flow hedges

Foreign currency derivatives are used to manage risks arising from changes in foreign currency rates relating to overseas sales and foreign currency denominated assets and liabilities. The Group does not enter into derivatives for speculative purposes. Foreign currency derivatives are stated at their fair value, being the estimated amount that the Group would pay or receive to terminate them at the balance sheet date, based on prevailing foreign currency rates.

Changes in the fair value of foreign currency derivatives which are designated and effective as hedges of future cash flows are recognised in Other comprehensive income and in the Cash flow hedging reserve, and subsequently transferred to the carrying amount of the hedged item or the Consolidated income statement. Realised gains or losses on cash flow hedges are therefore recognised in the Consolidated income statement within revenue in the same period as the hedged item.

Hedge accounting is discontinued when the hedging instrument expires or no longer qualifies for hedge accounting. At that time, any cumulative gain or loss on the hedging instrument previously recognised in equity is retained in equity until the hedged transaction occurs. If the hedged transaction is no longer expected to occur, the net cumulative gain or loss recognised in equity is then transferred to the Consolidated income statement.

Changes in fair value of foreign currency derivatives, which are ineffective or do not meet the criteria for hedge accounting in IFRS 9, are recognised in the Consolidated income statement within Gains/losses from the fair value of financial instruments.

In addition to derivatives held for cash flow hedging purposes, the Group uses short-term derivatives not designated as hedging instruments to offset gains and losses from exchange rate movements on foreign currency denominated assets and liabilities. Gains and losses from currency movements on underlying assets and liabilities, realised gains and losses on these derivatives and fair value gains and losses on outstanding derivatives of this nature are all recognised in Financial income and expenses in the Consolidated income statement. See note 24 for further detail on financial instruments.

Key estimate – Estimates of highly probable forecasts of the hedged item

Derivatives are effective for hedge accounting to the extent that the hedged item is 'highly probable' to occur, with 'highly probable' indicating a much greater likelihood of occurrence than the term 'more likely than not'. Determining a highly probable sales forecast for Renishaw plc and Renishaw UK Sales Limited, being the hedged item, over a multiple year time period, requires judgement of the suitability of external and internal data sources and estimations of future sales. Relevant sensitivity analysis is included in note 24.

Cash and cash equivalents

Cash and cash equivalents comprise cash balances, and deposits with an original maturity of less than three months or with an original maturity date of more than three months where the deposit can be accessed on demand without significant penalty for early withdrawal and where the original deposit amount is recoverable in full.

Pension scheme cash escrow account

The Company holds a pension scheme escrow account as part of the security given for the UK defined benefit pension scheme. This account is shown within current assets in the Consolidated balance sheet as it may be used to settle pension scheme liabilities immediately upon enforcement of the charge over the account.

Goodwill and other intangible assets

Goodwill arising on acquisition represents the difference between the cost of the acquisition and the fair value of the net identifiable assets acquired, net of deferred tax. Identifiable intangibles are those which can be sold separately or which arise from legal rights regardless of whether those rights are separable.

Business combinations are accounted for using the acquisition method as at the acquisition date, which is the date on which control is transferred to the Group.

Goodwill is stated at cost less any accumulated impairment losses. It is not amortised but is tested annually for impairment or earlier if there are any indications of impairment. The annual impairment review involves comparing the carrying amount to the estimated recoverable amount and recognising an impairment loss if the recoverable amount is lower. Impairment losses are recognised in the Consolidated income statement.

Intangible assets such as customer lists, patents, trade marks, know-how and intellectual property that are acquired by the Group are stated at cost less amortisation and impairment losses. Amortisation is charged to the Consolidated income statement on a straight-line basis over the estimated useful lives of the intangible assets.

The estimated useful lives of the intangible assets included in the Consolidated balance sheet reflect the benefit derived by the Group and vary from five to ten years.

Intangible assets – research and development costs

Expenditure on research activities is recognised in the Consolidated income statement as an expense as incurred. Expenditure on development activities is capitalised if the product or process is technically and commercially feasible and the Group intends and has the technical ability and sufficient resources to complete development, future economic benefits are probable and the Group can measure reliably the expenditure attributable to the intangible asset during its development.

Development activities involve a plan or design for the production of new or substantially improved products or processes. The expenditure capitalised includes the cost of materials, direct labour and an appropriate proportion of overheads. Other development expenditure is recognised in the Consolidated income statement as an expense as incurred.

Capitalised development expenditure is amortised over five years and is stated at cost less accumulated amortisation and less accumulated impairment losses. Capitalised development expenditure is removed from the balance sheet ten years after being fully amortised.

Key judgement – Whether a project meets appropriate criteria for capitalisation

Product development costs are capitalised once a project has reached a certain stage of development and these costs are subsequently amortised over a five-year period. Costs are capitalised from the point the product has passed testing to demonstrate it meets the technical specifications of the project and it satisfies all applicable regulations. Judgements are required to assess whether the new product development has reached the appropriate point for capitalisation of costs to begin. Should a product be subsequently obsoleted, the accumulated capitalised development costs would need to be immediately written off in the Consolidated income statement.

Intangible assets – software licences

Intangible assets, comprising software licences that are acquired by the Group, are stated at cost less accumulated amortisation and impairment losses. Amortisation is charged on a straight-line basis over the estimated useful life of the assets. The useful life of each of these assets is assessed on an individual basis and they range from two to 10 years.

Impairment of non-current assets

All non-current assets are tested for impairment whenever there is an indication that their carrying value may be impaired. An impairment loss is recognised in the Consolidated income statement to the extent that an asset's carrying value exceeds its recoverable amount, which represents the higher of the asset's net realisable value and its value in use. An asset's value in use represents the present value of the future cash flows expected to be derived from the asset or from the cash-generating unit to which it relates. The present value is calculated using a discount rate that reflects the current market assessment of the time value of money and the risks specific to the asset concerned.

Goodwill and capitalised development costs are subject to an annual impairment test.

Key estimate – Estimates of future cash flows used for impairment testing

Determining whether goodwill is impaired requires an estimation of the value-in-use of cash-generating units (CGUs) to which goodwill has been allocated. The value-in-use calculation involves an estimation of the future cash flows of CGUs and also the selection of appropriate discount rates, which involves judgement, to calculate present values (see note 12). Similarly, determining whether capitalised development costs are impaired requires an estimation of their value-in-use which involves significant judgement. Relevant sensitivity analysis is included in note 12.

Property, plant and equipment

Freehold land is not depreciated. Other assets are stated at cost less accumulated depreciation. Depreciation is provided to write off the cost of assets less their estimated residual value on a straight-line basis over their estimated useful economic lives as follows:

Freehold buildings 50 years, Plant and equipment 3 to 25 years, Vehicles 3 to 4 years.

Inventory and work in progress

Inventory and work in progress is valued at the lower of actual cost on a first-in, first-out (FIFO) basis and net realisable value. In respect of work in progress and finished goods, cost includes all production overheads and the attributable proportion of indirect overhead expenses that are required to bring inventories to their present location and condition. Overheads are absorbed into inventories on the basis of normal capacity or on actual hours if higher.

Key estimate – Determination of net realisable inventory value

Determining the net realisable value of inventory requires management to estimate future demand, especially in respect of provisioning for slow moving and potentially obsolete inventory. When calculating an inventory provision, management use historic usage levels (capped at 18 months), demand from customer orders and manufacturing build plans as a basis for estimating the future annual demand of individual stock items, except in the following instances:

- For key products and their components, provisions are typically made for quantities held in excess of three years' demand. A demand basis lower than three years is used for those key products and related components where the sales history is more volatile; and*
- Where strategic purchases of critical components have been made, an outlook beyond three years is considered where appropriate.*

Leases

As a lessee

At the lease commencement date the Group recognises a right-of-use asset for the leased item and a lease liability for any lease payments due.

Right-of-use assets are initially measured at cost, being the present value of the lease liability plus any initial costs incurred in entering the lease and less any lease incentives received. Right of use assets are subsequently depreciated on a straight-line basis from the commencement date to the earlier of i) the end of the useful life of the asset, or ii) the end of the lease term.

Lease liabilities are initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the incremental borrowing rate of the applicable entity. The lease liability is subsequently measured at amortised cost using the effective interest method and is remeasured if there is a change in future lease payments arising from a change in an index or rate (such as an inflation-linked increase), or if there is a change in the Group's assessment of whether it will exercise an extension or termination option. When this happens there is also a corresponding adjustment to the right-of-use asset.

Where the Group enters into leases with a lease term of 12 months or less, these are treated as 'short-term' leases and are recognised on a straight-line basis as an expense in the Consolidated income statement. The same treatment applies to low-value assets, which are typically IT equipment and office equipment.

As a lessor

The Group acts as a lessor for Renishaw-manufactured plant and equipment and determines at inception whether the lease is a finance or an operating lease.

Where the Group transfers the risks and rewards of ownership of lease assets to a third party, the Group recognises a receivable in the amount of the net investment in the lease. The lease receivable is subsequently reduced by the principal received, while an interest component is recognised as financial income in the Consolidated income statement.

Where the Group retains the risks and rewards of ownership of lease assets, it continues to recognise the leased asset in Property, plant and equipment. Income from operating leases is recognised on a straight-line basis over the lease term and recognised as Revenue rather than Other revenue as such income is not material.

Employee benefits

The Group operates contributory pension schemes, largely for UK, Ireland and USA employees, which were of the defined benefit type up to 5 April 2007, 31 December 2007 and 30 June 2012 respectively, at which time they ceased any future accrual for existing members and were closed to new members.

The schemes are administered by trustees who are independent of the Group finances. Investment assets of the defined benefit schemes are measured at fair value using the bid price of the unitised investments, quoted by the investment manager, at the reporting date. Pension scheme liabilities are measured using a projected unit

method and discounted at the current rate of return on a high-quality corporate bond of equivalent term and currency to the liability. Remeasurements arising from defined benefit schemes comprise actuarial gains and losses, the return on scheme assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest). The Company recognises them immediately in Other comprehensive income and all other expenses related to defined benefit schemes are included in the Consolidated income statement.

The pension schemes' surpluses, to the extent that they are considered recoverable, or deficits are recognised in full and presented on the face of the Consolidated balance sheet under Employee benefits. Where a guarantee is in place in relation to a pension scheme deficit, liabilities are reported in accordance with IFRIC 14 'The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction'. To the extent that contributions payable will not be available as a refund after they are paid into the plan, a liability is recognised at the point the obligation arises, which is the point at which the minimum funding guarantee is agreed. Overseas-based employees are covered by state, defined benefit and private pension schemes in their countries of residence. Actuarial valuations of overseas pension schemes were not obtained, apart from Ireland and USA, because of the low number of members. For defined contribution schemes, the amount charged to the Consolidated income statement represents the contributions payable to the schemes in respect of the accounting period.

Accruals are made for holiday pay, based on a calculation of the number of days holiday earned during the year, but not yet taken, and also for annual performance bonuses, if applicable.

Key estimate – Valuation of defined benefit pension schemes' liabilities

Determining the value of the future defined benefit obligation requires estimation in respect of the assumptions used to determine the present values. These include future mortality, discount rate and inflation. Management makes these estimates in consultation with independent actuaries. Details of the estimates in respect of the current year are given in note 22. Based on a review of the terms of the UK scheme trust deed, management has concluded that there are no likely circumstances which would result in the Company having an unconditional right to a refund in the event of a fund surplus. Relevant sensitivity analysis is included in note 22.

Share-based payments

The Group provides share-based payment arrangements to certain employees in accordance with the Renishaw plc deferred annual equity incentive plan (the Plan) (see the Governance section for further detail). The share awards are subject only to continuing service of the employee and are equity settled. The fair value of the awards at the date of grant, which is estimated to be equal to the market value, is charged to the Consolidated income statement on a straight-line basis over a three-year vesting period, with appropriate adjustments made to reflect expected or actual forfeitures. The corresponding credit is to Other reserve. The Renishaw Employee Benefit Trust (EBT) is responsible for purchasing shares on the open market on behalf of the Company to satisfy the Plan awards. Own shares held are recognised as an element in equity until they are transferred at the end of the vesting period, and such shares are excluded from earnings per share calculations.

Warranty provisions

The Group provides a warranty from the date of purchase, except for those products that are installed by the Group where the warranty starts from the date of completion of the installation. This is typically for a 12-month period, although up to three years is given for a small number of products. A warranty provision is included in the Group financial statements, which is calculated on the basis of historical returns and internal quality reports.

Government grants

Government grants are recognised in the Consolidated income statement as a deduction against expenditure. Where grants are received in advance of the related expenses, they are initially recognised in the Consolidated balance sheet and released to match the related expenditure. Where grants are expected to be received after the related expenditure has occurred, and there is reasonable assurance that the entity will comply with the grant conditions, amounts are recognised to offset the expenditure and an asset recognised.

Taxation

Tax on the profit for the year comprises current and deferred tax. Tax is recognised in the Consolidated income statement except to the extent that it relates to items recognised directly in Other comprehensive income, in which case it is recognised in the Consolidated statement of comprehensive income and expense. Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the balance sheet date, and any adjustment to tax payable in previous years.

Deferred tax is provided on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The following temporary differences are not provided for: the initial recognition of goodwill; the initial recognition of assets or liabilities that affect

neither accounting nor taxable profit other than in a business combination; and differences relating to investments in subsidiaries, to the extent that they will probably not reverse in the foreseeable future. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantively enacted at the balance sheet date.

Key estimate – Estimates of future profits to support the recognition of deferred tax assets

Deferred tax assets are recognised to the extent it is probable that future taxable profits (including the future release of deferred tax liabilities) will be available, against which the deductible temporary differences can be used, based on management's assumptions relating to the amounts and timing of future taxable profits. Estimates of future profitability on an entity basis are required to ascertain whether it is probable that sufficient taxable profits will arise to support the recognition of deferred tax assets relating to the corresponding entity. Relevant sensitivity analysis is included in note 9.

2. SEGMENTAL ANALYSIS

The Group manages its business in two segments, comprising manufacturing technologies (previously metrology) and analytical instruments and medical devices (previously healthcare). Within the operating segments, there are multiple product offerings with similar economic characteristics, similar production processes and similar customer bases. The results of these segments are regularly reviewed by the Board to allocate resources and to assess their performance.

During the year, we used the launch of our purpose, vision and strategy to rename our operating segments to better reflect the business. Our Manufacturing technologies business consists of industrial metrology, position measurement and additive manufacturing (AM) product lines, while our Analytical instruments and medical devices business consists of spectroscopy, neurological and medical dental product lines.

More details of the Group's products and services are given in the Strategic report.

Year ended 30 June 2021	Manufacturing technologies £'000	Analytical instruments and medical devices £'000	Total £'000
Revenue	526,191	39,368	565,559
Depreciation, amortisation and impairment	36,916	3,180	40,096
Operating profit before gains from fair value of financial instruments	110,498	5,865	116,363
Share of profits from associates and joint ventures	1,683	-	1,683
Net financial expense	-	-	(585)
Gains from the fair value of financial instruments	-	-	21,978
Profit before tax	-	-	139,439

Year ended 30 June 2020	Manufacturing technologies £'000	Analytical instruments and medical devices £'000	Total £'000
Revenue	475,203	35,012	510,215
Depreciation, amortisation and impairment	62,591	2,557	65,148
Operating profit before losses from fair value of financial instruments	31,188	1,737	32,925
Share of profits from associates and joint ventures	841	-	841
Net financial expense	-	-	(3,927)
Losses from the fair value of financial instruments	-	-	(26,631)
Profit before tax	-	-	3,208

There is no allocation of assets and liabilities to operating segments. Depreciation is included within certain other overhead expenditure which is allocated to segments on the basis of the level of activity.

The following table shows the disaggregation of group revenue by category:

	2021 £'000	2020 £'000
Goods, capital equipment and installation	513,675	457,024
Aftermarket services	51,884	53,191
Total Group revenue	565,559	510,215

Aftermarket services include repairs, maintenance and servicing, programming, training, extended warranties, and software licences and maintenance. There is no significant difference between our two operating segments as to their split of revenue by type.

The analysis of revenue by geographical market was:

	2021 £'000	2020 £'000
APAC	274,765	227,650
UK (country of domicile)	26,923	27,478
EMEA, excluding UK	142,219	139,775
EMEA	169,142	167,253
Americas	121,652	115,312
Total Group revenue	565,559	510,215

Revenue in the previous table has been allocated to regions based on the geographical location of the customer. Countries with individually material revenue figures in the context of the Group were:

	2021 £'000	2020 £'000
China	141,690	102,840
USA	103,850	101,153
Japan	51,523	57,833
Germany	51,095	49,397

There was no revenue from transactions with a single external customer which amounted to more than 10% of the Group's total revenue.

The following table shows the analysis of non-current assets, excluding deferred tax and derivatives, by geographical region:

	2021 £'000	2020 £'000
UK	179,039	186,249
Overseas	146,393	159,258
Total non-current assets	325,432	345,507

No overseas country had non-current assets amounting to 10% or more of the Group's total non-current assets.

3. PERSONNEL EXPENSES

The aggregate payroll costs for the year were:

	2021 £'000	2020 £'000
Wages and salaries	183,235	183,165
Compulsory social security contributions	21,766	21,373
Contributions to defined contribution pension schemes	19,759	21,103
Government grants - employment support	(989)	(4,532)
Share-based payment charge	173	173
Total payroll costs	223,944	221,282

Wages and salaries and compulsory social security contributions include £13,208,000 (2020: £nil) relating to performance bonuses and £3,500,000 (2020: £nil) relating to a one-off 'thank you' payment.

Amounts recognised as 'Government grants - employment support' relate to non-UK schemes in 2021 and mostly related to the UK Coronavirus Job Retention Scheme in 2020. The 2021 net amount of £989,000 includes £1,900,000 that was received in the year in relation to the UK Coronavirus Job Retention Scheme, and repaid in the same period.

The average number of persons employed by the Group during the year was:

	2021 Number	2020 Number
UK	2,742	3,001
Overseas	1,695	1,796
Average number of employees	4,437	4,797

Key management personnel have been assessed to be the Directors of the Company.

The total remuneration of the Directors was:

	2021	2020
	£'000	£'000
Short-term employee benefits	2,697	1,980
Post-employment benefits	111	136
Share-based payment charge	173	173
Total remuneration of the directors	2,981	2,289

Full details of Directors' remuneration are given in the Directors' remuneration report

4. COST OF SALES

Included in cost of sales are the following amounts:

	2021	2020
	£'000	£'000
Production costs	197,805	184,326
Research and development expenditure	58,618	66,614
Other engineering expenditure	18,019	15,755
Gross engineering expenditure	76,637	82,369
Development expenditure capitalised (net of amortisation)	(825)	(544)
Development expenditure impaired (see note 12)	1,092	9,881
Research and development tax credit	(4,857)	(4,399)
Total engineering costs	72,047	87,307
Total cost of sales	269,852	271,633

Research and development expenditure includes the payroll costs, material costs and allocated overheads attributed to projects identified as being related to new products or processes. Other engineering expenditure includes the payroll costs, material costs and allocated overheads attributed to projects identified as being related to existing products or processes.

Development expenditure impaired in 2020 excluded amounts relating to Restructuring costs in that period.

5. FINANCIAL INCOME AND EXPENSES

	2021	2020
	£'000	£'000
Financial income		
Fair value gains from one-month forward currency contracts (note 24)	2,781	-
Bank interest receivable	625	913
Total financial income	3,406	913
Financial expenses		
Net interest on pension schemes' liabilities (note 22)	876	861
Currency losses	2,660	2,433
Fair value losses from one-month forward currency contracts (note 24)	-	154
Lease interest	335	765
Interest payable on borrowings	69	78
Other interest payable	51	549
Total financial expenses	3,991	4,840

Currency losses relate to revaluations of foreign currency-denominated balances using latest reporting currency exchange rates. The losses recognised in 2021 largely related to an appreciation of Sterling relative to the US dollar affecting US dollar-denominated intragroup balances in the Company.

Certain intragroup balances are classified as 'net investments in foreign operations', such that revaluations from currency movements on designated balances accumulate in the Currency translation reserve in Equity. Rolling one-month forward currency contracts are used to offset currency movements on remaining intragroup balances, with fair value gains and losses being recognised in financial income or expenses. See note 24 for further details

6. PROFIT BEFORE TAX

Included in the profit before tax are the following costs:

	Notes	2021 £'000	2020 £'000
Depreciation and impairment of property, plant and equipment and right-of-use assets	(a)	28,780	33,168
Loss on sale of property, plant and equipment	(a)	31	22
Amortisation and impairment of intangible assets	(a)	11,316	36,716
Impairment of investment in associates and joint ventures	(b)	1,674	257
Impairment of long-term loans to associates and joint ventures	(b)	2,633	1,297
Auditor:			
Audit of these financial statements	(b)	403	293
Audit of subsidiary undertakings pursuant to legislation	(b)	458	398
Other assurance	(b)	12	12
All other non-audit fees	(b)	-	3

These costs can be found under the following headings in the Consolidated income statement: (a) within cost of sales, distribution costs and administrative expenses and (b) within administrative expenses.

7. EARNINGS PER SHARE

Basic and diluted earnings per share are calculated on earnings of £111,459,000 (2020: £288,000) and on 72,778,904 shares (2020: 72,778,904 shares), being the number of shares in issue. The number of shares excludes 9,639 shares held by the EBT, which were purchased on 10 December 2018.

There is no difference between the weighted average earnings per share and the basic and diluted earnings per share.

For the calculation of adjusted earnings per share, per note 28, earnings of £111,459,000 (2020: £288,000) are adjusted by post-tax amounts for Fair value (gains)/losses on financial instruments not eligible for hedge accounting (reported in Revenue), Fair value (gains)/losses on financial instruments not eligible for hedge accounting (reported in Gains/(losses) from the fair value of financial instruments) and costs relating to the formal sales process, amounting to £825,000 gain, £17,802,000 gain and £3,222,000 loss respectively.

8. INCOME TAX EXPENSE

	2021 £'000	2020 £'000
Current tax:		
UK corporation tax on profits for the year	7,535	-
UK corporation tax – prior year adjustments	(4,376)	333
Overseas tax on profits for the year	13,237	9,236
Overseas tax – prior year adjustments	27	(89)
Total current tax	16,423	9,480
Deferred tax:		
Origination and reversal of temporary differences	7,692	(9,349)
Prior year adjustments	4,438	(185)
Derecognition of previously recognised tax losses and excess interest	-	2,953
Recognition of previously unrecognised tax losses and excess interest	(3,909)	(1,127)
Effect on deferred tax for changes in tax rates	3,336	1,148
	11,557	(6,560)
Tax charge on profit	27,980	2,920

Prior year adjustments mainly relate to carry back of losses, with a current tax credit offset by a deferred tax charge.

The tax for the year is higher (2020: higher) than the UK standard rate of corporation tax of 19% (2020: 19%).

The differences are explained as follows:

	2021 £'000	2020 £'000
Profit before tax	139,439	3,208
Tax at 19% (2020: 19%)	26,493	610
Effects of:		
Different tax rates applicable in overseas subsidiaries	(150)	(312)
Expenses not deductible for tax purposes	1,817	576
Companies with unrelieved tax losses	100	189
Share of profits of associates and joint ventures	(320)	(85)
Items with no tax effect	(386)	(596)
Prior year adjustments	89	58
Effect on deferred tax for changes in tax rates	3,336	1,148
Recognition of previously unrecognised tax losses and excess interest	(3,909)	(1,127)
Derecognition of previously recognised tax losses and excess interest	-	2,953
Use of unrecognised losses	(162)	(399)
Irrecoverable withholding tax	1,052	-
Other differences	20	(95)
Tax charge on profit	27,980	2,920
Effective tax rate	20.1%	91.0%

The Group's future effective tax rate (ETR) will mainly depend on the geographic mix of profits and whether there are any changes to tax legislation in the Group's most significant countries of operations. In the Spring Budget 2021, the UK Government announced that from 1 April 2023 the UK corporation tax rate will increase to 25%, rather than remaining at 19%, which has resulted in a deferred tax charge of £3,336,000. This has been more than offset by the recognition of deferred tax assets totalling £3,909,000, which has mostly arisen from increased confidence over the recoverability of a portion of previously unrecognised losses and excess interest against future taxable profits in our US business. The increased confidence arises from a recovery in trading conditions and cost reductions following restructuring activities in 2020 (see note 29).

9. DEFERRED TAX

Deferred tax assets and liabilities are offset where there is a legally enforceable right of offset and there is an intention to net settle the balances. After taking these offsets into account, the net position of £10,890,000 asset (2020: £39,142,000 asset) is presented as a £21,292,000 deferred tax asset (2020: £39,641,000 asset) and a £10,402,000 deferred tax liability (2020: £499,000 liability) in the Consolidated balance sheet. Where deferred tax assets are recognised, the Directors are of the opinion, based on recent and forecast trading, that the level of profits in current and future years make it more likely than not that these assets will be recovered.

It is likely that the majority of unremitted earnings of overseas subsidiaries would qualify for the UK dividend exemption. However, £43,858,000 of those earnings may still result in a tax liability principally as a result of withholding taxes levied by the overseas jurisdictions in which those subsidiaries operate. The tax liabilities for the earnings for which management intend to repatriate in the foreseeable future are not material and consequently no deferred tax liability has been recognised.

Balances at the end of the year were:

	2021			2020		
	Assets £'000	Liabilities £'000	Net £'000	Assets £'000	Liabilities £'000	Net £'000
Property, plant and equipment	425	(17,546)	(17,121)	306	(14,234)	(13,928)
Intangible assets	-	(2,609)	(2,609)	-	(1,264)	(1,264)
Intragroup trading (inventories)	14,539	-	14,539	14,249	(289)	13,960
Intragroup trading (fixed assets)	1,252	-	1,252	2,071	-	2,071
Defined benefit pension schemes	4,548	(201)	4,347	11,951	(55)	11,896
Derivatives	-	(2,930)	(2,930)	6,344	-	6,344
Tax losses	8,365	-	8,365	14,077	-	14,077
Other	5,083	(36)	5,047	6,023	(37)	5,986
Balance at the end of the year	34,212	(23,322)	10,890	55,021	(15,879)	39,142

Other deferred tax assets include timing differences relating to inventory provisions totalling £2,001,000 (2020: £1,876,000), other provisions (including bad debt provisions) of £683,000 (2020: £1,628,000), employee benefits relating to Renishaw KK of £668,000 (2020: £731,000), and uniform capitalisation relating to Renishaw, Inc. of £117,000 (2020: £729,000), with the remaining balance relating to a number of other temporary differences.

The movements in the deferred tax balance during the year were:

	2021 £'000	2020 £'000
Balance at the beginning of the year	39,142	29,316
Reallocation from current tax	-	163
Movements in the Consolidated income statement	(11,557)	6,560
Movement in relation to the cash flow hedging reserve	(9,790)	(1,978)
Movement in relation to the currency translation reserve	902	(403)
Movement in relation to the defined benefit pension schemes	(7,705)	5,484
Total movement in the Consolidated statement of comprehensive income and expense	(16,593)	3,103
Currency translation	(102)	-
Balance at the end of the year	10,890	39,142

The deferred tax movement in the Consolidated income statement is analysed as:

	2021 £'000	2020 £'000
Property, plant and equipment	(3,193)	(847)
Intangible assets	(1,345)	1,230
Intragroup trading (inventories)	579	(2,725)
Intragroup trading (fixed assets)	(819)	(238)
Defined benefit pension schemes	156	(2,114)
Derivatives	(2,185)	(494)
Tax losses	(5,712)	10,822
Other	926	926
Total movement for the year	(11,557)	6,560

The Company has partially used the tax losses incurred in 2020 by way of loss carry back and offset against 2021 profits, reducing the deferred tax asset in respect of losses from £11,225,000 at 30 June 2020 to £3,299,000 at 30 June 2021. It is considered likely that the Company will generate sufficient future taxable profits to recognise the remaining deferred tax asset in full, as losses made in 2020 included a number of costs such as restructuring costs per note 29, which are unlikely to reoccur in future years, while the Company reported a profit before tax of £54,771,000 in 2021 (excluding intragroup dividends received). Further deferred tax assets of £5,066,000 in respect of losses are recognised across other Group companies where it is considered likely that the business will generate sufficient future taxable profits.

Deferred tax assets have not been recognised in respect of tax losses carried forward of £4,459,000 (2020: £20,930,000), due to uncertainty over their offset against future taxable profits and therefore their recoverability. These losses are held by Group companies in Switzerland, Brazil and Australia. Losses in Switzerland (46%) expire by 2023, while there are no time limitations to the remainder.

In determining profit forecasts for each Group company, revenue forecasts have been estimated using consistently applied external and internal data sources, which is the key variable in the profit forecasts. Sensitivity analysis indicates that a reduction of 5% to relevant revenue forecasts would result in an impairment to deferred tax assets recognised in respect of losses and intragroup trading (inventories) of less than £300,000, while an increase of 5% would result in additions to deferred tax assets in respect of tax losses not recognised of less than £100,000.

10. PROPERTY, PLANT AND EQUIPMENT

Year ended 30 June 2021	Freehold land and buildings £'000	Plant and equipment £'000	Motor vehicles £'000	Assets in the course of construction £'000	Total £'000
Cost					
At 1 July 2020	225,556	247,986	8,526	6,363	488,431
Additions	194	6,930	143	3,606	10,873
Transfers	345	2,515	-	(2,860)	-
Disposals	(136)	(9,628)	(951)	-	(10,715)
Currency adjustment	(9,176)	(5,371)	(297)	-	(14,844)
At 30 June 2021	216,783	242,432	7,421	7,109	473,745
Depreciation					
At 1 July 2020	35,842	175,864	6,676	-	218,382
Charge for the year	4,084	19,407	826	-	24,317
Disposals	(124)	(9,658)	(858)	-	(10,640)
Currency adjustment	(1,272)	(3,056)	(228)	-	(4,556)
At 30 June 2021	38,530	182,557	6,416	-	227,503
Net book value					
At 30 June 2021	178,253	59,875	1,005	7,109	246,242
At 30 June 2020	189,714	72,122	1,850	6,363	270,049

At 30 June 2021, properties with a net book value of £81,679,000 (2020: £83,200,000) were subject to a fixed charge to secure the UK defined benefit pension scheme liabilities.

Additions to assets in the course of construction comprise £817,000 (2020: £12,836,000) for land and buildings and £2,789,000 (2020: £5,886,000) for plant and equipment.

Year ended 30 June 2020	Freehold land and buildings £'000	Plant and equipment £'000	Motor vehicles £'000	Assets in the course of construction £'000	Total £'000
Cost					
At 1 July 2019	197,474	245,027	9,555	8,758	460,814
Additions	11,808	7,818	309	18,722	38,657
Transfers	15,948	5,169	-	(21,117)	-
Disposals	(297)	(10,061)	(1,305)	-	(11,663)
Currency adjustment	623	33	(33)	-	623
At 30 June 2020	225,556	247,986	8,526	6,363	488,431
Depreciation					
At 1 July 2019	31,893	158,567	6,877	-	197,337
Charge for the year	3,985	20,796	1,061	-	25,842
Impairment	-	2,590	-	-	2,590
Disposals	(386)	(6,389)	(1,235)	-	(8,010)
Currency adjustment	350	300	(27)	-	623
At 30 June 2020	35,842	175,864	6,676	-	218,382
Net book value					
At 30 June 2020	189,714	72,122	1,850	6,363	270,049
At 30 June 2019	165,581	86,460	2,678	8,758	263,477

11. RIGHT-OF-USE ASSETS

Year ended 30 June 2021	Leasehold property £'000	Plant and equipment £'000	Motor vehicles £'000	Total £'000
Net book value				
At 1 July 2020	10,287	-	2,385	12,672
Additions	3,548	232	1,234	5,014
Depreciation	(2,903)	(121)	(1,439)	(4,463)
Currency adjustment	(635)	(9)	(150)	(794)
At 30 June 2021	10,297	102	2,030	12,429

12. INTANGIBLE ASSET

Year ended 30 June 2021	Goodwill £'000	Other intangible assets £'000	Internally generated development costs £'000	Software licences and Intellectual property £'000	Total £'000
Cost					
At 1 July 2020	20,518	15,829	167,447	22,063	225,857
Additions	-	-	9,844	3,000	12,844
Currency adjustment	(985)	(46)	-	(102)	(1,132)
At 30 June 2021	19,533	15,783	177,291	24,962	237,569
Amortisation					
At 1 July 2020	9,028	13,105	141,696	18,664	182,493
Charge for the year	-	101	9,019	1,104	10,224
Impairment	-	-	1,092	-	1,092
Currency adjustment	-	48	-	(83)	(35)
At 30 June 2021	9,028	13,254	151,807	19,685	193,774
Net book value					
At 30 June 2021	10,505	2,529	25,484	5,277	43,795
At 30 June 2020	11,490	2,724	25,751	3,399	43,364

	Goodwill	Other intangible assets	Internally generated development costs	Software licences and intellectual property	Total
Year ended 30 June 2020	£'000	£'000	£'000	£'000	£'000
Cost					
At 1 July 2019	20,227	13,823	150,042	20,827	204,919
Additions	-	1,986	17,405	1,352	20,743
Disposals	-	-	-	(140)	(140)
Currency adjustment	291	20	-	24	335
At 30 June 2020	20,518	15,829	167,447	22,063	225,857
Amortisation					
At 1 July 2019	8,220	11,260	108,954	17,429	145,863
Charge for the year	-	267	16,861	1,299	18,427
Impairments	808	1,600	15,881	-	18,289
Disposals	-	-	-	(87)	(87)
Currency adjustment	-	(22)	-	23	1
At 30 June 2020	9,028	13,105	141,696	18,664	182,493
Net book value					
At 30 June 2020	11,490	2,724	25,751	3,399	43,364
At 30 June 2019	12,007	2,563	41,088	3,398	59,056

Goodwill

Goodwill has arisen on the acquisition of a number of businesses and has an indeterminable useful life. It is therefore not amortised but is instead tested for impairment annually and at any point during the year when an indicator of impairment exists. Goodwill is allocated to cash generating units (CGUs), which are either the statutory entities acquired or the group-wide product line. This is the lowest level in the Group at which goodwill is monitored for impairment and is at a lower level than the Group's operating segments.

The analysis of acquired goodwill on consolidation is:

	2021	2020
	£'000	£'000
itp GmbH	2,959	3,148
Renishaw Mayfield S.A.	1,873	2,039
Renishaw Fixturing Solutions, LLC	5,018	5,585
Other smaller acquisitions	655	718
Total acquired goodwill	10,505	11,490

The recoverable amounts of acquired goodwill are based on value-in-use calculations. These calculations use cash flow projections based on either the financial business plans approved by management for the next five financial years, or estimated growth rates over the five years, which are set out below. The cash flows beyond this forecast are extrapolated to perpetuity using a nil growth rate on a prudent basis, to reflect the uncertainties over forecasting beyond five years.

The following discount rates have been used in discounting the projected cash flows:

Business acquired	CGU	2021	2020
		Discount rate	Discount rate
itp GmbH	itp GmbH entity ('ITP')	10.6%	8%
Renishaw Fixturing Solutions, LLC	Renishaw fixturing product line ('RFS')	10.2%	8%
Renishaw Mayfield S.A.	Renishaw Mayfield S.A. entity ('Mayfield')	21.4%	15%

The Group post-tax weighted average cost of capital, calculated at 30 June 2021, is 8% (2020: 8%). Pre-tax discount rates for Manufacturing technologies CGUs (ITP and RFS) are calculated from this basis, given that they are aligned with the wider Group's industries, markets and processes. The Analytical instruments and medical devices CGU (Mayfield) has a higher risk weighting, reflecting the less mature nature of this segment. This risk weighting is unchanged from 2020.

An increase of 5% in the discount rates would result in an impairment of around £2m in the RFS CGU. For there to be an impairment in the ITP or Mayfield CGUs the discount rate would need to increase to at least 42% and 98% respectively. Management deems the likelihood of these increases to be unlikely.

The following bases have been used in determining cash flow projections:

CGU	2021 Basis of forecast	2020 Basis of forecast
itp GmbH entity	five-year business plan	5% growth rate
Renishaw Fixturing product line	five-year business plan	five-year business plan
Renishaw Mayfield S.A. entity	five-year business plan	five-year business plan

These 5-year business plans are considered prudent estimates based on management's view of the future and experience of past performance of the individual CGUs, and are calculated at a disaggregated level. Within these plans, revenue forecasts are calculated with reference to external market data, Renishaw past outperformance, and new product launches, consistent with revenue forecasts across the Group. Production costs, engineering costs, distribution costs and administrative expenses are calculated based on management's best estimates of what is required to support revenue growth and new product development. Estimates of capital expenditure and working capital requirements are also included in the cash flow projections.

The key estimate within these business plans is the forecasting of revenue growth, given that the cost bases of the businesses can be flexed in line with revenue performance. Given the average revenue growth assumptions included in the five-year business plans, management's sensitivity analysis involves modelling a reduction in the forecast cash flows utilised in those business plans and therefore into perpetuity. For there to be an impairment there would need to be a reduction to these forecast cash flows of 80% for ITP, 10% for RFS and 83% for Mayfield. Management deems the likelihood of these reductions to be unlikely.

Internally generated development costs

The key assumption in determining the value-in-use for internally generated development costs is the forecast unit sales over five years, which is determined by management using their knowledge and experience with similar products and the sales history of products already available in the market. Resulting cash flow projections over five years, the period over which product demand forecasts can be reasonably predicted and internally generated development costs are written off, are discounted using pre-tax discount rates, which are calculated from the Group post-tax weighted average cost of capital of 8% (2020: 8%).

Impairments of internally generated development costs in the year totalled £1,092,000 (2020: £15,881,000), resulting from an increase in the forecast of ongoing support costs of one project. This was accounted for in Cost of sales in the Consolidated income statement and relates to the Manufacturing technologies segment.

For the largest projects, comprising over 95% of the net book value at 30 June 2021, a 10% reduction to forecast unit sales, or an increase in the discount rate by 5%, would result in a further impairment of less than £500,000.

13. INVESTMENT IN ASSOCIATES AND JOINT VENTURES

The Group's investments in associates and joint ventures (all investments being in the ordinary share capital of the associate and joint ventures), whose accounting years end on 30 June, except where noted otherwise, were:

	Country of incorporation and principal place of business	Ownership 2021 %	Ownership 2020 %
RLS Merilna tehnika d.o.o. ('RLS') - joint venture	Slovenia	50.0	50.0
Metrology Software Products Limited ('MSP') - joint venture	England & Wales	70.0	50.0
HiETA Technologies Limited ('HiETA') (31 December) - associate	England & Wales	33.3	33.3

On 28 June 2021 Renishaw acquired an additional 20% shareholding in MSP, a pre-existing joint venture company, with cash consideration of £749,000. Following the transaction, the Group owns 70% of the ordinary share capital of MSP, and continues to equity account for MSP as a joint venture as the 'control' requirements of IFRS 10 are not satisfied. This is primarily because under the terms of the pre-existing and unchanged shareholders agreement, dated 8 September 2005, for so long as the Group's holding is less than 75% of the total shares of MSP, Renishaw agrees to exercise its voting rights such that it only votes as if it has the same aggregate shareholding as the remaining Management Shareholders.

Movements during the year were:

	2021 £'000	2020 £'000
Balance at the beginning of the year	16,604	13,095
Additions	749	4,299
Dividends received	-	(512)
Share of profits of associates and joint ventures	1,683	841
Impairment	(1,674)	(1,306)
Exchange differences	(728)	187
Balance at the end of the year	16,634	16,604

A revision to HiETA's five-year business plan at 30 June 2021, in light of the ongoing effects of the COVID-19 pandemic on certain industries, has resulted in an impairment to Renishaw's investment of £1,674,000. This has also resulted in additional and full impairment of a long-term loan of £2,633,000 and a finance lease impairment of £397,000. These have been accounted for in Administrative expenses in the Consolidated income statement. Other Short-term loans to associates and joint ventures of £598,000 relate to RLS.

Long-term and short-term loans to associates and joint ventures are tested for impairment using discounted cash flow projections at each reporting period, according to five-year business plans approved by management, or where there are indicators of impairment.

Summarised aggregated financial information for associates and joint ventures:

	RLS		MSP		HiETA	
	2021 £'000	2020 £'000	2021 £'000	2020 £'000	2021 £'000	2020 £'000
Assets	31,535	28,896	4,211	3,965	3,459	5,171
Liabilities	(3,719)	(4,430)	(1,056)	(623)	(7,780)	(7,494)
Net assets/(liabilities)	27,816	24,466	3,155	3,342	(4,321)	(2,323)
Group's share of net assets/(liabilities)	13,908	12,233	2,209	1,671	(1,426)	(767)
Revenue	25,145	21,447	2,239	2,452	1,973	1,926
Profit/(loss) for the year	4,800	1,974	(182)	1,094	(1,881)	(3,685)
Group's share of profit/(loss) for the year	2,400	987	(91)	547	(626)	(1,088)

14. LEASES (as lessor)

The Group acts as lessor for Renishaw manufactured plant and equipment on both an operating and finance lease basis.

Where the Group retains the risks and rewards of ownership of leased assets, it continues to recognise the leased asset in Property, plant and equipment, while the lease payments made during the term of the operating lease are recognised in Revenue (2021: £582,000 and 2020: £1,183,000). Operating leases are on one to four year terms. The total of future minimum lease payments receivable under non-cancellable operating leases were:

	2021 £'000	2020 £'000
Receivable in less than one year	361	742
Receivable between one and five years	306	152
Total future minimum lease payments receivable	667	894

Where the Group transfers the risks and rewards of ownership of leased assets to a third party, the Group recognises a receivable in the amount of the net investment in the lease in Finance lease receivables. The lease receivable is subsequently reduced by the principal received, while an interest component is recognised as financial income in the Consolidated income statement. Standard contract terms are up to five years and there is a nominal residual value receivable at the end of the contract.

The total future lease payments are split between the principal and interest amounts below:

	2021			2020		
	Gross investment £'000	Interest £'000	Net investment £'000	Gross investment £'000	Interest £'000	Net investment £'000
Receivable in less than one year	1,919	156	1,763	2,113	131	1,982
Receivable between one and two years	2,641	215	2,426	2,226	138	2,088
Receivable between two and three years	2,129	173	1,956	1,758	109	1,649
Receivable between three and four years	1,365	111	1,254	1,053	65	988
Receivable between four and five years	696	91	605	81	5	76
Total future minimum lease payments receivable	8,750	746	8,004	7,231	448	6,783

15. CASH AND CASH EQUIVALENTS

Bank deposits

Bank deposits at the end of the year amounted to £120,000,000 (2020: £10,000,000), of which £20,000,000 matures on 29 July 2021, £20,000,000 matures on 15 September 2021, £40,000,000 matures on 16 September 2021, and £40,000,000 is on a 90-day notice account.

Cash and cash equivalents

An analysis of cash and cash equivalents at the end of the year was:

	2021 £'000	2020 £'000
Bank balances and cash in hand	93,514	108,609
Short-term deposits	1,494	1,777
Balance at the end of the year	95,008	110,386

Amounts held on bank deposit, where the original term exceeds three months, and the UK defined benefit pension scheme cash escrow account are shown separately within current assets.

16. INVENTORIES

An analysis of inventories at the end of the year was:

	2021 £'000	2020 £'000
Raw materials	38,973	37,717
Work in progress	21,750	18,737
Finished goods	52,840	49,043
Balance at the end of the year	113,563	105,497

During the year, the amount of inventories recognised as an expense in the Consolidated income statement was £177,963,000 (2020: £169,769,000) and the amount of write-down of inventories recognised as an expense in the Consolidated income statement was £269,000 (2020: £7,473,000). At the end of the year, the gross cost of inventories which had provisions held against them totalled £17,389,000 (2020: £21,133,000).

17. PROVISIONS

Warranty provision movements during the year were:

	2021 £'000	2020 £'000
Balance at the beginning of the year	5,591	2,846
Created during the year	2,500	5,308
Utilised in the year	(1,832)	(2,563)
	668	2,745
Balance at the end of the year	6,259	5,591

The warranty provision has been calculated on the basis of historical return-in-warranty information and other internal reports. It is expected that most of this expenditure will be incurred in the next financial year and all expenditure will be incurred within three years of the balance sheet date. Included within the warranty provision is £4,200,000 (2020: £3,400,000) where the warranty cost has been reassessed to be the cost of replacing certain AM machines where the business will not have the capability to honour the warranty on these machines going forward as a result of restructuring activities in 2020. As we will not have the ability to repair or maintain these machines, the warranty cost reflects the cost of replacing these machines. It was expected that these warranty costs would be incurred in 2021, however the replacement product is now expected to be available in early 2022.

18. CONTRACT LIABILITIES

Movements during the year were:	2021	2020
	£'000	£'000
Balance at the beginning of the year	5,976	5,631
Released to revenue	(3,893)	(3,802)
Arising in year	3,864	4,100
Currency translation	173	47
Balance at the end of the year	6,120	5,976

The aggregate amount of the transaction price allocated to performance obligations that are unsatisfied at the end of the year is £6,120,000 (2020: £7,416,000). Of this, £1,682,000 (2020: £1,489,000) is not expected to be recognised in 2022.

19. OTHER PAYABLES

Balances at the end of the year were:	2021	2020
	£'000	£'000
Payroll taxes and social security	7,924	5,833
Performance bonuses	13,208	-
Other creditors and accruals	30,584	28,539
Total other payables	51,716	34,372

Other creditors and accruals includes £2,114,000 (2020: £nil) relating to outstanding third-party fees relating to the 2021 formal sales process ('FSP'), £7,287,000 (2020: £3,087,000) of receivables in payable positions where there is no right of offset, £7,200,000 (2020: £7,003,000) of holiday pay and retirement accruals, and a number of other smaller accruals.

20. LEASES (as lessee)

The Group acts as lessee for land and buildings, plant and equipment, and vehicles and recognises leases as a liability in the Consolidated balance sheet, with a corresponding amount recognised as a right-of-use asset.

Lease liabilities are analysed as below:

	2021 £'000	Leasehold property	Plant and equipment	Motor vehicles	Total
Due in less than one year		3,022	42	1,110	4,174
Due between one and two years		2,497	15	591	3,103
Due between two and three years		1,638	9	249	1,896
Due between three and four years		728	5	55	788
Due between four and five years		571	4	1	576
Due in more than five years		5,026	-	-	5,026
Total future minimum lease payments payable		13,482	75	2,006	15,563
Effect of discounting		(2,936)	(2)	(63)	(3,001)
Lease liability		10,546	73	1,943	12,562

	2020 £'000	Leasehold property	Plant and equipment	Motor vehicles	Total
Due in less than one year		3,011	-	1,325	4,336
Due between one and five years		4,754	-	1,130	5,884
Due in more than five years		7,182	-	-	7,182
Total future minimum lease payments payable		14,947	-	2,455	17,402
Effect of discounting		(4,189)	-	(47)	(4,236)
Lease liability		10,758	-	2,408	13,166

	2021	2020
	£'000	£'000
Depreciation expense of right-of-use assets	4,463	4,736
Interest expense on lease liabilities	335	766
Expenses relating to short-term and low-value leases	139	80
Total recognised in the Consolidated income statement	4,937	5,582
Total cash outflows for leases	5,289	4,976

21. BORROWINGS

Third-party borrowings at 30 June 2021 consist of a five year loan entered into on 31 May 2019 by Renishaw KK to purchase a new property, with original principal of JPY 1,447,000,000 (£10,486,000). Principal of JPY 12,000,000 is repayable each month, with a fixed interest rate of 0.81% also paid on monthly accretion. The residual principal at 31 May 2024 of JPY 739,000,000 can either be repaid in full at that time, or extended for another five years. Additionally, a Renishaw (Korea) Limited property loan, which had a balance of £1,908,000 at 30 June 2020, was increased by £636,000 and fully repaid during the year.

Borrowings are held at amortised cost. There is no significant difference between the book value and fair value of borrowings, which is estimated by discounting contractual future cash flows, which represents level 2 of the fair value hierarchy defined in note 24.

Movements during the year were:

	2021	2020
	£'000	£'000
Balance at the beginning of the year	11,543	10,399
Additions	636	1,894
Interest	69	78
Repayments	(3,477)	(1,136)
Currency adjustment	(1,322)	308
Balance at the end of the year	7,449	11,543

22. EMPLOYEE BENEFITS

The Group operates defined benefit pension schemes for several Group companies. As noted in the accounting policies, actuarial valuations of overseas pension schemes have not been obtained, except for the schemes relating to Renishaw Ireland (DAC) and Renishaw, Inc. ('the Irish scheme' and 'the US scheme' respectively).

The largest scheme, which covers qualifying UK-based employees, is also of the defined benefit type. This scheme, together with the Irish scheme and the US scheme, are closed to new members and have ceased any future accrual for existing members. These employees are now covered by defined contribution schemes.

The total pension cost of the Group for the year was £19,759,000 (2020: £21,103,000), of which £111,000 (2020: £136,000) related to Directors and £5,256,000 (2020: £5,253,000) related to overseas schemes.

The latest full actuarial valuation of the UK defined benefit pension scheme was carried out as at 30 September 2018 and updated to 30 June 2021 by a qualified independent actuary. The mortality assumption used for 2021 is the S2PxA base tables and CMI 2020 model, with long-term improvements of 1% per annum. Adjustments have been made to both the core base tables and CMI 2020 model to allow for the scheme's membership profile and best estimate assumptions of future mortality improvements.

Major assumptions used by actuaries for the UK, Ireland and US schemes were:

	30 June 2021			30 June 2020		
	UK scheme	Ireland scheme	US scheme	UK scheme	Ireland scheme	US scheme
Rate of increase in pension payments	3.10%	1.70%	-	2.80%	1.30%	-
Lump sum - assumed settlement rate	-	-	0.75%	-	-	0.80%
Discount rate	1.85%	1.10%	2.85%	1.50%	1.10%	2.80%
Inflation rate (RPI)	3.20%	1.70%	-	2.80%	1.30%	-
Inflation rate (CPI)	2.20% <small>pre-2030</small>	-	-	2.20%	-	-
	3.10% <small>post-2030</small>					
Retirement age	64	65	65	64	65	65

The life expectancies implied by the mortality assumption at age 65 and 45 are:

	2021	2020
	years	years
Male currently aged 65	22.0	21.4
Female currently aged 65	23.9	23.4
Male currently aged 45	22.7	22.4
Female currently aged 45	24.9	24.6

The weighted average duration of the defined benefit obligation is around 23 years.

The assets and liabilities in the defined benefit schemes at the end of the year were:

	30 June 2021	% of total	30 June 2020	% of total
	£'000	assets	£'000	assets
Market value of assets:				
Equities	140,717	61	110,027	58
Multi-asset funds	63,017	27	54,822	29
Credit and fixed income funds	18,833	8	14,339	8
Fixed interest gilts	1,457	1	1,488	1
Index linked gilts	1,843	1	1,929	1
Property	802	0	-	0
Cash and other	4,686	2	6,014	3
	231,355	100	188,619	100
Actuarial value of liabilities	(255,053)	-	(253,514)	-
Deficit in the schemes	(23,698)	-	(64,895)	-
Deferred tax thereon	4,347	-	11,896	-

Equities are held in externally-managed funds and primarily relate to UK and US equities. Credit and fixed income funds, fixed interest gilts, and index linked gilts relate to UK, US and Eurozone government-linked securities, again held in externally-managed funds. The fair values of these equity and fixed income instruments are determined using the bid price of the unitised investments, quoted by the investment manager, at the reporting date and therefore represent 'Level 2' of the fair value hierarchy defined in note 24.

Multi-asset funds are also held in externally-managed funds, with active asset allocation to diversify growth across asset classes such as equities, bonds and money-market instruments. The fair value of these funds is determined on a comparable basis to the equity and fixed income funds, and therefore are also 'Level 2' assets.

No scheme assets are directly invested in the Group's own equity.

The UK scheme is closed for future accrual and is expected to mature over the coming years, and therefore while the focus of the investment strategy remains on growth the trustees intend to start gradually de-risking the investments where (and when) appropriate.

The overall target investment strategy for the UK scheme for the period to 30 June 2021 was to hold 61% of investment assets in equities, 34% in diversified growth funds and 5% in fixed income. Contributions over the year were predominantly invested in buy and maintain credit, bringing the current actual allocation up to 6% of assets. Remaining contributions have been held in a cash fund, pending investment into a multi-asset credit mandate.

The movements in the schemes' assets and liabilities were:

Year ended 30 June 2021	Assets	Liabilities	Total
	£'000	£'000	£'000
Balance at the beginning of the year	188,619	(253,514)	(64,895)
Contributions paid	8,866	-	8,866
Interest on pension schemes	2,933	(3,809)	(876)
Remeasurement loss from GMP equalisation	-	(78)	(78)
Remeasurement gain/(loss) under IAS 19, the asset ceiling and IFRIC 14	36,824	(3,539)	33,285
Benefits paid	(5,887)	5,887	-
Balance at the end of the year	231,355	(255,053)	(23,698)

Year ended 30 June 2020	Assets £'000	Liabilities £'000	Total £'000
Balance at the beginning of the year	181,588	(233,458)	(51,870)
Contributions paid	11,814	-	11,814
Interest on pension schemes	4,371	(5,232)	(861)
Remeasurement loss under IAS 19	(2,237)	(21,741)	(23,978)
Benefits paid	(6,917)	6,917	-
Balance at the end of the year	188,619	(253,514)	(64,895)

In November 2020 the High Court of England and Wales issued a supplementary ruling in the Lloyds Bank GMP equalisation case with respect to members that have transferred out of their scheme prior to the ruling. The result of this means that Trustees are obliged to make transfer payments that reflect equalised benefits and are required to make top up payments where this was not the case in the past, and a defined benefit pension scheme that received a transfer is concurrently obliged to provide equalised benefits in respect of the transfer payments. We determined an estimated cost of the impact of this ruling for the UK fund of £78,000, which has been recognised through Administrative expenses in the Consolidated income statement as a past service cost.

The analysis of the amount recognised in the Consolidated statement of comprehensive income and expense was:

	2021 £'000	2020 £'000
Actuarial gain/(loss) arising from:		
- Changes in demographic assumptions	(2,669)	(682)
- Changes in financial assumptions	4,643	(22,402)
- Experience adjustment	2,631	1,648
- Adjustment related to the application of revaluation and late retirement factors	14,300	-
Return on plan assets excluding interest income	36,823	(2,542)
Adjustment for the asset ceiling	(3,280)	-
Adjustment to liabilities for IFRIC 14	(19,163)	-
Total amount recognised in the Consolidated statement of comprehensive income and expense	33,285	(23,978)

The cumulative amount of actuarial gains and losses recognised in the Consolidated statement of comprehensive income and expense was a loss of £91,497,000 (2020: loss of £124,782,000).

The total deficit of the Group's defined benefit pension schemes, on an IAS 19 basis (excluding the asset ceiling and IFRIC 14 adjustments), has decreased from £64,895,000 at 30 June 2020 to £1,254,000 at 30 June 2021, primarily reflecting the net impact of:

- an increase in the discount rate of the UK scheme;
- an increase in RPI for the UK and Irish schemes;
- an increase in CPI for the UK scheme;
- strong performance of the investment assets of the UK, Irish and US schemes; and
- an adjustment relating to the application of revaluation and late retirement factors, which is discussed further below.

For the UK scheme, the latest actuarial report prepared in September 2018 shows a deficit of £70,700,000, which is based on funding to self-sufficiency and uses prudent assumptions. IAS 19 requires best estimate assumptions to be used, resulting in the IAS 19 deficit being lower than the actuarial deficit.

For the UK defined benefit scheme, a guide to the sensitivity of the value of the respective liabilities is as follows:

	Variation	Approximate effect on liabilities
UK – discount rate	Increase/decrease by 0.5%	-£21.2m/+£24.4m
UK – future inflation	Increase/decrease by 0.5%	+£20.3m/-£17.1m
UK – mortality	Increased/decreased life by one year	+£9.2m/-£8.9m

In October 2020, the Trustees of the UK defined benefit scheme notified the Company of a difference between the calculated estimate of liabilities in the scheme for administration purposes and for accounting purposes. Differing legal interpretations of the Trust Deed and Rules were subsequently concluded by legal firms instructed by the Trustees and the Company, mostly relating to the period over which revaluation and late retirement factors are applied, with significant differences between the firms in the financial impact noted. Consequently, in April 2021, the Trustees and the Company jointly instructed Queen's Counsel to opine on a legal interpretation of the Trust Deed and Rules that both parties would accept. This resulted in another interpretation of the Trust Deed and Rules which is now the accepted legal position, with a £14,300,000 reduction in liabilities calculated on this basis. This change in liability estimate in the year relates to benefits for some members payable in future years, and has been accounted for within the 'Remeasurement of defined benefit pension scheme liabilities' line item in

the Consolidated statement of comprehensive income and expense.

A deficit funding plan for the UK defined benefit pension scheme was agreed with The Pensions Regulator in 2018, which superseded all previous arrangements. The Company agreed to pay £8,700,000 per annum into the scheme for five years with effect from 1 October 2018.

The present value of the expected payments under the plan at 30 June 2021 totalled £19,163,000, which compares to the IAS 19 pension scheme surplus of £3,280,000 at 30 June 2021. As such, an adjustment of £3,280,000 has been recognised in respect of the asset ceiling restriction, on the basis that the surplus is not deemed to be recoverable, and £19,163,000 has been recognised in accordance with IFRIC 14, to present a net liability position of £19,163,000. At 30 June 2020, the IAS 19 deficit was higher than the present value of expected payments, such that no adjustment was recognised.

A number of UK properties owned by the Company with a book value of £81,679,000 at 30 June 2021 are subject to registered fixed charges and continue to provide security to the scheme under the deficit funding plan. The Company also has an escrow bank account with a balance of £10,578,000 at the end of the year (2020: £10,568,000) which is subject to a registered floating charge. There is no scheduled release of funds back to the Company under the deficit funding plan.

In the event a subsequent actuarial valuation results in the combined value of the properties and the escrow bank account exceeding 120% of the actuarial deficit, some of the contingent assets will be released back to the Company. Any remaining contingent assets will be released from charge when the deficit no longer exists.

The current agreement will continue until 30 June 2031 and any outstanding deficit paid at that time. The agreement will end sooner if the actuarial deficit (calculated on a self-sufficiency basis) is eliminated in the meantime.

The charges may be enforced by the Trustees if one of the following occurs: (a) the Company does not pay funds into the scheme in line with the agreed plan; (b) an insolvency event occurs in relation to the Company; or (c) the Company does not pay any deficit at 30 June 2031.

Under the Ireland defined benefit pension scheme deficit funding plan, a property owned by Renishaw Ireland (DAC) is subject to a registered fixed charge to secure the Ireland defined benefit pension scheme's deficit.

23. SHARE-BASED PAYMENTS

In accordance with the remuneration policy approved by shareholders at the 2017 AGM, the deferred annual equity incentive plan ('the Plan') was implemented in relation to the financial year ending 30 June 2018. The 20 July 2018 Remuneration Committee meeting recommended plan rules that were adopted by a resolution of the Board on 24 July 2018. The Committee also approved the grant of awards under the Plan to the participating Executive Directors.

The number of shares to be awarded is calculated by dividing the relevant amount of annual bonus under the Plan by the average price of a share during a period determined by the Committee of not more than five dealing days ending with the dealing day before the award date. These shares must be purchased on the open market and cannot be satisfied by issuance of new shares or transfer of existing treasury shares.

An employee benefit trust (EBT) exists to purchase and hold such shares, until transferring to the employee, which will normally be on the third anniversary of the award date, subject to continued employment. Malus and clawback provisions can be operated by the Committee within five years of the award date. During the vesting period, no dividends are payable on the shares. However, upon vesting, employees will be entitled to additional shares or cash, equivalent to the value of dividends paid on the awarded shares during this period.

The total cost recognised in the 2021 Consolidated income statement in respect of the Plan was £173,000 (2020: £173,000).

In accordance with the Plan, amounts equivalent to £734,317 (2020: £nil) have been awarded in respect of 2021.

24. FINANCIAL INSTRUMENTS

The Group has exposure to credit risk, liquidity risk and market risk arising from its use of financial instruments. This note presents information about the Group's exposure to these risks, along with the Group's objectives, policies and processes for measuring and managing the risks.

Fair value

There is no significant difference between the fair value of financial assets and financial liabilities and their carrying value in the Consolidated balance sheet. All financial assets and liabilities are held at amortised cost, apart from the forward foreign currency exchange contracts, which are held at fair value, with changes going through the Consolidated income statement unless subject to hedge accounting.

The fair values of the forward foreign currency exchange contracts have been calculated by a third-party expert, discounting estimated future cash flows on the basis of market expectations of future exchange rates, representing level 2 in the IFRS 13 fair value hierarchy. The IFRS 13 level categorisation relates to the extent the fair value can be determined by reference to comparable market values. The classifications are: level 1 where instruments are quoted on an active market; level 2 where the assumptions used to arrive at fair value have comparable market data; and level 3 where the assumptions used to arrive at fair value do not have comparable market data.

Credit risk

The Group's liquid funds are substantially held with banks with high credit ratings and the credit risk relating to these funds is therefore limited. The Group carries a credit risk relating to non-payment of trade receivables by its customers. The Group's policy is that credit evaluations are carried out on all new customers before credit is given above certain thresholds. There is a spread of risks among a large number of customers with no significant concentration with one customer or in any one geographical area. The Group establishes an allowance for impairment in respect of trade receivables where recoverability is considered doubtful.

An analysis by currency of the Group's financial assets at the year end is as follows:

Currency	Trade & finance lease receivables		Other receivables		Cash & bank deposits	
	2021 £'000	2020 £'000	2021 £'000	2020 £'000	2021 £'000	2020 £'000
Pound Sterling	16,915	9,293	23,752	16,974	174,905	75,052
US Dollar	39,603	33,358	815	946	9,511	7,096
Euro	23,476	15,607	1,144	1,663	8,118	6,324
Japanese Yen	16,568	20,416	173	337	3,786	4,553
Other	26,103	33,186	4,137	3,276	18,688	27,361
	122,665	111,860	30,021	23,196	215,008	120,386

The above trade receivables, finance lease receivables, other receivables and cash are predominately held in the functional currency of the relevant entity, with the exception of £20,447,000 of US Dollar-denominated trade receivables being held in Renishaw (Hong Kong) Limited and £1,761,000 of Euro-denominated trade receivables being held in Renishaw UK Sales Limited, along with some foreign currency cash balances which are of a short-term nature.

Other receivables include mostly prepayments, a proportion of the R&D tax credit receivable, and indirect tax receivables. Prepayment balances are reviewed at each reporting period to confirm that prepaid goods or services are still expected to be received, while tax balances are reviewed for recoverability.

The ageing of trade receivables past due, but not impaired, at the end of the year was:

	2021 £'000	2020 £'000
Past due zero to one month	10,537	11,703
Past due one to two months	2,704	4,510
Past due more than two months	6,283	15,495
Balance at the end of the year	19,524	31,708

Movements in the provision for impairment of trade receivables during the year were:

	2021 £'000	2020 £'000
Balance at the beginning of the year	5,965	3,081
Changes in amounts provided	(1,994)	3,254
Amounts used	(145)	(370)
Balance at the end of the year	3,826	5,965

The Group applies the simplified approach when measuring the expected credit loss for trade receivables, with a provision matrix used to determine a lifetime expected credit loss.

For this provision matrix, trade receivables are grouped into credit risk categories, with category 1 being the lowest risk and category 5 the highest. Risk scores are allocated to the customer's country of operation, their type (such as distributor, end-user and OEM), their industry and the proportion of their debt that was past due at the year-end. These scores are then weighted to produce an overall risk score for the customer, with the lowest scores being allocated to category 1 and the highest scores to category 5.

The matrix then applies an expected credit loss rate to each category, with this rate being determined by adjusting the Group's historic credit loss rates to reflect forward-looking information. This includes management's latest assessment of the impact of COVID-19 and the recent improvements in global macroeconomic conditions, which has resulted in a decrease in the expected credit loss rate, and the expected credit loss allowance, compared to the prior year

Where certain customers have been identified as having a significantly elevated credit risk these have been provided for on a specific basis. Both elements of expected credit loss are shown in the matrix below and have been shown separately so as not to distort the expected credit loss rate.

	Risk category 1	Risk category 2	Risk category 3	Risk category 4	Risk category 5	2021 Total
Year ended 30 June 2021	£'000	£'000	£'000	£'000	£'000	£'000
Gross trade receivables	9,154	38,759	65,870	3,806	898	118,487
Expected credit loss rate	0.28%	0.31%	0.31%	0.36%	0.39%	0.31%
Expected credit loss allowance	26	119	205	14	3	367
Specific loss allowance	-	-	2,080	1,138	241	3,459
Total expected credit loss	26	119	2,285	1,152	244	3,826
Net trade receivables	9,128	38,640	63,585	2,654	654	114,661

	Risk category 1	Risk category 2	Risk category 3	Risk category 4	Risk category 5	2020 Total
Year ended 30 June 2020	£'000	£'000	£'000	£'000	£'000	£'000
Gross trade receivables	714	39,931	64,908	5,187	302	111,042
Expected credit loss rate	1.24%	1.35%	1.42%	1.58%	1.69%	1.40%
Expected credit loss allowance	9	541	922	82	5	1,559
Specific loss allowance	-	-	3,730	676	-	4,406
Total expected credit loss	9	541	4,652	758	5	5,965
Net trade receivables	705	39,390	60,256	4,429	297	105,077

The Group has no material contract assets, and finance lease receivables are subject to the same approach as noted above for trade receivables.

The maximum exposure to credit risk is £377,333,000 (2020: £259,200,000), comprising the Group's trade, finance and other receivables, cash and cash equivalents and derivative assets.

The maturities of non-current other receivables, being long-term loans to associates and joint ventures and derivatives, at the year end were

	2021 £'000	2020 £'000
Receivable between one and two years	12,484	905
Receivable between two and five years	-	3,155
	12,484	4,060

Liquidity risk

Our approach to managing liquidity is to ensure, as far as possible, that we will always have sufficient liquidity to meet our liabilities when due, without incurring unacceptable losses or risking damage to the Group's reputation. We use monthly cash flow forecasts on a rolling 12-month basis to monitor cash requirements.

With net cash and bank deposits at 30 June 2021 totalling £215,008,000, an increase of £94,622,000 from 30 June 2020, the Group's liquidity has improved in the period.

In respect of net cash and bank deposits, the carrying value is materially the same as fair value because of the short maturity of the bank deposits. Bank deposits are affected by interest rates that are either fixed or floating, which can change over time, affecting the Group's interest income. An increase of 1% in interest rates would result in an increase in interest income of approximately £1,200,000.

The contractual maturities of financial liabilities at the year end were:

Year ended 30 June 2021	Carrying amount £'000	Effect of discounting £'000	Gross maturities £'000	Contractual cash flows		
				Up to 1 year £'000	1-2 years £'000	2-5 years £'000
Trade payables	24,715	-	24,715	24,715	-	-
Other payables	51,716	-	51,716	51,716	-	-
Borrowings	7,448	145	7,593	992	6,601	-
Forward exchange contracts	5,949	-	5,949	5,594	355	-
	89,828	145	89,973	83,017	6,956	-

Year ended 30 June 2020	Carrying amount £'000	Effect of discounting £'000	Gross maturities £'000	Contractual cash flows		
				Up to 1 year £'000	1-2 years £'000	2-5 years £'000
Trade payables	16,998	-	16,998	16,998	-	-
Other payables	34,372	-	34,372	34,372	-	-
Borrowings	11,543	226	11,769	1,149	3,034	7,586
Forward exchange contracts	63,648	-	63,648	22,546	29,220	11,882
	126,561	226	126,787	75,065	32,254	19,468

Changes in liabilities arising from financing activities

	1 July 2020	Cash flows	Other	Currency	30 June 2021
Lease liabilities	13,166	(4,815)	4,815	(604)	12,562
Borrowings	11,543	(2,841)	69	(1,322)	7,449
	24,709	(7,656)	4,884	(1,926)	20,011

	1 July 2019	Cash flows	Other	Currency	30 June 2020
Lease liabilities	14,247	(4,896)	4,000	(185)	13,166
Borrowings	10,399	758	78	308	11,543
	24,646	(4,138)	4,078	123	24,709

See notes 20 and 21 for further details on borrowing and leasing activities.

Market risk

As noted in the Strategic report under Principal risks and uncertainties, the Group operates in a number of foreign currencies with the majority of sales being made in these currencies, but with most manufacturing being undertaken in the UK, Ireland and India.

The Group enters into US Dollar, Euro and Japanese Yen derivative financial instruments to manage its exposure to foreign currency risk, including:

- i. forward foreign currency exchange contracts to hedge a significant proportion of the Group's forecasted US Dollar, Euro and Japanese Yen revenues over the next 24 months;
- ii. foreign currency option contracts, entered into alongside the forward contracts above until May 2018 as part of the Group hedging strategy, are ineffective for cash flow hedging purposes. Note 28, 'Alternative performance measures', gives an adjusted measure of profit before tax to reflect the original intention that these derivatives were entered into for hedging purposes. The final option contract will mature in November 2021; and
- iii. one-month forward foreign currency exchange contracts to offset the gains/losses from exchange rate movements arising from foreign currency-denominated intragroup balances of the Company.

The following table details the fair value of these forward foreign currency derivatives according to the categorisations of instruments noted above:

	2021		2020	
	Nominal value	Fair value	Nominal value	Fair value
	£'000	£'000	£'000	£'000
Forward currency contracts in a designated cash flow hedge (i)				
Non-current derivative assets	172,165	9,865	78,527	1,133
Current derivative assets	127,548	7,512	19,467	283
Current derivative liabilities	74,652	(3,063)	154,045	(11,415)
Non-current derivative liabilities	34,245	(322)	290,499	(24,925)
	408,610	13,992	542,538	(34,924)
Amounts recognised in the Consolidated statement of comprehensive income and expense	-	51,590	-	13,924
Forward currency contracts ineffective as a cash flow hedge (i)				
Non-current derivative assets	56,357	2,619	-	-
Current derivative assets	31,011	428	-	-
Current derivative liabilities	59,529	(1,653)	93,962	(10,030)
Non-current derivative liabilities	6,687	(33)	153,585	(16,021)
	153,585	1,361	247,547	(26,051)
Amounts recognised in Gains/(losses) from the fair value of financial instruments in the Consolidated income statement	-	22,824	-	(24,361)
Foreign currency options ineffective as a cash flow hedge (ii)				
Non-current derivative assets	-	-	-	108
Current derivative assets	-	1,699	-	3,394
Current derivative liabilities	-	(216)	-	(122)
Non-current derivative liabilities	-	-	-	(155)
	-	1,483	-	3,225
Amounts recognised in Gains/(losses) from the fair value of financial instruments in the Consolidated income statement	-	(846)	-	2,021
Forward currency contracts not in a designated cash flow hedge (iii)				
Current derivative assets	-	-	5,127	80
Current derivative liabilities	51,929	(662)	62,549	(979)
	51,929	(662)	67,676	(899)
Amounts recognised in Financial income/(expense) in the Consolidated income statement	-	2,781	-	(154)
Total forward contracts and options				
Non-current derivative assets	228,522	12,484	78,527	1,242
Current derivative assets	158,559	9,639	24,594	3,758
Current derivative liabilities	186,110	(5,594)	310,556	(22,546)
Non-current derivative liabilities	40,932	(355)	444,085	(41,102)
	614,123	16,174	857,762	(58,648)

The amounts of foreign currencies relating to these forward contracts and options are, in Sterling terms:

	2021		2020	
	Nominal value	Fair value	Nominal value	Fair value
	£'000	£'000	£'000	£'000
US Dollar	399,065	4,192	596,032	(56,562)
Euro	146,120	6,040	159,221	409
Japanese Yen	68,938	5,942	102,509	(2,495)
	614,123	16,174	857,762	(58,648)

The following are the exchange rates which have been applicable during the financial year.

Currency	2021			2020		
	Average forward contract rates	Year end exchange rate	Average exchange rate	Average forward contract rates	Year end exchange rate	Average exchange rate
US Dollar	1.37	1.38	1.36	1.37	1.24	1.26
Euro	1.09	1.17	1.14	1.09	1.10	1.14
Japanese Yen	136	154	145	136	134	136

For the Group's foreign currency forward contracts and options at the balance sheet date, if Sterling appreciated by 5% against the US Dollar, Euro and Japanese Yen, this would increase pre-tax equity by £31,300,000 and increase profit before tax by £9,200,000, while a depreciation of 5% would decrease pre-tax equity by £4,100,000 and decrease profit before tax by £1,100,000.

Hedging

In relation to the forward currency contracts in a designated cash flow hedge, the hedged item is a layer component of forecast sales transactions. Forecast transactions are deemed highly probable to occur and Group policy is to hedge around 75% of net foreign currency exposure for USD, EUR and JPY. The hedged item creates an exposure to receive USD, EUR or JPY, while the forward contract is to sell USD, EUR or JPY and buy GBP. Therefore, there is a strong economic relationship between the hedging instrument and the hedged item. The hedge ratio is 100%, such that, by way of example, £10m nominal value of forward currency contracts are used to hedge £10m of forecast sales. Fair value gains or losses on the forward currency contracts are offset by foreign currency gain or losses on the translation of USD, EUR and JPY based sales revenue, relative to the forward rate at the date the forward contracts were arranged. Foreign currency exposures in HKD and USD are aggregated and only USD forward currency contracts are used to hedge these currency exposures. Sources of hedge ineffectiveness according to IFRS 9 Financial Instruments include: changes in timing of the hedged item; reduction in the amount of the hedged sales considered to be highly probable; a change in the credit risk of Renishaw or the bank counterparty to the forward contract; and differences in assumptions used in calculating fair value.

During 2020, global macroeconomic uncertainty resulted in a reduction to the 'highly probable' revenue forecasts of Renishaw plc and Renishaw UK Sales Limited, being the hedged item, which resulted in proportions of forward contracts failing hedge effectiveness testing, with nominal value amounting to £247,547,000. Following maturities during 2021, the remaining nominal value of ineffective forward contracts at 30 June 2021 totalled £153,585,000, with fair value gains of £22,824,000 recognised in the Consolidated income statement relating to movements in the mark-to-market valuations of these outstanding contracts.

During 2021, an improvement in global macroeconomic conditions and business performance has resulted in an increase to the 'highly probable' revenue forecasts of the hedged item, such that no additional contracts have become ineffective. A decrease of 10% in the highly probable forecasts would result in an additional £7,430,000 notional value of forward contracts becoming ineffective, with £818,000 gain immediately recycled to the Consolidated income statement based on 30 June 2021 mark-to-market valuations.

25. SHARE CAPITAL AND RESERVES

Capital management

The Group defines capital as being the equity attributable to the owners of the Company, which is captioned on the Consolidated balance sheet. The Board's policy is to maintain a strong capital base and to maintain a balance between significant returns to shareholders, with a progressive dividend policy, while ensuring the security of the Group is supported by a sound capital position. The Group may adjust dividend payments due to changes in economic and market conditions which affect, or are anticipated to affect, Group results.

Share capital

	2021	2020
	£'000	£'000
Allotted, called-up and fully paid 72,788,543 ordinary shares of 20p each	14,558	14,558

The ordinary shares are the only class of share in the Company. Holders of ordinary shares are entitled to vote at general meetings of the Company and receive dividends as declared. The Articles of Association of the Company do not contain any restrictions on the transfer of shares nor on voting rights.

Dividends paid

Dividends paid comprised:

	2021 £'000	2020 £'000
2020 final dividend paid of nil per share (2019: 46.0p)	-	33,483
Interim dividend paid of 14.0p per share (2020: nil)	10,189	-
Total dividends paid	10,189	33,478

As a result of the outbreak of the COVID-19 pandemic, and according to the Board's priority of conserving cash and managing the Group in a prudent manner during a period of uncertainty, no final dividend was declared in respect of 2020. Following an improvement in global macroeconomic conditions and the financial position of the Group during 2021, the Board have reinstated the dividend, with an interim dividend of 14.0p per share paid in April 2021. A final dividend of 52.0p per share is proposed in respect of 2021, which will be payable on 29 November 2021 to shareholders on the register on 29 October 2021.

Currency translation reserve

The currency translation reserve comprises all foreign exchange differences arising from the translation of the financial statements of the foreign operations and currency movements on intragroup loan balances classified as net investments in foreign operations (see note 5).

Movements during the year were:

	2021 £'000	2020 £'000
Balance at the beginning of the year	17,729	14,577
(Loss)/gain on net assets of foreign currency operations	(7,009)	996
(Loss)/gain on intragroup loans classified as net investments in foreign operations	(7,743)	2,373
Tax on translation of net investments in foreign operations	1,470	(403)
(Loss)/gain in the year relating to subsidiaries	(13,282)	2,966
Currency exchange differences relating to associates and joint ventures	(728)	186
Balance at the end of the year	3,719	17,729

Cash flow hedging reserve

The cash flow hedging reserve, for both the Group and the Company, comprises all foreign exchange differences arising from the valuation of forward exchange contracts which are effective hedges and mature after the year end. These are valued on a mark-to-market basis, are accounted for in Other comprehensive income and expense and accumulated in Equity, and are recycled through the Consolidated income statement and Company income statement when the hedged item affects the income statement, or when the hedging relationship ceases to be effective. See note 24 for further detail.

Movements during the year were:

	2021 £'000	2020 £'000
Balance at the beginning of the year	(30,455)	(42,401)
Losses on contract maturity recognised in revenue during the year	(608)	16,216
Losses transferred to the Consolidated income statement during the year	-	24,361
Deferred tax transferred to the consolidated income statement	-	(4,629)
Revaluations during the year	52,198	(26,653)
Deferred tax movement	(9,970)	2,651
Balance at the end of the year	11,345	(30,455)

Own shares held

The EBT is responsible for purchasing shares on the open market on behalf of the Company to satisfy the Plan awards, see note 23 for further detail. Own shares held are recognised as an element in equity until they are transferred at the end of the vesting period.

Movements during the year were:

	2021 £'000	2020 £'000
Balance at the beginning of the year	(404)	(404)
Acquisition of own shares	-	-
Balance at the end of the year	(404)	(404)

On 10 December 2018, 9,639 shares were purchased on the open market by the EBT at a price of £41.66, costing a total of £404,348.

Other reserve

The other reserve relates to additional investments in subsidiary undertakings and share-based payments charges according to IFRS 2 in relation to the Plan.

Movements during the year were:

	2021 £'000	2020 £'000
Balance at the beginning of the year	(129)	(302)
Share-based payments charge	173	173
Balance at the end of the year	44	(129)

Non-controlling interest

Movements during the year were:

	2021 £'000	2020 £'000
Balance at the beginning of the year	(577)	(577)
Share of profit for the year	-	-
Balance at the end of the year	(577)	(577)

The non-controlling interest represents the minority shareholdings in Renishaw Diagnostics Limited – 7.6%.

26. CAPITAL COMMITMENTS

Authorised and committed capital expenditure at the end of the year, for which no provision has been made in the Financial statements, were:

	2021 £'000	2020 £'000
Freehold land and buildings	412	640
Plant and equipment	3,255	1,621
Motor vehicles	79	-
Software licences and intellectual property	68	3,854
Total committed capital expenditure	3,814	6,115

27. RELATED PARTIES

Associates, joint ventures and other related parties had the following transactions and balances with the Group:

	Joint ventures		Associate	
	2021 £'000	2020 £'000	2021 £'000	2020 £'000
Purchased goods and services from the Group during the year	711	837	642	526
Sold goods and services to the Group during the year	22,175	17,160	-	-
Paid dividends to the Group during the year	-	512	-	-
Amounts owed to the Group at the year end	146	87	2,747	3,227
Amounts owed by the Group at the year end	2,556	3,103	-	-
Loans owed to the Group at the year end	598	955	-	2,500

Loans and finance leases owed to the Group by an associate totalling £3,030,000 were impaired in 2021. There were no bad debts relating to related parties written off during 2020.

By virtue of their long-standing voting agreement, Sir David McMurtry (Executive Chairman 36.23% shareholder) and John Deer (Non-executive Deputy Chairman, together with his wife, 16.59%), are the ultimate controlling party of the Group. The only significant transactions between the Group and these parties are in relation to their respective remuneration.

28. ALTERNATIVE PERFORMANCE MEASURES

In accordance with Renishaw's Alternative Performance Measures (APMs) policy and ESMA Guidelines on Alternative Performance Measures (2015), APMs are defined as - Revenue at constant exchange rates, Adjusted profit before tax, Adjusted earnings per share and Adjusted operating profit.

Revenue at constant exchange rates is defined as revenue recalculated using the same rates as were applicable to the previous year and excluding forward contract gains and losses.

	2021	2020
	£'000	£'000
Revenue at constant exchange rates		
Statutory revenue as reported	565,559	510,215
Adjustment for forward contract (gains)/losses	(1,427)	12,053
Adjustment to restate current year at previous year exchange rates	26,206	-
Revenue at constant exchange rates	590,338	522,268
Year-on-year revenue growth at constant exchange rates	+13.0%	-

Year-on-year revenue growth at constant exchange rates for 2020 was -13.2%.

Adjusted profit before tax, Adjusted earnings per share and Adjusted operating profit are defined as the profit before tax, earnings per share and operating profit after excluding costs relating to business restructuring, third-party costs relating to the formal sales process ('FSP'), and gains and losses in fair value from forward currency contracts which did not qualify for hedge accounting and which have yet to mature.

Restructuring costs reported separately in the Consolidated income statement (see note 29), and third-party legal and advisory costs relating to the 2021 FSP reported in Administrative expenses, have been excluded from adjusted measures on the basis that they relate to matters that do not frequently recur.

From 2017, the gains and losses from the fair value of financial instruments not effective for cash flow hedging have been excluded from statutory profit before tax, statutory earnings per share and statutory operating profit in arriving at Adjusted profit before tax, Adjusted earnings per share and Adjusted operating profit to reflect the Board's intent that the instruments would provide effective hedges. This is classified as 'Fair value (gains)/losses on financial instruments not eligible for hedge accounting (i)' in the following reconciliations. The amounts shown as reported in revenue represent the amount by which revenue would change had all the derivatives qualified as eligible for hedge accounting.

Gains and losses which recycle through the Consolidated income statement as a result of contracts deemed ineffective during 2020, as described in note 24, are also excluded from adjusted profit measures, on the basis that all forward contracts are still expected to be effective hedges for Group revenue, while the potentially high volatility in fair value gains and losses relating to these contracts will otherwise cause confusion for users of the financial statements wishing to understand the underlying trading performance of the Group. This is classified as 'Fair value (gains)/losses on financial instruments not eligible for hedge accounting (ii)' in the following reconciliations.

The Board considers these alternative performance measures to be more relevant and reliable in evaluating the Group's performance.

	2021	2020
	£'000	£'000
Adjusted profit before tax:		
Statutory profit before tax	139,439	3,208
Restructuring costs	-	23,797
Third-party FSP costs	3,222	-
Fair value (gains)/losses on financial instruments not eligible for hedge accounting (i):		
- reported in revenue	1,882	(731)
- reported in gains from the fair value in financial instruments	846	(2,021)
Fair value (gains)/losses on financial instruments not eligible for hedge accounting (ii):		
- reported in revenue	(2,899)	-
- reported in gains from the fair value of financial instruments	(22,824)	24,361
Adjusted profit before tax	119,666	48,614

	2021	2020
	Pence	Pence
Adjusted earnings per share:		
Statutory earnings per share	153.2	0.4
Restructuring costs	-	26.5
Third-party FSP costs	4.4	-
Fair value (gains)/losses on financial instruments not eligible for hedge accounting (i):		
- reported in revenue	2.1	(0.8)
- reported in gains in fair value in financial instruments	0.9	(2.2)
Fair value (gains)/losses on financial instruments not eligible for hedge accounting (ii):		
- reported in revenue	(3.2)	-
- reported in gains from the fair value of financial instruments	(25.4)	27.1
Adjusted earnings per share	132.0	51.0

	2021	2020
Adjusted operating profit:	pence	pence
Statutory operating profit	138,341	6,294
Restructuring costs	-	23,797
Third-party FSP costs	3,222	-
Fair value (gains)/losses on financial instruments not eligible for hedge accounting (i):		
- reported in revenue	1,882	(731)
- reported in gains in fair value in financial instruments	846	(2,021)
Fair value (gains)/losses on financial instruments not eligible for hedge accounting (ii):		
- reported in revenue	(2,899)	-
- reported in gains from the fair value of financial instruments	(22,824)	24,361
Adjusted operating profit	118,568	51,700

Adjustments to the segmental operating profit:

	2021	2020
Manufacturing technologies	£'000	£'000
Operating profit before loss from fair value of financial instruments	110,498	31,188
Restructuring costs	-	23,797
Third-party FSP costs	3,061	-
Fair value gains on financial instruments not eligible for hedge accounting (i):		
- reported in revenue	1,797	(688)
Fair value gains on financial instruments not eligible for hedge accounting (ii):		
- reported in revenue	(2,734)	(4,036)
Adjusted manufacturing technologies operating profit	112,622	50,261

	2021	2020
Analytical instruments and medical devices	£'000	£'000
Operating profit before loss from fair value of financial instruments	5,865	1,737
Third-party FSP costs	161	-
Fair value gains on financial instruments not eligible for hedge accounting (i):		
- reported in revenue	86	(43)
Fair value gains on financial instruments not eligible for hedge accounting (ii):		
- reported in revenue	(166)	(255)
Adjusted analytical instruments and medical devices operating profit	5,946	1,439

29. RESTRUCTURING COSTS

During 2020 the Board implemented its 'Fit for the Future' initiative, which incorporated the rationalisation and reorganisation of certain operating activities, particularly relating to the additive manufacturing (AM) business, and cost control measures which included a UK compulsory redundancy programme.

The Board considered that the costs relating to these restructuring activities should be reported separately in the Consolidated income statement in order to aid users' understanding. No expenses relating to this initiative have been incurred in 2021. The table below shows the analysis of these costs:

	2020
	£'000
Redundancy costs (a)	6,281
Impairment of capitalised research and development costs (b)	5,999
Impairment of goodwill (c)	405
Impairment of property, plant and equipment (a)	2,590
Increase in inventory provisions (b)	4,910
Increase in warranty provisions (b)	3,400
Other expenses (c)	212
Total Restructuring expenses	23,797

These costs would be found under the following headings in the Consolidated income statement if they had not been separately identified in Restructuring costs: (a) within cost of sales, distribution costs and administrative expenses; (b) within cost of sales; and (c) within administrative expenses.

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