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Haydale Graphene Industries Plc

Annual Report And Accounts

For the year ended 30 June 2023

Creating Material Change

Company Registration No: 07228939

Contents

About Haydale

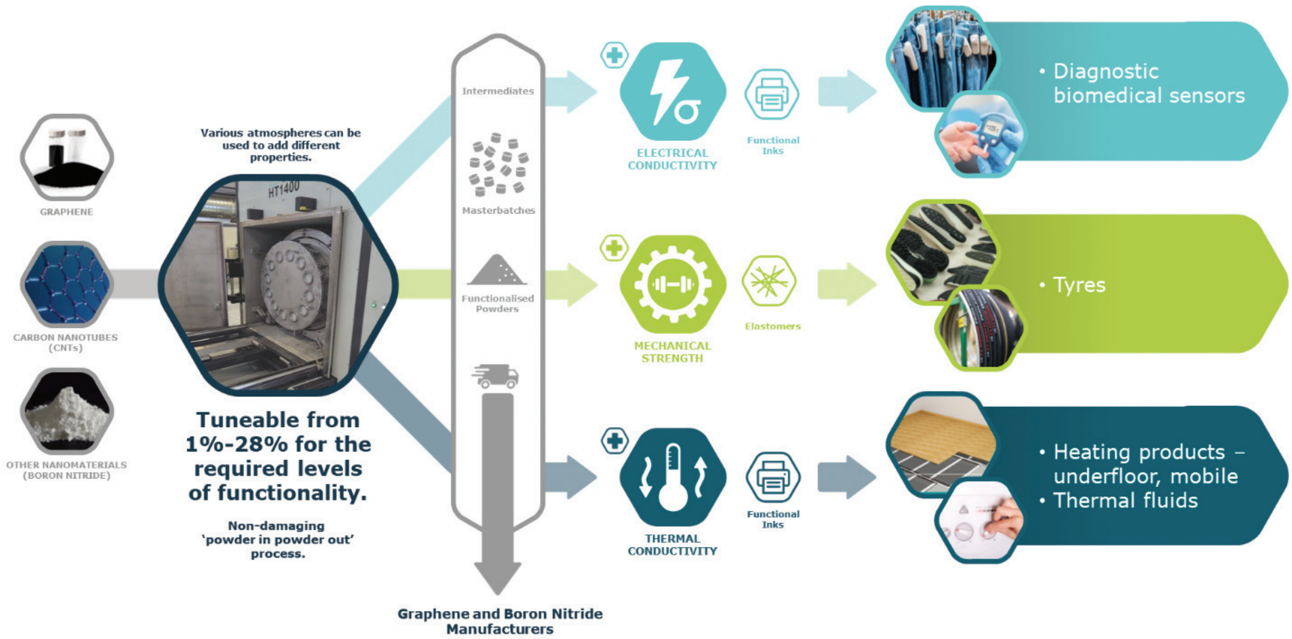
Haydale comprises two complementary advanced material businesses, both leaders in their respective fields:

- Plasma functionalisation of nanomaterials for third party applications and manufacture of plasma functionalised graphene enhanced products, all primarily based in the UK; and
- Manufacture and sale of Silicon Carbide cutting tools and powders, based in the US.

Nanomaterial plasma functionalisation processing for third parties and own products

Graphene has been feted for its superqualities including electrical and heat conductivity as well as its inherent mechanical strength that if properly harnessed can make a significant difference to host materials and the products containing them. The issue is that graphene and many other nanomaterials (such as boron nitride) are inert and therefore do not easily disperse within the medium to which they are added, be that water, epoxy resin, oil or solvent. The challenge has therefore always been how to change the surface chemistry of graphene and other nanomaterials so they will properly integrate and thereby bring these superqualities to the end product (a process known as "functionalisation").

Haydale has a unique, patented HDPlas process that treats nanomaterial powders by using plasma and bleeding in the required chemistry using a precursor such as gas to achieve the necessary end result. This is a highly tunable, environmentally clean means of functionalisation suitable for most applications and grades of nanomaterial that does not require the use of acids or surfactants used by other chemical functionalisation processes. Haydale does not manufacture graphene or boron nitride, but has characterised over 250 types of third party graphenes in order to understand which ones are appropriate for different applications. Haydale acts as an intermediary to both nanomaterial producers and end product manufacturers to functionalise their products to achieve the results sought. The functionalised nanomaterial powders can then be incorporated by Haydale into inks, masterbatches or pre-pregs before being shipped to the customer and being used directly in their existing production line facilities. Haydale has also developed its own range of products concentrating on the heating and sensor markets.



SiC powder & tooling

Silicon Carbide ("SiC") is one of the hardest known substances after diamond. Haydale has the largest installed capacity in the world for manufacturing silicon carbide whisker fibres and microfibres at its US facility in South Carolina. SiC whisker fibres, due to their shape, can give lateral strength to products and thereby bring fracture resistance, increased hardness and toughness, and heat and wear resistance to cutting tools used in the aerospace, automotive and other industries which use difficult to cut high grade steels and other hard metals. Haydale has recently moved laterally into tool manufacturing and has established a pan US manufacturer's representative distribution network.

Chair's Statement

Introduction

I am pleased to present Haydale Graphene Industries Plc's ("Haydale", the "Group" or the "Company") full year audited results to 30 June 2023 ("FY23").

The Group continued to make positive progress during the year on its journey to delivering sustainable commercial revenues. The US operation in particular saw a strong bounce back in FY23 and, with its continued progress into the manufacture of SiC cutting tools, is increasingly well positioned to deliver strong growth moving forwards. The UK operation has started to see the seeds planted in FY22 begin to come through in the second half of FY23 and post year end period as we entered into a number of agreements that we believe will form the bedrock of strong business partnerships going forwards to take our offerings to the wider market. We anticipate the momentum across both the nanomaterial and SiC markets will continue into the current financial year.

Summary financials

Commercial revenue for FY23 of £4.30 million (FY22: £2.90 million) was up by 48.3% on prior year. Gross profit margin was slightly down due to sales mix at 56% (FY22: 60%) resulting in a gross profit of £2.39 million (FY22: £1.75 million). Other operating income for the year of £0.38 million (FY22: £0.44 million) was in line with last year after adjusting for US Covid support received in FY22. Adjusted administrative expenses increased by £0.74 million (13.4%) to £6.26 million (FY22: £5.52 million) primarily related to the full year impact of FY22 planned investment in resource resulting in an adjusted operating loss of £3.49 million (FY22: £3.33 million). Total administrative expenses were £8.93 million (FY22: £7.24 million) as a result of the above plus a number of additional non-trading items, namely increase in share-based payments charges of £0.55 million and an increase in depreciation and impairment of £0.40 million. Loss for the year was £6.17 million (FY22: £4.81 million).

Operational Highlights

The Group made good progress towards its longer-term goals in the year as the Company consolidated its position bringing increased focus onto its core offerings and laying the foundations for continuing growth in FY24 and beyond. The priorities of delivery of commercial revenue, focused investment in our physical and human capacity and development of our technology remains central to our strategy.

During the year we continued to optimise and extend the functionality of the HDPlas® HT1400 plasma reactor acquired in 2022 which allows us to manufacture functionalised nanomaterials on an industrial scale. With that assurance, we have further developed our collaborations with industry partners who, due to their market reach or capability, are potentially able to help take our products to market. We have also concluded commercial project arrangements with several nanomaterial producers and end customers where our HDPlas® process can bring additional value to their end customers.

The SiC and ceramic cutting tools produced by our US facility saw growth in their core aerospace and automotive markets. We started to roll out a regionalised manufacturer's representative strategy towards the end of FY23 which is already showing signs of generating improved commercial traction within the North American steel mill, aerospace and automotive sectors for our finished tooling. We anticipate this will increase further during the current financial year as additional distribution agreements are concluded.

Staff

I would like to thank our staff for their continued support and flexibility, as their efforts are key to us achieving our aims. I would also like to thank the executive management team who continue to drive the transition towards a sustainable commercial operation.

Funding

On 3 October 2023, the Company completed an equity funding of £5.1 million (gross) and I would like to welcome our new shareholders and to thank our existing shareholders for their continued support.

Outlook

We have made important progress in our next planned steps as a business by forging commercial partnerships and collaborations with leading organisations that the Board believe will ultimately help lead to commercial success. With the fundamental building blocks in place and continuing progress in our key markets, the Board remains confident that the Company will be able to take advantage of the traction it is now seeing.

David Banks
Chair
25 October 2023

Strategic Report

The directors present their Strategic Report for the year ended 30 June 2023.

PRINCIPAL ACTIVITIES

Haydale has three principal activities:

- The plasma functionalisation of nanomaterials for third party applications through our patented HDPlas® process;
- The development, manufacture and sale of products using plasma functionalised nanomaterials to primarily address the heating and sensor markets; and
- The manufacture and sale of proprietary silicon carbide ("SiC") whisker powders and high wear resistant cutting tools for use primarily in the aerospace and automotive industries.

These activities are explained in more detail on page 1 and pages 4 to 6 below. The first two nanomaterial business activities are based in the UK with a sales presence in Asia. The SiC activities are based in North America with a sales reach into Europe and the far East.

At 30 June 2023, the Group has the following operational activities across its five facilities.

Haydale subsidiary	*Location*	*Principal activities*
Haydale Limited	Ammanford, Wales	Specialist plasma functionalisation and manufacturing facility producing inks, resins, fluids and masterbatches to be used in composites and polymers for direct sales to customers and for transfer to other Group sites.
Haydale Composite Solutions Limited ("HCS")	Loughborough, England	Sales of masterbatch and pre-preg composites, elastomers, other nanomaterials and the provision of advanced consulting.
Haydale Technologies (Korea) Limited ("HTK")	Seoul, South Korea	Dedicated sales office servicing the fast-moving South Korean and other APAC markets.
Haydale Technologies (Thailand) Company Limited ("HTT")	Bangkok, Thailand	Sales office servicing the APAC region with plasma functionalisation and R&D capability.
Haydale Technologies, Inc. and its wholly owned subsidiary Haydale Ceramic Technologies LLC ("HCT")	Greer, SC, USA	SiC and cutting tool manufacturing facility with sales office serving the North American market and developing the European and East Asian markets.

REVENUE MODEL

The Group's revenue model is based on the following strands:

- Sale of functionalised material in powder, masterbatch, fluid or pre-preg format;
- Strategic partnerships with industry players through whom products and plasma functionalised material can be taken to market;
- Sale of SiC microfibres and whiskers, SiC tooling, ceramic blends and ceramic blanks to the steel mill, aerospace and automotive sectors and the coatings industry;
- Sale of own brand and third-party products which clearly align with our principal activities or customer base;
- Sale or lease of plasma reactors with appropriate licencing for use of the patented HDPlas® functionalisation process; and
- Consultancy services with respect to testing the potential enhancements that our product range and engineering acumen may bring to customer applications.

Strategic Report (continued)

COMMERCIAL OVERVIEW

FY23 has seen the Group's US operations continue its progress as demand returns for SiC powders and tooling in the aerospace and automotive industries. This has driven the overall FY23 revenue growth of the Group and looks set to help support the Group moving forwards with the expansion into the manufacture and sale of SiC tooling through a network of regional manufacturer representatives recently engaged across the USA. The UK based nanomaterial business has made significant steps in commercialising its portfolio of technology, especially in terms of business collaborations with significant industry players in key markets, having previously installed sufficient capacity to be able to process commercial levels of plasma functionalised nanomaterials for those partners and other third parties. These collaborations are expected to form a solid base to the expected progress in the current financial year.

NANOMATERIALS

The UK operations made significant progress over the year in progressing commercialisation of its proprietary technology which resulted in a number of key agreements being signed with industry partners in the last quarter of FY23 and first quarter of FY24. We anticipate these may lead to significant volume sales as those products and relationships mature over the next few years. Whilst progress on commercial arrangements has been strong, it is taking longer than expected for this to translate into revenue and, primarily due to one large functionalised product sale (goods) in FY22 not being repeated in FY23, total UK sales reduced by £0.20 million on prior year. Other UK consultancy revenues (services) grew by 10.2% on a like-for-like basis.

Patented Plasma Functionalisation Technology

At the core of all our product offerings and underpinning the Group's future nanomaterial prospects, is Haydale's patented HDPlas® plasma functionalisation process which improves the dispersibility of many nanomaterials by changing their surface chemistry using a highly tunable, repeatable process. Plasma functionalisation allows Haydale to tailor advanced materials to enhance the properties of its customers' products to achieve pre-agreed mechanical or conductive performance criteria. The process is cost effective and environmentally friendly and our capacity to produce industrial levels of functionalised nanomaterials underpins the business model. Specifically, we have the expertise to:

- functionalise nanomaterials that are blended with resins, composites and fluids to deliver enhanced electrical, mechanical (strength) and thermal performance;
- formulate proprietary nanomaterial-based inks and coatings for the print and sensor markets, including biomedical, RFID and piezo resistive inks and sensors; and
- compound functionalised nanomaterials into a range of elastomers to enable customers to use nanomaterials in elastomeric products.

The Group safeguards its nanomaterials business across its sites and the territories in which it operates through the use of patents and trade secret protocols which protect its intellectual property. It holds licences where that intellectual property is for operational reasons with a third party. Haydale currently has a portfolio of patents that are variously recognised in the following territories – US, UK, Europe, China, Japan and Australia. Haydale works closely with its patent advisors, Mewburn Ellis LLP, and maintains a rolling programme of patent applications.

Plasma Functionalised Powder Sales

We have secured a number of commercial contracts during the year with manufacturers of graphene to plasma functionalise their graphene powders to their requirements and are in discussions with many others who recognise the difference plasma functionalisation can make.

Of particular note, we have entered into contracts with a number of major industrial customers who manufacture their own nanomaterials. For Saint Gobain, who manufacture boron nitride, we are working with their end customers to hone the final surface chemistry to match their desired outcomes. Our ability to reliably adjust the surface chemistry has more recently led to our securing a major collaboration with Petronas to help them take their own graphene product, refined from a byproduct of their main petrochemical business, and functionalise it so it can potentially be recycled into other applications. We anticipate that these initiatives may lead to significant volumes needing to be plasma functionalised over the coming years, either directly by Haydale, or indirectly through the leasing of plasma reactors on a volume based royalty model.

Plasma Functionalised Products Sales:

Heating

Haydale has been working in the energy and heating sectors for a number of years. Geopolitical events and the UK Government's net zero strategy, have brought an increased urgency for solutions in this space.

Over the past few years, the Company has developed a number of off-the-shelf flexible heater graphene-based functional inks that can be printed onto a wide variety of surfaces. Based on those inks we are developing a range of low power heating products, potentially the most exciting of which is an energy efficient, cost-effective and easy to install underfloor heating system that could be used to supplement or replace domestic heating systems. The technology could be rolled out underneath the floor covering (e.g. carpet or tiles) and potentially run off a battery. With support from the Welsh Government, working prototypes have been created and are currently being tested in laboratory conditions to finalise the design before further optimisation and seeking a CE mark. We are now looking at various partnership options to take these to market.

We are also undertaking a number of paid projects for Cadent focused on helping energy suppliers meet their obligations to their vulnerable customers where they are under a legal requirement to be able to guarantee hot water and heating in situations where the power or gas go down. The initial project referred to last year involves a portable, battery powered water heater, a prototype of which is currently undergoing testing. We have also recently started work on a low power, portable over-the-radiator heating device which is also looking promising. Other potential applications of the same low power heating technology are currently in early-stage testing with partners.

In FY22 we announced we were working with a company that had acquired a patent for a boron nitride based thermal fluid. This has not progressed as we had hoped and is unlikely to lead to further revenues. We have however developed our own graphene based thermal fluid (patent pending) which early trials suggest performs with similarly positive thermal results and have now partnered with a specialist heating fluid engineering firm to finesse the formulation to work with the necessary additives so it meets applicable industry standards and can ultimately be deployed into their customer base.

Sensors

Following on from the work historically undertaken in the biomedical ink sector, we have a range of off-the-shelf functional inks appropriate for use in biomedical and other sensor applications that can potentially detect a wide range of medical conditions. These inks have a high sensitivity and are therefore able to replace lower grade carbon inks and potentially metallic based inks in existing sensor products. Our work with a leader in the glucose monitoring and diabetes management sector is moving forwards following positive results against their existing inks and, having successfully passed an audit of the quality controls around production at our Ammanford site, we are now working with them on further tests. In the interim, we are separately working with a major European sensor manufacturer on a sensor product application to detect chlorine in water which we understand has a potentially lower barrier to entry, market wise.

Elastomers

Our collaboration with Vittoria Spa, a leading premium cycle tyre manufacturer, has progressed and, having proved the benefits that plasma functionalised graphene can bring to tyres (namely: grip, rolling resistance, puncture resistance and durability), we are shipping tonnage materials. We are also working with Vittoria on further enhancements for the next generation of tyres and anticipate the existing graphene enhancements to start trickling out to the wider market in due course.

Composites

In the second half of FY23, we released a graphene enhanced prepreg tooling material, following two years of trialling with Prodrive Composites Ltd, which is designed to deliver cost effective composite tooling with extended tooling life. This, and related products which were released during the year, are now seeing interest from the market which we hope will build through the current year.

Focused research and development

We continue to work on customer-paid and grant-funded projects to develop plasma functionalised nanomaterial solutions where there is a clear problem statement and we believe there to be a volume demand at the end of the process for any product created. We are selective and require a clear business case to proceed. By being able to deliver a number of selective projects that have resulted in a requirement for plasma functionalised material for third party applications or intellectual property that vests in Haydale, we have been able to build our underlying customer base. Key projects include the development of material that might be appropriate for type IV and V hydrogen storage tanks with Viritech for use in hydrogen powered vehicles and anti-counterfeiting technology using our PATit plasma functionalised graphene based conductive inks.

Asia Pacific

The performance of both the Thailand and Korea operations were at the lower end of expectation and, whilst we have been able to leverage our presence in these countries to secure several major clients for the Group as a whole including Petronas and Vittoria sourced by the Thailand office, it has been agreed that both entities are to be scaled back to a sales front office for the foreseeable future. This has been a progressive process which we will continue to monitor carefully. The Korea office concluded a beneficial commercial settlement with iCraft to terminate the agreement after they decided to focus on their core activities.

SILICON CARBIDE POWDERS AND TOOLING

Following prior year investment in the US and our move up the value chain into the manufacture of cutting tools, we have seen our silicon carbide and tooling business achieve significant growth in FY23. Although the raw SiC powder market is limited in scope (historically dependent on a small number of key customers) we continue to have additional sales in that area.

The sale of SiC cutting tools is, by itself, a $900m market. Having previously invested in the necessary plant to manufacture our own SiC tooling and signed finishing service supply agreements to ensure we can meet capacity demands, towards the end of FY23 we released our first cutting tools catalogue and appointed four additional regional manufacturer representatives who act to introduce our product directly to end users on a commission only basis and thereby cost effectively extend our sales reach. The initial feedback we are receiving is very positive and we understand our tooling is exceeding the largest competitor in terms of durability and performance in a number of applications. This is starting to lead to a potential sizeable demand for product being reported by the manufacturer representatives which we anticipate will feed through into orders in the US, hence we are

Strategic Report (continued)

taking steps to ensure inventory is available to support. We have recently secured an agreement with a distributor for the UK and Eire and are in discussions for similar arrangements in East Asia. In addition, we have started acting as a seller of complementary non-SiC tooling in a number of areas and are also looking to develop further partnerships in this space through FY24.

Other products

There has been limited progress on CeramycGuard™, a one stop solution to significantly extend the surface life of concrete assets, for which Haydale holds the distribution rights for the UK market. Whilst accreditation with the Drinking Water Inspectorate ("DWI") has not been progressed due to the DWI not having the necessary capability at this time, we still believe that there remains a key market in the wider, non-drinking water market.

PRODUCTION CAPACITY

Haydale invested in production capacity for its plasma functionalisation process and ink production in FY22 and now has sufficient capacity to meet its forecasts for the next few years. Should additional capacity be required, Haydale has a scaling plan to affordably and materially increase its own internal capacity on relatively short timescales or, depending on client volumes, arrange for a machine to be leased to a client and charge a volume based royalty.

Likewise, there is also more than sufficient capacity for the manufacture of SiC powder and tooling in the US to meet the business plan for the next few years.

OVERHEADS

The Directors continued to invest in the human capital across the wider business in FY23, strengthening the teams across UK and US operations across the spectrum of sales, marketing, human resources, quality control and production. Whilst there will be further strategic hires required at the right time to manage the anticipated growth, there is not expected to be a need for any step change to deliver the business plan.

At the same time, the Group has also taken selective measures to reduce costs around the organisation. The scope of these is being extended as more focus is brought into the areas likely to lead to profit on a short-term basis.

FUTURE STRATEGIC DIRECTION

As noted above, the US operations have potential for strong growth in the short term through the manufacture and sale of specialised SiC tooling and complementary products. Having historically made the necessary capital investments, the focus is now on building the manufacturing representative network across the US and elsewhere to get the tooling into key end user sites.

Whilst Haydale has world leading technology for the functionalisation of nanomaterials, the focus for the UK is on building the business partnerships that will get its plasma functionalised nanomaterial solutions into the market and the organic growth that this will bring through repeat revenues at scale. This is concurrent to developing our own strategic products based on our existing solutions, such as underfloor heating, and we anticipate these, together with third party plasma functionalisation services, will form the basis of our future growth over the coming years in the UK.

The Directors remain mindful of the scaling challenges in both the US and UK that need to be managed for the Company to deliver the growth it expects to deliver as its early-stage industry partner relationships develop.

FINANCIAL REVIEW

The Financial Review should be read in conjunction with the consolidated financial statements of the Group and the notes thereto. The consolidated financial statements are presented under International Financial Reporting Standards and are set out on pages 27 to 60. The financial statements of the Company continue to be prepared in accordance with FRS 101 and are set out on pages 61 to 67.

Statement of Comprehensive Income

In the year under review, the Group's principal areas of income were sales of specialty inks, fluids and graphene enhanced composites and associated consultancy services from the UK and APAC operations and sale of SiC fibres, whiskers, particulate, blanks and tooling from the US operation. The Group's revenue for the year ended 30 June 2023 of £4.30 million (FY22: £2.90 million) represents a 48% increase compared with the previous year. Revenue derived from product sales increased by £1.33 million during the year, driven by the US business performance (See note 4, Segmentation Analysis).

The Group's Gross Profit, which excludes Other Operating Income, was £2.39 million (FY22: £1.75 million) delivering a Gross Profit margin of 56% (FY22: 60%) which is slightly down due to sales mix.

Other operating income, which is principally grant funded projects, was £0.38 million (FY22: £0.44 million) consistent with prior year after taking account of £0.06 million received in FY22 from US Covid Government Support packages.

Adjusted administrative expenses increased by £0.74 million (13.4%) to £6.26 million (FY22: £5.52 million) reflecting the full year impact of investment decisions taken in FY22 partially offset by cost savings resulting in an adjusted operating loss of £3.49 million (FY22: £3.33 million). Total administrative expenses for the year were £8.93 million (FY22: £7.24 million) which, in addition to the above, reflects additional non-cash related share-based payment expenses of £0.55 million. Also, the Group took the decision to impair the fixed assets held in the US and accordingly a non-cash charge of £0.53 million is included in total administrative expenses.

The Loss from Operations was £6.17 million (FY22: £5.06 million). Finance costs, which include interest payable on the Group's debt, for the year were £0.41 million (FY22: £0.19 million).

The Group continued to direct resources to research and development with the focus for that investment on products and processes that could develop into sustainable and profitable revenue streams. R&D spend for the year was £1.52 million (FY22: £1.45 million[1]), of which £0.42 million was capitalized (FY22: £0.34 million). During the year the Group claimed R&D tax credits of £0.40 million (FY22: £0.43 million) and it is expected that this claim will be received during the current financial year.

Total comprehensive loss for the year, including £1.12 million (FY22: £0.41 million) of one off charges relating to impairment of tangible assets and share-based payment costs, was £5.80 million (FY22: £4.54 million).

The loss per share for the year was £0.01 loss (FY22: £0.01 loss).

Statement of Financial Position and Cashflows

As at 30 June 2023, net assets amounted to £6.97 million (2022: £7.05 million), including cash balances of £1.38 million (2022: £1.19 million). Other current assets marginally decreased to £3.15 million at the year-end (2022: £3.26 million) with modest reductions across most areas offset by an increase in inventory of £0.22 million at the US facility during the year. Current liabilities reduced slightly to £2.01 million (2022: £2.28 million) principally due to a reduction in trade and other payables.

The Right of Use Asset in respect of its leased premises decreased to £2.20 million (FY22: £2.70 million) due to winding down of the leases agreements. The Lease Liability which is split between Current and Non-Current Liabilities similarly decreased to £2.44 million (FY22: £2.92 million). These movements were non-cash items and did not impact the cash outflow in the year. The Company will amortise these balances over the remaining life of the leases which varies across the sites.

The Group's US Pension Obligations of £0.58 million (FY22: £1.36 million) has reduced in the year due to a combination of positive movements on investments, exchange and discount rate movements and contributions made.

Net cash outflow from operating activities before working capital movements for the year increased to £3.67 million (FY22: £3.42 million), the principal contributing factors being the Loss after Taxation of £6.17 million (FY22: £4.81 million). Cash used in Operations increased by £0.92 million in the year to £4.09 million (FY22: £3.17 million). The Group received an R&D tax credit inflow of £0.43 million in the year (FY22: £0.37 million). Net cash used in operating activities increased to £3.66 million (FY22 £2.80 million).

Capital expenditure in the year, excluding the IFRS 16 adjustments, was £0.20 million (FY22: £1.00 million).

Capital Structure and Funding

On 13 September 2022, the Company raised £5.51 million (gross) through the placing, open offer and subscription of 275,516,784 new Ordinary Shares at 2.00 pence per share. Consequently, at 30 June 2023 the Company had 785,852,475 ordinary shares in issue (2022: 510,335,691). No options were exercised into ordinary shares during the year (FY22: Nil).

The Group's total borrowings at the year-end were £1.37 million (2022: £1.35 million), of which £1.21 million was in the UK and the balance in the Group's US subsidiaries. The UKRI Innovation loan has a quarterly liquidity covenant until April 2024 with which the Group has been in full compliance through the reporting period. There are no financial covenants extant in respect of the UK bounceback loan of £0.03 million (FY22: £0.04 million) or the Group's US borrowings.

Post Balance Sheet Event

On 3 October 2023, the Company raised £5.1 million (gross) through a placing, retail offer and subscription of 1,012,609,000 new Ordinary Shares at 0.5 pence per share. The funds raised will be principally used to fund the general working capital needs of the business. As part of this process, the Company's share capital was restructured to in effect reduce the nominal value of each ordinary share from 2.0 pence to 0.1 pence.

Save for 576 shares issued following an exercise of warrants, all other warrants issued following the fundraise on 13 September 2022 of 138,758,392 lapsed on 14 September 2023 and are no longer exercisable.

Key Performance indicators

The Group has historically reported financial metrics of revenues, gross profit margin, adjusted operating loss, cash position and other metrics as its key performance indicators and these are set out below.

	FY23 (£m)	*FY22 (£m)*
Revenue	4.30	2.90
Gross profit margin	56%	60%
Adjusted operating loss	(3.49)	(3.33)
Cash position	1.38	1.19
Borrowings	(1.37)	(1.35)

During the year under review, management also used a sales tracker, a non-financial performance metric to monitor the revenue pipeline of the business. The sales tracker monitors the number of accredited leads and assigns a probability of revenue realisation to those leads.

[1] Based on calculations submitted to HMRC for the R&D tax credit.

Strategic Report (continued)

SECTION 172(1) STATEMENT

The Directors acknowledge their duty under s.172 of the Companies Act 2006 ("s.172") and consider that they have both individually and together acted in the way that, in good faith, would be most likely to promote the success of the Company for the benefit of its members as a whole, having regard to the matters set out in s.172.

The Directors have set out the ways in which they look to fulfil their duties in the year at section 3 of the Chair's Corporate Governance Statement on page 13 to 14.

PRINCIPAL RISKS AND UNCERTAINTIES

The Board considers that the principal risks and uncertainties facing the Group may be summarised as follows:

Health and Safety

Many of the Group's products are advanced materials that are nano in size and, although there is little actual evidence of any health risks associated with the handling of the Group's products, there is a theoretical risk that the Group's products could be a danger to health if an individual is exposed to and/or inhales/ingests some of the Group's products. The Group takes health and safety very seriously and manages the potential health and safety risk by regular staff training, well maintained facilities and restricting activities to only certain qualified individuals. The UK facilities are ISO 9001 and ISO 14001 accredited and the Thailand facility has ISO 9001 accreditation. A detailed health and safety report is provided to the Board each month and is a standing agenda item at scheduled Board meetings.

Timely Adoption of the Group's Products

While the Group makes every effort to establish realistic timelines for customer engagement, testing and purchasing of Haydale's products, there are often unforeseen delays (by both parties) in forecasting the commencement of sales. There may be regulatory hurdles to overcome and end-customer risk aversion in accepting a new nanomaterial enhanced product or other competitive considerations. The focus on commercial product sales remains an absolute priority, notwithstanding that the timing and adoption of Haydale's newly developed product lines remains difficult to predict.

Intellectual Property Risk

The Group's success will depend in part on its ability to continue to innovate to keep itself ahead of the competition, especially in and around plasma functionalisation, and maintain adequate protection of its resulting IP portfolio, covering its manufacturing process, additional processes, products and applications. The IP on which the Group's business is based is a combination of granted patents, patent applications and confidential know-how.

Internal procedures and controls are in place to capture and exploit all generated IP as well as to protect, limit and control disclosure to third parties and partners. The Group aims to mitigate any risk that any of the Group's patents will not be held valid if challenged, or that third parties will claim rights in, or ownership of, the patents and other proprietary rights held by the Group through general vigilance, regular international IP searches as well as monitoring activities and regulations for developments in copyright/intellectual property law and enforcement. The Group retains third party professional experts to advise and assist on all matters relating to IP.

Information and Communications Technology ("ICT") Risk

The inability to access data for a period of time either due to systems failures or the unauthorised intervention of malicious parties may severely impact the Group's ability to conduct its day-to-day business, lead to the loss of sensitive information or result in loss of funds in a ransomware attack.

The Group aims to mitigate these threats by maintaining a third-party ICT support agreement with a respected contractor, ensuring industry standard cyber security procedures are followed, setting out clear internal procedures for communicating potential ICT breaches and by providing adequate staff training on the cyber security risk that all users face. In the event that these procedures are inadequate the Group maintains a business continuity plan with our service provider that covers longer term denial of access.

Dependence on Key Personnel

The Group's business, development and prospects are dependent upon the continued services and performance of its Directors and other key executives. The experience of the Group's personnel helps provide the Group with a competitive advantage. The Directors believe that the loss of services of any existing key executives, for any reason, or failure to attract and retain necessary additional personnel, could adversely impact on the business, development, financial condition, results of operations and prospects of the Group. The Group aims to mitigate this risk by providing well-structured and competitive reward and benefit packages that allow it to attract and retain key employees.

Financing Risk

Until such time as the Group is profitable and cash flow generative, it will periodically need to raise additional funding to cover its ongoing working capital needs. The Group may be unable to access additional debt or equity capital or to raise funds on acceptable terms. In the event that the resources available to the Group are insufficient then this could have a materially adverse impact on the implementation of the Group's strategy, operations and financial status. The Group mitigates this risk by active engagement with its major shareholders, advisers and bankers.

By order of the Board

David Banks
Chair
25 October 2023

Board of Directors

The Haydale board consists of experienced commercial directors from a range of industries that include engineering, retail, finance and accounting, and technology. Brief biographies of each of the directors are set out below.

David Banks,
Non-Executive Chair

David Banks started in stockbroking in Birmingham in 1979 with Harris, Allday, Lea and Brooks before moving to London and becoming an Institutional Salesman at Panmure Gordon where he was acclaimed in the Automotive, Engineering, Aerospace and Motor Distributors sectors. He subsequently became a Corporate Broker advising many companies on their Corporate Structure, Strategy, Messaging and Presentations. He also raised the Capital for many of these Companies both at IPO and in Secondary fund raises. David joined Haydale as Non-executive Chair in July 2017.

David has significant city experience and has advised companies in the Automotive, Aerospace and Motor Distribution sectors on their corporate structure, strategy messaging and presentation. He has experience of raising capital for growing companies and is responsible for liaison with our major shareholders.

Keith Broadbent,
Chief Executive Officer

Prior to joining Haydale, Keith held a number of senior operational and commercial positions which covered aerospace, defence, automotive, marine and medical sectors. His experience includes significant multi-site responsibilities in both the UK and internationally and he has worked for Princess Yachts International, Sunseeker, TT Electronics and most recently Ultra Electronics. Keith has demonstrated a strong track record in the delivery of budgets, high level customer service and enhancing shareholder value. Keith joined Haydale in July 2017 and was appointed the Group's Chief Executive Officer in March 2019.

Keith holds an MBA from Derby University and this, coupled with his customer contact and manufacturing experience across a number of different sectors encompassing design, supply chain, manufacture, commercial and financial elements of business, are a key skill requirement in the ongoing journey moving Haydale into a market led commercial scale manufacturing organisation putting people at the centre of the enterprise strategy.

Patrick Carter,
Chief Financial Officer

Prior to joining the Company, Patrick has had over 20 years' experience as CFO across a range of business sectors with a number of AIM listed and private equity backed international businesses undergoing change. Before that he worked for Deloitte. Patrick joined Haydale as CFO in June 2023. He is a qualified Chartered Accountant and Barrister and brings significant commercial experience to the role.

Graham Eves,
Non-Executive Director

Graham Eves joined GKN plc in 1967 where he spent 13 years operating across multiple overseas jurisdictions including, for the last 5 years, setting up and running a special operation for GKN plc's head office in Switzerland. He returned to the UK in 1980 to work in venture capital and establish his own international business consultancy. His main activities covered advising a range of German, North American and Japanese automotive component/technology suppliers and he co-founded and was chair of an automotive technology company, Mechadyne (now part of Rheinmetall Automotiv AG). Graham was a non-executive director of AB Dynamics plc from flotation until September 2020. He was on the AIM advisory committee of the London Stock Exchange ("LSE") for 6 years.

Graham is a Non-Executive Director of iVapps (UK) Limited. He has an extensive range of international business contacts and years of experience of negotiating technology licence deals. He is particularly interested in the challenges of growing and structuring small high technology companies so that they can find their places on the world stage.

Theresa Wallis,
Non-Executive Director

Theresa Wallis worked most of her executive career in financial services, moving into technology commercialisation in 2001. She was with the LSE for 13 years, where from 1995 to 2001 she was COO of AIM, having managed the market's development and launch. From 2001 to 2006 she was a principal executive of ANGLE plc, a venture management and consulting business focusing on the commercialisation of technology. Since 2001 she has held a number of non-executive directorships, including LiDCO Group plc where she was non-executive chair, Veriton Pharma Ltd and the Quoted Companies Alliance. Prior to joining the LSE, she worked for Hambros Bank and then Canadian Imperial Bank of Commerce in London.

Theresa has a background in business development and technology commercialisation alongside her experience of working with AIM and other companies at a similar stage of development. She brings a range of corporate governance, business development, financial and commercial experience to the Company and holds a Diploma in Company Direction from the Institute of Directors. Theresa joined the Board of Haydale in June 2020.

Directors' Report

The directors present their report and the audited financial statements for Haydale Graphene Industries Plc (the "Company"), a public company incorporated and registered in England and Wales with company number 07228939, and its subsidiaries (together the "Group") for the year ended 30 June 2023.

There are a number of items required to be included in the Directors' Report which are covered elsewhere in the annual report. Details of directors' remuneration and share options are given in the Directors' Remuneration Report, details of the use of financial instruments and financial risk management objectives and policies are given in note 22 of the financial statements and the Strategic Report on pages 3 to 8 covers the following matters:

- Review of the Business and Future Developments;
- Post Balance Sheet Events;
- Key Performance Indicators; and
- Research and Development.

Statement of Directors' Responsibilities in respect of the Annual Report and the Financial Statements

The directors are responsible for preparing the strategic report, the annual report and the financial statements in accordance with applicable law and regulations.

Company law requires the directors to prepare financial statements for each financial year. Under that law, the directors have elected to prepare the Group financial statements in accordance with International Financial Reporting Standards as adopted by the UK (IFRSs) in conformity with the requirements of the Companies Act 2006 and the Company financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law). Under company law, the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and Company and of the profit or loss for the Group for that period. The directors are also required to prepare financial statements in accordance with the rules of the London Stock Exchange for companies trading securities on the AIM market.

In preparing these financial statements, the directors are required to:

– Select suitable accounting policies and then apply them consistently;

– Make judgements and accounting estimates that are reasonable, relevant, reliable and prudent;

– State whether they have been prepared in accordance with IFRSs in conformity with the requirements of the Companies Act 2006;

– For the Parent Company financial statements, state whether applicable UK accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements; and

– Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Group and the Company will continue in business.

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the financial statements comply with the requirements of the Companies Act 2006. They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The directors are responsible for the maintenance and integrity of the Group's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Dividends

The directors do not propose the payment of a dividend (2022: Nil).

Directors

Except as stated below, the following directors have held office since 1 July 2022 and up to the date of signing the financial statements:

David Banks
Keith Broadbent
Mark Chapman (resigned 5 June 2023)
Patrick Carter (appointed 5 June 2023)
Graham Eves
Theresa Wallis
Ryan Howard (appointed 1 November 2022 resigned 1 August 2023)

Directors' Interests in Ordinary Shares

The directors had the following interests in ordinary shares of the Company at the 30 June 2023 and at the date of this report:

Director	*Number of Shares at 30 June 2023*	*% of Share Capital*	*Number of Shares at 25 October 2023*	*% of Share Capital*
David Banks	5,000,000	0.77	8,000,000	0.44
Keith Broadbent	1,952,381	0.30	4,952,381	0.28
Patrick Carter	–	–	1,000,000	0.06
Graham Eves	142,857	0.02	142,857	0.01
Theresa Wallis	1,011,904	0.16	2,011,904	0.11

Directors' and Officers' Liability Insurance

Qualifying indemnity insurance cover has been arranged in respect of the personal liabilities which may be incurred by directors and officers of the Group during the course of their service with the Group. This insurance has been in place during the year and on the date of this report.

Foreign Currency, Interest Rate, Credit and Liquidity Risk

The directors do not consider any of these potential risks to pose a significant risk to the Group or its operations over the coming year. See note 22, Financial Instruments, for further details.

Going Concern

The directors have prepared and reviewed detailed financial forecasts of the Group and, in particular, considered the cash flow requirements for the period from the date of approval of these financial statements to the end of June 2025. These forecasts sit within the Group's latest estimate and within the longer-term financial plan, both of which have been updated on a regular basis. The directors are also mindful of the impact that the other risks and uncertainties set out on page 8 may have on these estimates and in particular the speed of adoption of new technology.

As part of this review the directors have considered scenarios based on revenue, cost and funding sensitivities.

Revenue

Various sensitivities have been applied to forecasted revenue including a stress test scenario which reduces forecasted revenue by circa 14% in FY24 and 9% in FY25, to the point where the Group would breach its available cash resources in November 2024. With respect to this 'stress test' the Group has circa 28 per cent of that sensitised revenue within forward orders, contractual or some other form of customer assurance which have a high degree of certainty.

Cost Mitigation

The directors have included some limited assumptions regarding cost savings that might be achievable if the forecast fails to meet the forecasted or sensitised estimates, and these have been phased in gradually over the 12-month period to October 2024.

Customer Solvency and Contractual Commitments

As part of this review the directors have assessed the solvency of key customers and their ability to deliver on their contractual or other commitments on the basis of publicly available information and have taken account of these assessments in their forecasts. Future revenue related to certain contractual commitments have been heavily discounted given the lack of available data and trading history with the Group.

Directors' Report (continued)

Summary
Therefore, after due consideration of the forecasts prepared, the sensitivities applied and the Group's current cash resources after the equity fund raise in October 2023 and the terms of its debt facilities, the directors consider that the Company and the Group have adequate financial resources to continue in operational existence for the foreseeable future (being a period of at least 12 months from the date of this report), and for this reason the financial statements have been prepared on the going concern basis.

Whilst the directors believe that the going concern basis is appropriate at the date of this report, the Board is mindful that the net proceeds of the fund raise will be insufficient to fund the cash requirements of the Group through to a position where it is able to fund itself from its own cashflow. The Board continues to pursue the possibility of securing additional debt facilities to provide additional liquidity. In the event that such debt facilities are not available or are unavailable in sufficient quantum it is very likely that the Group would need to raise additional equity funding in the future and, whilst the directors believe that future equity funding would be available, there can be no guarantee that sufficient funds could be raised at a later date. Any additional equity financing may be dilutive to Shareholders.

Disclosure of information to auditors
All of the current directors have taken all the steps that they ought to have taken to make themselves aware of any information needed by the Company's auditors for the purposes of their audit and to establish that the auditors are aware of that information. The directors are not aware of any relevant audit information of which the auditors are unaware.

Independent auditors
The auditors have expressed their willingness to continue in office and a resolution concerning their reappointment will be proposed at the annual general meeting.

Statement by the Directors
The directors consider the annual report and accounts, taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position and performance, business model and strategy.

By order of the Board

David Banks
Chair
25 October 2023

Chair's Corporate Governance Statement

Overview

As Chair of the Board of Directors of the Group, it is my responsibility to ensure that Haydale has both sound corporate governance and an effective Board. This is achieved by maintaining a corporate governance framework that includes regular meetings of the Board and its committees, with informative, relevant and timely information flow. The Board members have extensive experience of managing AIM companies, including knowledge of the AIM Rules and the Market Abuse Regulations. Haydale adopts the Quoted Companies Alliance Corporate Governance Code ("QCA Code") and this report follows its structure and explains how we have applied it. The principal methods of communicating our application of the QCA Code are this Annual Report and through our website, at www.haydale.com.

Below are the Company's explanations of how it has complied with the 10 principles of the QCA Code during the year.

QCA principles

1. Establish a strategy and business model which promotes long-term value for shareholders

The Board believes the highest medium and long-term value can be delivered to its shareholders by the adoption of the following vision statement for the Company: *To be a world leader in the revolutionary development of plasma functionalisation of advanced performance-enhancing materials and nanomaterials across all industry sectors, providing cutting-edge technological solutions to improve people's life experience.* To achieve this, the Company aims to grow organically and, if necessary, by acquisition, to extend the Group's client base and geographical penetration and use its existing expertise and global reach to generate commercial opportunities in the high growth advanced materials industry. The Group's business model, together with the principal risks and uncertainties facing the Group, are set out in the Strategic Report on pages 3 to 8 of this Annual Report. The directors intend that the strategy will deliver shareholder returns initially through capital appreciation and eventually through distributions via dividends. The Group's values underpin its approach to growth and are addressed in paragraph 8.

2. Seek to understand and meet shareholder needs and expectations

The Board is committed to maintaining good communication and having constructive dialogue with its shareholders.

The directors meet shareholders and other investors or potential investors during the year, especially following the announcement of the Annual and Interim Results. The Company also hosts broker and analyst meetings. The website provides contact details for investor relations enquiries and David Banks is the director appointed as the main point of contact for shareholder liaison.

The Company intends to have close ongoing relationships with its larger private shareholders, institutional shareholders and analysts and for them to have the opportunity to discuss issues and provide feedback at meetings with the Company. The Company receives reports from its corporate registrar and from Argus Vickers to facilitate these relationships. When possible, the whole Board attends the Company's Annual General Meeting ("AGM"), which is regarded as an opportunity to meet, listen and present to shareholders, all of whom are encouraged to attend. The Company held its 2022 AGM at its registered office at Clos Fferws, Parc Hendre, Capel Hendre, Ammanford, SA18 3BL on 29 November 2022 ("2022 AGM"). As with recent AGMs, provision was made to allow those shareholders who were unable to attend the AGM to ask questions of the directors by email as well as submit their votes in advance by proxy. The outcomes of each of the AGM votes are announced following the meeting. If there is a resolution passed at a general meeting with a significant number of votes against, as was the case at the 2022 AGM, the Board engages with the relevant shareholders, where possible, to understand the reason for the result and, where appropriate, takes suitable action.

FinnCap (now Cavendish) as the Company's broker and nominated advisor regularly briefed and kept the Company appraised of market and regulatory developments as they affect the Company and feedback from shareholders and potential investors.

3. Take into account wider stakeholder and social responsibilities and their implications for long-term success

The Board is mindful of its statutory duty under s.172 of the Companies Act and the directors have acted in a way that they considered, in good faith, to be most likely to promote the success of the Company for the benefit of its shareholders as a whole, and in doing so, had regard amongst other matters to the:

- foreseeable or likely consequences of any decision in the long term;
- interests of the Company's employees at each of its five facilities;
- need to foster the Company's business relationships with suppliers, customers and other stakeholders;
- impact of the Company's operations on the community and the environment;
- importance of the Company maintaining a reputation for high standards of business conduct; and
- the need to act fairly as between members of the Company.

Chair's Corporate Governance Statement

(continued)

In doing so, the Board recognises the Company is reliant upon the efforts of the employees of the Company and its collaboration partners, suppliers, regulators and other stakeholders whether they are identified under s.172 or not. The Board ensures that there is close oversight and contact with its key resources and relationships by various means. The following paragraphs set out how we engage with our stakeholders.

Everyone within the Group is a valued member of the team, and our aim is to help every individual achieve their full potential. We offer equal opportunities regardless of race, gender, gender identity or reassignment, age, disability, religion or sexual orientation. The challenges raised by the Covid-19 pandemic in early 2020 required the Company to adapt its procedures to comply with national and local guidance in the jurisdictions in which it operates. Health and safety of our team remains a priority, and compliant protocols are maintained at our sites. The Company is still of a size where the executive directors know all of the team and employees are aware that they are able to contact the senior leadership directly to ask questions on any topic that concerns them.

The Group has continued to invest in staff training to ensure that employees have the skills to meet their responsibilities as part of a modern international operation with specific focus on health and safety related training at, initially, the Ammanford site, which has subsequently been rolled out across the other sites as the Group prepares for higher material throughput.

The Company prepares a detailed budget annually which takes into account the Group's strategy and its available key resources including staffing, working capital, production capacity and functionalisation capabilities. In depth analysis and reviews inform the development of each business unit's budget and taken together these form the basis of the Company's annual budget. Subsequently, the ongoing review of performance against the budget facilitates an on-going dialogue on the goals, targets and aspirations of the Company and of each of the business units. This two-way communication provides each strategic business unit with the opportunity to raise issues and provide feedback to the Board via the executive members. These feedback processes help to ensure that the Company can respond to new issues and opportunities that arise to further the success of the Group.

The Company has close on-going relationships with a broad range of its stakeholders and, as set out above, provides them with the opportunity to raise issues and provide feedback to the Company. The Company seeks regular feedback from its stakeholders which include employees, industry participants, such as customers, graphene producers, R&D facilities, including universities and academic institutions, whilst simultaneously embracing influential movers within the advanced materials industry who may positively influence perception of the Company. This feedback is generally but not exclusively received through formal performance reviews (employees) and meetings held in the ordinary course of business with other stakeholders such as customers, suppliers and partners. Feedback received is reviewed and considered with any changes required being actioned appropriately. The Company communicates with its stakeholders and takes account of their feedback in order to develop products that meet the needs of their customers and that can be supplied reliably, cost effectively and in line with applicable standards.

4. Embed effective risk management, considering both opportunities and threats, throughout the organisation

The Board oversees and reviews the Group's risk management and internal control mechanisms.

The risk register was reviewed in detail at regular intervals during the year by the executive directors in conjunction with other senior managers as well as the Audit Committee and the full Board. The risk register sets out the assessed risks and the key actions and processes to mitigate those risks and the individual or group responsible for ensuring that these are performed.

The review process involves the review and identification of risks, assessment to determine the relative likelihood of them impacting the business and the potential severity of the impact and determination of what needs to be done to minimise their likelihood and/or mitigate their impact. The risk register sets out and categorises these risks and outlines the controls and any further actions required.

The risk register was considered by the Audit Committee at its meeting in February 2023. The principal risks and uncertainties to the business and steps to mitigate them are set out in the Strategic Report in this Annual Report on page 8.

The Board has established appropriate reporting and control mechanisms. The system of internal control is structured around the risks set out in the risk register and is designed to address those risks that the Board considers to be material, to safeguard assets against unauthorised use or disposition and to maintain proper accounting records which produce reliable financial and management information.

Further key features of the Company's internal control system include the following:

- Close management of the business by the executive directors;
- Monthly management accounts information is prepared and reviewed by the Board, including variances against the annual budget, latest expectations, market guidance issued by the Company's brokers and prior year;
- There is a schedule of matters reserved for decision by the Board;
- A clearly defined organisational structure is in place, with clearly delegated authorities, reporting lines and roles;
- Defined levels/limits for authorisation of expenditure and placing of orders and clearly set out authorisation procedures; and
- Quality management systems are implemented and regularly audited by an independent third party. The UK operations are ISO 9001:2015 and ISO 14001:2015 certified and the Thailand facility is ISO 14001:2015

5. Maintain the Board as a well-functioning, balanced team led by the Chair

The Board comprises two executive directors and three non-executive directors as follows:

Executives

- Chief Executive Officer: Keith Broadbent;
- Chief Financial Officer: Patrick Carter;

Non-executives

- Non-executive Chair: David Banks;
- Non-executive: Graham Eves; and
- Non-executive: Theresa Wallis.

Biographical details of the Directors can be found here at www.haydale.com or in this Annual Report on page 9.

All the non-executive directors are expected to dedicate at least 24 days per annum to the Company. Mr Broadbent and Mr Carter are full time. Any director who was not appointed or re-appointed at one of the preceding two annual general meetings shall retire from office and be subject to re-election at the next AGM.

Graham Eves, a non-executive director of the Company, has served as an independent non-executive director for more than nine years, having been appointed in January 2014. The Board has decided that in line with best practice corporate governance, it would annually consider Mr Eves' ongoing independence as a non-executive director and that he would submit himself for annual re-election at the Company's Annual General Meeting. As at the date of this report, the Board considers Mr Eves to be independent.

Board meetings are open and constructive, with every director participating fully. Senior management may also be invited to meet with the Board, providing further insights into the Company's activities and performance. The full Board met 28 times in the year. Regular board meetings are scheduled in advance, but the Board also meets as and when required. In order to be efficient, the directors meet formally and informally in person, by video conference or telephone. Board papers are prepared by the relevant personnel and usually circulated to the Board at least 48 hours before meetings, allowing time for consideration and necessary clarifications before the meetings. Directors are free to seek any further information they consider necessary.

The non-executive directors meet without the presence of the executive directors during the year, and also maintain ongoing communications with executives between Board meetings.

Terms of reference for each of the Board's Committees are published on the Group's website. The Company believes that the Committees have the necessary skills and knowledge to discharge their duties effectively. Summaries of the key activities of each of the Board's Committees during the year under review are set out on page 18 to 19 of this Annual Report.

Chair's Corporate Governance Statement
(continued)

During the year ended 30 June 2023, the Company held 28 board meetings (FY22: 20), with each member's attendance as follows:

	Number of board meetings attended			
Director	*Scheduled FY23*	*Ad hoc FY23*	*Total FY23*	*Total FY22*
David Banks	7/7	21/21	28/28	20/20
Keith Broadbent	7/7	21/21	28/28	20/20
Graham Eves	7/7	20/21	27/28	19/20
Mark Chapman	6/6	19/19	25/25	19/20
Theresa Wallis	7/7	21/21	28/28	19/20
Ryan Howard	1/4	5/9	6/13	–
Patrick Carter	1/1	2/2	3/3	–

Attendance at the Company's audit, remuneration and nomination committee meetings during FY23 and the prior year were as follows:

	Number of committee meetings attended					
Committee member	*Audit*		*Remuneration*		*Nomination*	
	FY23	FY22	FY23	FY22	FY23	FY22
David Banks	4/4	5/5	9/9	3/3	5/5	–
Graham Eves	4/4	5/5	9/9	3/3	5/5	–
Theresa Wallis	4/4	5/5	9/9	3/3	5/5	–

6. Ensure that between them the directors have the necessary up-to-date experience, skills and capabilities

The Company believes that the directors have an appropriate breadth and depth of skills, knowledge and experience to fulfil their roles, reflecting a broad range of personal, commercial and professional skills across geographies and relevant sectors and experience of public markets. Details of the directors' experience and areas of expertise and the relevant skills each director brings to the Board are outlined on page 9 of this Annual Report and on the Company's website.

In addition to their general board responsibilities, non-executive directors are encouraged to be involved in site visits and meetings, in line with their individual areas of expertise.

The Company has employed the services of ONE Advisory Limited to provide company secretarial and MAR compliance services. Matt Wood, a director of ONE Advisory Limited, is Haydale's Company Secretary.

If required, the directors are entitled to take independent professional advice at the Company's expense in accordance with the relevant Board agreed procedure.

In addition, the Company is a member of the QCA and as such all the directors have access to briefings issued by the QCA and also access briefings, updates and events offered by other professional advisory firms.

7. Evaluate board performance based on clear and relevant objectives, seeking continuous improvement

The Chair performs a continuous assessment of the individual and collective performance of the Board in an informal and collegiate way through dialogue and meetings. As previously reported, during the prior year (FY22), the Chair led a more formal evaluation exercise through a structured questionnaire that was completed by the non-executive directors. Since then, the Chair has assessed the questionnaire feedback, held discussions with each of the directors and provided a report of his findings to the Board, concluding the formal process. This was the Company's first Board evaluation. Recommendations included enhancements to the reports provided to Board meetings. The Board's intention is for a further review to be performed in the current year.

Making recommendations relating to board succession planning is one of the responsibilities of the Nomination Committee as set out with regard to Principle 9 on page 19. Below the main Board, the CEO seeks board approval for his recommendations on changes to the directors of subsidiary companies.

8. Promote a corporate culture that is based on ethical values and behaviours

The Board recognises that its decisions regarding strategy and risk will impact the corporate culture of the Company as a whole and that this will impact the performance of the Company. The Board is very aware that the tone and culture set by the Board will greatly impact all aspects of the Company as a whole and the way that employees behave.

The Company is working towards the goal of a "one team" shared culture that supports an open and respectful dialogue with employees, clients and other stakeholders, and is underpinned by sound ethical values and behaviours. These values are reinforced at the regular team and site performance reviews and also at inter-site meetings which, amongst other areas, cover sales, marketing, technical and health and safety matters.

The Company has implemented a quality system based on the rigorous standards of BS EN ISO 9001 and 14001 and adherence to this quality system is mandatory throughout the Company. All employees are encouraged to take responsibility for the quality of their own workmanship and to work with their colleagues towards maintaining our ISO standards.

To ensure we meet the high standards that we set ourselves employees are normally formally appraised each year and clear personal objectives are set out within personal development plans. Individual training needs are defined by these reviews and this training is combined with wider department and group training initiatives.

The Board attaches great importance to the health and safety of its employees and stakeholders who handle or use the Group's products. Health and safety is a standing item on the Board's agenda, with reports reviewed by the Board at each scheduled board meeting. The Company's Health and Safety policy and the respective site Health and Safety plans are enforced rigorously.

9. Maintain governance structures and processes that are fit for purpose and support good decision-making by the board

The Board is committed to, and ultimately responsible for, high standards of corporate governance, and has chosen to adopt the QCA Corporate Governance Code. We review our corporate governance arrangements regularly and expect to evolve these over time, in line with the Company's growth. The Board delegates responsibilities to committees and individuals as it sees fit, with the Chair being responsible for the effectiveness of the Board, and the executive directors being accountable for the management of the Company's business and primary contact with stakeholders.

The Chair is responsible for the leadership of the Board and ensuring its effectiveness in all aspects of its role. He is also responsible for creating the right Board dynamic and for ensuring that all important matters receive adequate time and attention at Board meetings. He is also the director appointed as the main point of contact for shareholder liaison. The CEO is responsible for the day-to-day running of the business as well as developing corporate strategy while the non-executive directors are tasked with, for example, constructively challenging the decisions and recommendations of executive management and satisfying themselves that the systems of business risk management and internal financial controls are appropriate.

Chair’s Corporate Governance Statement

(continued)

The Board has adopted appropriate delegations of authority which sets out matters which are reserved to the Board as summarised below:

- The Group’s strategy and vision;
- Determining management’s performance;
- Board membership and membership of subsidiary boards;
- Approval of major capital expenditure;
- Financial reporting, risk management and internal controls;
- Contracts, including potential acquisitions or investments in new projects or products;
- Corporate governance;
- Approval of annual budgets;
- Approval of annual and interim reports;
- Approval of changes in equity or debt funding; and
- Dividend recommendations and policy.

The Board delegates certain duties and, where applicable, authority, to the following three board Committees to assist in meeting its business objectives whilst ensuring a sound system of internal control and risk management. The Committees meet independently of Board meetings.

Audit Committee

The Audit Committee has three members, Theresa Wallis (Chair), Graham Eves and David Banks. The CFO, CEO and external auditors normally attend meetings by invitation. The Audit Committee is responsible for assisting the Board in fulfilling its financial and risk responsibilities. The Audit Committee oversees financial reporting, risk management and internal control, advises the Board on the appointment and removal of the external auditor and discusses the nature, scope and results of the audit with the auditors. The Audit Committee reviews the extent of non-audit services provided by the auditors and reviews with them their independence and objectivity. The Audit Committee plans to meet not less than three times in each financial year.

During the year the Committee met four times. The Committee met in September and October 2022 to consider the draft report and accounts for the year ended 30 June 2022, including the key judgements and estimates including revenue recognition, going concern, carrying value of intangible assets, and valuation of the defined benefit pension scheme as well as the independence of the auditors and their fees, which it subsequently recommended to the Board for approval. The Committee reviewed the feedback from the auditors (Crowe UK LLP) as set out in their draft Audit Status Update to the Board at the first meeting.

The third meeting of the Committee was held in February 2023 to consider the draft interim results and receive updates on the risk register and the Group’s internal control mechanisms.

The fourth meeting of the Committee was held in June 2023. The meeting considered the audit plan for the Group for the FY23 audit and the terms of engagement between the Company and Crowe UK LLP.

During two of these meetings, a discussion took place between the Audit Committee and the auditors without management being present.

Remuneration Committee

The Remuneration Committee has three members, David Banks (Chair), Graham Eves and Theresa Wallis. The members are all non-executive Directors. Other members of the Board may attend the Committee's meetings at the request of the Committee Chair.

The remit of the Committee is primarily to ensure that the executive directors are provided with appropriate remuneration packages. The Committee reviews the performance of the executive directors and considers matters relating to their terms of employment and remuneration, including short term bonus and long-term incentives. The Remuneration Committee considers the granting of share options pursuant to the Company's share option scheme. The Remuneration Committee plans to meet at least twice a year and will meet on other occasions as and when required. The Committee met nine times during the year. The Directors' Remuneration Report is on pages 20 to 21.

Nomination Committee

The Nomination Committee has responsibility for evaluating the structure, size and composition of the Board in order to ensure a suitable balance of experience, knowledge, skills and independence, as well as for recommending to the Board the appointment of executive and non-executive directors. The Committees' Terms of Reference may be found on the Company's website.

The Nomination Committee has three members, Graham Eves (Chair), David Banks and Theresa Wallis. The Committee met five times during the year reflecting the requirement to appoint a new CFO following the decision of the previous incumbent to step down.

As with many small companies, due to financial constraints and limited human resources, internal opportunities for succession to Board director roles are circumscribed.

10. Communicate how the company is governed and is performing by maintaining a dialogue with shareholders and other relevant stakeholders

As stated in relation to Principle 2, the Board is committed to maintaining effective communication and having constructive dialogue with its shareholders. We communicate through our Interim and Annual Reports along with Regulatory News Service announcements. We also use the Company's website for both financial and general news relevant to shareholders. The Company's AGM results are available to view on the Company's website and all resolutions tabled at the Company's 2022 AGM were passed.

The Company keeps in mind the proportions of direct, nominee and institutional shareholders, and distributes communications accordingly.

The latest corporate documents (including Annual Reports and Notices of AGMs) can be found on the Company's website.

Investors also have access to the latest information about the Group which is set out on the Company's website at www.haydale.com. The Company uses electronic communications with shareholders, where possible, to maximise efficiency.

A summary of the work carried out by the Audit, Remuneration and Nomination committees during the year is set out in section 9 above.

By order of the Board on 25 October 2023

David Banks
Chair

Directors' Remuneration Report

REMUNERATION COMMITTEE

The Company's remuneration policy for executive directors is the responsibility of the Remuneration Committee. The terms of reference of the Remuneration Committee are outlined below and, in the Chair's Corporate Governance Statement on page 19. The members of the Remuneration Committee during the year under review were David Banks (Chair), Graham Eves and Theresa Wallis. The provisions of the 2006 Companies Act in respect of the Directors' Remuneration Report have been applied to this report.

Under the terms of reference of the Remuneration Committee, the remuneration of the Company's non-executive directors (including the chair of the Board, if a non-executive) is a matter for the Board.

Directors' remuneration for the year to 30 June 2023 is set out on page 21.

The Remuneration Committee terms of reference require it to determine remuneration packages needed to attract, retain and motivate executives of the quality required (but to avoid paying more than is necessary for this purpose) and to ensure that performance related elements of remuneration are designed to support alignment with the long-term interests of shareholders and to give such executives incentives to perform at the highest levels. The Committee met nine times during the year to discuss these matters.

Equity Based Incentive Schemes

The Remuneration Committee believes that equity-based incentive schemes provide a strong incentive for retaining and attracting high calibre individuals.

On 13 January 2020, the Company adopted an EMI share option scheme ("EMI Scheme") and on 8 July 2020 the Company adopted a Stock Appreciation Rights Plan ("SAR Scheme") for the Group's wholly owned US subsidiary, Haydale Technologies Inc. The EMI Scheme and the SAR Scheme are designed to align the interests of the Directors and other employees with those of shareholders, as set out below.

On 14 November 2022, under the EMI Scheme, the Company granted a total of 13,200,000 options ("EMI Options") to the Company's executive directors and a further 6,500,000 EMI Options were granted to directors of UK subsidiaries and 1,500,000 SAR Options granted to directors of the US subsidiaries. The EMI Options granted in November 2022 have an exercise price of 2.25p and their vesting is subject to, amongst other conditions, certain performance criteria linked to the share price of the Company being met in the period to November 2025.

As at 30 June 2023, the Company had granted a total of 26,400,000 EMI Options to the Company's executive directors and 13,000,000 EMI Options and 4,500,000 options under the SAR Scheme ("SAR Options") to the directors of subsidiaries of the Company. The EMI Options and the SAR Options (together the "Options") granted since January 2020 have an exercise price of between 2.25p to 6.25p per Ordinary Share and can only be exercised between the third and tenth anniversary of Grant ("Exercise Period"). Full details of the principal conditions and performance requirements of the grants made can be found on the Company's website at www.haydale.com.

The proportion of the Options granted that are capable of vesting are dependent on certain performance conditions being met, with such performance being directly linked to the Company's share price. Should the Company's closing mid-market share price not meet the performance conditions set then a specified percent of the grant shall lapse. As at 30 June 2023, 7,600,000 Options granted to the executive directors of the Company and 3,500,000 EMI Options granted to the directors of subsidiaries of the Company have met the performance thresholds specified and become exercisable as from 13 January 2023. At the year ended 30 June 2023, 1,800,000 SAR Options granted to a director of a subsidiary of the Company have met the performance thresholds specified and become exercisable as from 8 July 2023.

The Remuneration Committee and the Board as a whole are expected to grant equity-based incentives during the current financial year to continue to attract, incentivise and retain its employees.

DIRECTORS' INTERESTS IN SHARE OPTIONS

The interests of directors of the Company in options over ordinary shares during the year were as follows:

Director	*Number EMI Options*	*Date of Grant*	*First Exercise Date*	*Exercise Price*	*Expiry Date*
Keith Broadbent	12,000,000	13 January 2020	13 January 2023	2.25p	12 January 2030
	1,200,000	20 January 2022	20 January 2025	6.25p	19 January 2032
	13,200,000	14 November 2022	14 November 2025	2.25p	13 November 2032

No options were exercised by the directors during the year under review.

The mid-market closing price of the Company's ordinary shares at 30 June 2023 was 1.05p (2022: 5.20p). During the year to 30 June 2023, the mid-market closing price ranged from 0.98p to 5.60p (2022: 3.81p to 9.40p).

DIRECTORS' CONTRACTS

The executive directors have service contracts with the period of notice being six months. The non-executive directors have a letter of engagement which provides for a one month notice period.

DIRECTORS' REMUNERATION

The aggregate remuneration received by directors who served during the years ended 30 June 2023 and 30 June 2022 was as follows:

				Year Ended June 2023			*Year Ended June 2022*		
£'000	*Salary/Fee*	*Bonus*	*Benefits*	*Total exc. pension*	*Pension*	*Total inc. pension*	*Total exc. pension*	*Pension*	*Total inc. pension*
Executive Directors									
K Broadbent	209	44	16	269	24	293	273	24	297
M Chapman	115	–	12	127	14	141	142	12	154
P Carter	11	–	1	12	1	13	–	–	–
Non-Executive Directors									
D Banks	65	–	–	65	–	65	51	–	51
G Eves	30	–	–	30	–	30	28	–	28
T Wallis	30	–	–	30	–	30	28	–	28
R Howard	20	–	–	20	–	20	–	–	–
	480	**44**	**29**	**553**	**39**	**592**	**491**	**36**	**527**

By order of the Board

David Banks
Chair
25 October 2023

Independent Auditor's Report to the Members of Haydale Graphene Industries Plc

Opinion

We have audited the financial statements of Haydale Graphene Industries plc (the "Parent Company") and its subsidiaries (the "Group") for the year ended 30 June 2023, which comprise:

- the consolidated statement of comprehensive income for the year ended 30 June 2023;
- the consolidated and parent company statements of financial position as at 30 June 2023;
- the consolidated statement of cash flows for the year then ended;
- the consolidated and parent company statements of changes in equity for the year then ended; and
- the notes to the financial statements, including significant accounting policies.

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law and UK-adopted international accounting standards. The financial reporting framework that has been applied in the preparation of the Parent Company financial statements is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 101 Reduced Disclosure Framework (United Kingdom Generally Accepted Accounting Practice).

In our opinion:

- the financial statements give a true and fair view of the state of the Group's and of the Parent Company's affairs as at 30 June 2023 and of the Group's loss for the year then ended;
- the Group financial statements have been properly prepared in accordance with UK-adopted international accounting standards;
- the Parent Company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the Group and the Parent Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard as applied to listed entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

In auditing the financial statements, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate. Our evaluation of the directors' assessment of the Group's and Parent Company's ability to continue to adopt the going concern basis of accounting included assessing the reasonableness of underlying assumptions included in the forecasts, obtaining details of the cash raised post year end from the share issue, evidence of the sales pipeline, and understanding the directors' assessment of potential measures that could be taken to conserve cash should this be required.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the Group's and Parent Company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

Our responsibilities and the responsibilities of the directors with respect to going concern are described in the relevant sections of this report. We considered going concern to be a key audit matter.

Overview of our audit approach

Materiality

In planning and performing our audit we applied the concept of materiality. An item is considered material if it could reasonably be expected to change the economic decisions of a user of the financial statements. We used the concept of materiality to both focus our testing and to evaluate the impact of misstatements identified.

Based on our professional judgement, we determined overall materiality for the Group financial statements as a whole to be £300,000 (2022: £240,000), based on approximately 5% of the Group's loss before tax. Materiality for the Parent Company financial statements as a whole was set at £190,000 (2022: £170,000) based on 1.5% of the Parent Company's total assets.

We use a different level of materiality ('performance materiality') to determine the extent of our testing for the audit of the financial statements. Performance materiality is set based on the audit materiality as adjusted for the judgements made as to the entity risk and our evaluation of the specific risk of each audit area having regard to the internal control environment. This is set at £210,000 (2022: £168,000) for the group and £133,000 (2022: £119,000) for the parent.

Where considered appropriate performance materiality may be reduced to a lower level, such as, for related party transactions and directors' remuneration.

We agreed with the Audit Committee to report to it all identified errors in excess of £15,000 (2022: £12,000). Errors below that threshold would also be reported to it if, in our opinion as auditor, disclosure was required on qualitative grounds.

Overview of the scope of our audit

Full scope audit were performed for Haydale Graphene Industries Plc, Haydale Ltd, Haydale Composite Solutions Limited and Haydale Ceramic Technologies LLC. Specific procedures on higher risk audit areas were performed for Haydale Technologies Thailand Ltd. The other group entities were subject to analytical review procedures.

Scope	*% coverage Revenue*	*% coverage Net Assets*	*% coverage Loss before tax*
Full scope	93	97	93
Specific procedures	4	2	5
Analytical review	3	1	2

All audit work was performed by the same team at Crowe U.K. LLP.

Key Audit Matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) that we identified. These matters included those which had the greatest effect on: the overall audit strategy, the allocation of resources in the audit; and directing the efforts of the engagement team. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Independent Auditor's Report to the Members of Haydale Graphene Industries Plc (continued)

This is not a complete list of all risks identified by our audit.

Key audit matter	*How the scope of our audit addressed the key audit matter*
Valuation of goodwill in respect of Haydale Ceramic Technologies LLC (HCT) – Group (see note 10) As at 30 June 2023, the group had goodwill balance of £1,059,000 (2022: £1,131,000). Of this amount, £1,035,000 (2022: £1,107,000) relates to the goodwill that arose from the acquisition of HCT. The directors are required to test goodwill for impairment at least annually. The process of measuring and recognising impairment of assets, including goodwill, is complex and highly judgemental. We considered the risk that the goodwill in relation to HCT was impaired given the losses incurred in the cash generating unit in the year.	We obtained the directors' impairment assessment and performed the following procedures: • Challenging the key assumptions used in the model including discount rate; • Discussion with management to understand the budgets and growth plans for the business including obtaining supporting contracts for key items where possible; • Obtaining the sales pipeline and evidence of orders received post year end to support the revenue assumption for the coming financial year; • Reviewing post year end management accounts; • Challenging management's sensitivity analysis by applying different scenarios over key assumptions in the model including discount rate, revenue growth and rate of increase applied to expenses; and • Reviewing the completeness of disclosure including that given in relation to the sensitivity analysis.
Revenue recognition – Group (see note 4) The group has various revenue streams where revenue recognition policy varies depending on the underlying contract which could result in revenue being recognised at a point in time and over time. We considered the increased risk around cut off due to the nature of the group's revenue from material sales on when the customer obtains control of the goods. As such, we consider this to be a key audit matter.	We performed the following procedures: • Assessing the design and implementation of controls over revenue recognition on each of the revenue streams; • Testing a sample of revenue items during the year to supporting documentation, including invoices, delivery notes and cash receipts; and • Testing the cut off of revenue by agreeing a sample of items around the year end to supporting evidence such as delivery notes and contractual terms, ensuring revenue is recognised in accordance with the group's policy.
Impairment of investments in subsidiaries – Parent Company (see notes 2 and 6) The parent company holds investments in its subsidiaries amounting to £1,317,000 (2022: £1,238,000). The assessment of impairment in the investments in subsidiaries involves significant judgements and estimates. We considered the risk that the investments were impaired due to the losses incurred in the year.	We considered the directors' assessment of the impairment of investments alongside our consideration of the carrying value of the associated goodwill. Our procedures are consistent with the procedures performed around goodwill impairment above and included: • Discussion with management to understand the budgets and growth plans for the business; and • Obtaining the sales pipeline and evidence of orders received post year end to support the revenue assumption for the coming financial year.

Other information

The directors are responsible for the other information contained within the annual report. The other information comprises the information included in the annual report, other than the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Opinion on other matter prescribed by the Companies Act 2006

In our opinion based on the work undertaken in the course of our audit

- the information given in the strategic report and the directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the directors' report and strategic report have been prepared in accordance with applicable legal requirements.

Matters on which we are required to report by exception

In light of the knowledge and understanding of the group and the parent company and their environment obtained in the course of the audit, we have not identified material misstatements in the strategic report or the directors' report.

We have nothing to report in respect of the following matters where the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept by the parent company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent company financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of the directors for the financial statements

As explained more fully in the directors' responsibilities statement set out on page 10, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the group's and parent company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the group or the parent company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud is detailed below:

- Understanding the principal legal and regulatory frameworks relevant to the Group, these included the requirements of the Companies Act 2006, laws relating to taxation and health and safety;
- Making enquiries of management, and other personnel, regarding their knowledge of any actual, suspected or alleged fraud;
- Performing substantive audit procedures in areas of significant audit risk, including revenue recognition;

Independent Auditor's Report to the Members of Haydale Graphene Industries Plc (continued)

- Performing specific testing on journal transaction with a focus on those journals which, in our opinion, displayed higher risk characteristics; and
- Considering accounting estimates, both individually and in aggregate, and reporting to the Audit Committee our view of the judgements made by management.

A further description of our responsibilities is available on the Financial Reporting Council's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

Use of our report

This report is made solely to the company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Matthew Stallabrass
(Senior Statutory Auditor)
for and on behalf of
Crowe U.K. LLP
Statutory Auditor
London
25 October 2023

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
For the year ended 30 June 2023

	Note	**Year ended 30 June 2023 £'000**	Year ended 30 June 2022 £'000
REVENUE	4	**4,301**	2,901
Cost of sales		**(1,911)**	(1,156)
Gross profit		**2,390**	1,745
Other operating income	5	**377**	442
Adjusted administrative expenses		**(6,260)**	(5,520)
Adjusted operating loss		**(3,493)**	(3,333)
Adjusting administrative items:			
Share based payment expense		**(589)**	(39)
Depreciation and amortisation		**(1,552)**	(1,308)
Impairment		**(531)**	(375)
		(2,672)	(1,722)
Total administrative expenses		**(8,932)**	(7,242)
LOSS FROM OPERATIONS		**(6,165)**	(5,055)
Finance costs		**(407)**	(187)
LOSS BEFORE TAXATION	6	**(6,572)**	(5,242)
Taxation	8	**407**	433
LOSS FOR THE YEAR FROM CONTINUING OPERATIONS		**(6,165)**	(4,809)
Other comprehensive income:			
Items that may be reclassified to profit or loss:			
Exchange differences on translation of foreign operations		**(341)**	374
Items that will not be reclassified to profit or loss:			
Remeasurements of defined benefit pension schemes		**702**	(109)
TOTAL COMPREHENSIVE LOSS FOR THE YEAR FROM CONTINUING OPERATIONS		**(5,804)**	(4,544)
Loss for the year attributable to:			
Owners of the parent		**(6,165)**	(4,809)
Total comprehensive loss attributable to:			
Owners of the parent		**(5,804)**	(4,544)
Loss per share attributable to owners of the Parent			
Basic (£)	9	**(0.01)**	(0.01)
Diluted (£)	9	**(0.01)**	(0.01)

The notes from pages 31 to 60 form part of these financial statements.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION
As at 30 June 2023

Company Registration No. 07228939

	Note	30 June 2023 £'000	30 June 2022 £'000
ASSETS			
Non-current assets			
Goodwill	10	**1,059**	1,131
Intangible assets	10	**1,386**	1,312
Property, plant and equipment	11	**5,915**	7,579
		8,360	10,022
Current assets			
Inventories	12	**1,733**	1,515
Trade receivables	13	**564**	667
Other receivables	14	**446**	646
Corporation tax	14	**406**	427
Cash and bank balances		**1,378**	1,186
		4,527	4,441
TOTAL ASSETS		**12,887**	14,463
LIABILITIES			
Non-current liabilities			
Bank loans	20	**(1,363)**	(1,341)
Pension Obligation	26	**(577)**	(1,356)
Other payables	19	**(1,962)**	(2,440)
		(3,902)	(5,137)
Current liabilities			
Bank loans	20	**(11)**	(11)
Trade and other payables	19	**(1,899)**	(2,199)
Deferred income	15	**(103)**	(68)
		(2,013)	(2,278)
TOTAL LIABILITIES		**(5,915)**	(7,415)
TOTAL NET ASSETS		**6,972**	7,048
EQUITY			
Capital and reserves attributable to equity holders of the parent			
Share capital	16	**15,717**	10,207
Share premium account	16	**31,912**	31,912
Share-based payment reserve		**833**	244
Foreign exchange reserve		**(353)**	(12)
Retained losses		**(41,137)**	(35,303)
TOTAL EQUITY		**6,972**	7,048

The financial statements on pages 27 to 60 were approved and authorised for issue by the Board of directors on 25 October 2023 and signed on its behalf by:

David Banks
Chair

Keith Broadbent
Chief Executive Officer

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
For the year ended 30 June 2023

	Share capital £'000	Share premium £'000	Share-based payment reserve £'000	Foreign exchange reserve £'000	Retained losses £'000	Total equity £'000
At 30 June 2021	8,505	28,820	250	(386)	(30,430)	6,759
Comprehensive loss for the year						
Loss for the year	–	–	–	–	(4,809)	(4,809)
Other comprehensive income/(loss)	–	–	–	374	(109)	265
	8,505	28,820	250	(12)	(35,348)	2,215
Contributions by and distributions to owners						
Recognition of share-based payments	–	–	39	–	–	39
Share based payment charges – lapsed options	–	–	(45)	–	45	–
Issue of ordinary share capital	1,702	3,401	–	–	–	5,103
Transaction costs in respect of share issues	–	(309)	–	–	–	(309)
At 30 June 2022	10,207	31,912	244	(12)	(35,303)	7,048
Comprehensive loss for the year						
Loss for the year	–	–	–	–	(6,165)	(6,165)
Other comprehensive income/(loss)	–	–	–	(341)	702	361
	10,207	31,912	244	(353)	(40,766)	1,244
Contributions by and distributions to owners						
Recognition of share-based payments	–	–	589	–	–	589
Issue of ordinary share capital	5,510	–	–	–	–	5,510
Share issue cost	–	–	–	–	(371)	(371)
At 30 June 2023	**15,717**	**31,912**	**833**	**(353)**	**(41,137)**	**6,972**

CONSOLIDATED STATEMENT OF CASH FLOWS
For the year ended 30 June 2023

	Note	**Year ended 30 June 2023 £'000**	Year ended 30 June 2022 £'000
Cash flow from operating activities			
Loss after taxation		**(6,165)**	(4,809)
Adjustments for:			
Amortisation and impairment of intangible assets	10	**335**	607
Depreciation and impairment of property, plant and equipment	11	**1,747**	1,076
Profit on disposal of plant and equipment and F&F		**–**	8
Share-based payment charge	17	**589**	39
Finance costs		**407**	188
Pension: employer contribution	26	**(180)**	(92)
Taxation		**(407)**	(433)
Operating cash flow before working capital changes		**(3,674)**	(3,416)
Increase in inventories		**(218)**	(187)
Decrease/(increase) in trade and other receivables		**304**	(4)
(Decrease)/increase in payables and deferred income		**(503)**	435
Cash used in operations		**(4,091)**	(3,172)
Income tax received		**427**	371
Net cash used in operating activities		**(3,664)**	(2,801)
Cash flow used in investing activities			
Purchase of plant and equipment		**(203)**	(996)
Purchase of intangible assets		**(421)**	(340)
Net cash used in investing activities		**(624)**	(1,336)
Cash flow from financing activities			
Finance costs		**(209)**	(63)
Finance costs – right of use asset		**(116)**	(125)
Payment of lease liability		**(261)**	(548)
Proceeds from issue of share capital	16	**5,510**	5,103
Share capital issues costs	16	**(371)**	(309)
New bank loans raised	29	**–**	454
Repayments of borrowings	29	**(53)**	(842)
Net cash flow from financing activities		**4,500**	3,670
Effects of exchange rates changes		**(20)**	9
Net increase/(decrease) in cash and cash equivalents		**192**	(458)
Cash and cash equivalents at beginning of the financial year		**1,186**	1,644
Cash and cash equivalents at end of the financial year		**1,378**	1,186

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
For the year ended 30 June 2023

1. Accounting policies
Basis of preparation
The Group consolidated financial statements have been prepared in accordance with International Financial Reporting Standards, International Accounting Standards and Interpretations as adopted by the UK (collectively "IFRSs") and with the requirements of the Companies Act 2006.

The Group's financial statements have been prepared under the historical cost convention except for pension obligation which is measured at the present value of future benefits that the employees earn for services provided less fair value of plan assets.

The consolidated financial statements are presented in sterling amounts.

Amounts are rounded to the nearest thousands, unless otherwise stated.

Under Section 479A of the Companies Act 2006, exemptions from an audit of the accounts for the financial year ended 30 June 2023 have been taken by Haydale Limited (04790862) and Haydale Composite Solutions Limited (02675462). As required, the Company guarantees all outstanding liabilities to which the subsidiary companies listed above are subject at the end of the financial year, until they are satisfied in full and the guarantee is enforceable against the parent undertaking by any person to whom the subsidiary companies listed above is liable in respect of those liabilities.

Basis of consolidation
The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company made up to the reporting date. The Company controls an investee if all three of the following elements are present: power over the investee, exposure to variable returns from the investee, and the ability of the investee to use its power to affect the variable returns. Control is reassessed whenever facts and circumstances indicate that there may be a change in any of these elements of control. All intra-group transactions, balances, income and expenditure are eliminated on consolidation. The consolidated financial statements have been prepared using the acquisition method of accounting.

Under the acquisition method, the results of the subsidiaries acquired or disposed of are included from the date of acquisition or up to the date of disposal. At the date of acquisition, the fair values of the subsidiaries' net assets are determined, and these values are reflected in the Consolidated Financial Information. The cost of acquisitions is measured at the aggregate of the fair values, at the date of exchange, of assets given, liabilities incurred or assumed, and equity instruments issued by the Haydale Graphene Industries Group in exchange for control of the acquisition. Any excess of the purchase consideration of the business combination over the fair value of the identifiable assets and liabilities acquired is recognised as goodwill. Goodwill, if any, is not amortised, but reviewed for impairment at least annually. If the consideration is less than the fair value of assets and liabilities acquired, the difference is recognised directly in the statement of comprehensive income. Acquisition-related costs are expensed as incurred.

Going concern
The directors have prepared and reviewed detailed financial forecasts of the Group and, in particular, considered the cash flow requirements for the period from the date of approval of these financial statements to the end of June 2025. These forecasts sit within the Group's latest estimate and within the longer-term financial plan, both of which have been updated on a regular basis. The directors are also mindful of the impact that the other risks and uncertainties set out on page 8 may have on these estimates and in particular the speed of adoption of new technology.

As part of this review the directors have considered several scenarios based on various revenue, cost and funding sensitivities.

Revenue
Various sensitivities have been applied to forecasted revenue including a stress test scenario which reduces forecasted revenue by circa 14 per cent in FY24 and 9% in FY25, to the point where the Group would breach its available cash resources in November 2024. With respect to this 'stress test' the Group has circa 28 per cent of that sensitised revenue within forward orders, contractual or some other form of customer assurance which have a high degree of certainty.

Cost Mitigation
The directors have included some limited assumptions regarding cost savings that might be achievable if the forecast fails to meet the forecasted or sensitised estimates, and these have been phased in gradually over the 12-month period to October 2024.

Customer Solvency
As part of this review the directors have assessed the solvency of key customers and their ability to deliver on their contractual or other commitments on the basis of both publicly available information and taken account of these assessments in their forecasts. Future revenue related to certain contractual commitments have been heavily discounted given the lack of available data and trading history with the Group.

1. Accounting policies (continued)

Summary

Therefore, after due consideration of the forecasts prepared, the sensitivities applied and the Group's current cash resources after the equity fund raise in October 2023 and the terms of its debt facilities, the directors consider that the Company and the Group have adequate financial resources to continue in operational existence for the foreseeable future (being a period of at least 12 months from the date of this report), and for this reason the financial statements have been prepared on the going concern basis.

Whilst the directors believe that the going concern basis is appropriate at the date of this report, the Board is mindful that the net proceeds of the fund raise will be insufficient to fund the cash requirements of the Group through to a position where it is able to fund itself from its own cashflow. The Board continues to pursue the possibility of securing additional debt facilities to provide additional liquidity. In the event that such debt facilities are not available or are unavailable in sufficient quantum it is very likely that the Group would need to raise additional equity funding in the future and, whilst the directors believe that future equity funding would be available, there can be no guarantee that sufficient funds could be raised at a later date. Any additional equity financing may be dilutive to Shareholders.

2. Changes in accounting policies

The Group has applied the following amendment for the first time for their annual reporting period commencing 1 July 2022;

- Property, Plant and Equipment: Proceeds before Intended use – Amendments to IAS 16
- Onerous contracts – Cost of Fulfilling a Contract – Amendments to IAS 37
- Annual Improvements to IFRS Standards 2018-2020: and
- Reference to the Conceptual Framework – Amendments to IFRS 3

The Group also elected to adopt the following amendments early:

- Deferred Tax related to Asset and Liabilities arising from a Single Transaction – amendment to IAS 12; and
- Disclosure of Accounting Policies – Amendments to IAS 1 and IFRS Practice Statement 2.

The amendments listed above did not have any impact on the amounts recognised in the prior periods and are not expected to significantly affect the current or future periods.

New standards and interpretation not yet adopted

Certain new accounting standards and interpretations have been published that are not mandatory for 30 June 2023 reporting periods and have not been early adopted by the Group. None of these are expected to have a material impact on the Group in the current or future reporting periods and on foreseeable future transactions.

3. Summary of significant accounting policies

a) Intangible assets

Research and development expenditure

Research expenditure is recognised as an expense when it is incurred.

Development expenditure is recognised as an expense except that costs incurred on development projects are capitalised as intangible assets to the extent that such expenditure is expected to generate future economic benefits. Development expenditure is capitalised if, and only if an entity within the Group can demonstrate all of the following:-

i) its ability to measure reliably the expenditure attributable to the asset under development;

ii) the product or process is technically and commercially feasible;

iii) its future economic benefits are probable;

iv) its ability to use or sell the developed asset;

v) the availability of adequate technical, financial and other resources to complete the asset under development; and

vi) its intention to use or sell the developed asset.

Capitalised development expenditure is measured at cost less accumulated amortisation and impairment losses, if any. Development expenditure initially recognised as an expense will not be restated as an asset in a subsequent period.

Historic capitalised development expenditure is amortised on a straight-line basis over a period of up to 20 years when the products or services are ready for sale or use. The maximum 20 years amortisation period is based on UK Patents being 20 years from the date of filing of the application, under Article 60 of the European Patent Convention, and, although the Group now has patents granted in other jurisdictions, the directors believe that 20 years is appropriate. New projects will be reviewed on completion, to determine the useful economic life. In the event that it is no longer probable that the expected future economic benefits will be recovered, the development expenditure is written down to its recoverable amount. Amortisation is included within administrative expenses.

Acquired intangible assets

An intangible resource acquired with a subsidiary undertaking is recognised as an intangible asset if it is separable from the acquired business or arises from contractual or legal rights, is expected to generate future economic benefits and its fair value can be measured reliably. Acquired intangible assets (excluding development expenditure which is in line with the above policy), including customer relationships, are amortised through the Consolidated Statement of Comprehensive Income on a straight-line basis over their estimated economic lives of ten years.

Goodwill

Business combinations are accounted for by applying the purchase method. The cost of a business combination is a fair value of the consideration given, liabilities incurred or assumed and of equity instrument issued. Where control is achieved in stages the cost is a consideration at the date of each transaction.

Contingent consideration is initially recognised at estimated amount where the consideration is probable and can be measured reliably. Where (i) the contingent consideration is not considered probable or cannot be reliably measured but subsequently becomes probable or (ii) contingent consideration previously measured is adjusted, the amounts are recognised as an adjustment to the cost of the business combination if the remeasurement occurs within a year of the transaction and relates to information that was available at the point of acquisition. Otherwise, any remeasurements of contingent consideration is reflected in the statement of comprehensive income.

On acquisition of a business, fair values are attributed to the identifiable assets, liabilities and contingent liabilities unless the fair value cannot be measured reliably, in which case the value is incorporated in goodwill. Where the fair value of contingent liabilities cannot be reliably measured they are disclosed on the same basis as other contingent liabilities.

Goodwill recognised represents the excess of the fair value and directly attributable costs of the purchase consideration over the fair value to the Group's interest in the identifiable net assets, liabilities and contingent liabilities acquired.

b) Impairment of goodwill and other non-financial assets

The carrying value of goodwill, and the cash-generating unit to which it relates, is reviewed at the end of each reporting period for impairment regardless of whether there is an indication that the asset may be impaired. Other non-financial assets are considered for indicators of impairment at each reporting date and full impairment reviews carried out if indicators of impairment exist. Impairment is measured by comparing the carrying values of the assets with their recoverable amounts. The recoverable amount of the assets is the higher of the assets' fair value less costs to sell and their value-in-use, which is measured by reference to discounted future cash flow. An impairment loss is recognised in administrative expenses within the Statement of Comprehensive Income immediately it is identified.

In respect of assets other than goodwill, and when there is a change in the estimates used to determine the recoverable amount, a subsequent increase in the recoverable amount of an asset is treated as a reversal of the previous impairment loss and is recognised to the extent of the carrying amount of the asset that would have been determined (net of amortisation and depreciation) had no impairment loss been recognised. The reversal is recognised in profit or loss immediately.

c) Revenue

To determine whether to recognise revenue, the Group follows a five step process:

1. Identifying the contract with a customer;
2. Identifying the performance obligations;
3. Determining the transaction price;
4. Allocating the transaction price to the performance obligations; and
5. Recognising revenue when/as performance obligation(s) are satisfied.

3. Summary of significant accounting policies (continued)

Revenue arises mainly as:

i) *Goods (including Reactor sales)*

Revenue represents sales to external customers at invoiced amounts less value added tax or local taxes on sales. Revenue is recognised at the point where control is considered to pass to the customer when all performance obligations have been fulfilled. In all instances the transaction price is agreed with the customer prior to transfer of goods on a stand-alone basis.

ii) *Services*

Engineering design and research revenue is recognised on the percentage of completion method unless the outcome of the contract cannot be reliably determined, in which case contract revenue is only recognised to the extent of contract costs incurred that are recoverable. Foreseeable losses, if any, are provided for in full as and when it can be reasonably ascertained that the contract will result in a loss.

The Group recognises revenue over time based upon the percentage of completion input method, whereby the stage of completion is determined based on the proportion of contract costs incurred compared to total estimated costs. In all cases, the total transaction price for a contract is allocated amongst the various performance obligations based on their relative stand-alone prices.

At each reporting period, receivables are recognised for revenues yet to be invoiced or settled to the extent that it is highly probable that there will not be a significant reversal of the amounts accrued in the future.

Where invoices are raised to the client in excess of the value of the consideration recognised as revenue based on the stage of completion, deferred income balances are recorded that represent unfulfilled performance obligations. These performance obligations are expected to be fulfilled within a year of the reporting date.

d) Financial instruments

i) *Financial assets*

Financial assets and financial liabilities are recognised in the Group balance sheet when the Group becomes a party to the contractual provisions of the instrument. Financial assets are classified as either fair value through profit or loss, fair value through other comprehensive income, or amortised cost. Classification and subsequent re-measurement depends on the group's business model for managing the financial asset and its cash flow characteristics. The Group has financial assets in the categories of amortised cost only. The Group does not have financial assets at fair value through other comprehensive income or fair value through profit or loss. Detailed disclosures are set out in note 22.

ii) *Amortised cost*

These assets arise principally from the provision of goods and services to customers (such as loans and trade receivables), but also incorporate other types of financial assets where the objective is to hold these assets in order to collect contractual cash flows and the contractual cash flows are solely payments of principal and interest. They are initially recognised at fair value once the Group's right to consideration is unconditional and are subsequently carried at amortised cost using the effective interest rate method, less provision for impairment.

Impairment provisions for trade receivables are recognised based on the simplified approach within IFRS 9 using the lifetime expected credit losses. During this process, the probability of the non-payment of trade receivables is assessed. This probability is then multiplied by the amount of the expected loss arising from default to determine the lifetime expected credit loss for the trade receivables. For trade receivables, such provisions are recorded in a separate provision account with the loss being recognised in the income statement. On confirmation that the trade receivable will not be collectable, the gross carrying value of the asset is written off against the associated provision.

Impairment provisions for other receivables are recognised based on a forward-looking expected credit loss model. The methodology used to determine the amount of the provision is based on whether at each reporting date, there has been a significant increase in credit risk since initial recognition of the financial asset. For those financial assets where the credit risk has not increased significantly since initial recognition, twelve month expected credit losses along with gross interest income are recognised. For those for which credit risk has increased significantly, lifetime expected credit losses along with the gross interest income are recognised. For those that are determined to be credit impaired, lifetime expected credit losses along with interest income on a net basis are recognised.

iii) Financial liabilities:

Financial liabilities are comprised of trade and other payables, borrowings and other short-term monetary liabilities, which are recognised at amortised cost.

Trade payables, other payables and other short-term monetary liabilities, are initially recognised at fair value and subsequently carried at amortised cost using the effective interest method.

Borrowings are recognised initially at fair value, net of transaction costs incurred. Borrowings are subsequently carried at amortised cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognised in the income statement over the period of the borrowings using the effective interest method.

Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the draw-down occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalised as a pre-payment for liquidity services and amortised over the period of the facility to which it relates.

e) Property, plant and equipment

Property, plant and equipment are stated at cost less accumulated depreciation and impairment losses, if any. The cost of an item of property, plant and equipment initially recognised includes its purchase price and any cost that is directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management.

Depreciation is calculated under the straight-line method to write off the depreciable amount of the assets over their estimated useful lives. The principal annual rates used for this purpose are:-

Leasehold improvements	10-20% per annum straight line
Plant and machinery	15-33% per annum straight line
US Plant and machinery	Time in use
Furniture and fittings	20-33% per annum straight line
Motor vehicles	33% per annum straight line

The depreciation method, useful lives and residual values are reviewed, and adjusted if appropriate, at the end of each reporting period to ensure that the amounts, method and periods of depreciation are consistent with previous estimates and the expected pattern of consumption of the future economic benefits embodied in the items of the property, plant and equipment.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when the cost is incurred and it is probable that the future economic benefits associated with the asset will flow to the Group and the cost of the asset can be measured reliably. The carrying amount of parts that are replaced is derecognised. The costs of the day-to-day servicing of property, plant and equipment are recognised in profit or loss as incurred. Cost also comprises the initial estimate of dismantling and removing the asset and restoring the site on which it is located for which the Group is obligated to incur when the asset is acquired, if applicable.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. The gain or loss on retirement or disposal is determined as the difference between any sales proceeds and the carrying amounts of the asset and is recognised in the Statement of Comprehensive Income within administrative expenses.

f) Income taxes

The charge for taxation is based on the loss for the period and takes into account deferred taxation.

Current tax is measured at amounts expected to be paid using the tax rates and laws that have been enacted by the balance sheet date. The substantively enacted rate has been used for deferred tax balances, which are recognised in respect of all timing differences that have been originated but not reversed by the reporting date, except that the recognition of deferred tax assets is limited to the extent that the Company anticipates making sufficient taxable profits in the future to absorb the reversal of the underlying timing differences.

The Group receives research and development tax credits for the work it performs in the field of nano-technology. Using the SME and large company schemes, these credits generate cash reimbursement in exchange for the sacrifice of applicable losses, such tax credits are recognised in income tax within the Statement of Comprehensive Income, in the period in which they relate.

3. Summary of significant accounting policies (continued)

g) Cash and cash equivalents

Cash and cash equivalents comprise cash in hand, bank balances, deposits with financial institutions and short-term, highly liquid investments that are readily convertible to known amounts of cash, are subject to an insignificant risk of changes in value and have maturities of 3 months or less from inception.

h) Inventories

Inventories are recorded at the lower of cost and net realisable value. Cost represents materials, direct labour, other direct costs and related production overheads, and is determined on the First-In-First-Out (FIFO) method. Net realisable value is based on estimated selling price, less further costs expected to be incurred to completion and disposal. Provision is made for slow-moving, obsolete and defective inventories where appropriate.

The value of inventories used in the fulfilment of commercial or developmental programmes are charged to cost of sales in the Statement of Comprehensive Income on an accruals basis.

i) Employee benefits

i) Short-term benefits

Wages, salaries, paid annual leave and sick leave, bonuses and non-monetary benefits are accrued in the period in which the associated services are rendered by employees of the Group.

ii) Defined contribution plans

The Group's contributions to defined contribution plans are recognised in profit or loss in the period to which they relate. Once the contributions have been paid, the Group has no further liability in respect of the defined contribution plans.

iii) Defined Benefit Pension plans

The group accounts for its defined benefit pension scheme such that the net pension scheme position is reported on the balance sheet with actuarial gains and losses being recognised directly in equity through the statement of comprehensive income. A number of key assumptions have been made in calculating the fair value of the Group's defined benefit pension scheme which affect the balance sheet position and the group's reserves and income statement. Refer to note 26 of the notes to the consolidated accounts for a summary of the main assumptions and sensitivities. Actual outcomes may differ materially from the assumptions used and may result in volatility in the net pension scheme position.

j) Provisions

Provisions are recognised when the Group has a present or constructive obligation as a result of past events, when it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and when a reliable estimate of the amount can be made. Provisions are reviewed at the end of each financial reporting period and adjusted to reflect the current best estimate. Where the effect of the time value of money is material, the provision is the present value of the estimated expenditure required to settle the obligation.

k) Government grants

Revenue grants are accounted for under the accruals model, with grants being recognised within Other operating income on a systematic basis over the period in which the group recognised the related costs for which the grant is intended to compensate. Grants received in advance of the income being recognised in the Statement of Comprehensive Income are included in grant creditors.

When grant income is received for capital expenditure, it is held as deferred income on the balance sheet and released on a straight line basis over the useful economic life of the asset to which it relates. All income relating to government grants is included as 'Other operating income' within the Statement of Comprehensive Income.

l) Share-based payment arrangements

Equity-settled share-based payments to employees and others providing similar services are measured at the fair value of the equity instruments at the grant date. Details regarding the determination of the fair value of equity-settled share-based transactions are set out in note 17 to the Consolidated Financial Statements.

The fair value determined at the grant date of the equity-settled share-based payments is expensed on a straight-line basis over the vesting period, with a corresponding increase in equity. At the end of each reporting period, the Group revises its estimate of the number of equity instruments expected to vest. The impact of the revision of the original estimates, if any, is recognised in profit or loss such that the cumulative expense reflects the revised estimate, with a corresponding adjustment to other reserves.

m) Leases

Leased assets

For any new contract entered into on or after 1 July 2019, the Group considers whether a contract is, or contains a lease. A lease is defined as 'a contract, that conveys the right to use an asset for a period of time in exchange for consideration'. To apply this definition the Group assesses whether the contract meets all three key criteria which are whether;

- The contract contains an identified asset, which is either explicitly identified in the contract or implicitly specified by being identified at the time the asset is made available to the Group.
- The Group has the right to obtain substantially all of the economic benefits from use of the identified asset throughout the period of use, considering its rights within the defined scope of the contract.
- The Group has the right to direct the use of the identified asset throughout the period of use. The Group assesses whether it has the right to direct 'how and for what purpose' the asset is used throughout the period of use.

Measurement and recognition of lease as a lessee

At lease commencement date, the Group recognises a right-of-use asset and a lease liability on the balance sheet. The right-of-use asset is measured at cost, which is made up of the initial measurement of the lease liability, any initial direct costs incurred by the Group, an estimate of any costs to dismantle and remove the asset at the end of the lease, and any lease payment made in advance of the lease commencement date (net of any incentives received).

The Group depreciates the right-of-use assets on a straight line basis from the lease commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. The Group also assesses the right-of-use asset for impairment when such indicators exist.

At the commencement date, the Group measures the lease liability at the present value of the lease payment unpaid at that date, discounted using the interest rate implicit in the lease if that rate is readily available or the Group's incremental borrowing rate.

Lease payments included in the measurement of the lease liability are made up of fixed payments, variable payments based on an index or rate, amounts expected to be payable under a residual value guarantee and payments arising from options reasonably certain to be exercised.

Subsequent to initial measurement, the liability will be reduced for payment made and increased for interest. It is remeasured to reflect any reassessment or modification, or if there are changes in substance to the fixed payments.

When the lease liability is remeasured, the corresponding adjustment is reflected in the right-of-use asset, or profit and loss if the right-of-use asset is already reduced to zero.

Measurement and recognition of lease as a lessor

The Group leases out elements of plant and machinery. The Group has classified these leases as operating leases. The Group is not required to make any adjustments on transition to IFRS 16 for leases in which it acts as a lessor.

The Group has applied IFRS 15 Revenue from Contracts with customers to allocate consideration in the contract to each lease and non-lease components.

n) Transactions and balances in foreign currencies

Transactions in foreign currencies are converted into the respective functional currencies on initial recognition, using the exchange rates approximating those ruling at the transaction dates. Monetary assets and liabilities at the end of the reporting period are translated at the rates ruling as of that date. Non-monetary assets and liabilities are translated using exchange rates that existed when the values were determined. All exchange differences are recognised in profit or loss.

Overseas operations which have a functional currency different to the group presentation currency have been translated using the monthly average exchange rate for consolidation into the statement of comprehensive income. The amounts included in the group statement of financial position, have been translated at the exchange rate ruling at the statement date. All resulting exchange differences are reported in other comprehensive income.

o) Critical accounting judgements and key sources of estimation uncertainty

The preparation of financial information in conformity with IFRSs requires the use of certain critical accounting estimates. It also requires the directors of the Group to exercise their judgement in the process of applying the accounting policies which are detailed below. These judgements are continually evaluated by the directors and management and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

3. Summary of significant accounting policies (continued)

The key estimates and underlying assumptions concerning the future and other key sources of estimation uncertainty at the statement of financial position date, that have a significant risk of causing material adjustment to the carrying amounts of assets and liabilities within the next financial period are reviewed on an ongoing basis. Revision to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Defined Benefit Pension Scheme (estimate)
In determining the pension valuation movement and the defined benefit obligation of the Group's pension scheme, a number of assumptions are used in order to produce a valuation, which is sensitive to changes in the assumptions. These assumptions include an appropriate discount rate, the levels of salary increases, price inflations and mortality rates. Further details are included in note 26, including sensitivity analysis.

Impairment of non-financial assets (judgement)
The carrying value of goodwill, and the cash generating units (CGUs) to which it relates, is assessed annually for impairment through comparing the recoverable amount to the CGU's carrying value. The value in use calculations require estimates in relation to uncertain items, including management's expectations of future revenue growth, operating costs, profit margins, operating cashflows and the discount rate applied.

Future cash flows used in the value in use calculations are based on our latest longer term projections reviewed by the Board. Expectations about future growth reflect expectations of growth in the markets applicable to the Group. The future cashflows are discounted using a pre-tax discount rate that reflects current market assessments of the time value of money. The discount rate used is adjusted for the specific risk to the group, including the countries to which cash flows will be generated. Further details are included in note 10, including sensitivity analysis.

Useful economic lives of tangible and intangible assets (judgement)
The annual depreciation charge for tangible assets is sensitive to change in the estimated useful economic lives and residual values of the assets. The useful economic lives and residual values are re-assessed annually. They are amended where necessary to reflect current estimates, based on technological advancement, future investments, economic utilisation and the physical condition of the assets. See note 11 for the carrying amounts of the property plant and equipment, and the depreciation accounting policy for the useful economic lives for each class of assets.

Share Based Payments (estimate)
The costs of the share-based payments plans (and warrant plans) are determined on the basis of the fair value of the equity instrument at grant date. Determining the fair value assumes choosing the most suitable valuation model for these equity instruments, for which the characteristics of the grant have a decisive influence. This assumes also the input into the valuation model of some relevant judgments, like the estimated expected life of the warrant and the volatility. The judgments made and the model used are further specified in note 17.

Inventory Valuation (estimate)
In determining the inventory value management assesses the cost of the inventory against the net realisable value as set out in the inventory accounting policy (h).

p) Alternative Performance Measures

Disclosure has been adjusted in the Statement of Comprehensive Income. Adjusted Administrative expenses have excluded Share based payment charges, impairment charges and depreciation as these are non-cash items. We believe removing these balances better reflects the performance of the Group and provides more meaningful information to the user of the Financial Statements.

4. Segment analysis

IFRS 8 requires operating segments to be identified on the basis of internal reports about components of the Group that are regularly reviewed by the chief operating decision maker (which is the Chief Executive Officer and Chief Financial Officer) as defined in IFRS 8, in order to allocate resources to the segment and to assess its performance.

For management purposes, the Group is organised into the following reportable regions:

- UK & Europe (focusing on functionalisation of nano materials, high performance ink & master batches, elastomers and the composites market in Europe);
- North America (focusing on SiC & blank products for tooling); and
- Asia Pacific (focusing on sales to the Asian markets).

2023

	UK & Europe £'000	North America £'000	Asia Pacific £'000	Adjustments, Central & Eliminations £'000	Consolidated £'000
REVENUE	786	3,190	325	–	4,301
Cost of sales	(467)	(1,231)	(213)	–	(1,911)
Gross profit	319	1,959	112	–	2,390
Other operating income	377	–	–	–	377
Adjusted administrative expenses	(2,270)	(1,836)	(538)	(1,616)	(6,260)
Adjusted operating loss	(1,574)	123	(426)	(1,616)	(3,493)
Administrative expenses					
Share based payment expense	(34)	(43)	(1)	(511)	(589)
Depreciation & amortisation	(681)	(693)	(48)	(130)	(1,552)
Impairment	–	(531)	–	–	(531)
	(715)	(1,267)	(49)	(641)	(2,672)
Total administrative expenses	(2,985)	(3,103)	(587)	(2,257)	(8,932)
OPERATING LOSS	(2,289)	(1,144)	(475)	(2,257)	(6,165)
Finance costs					(407)
LOSS BEFORE TAXATION					(6,572)
Taxation					407
LOSS AFTER TAXATION					(6,165)
Additions to non-current assets	658	–	80	–	738
Segment assets	3,607	6,447	312	2,521	12,887
Segment liabilities	(2,391)	(3,138)	(99)	(287)	(5,915)

4. Segment analysis (continued)

2022

	UK & Europe £'000	North America £'000	Asia Pacific £'000	Adjustments, Central & Eliminations £'000	Consolidated £'000
REVENUE	984	1,673	244	–	2,901
Cost of sales	(356)	(670)	(130)	–	(1,156)
Gross profit	628	1,003	114	–	1,745
Other operating income	373	69	–	–	442
Adjusted administrative expenses	(1,977)	(1,648)	(525)	(1,370)	(5,520)
Adjusted operating loss	(976)	(576)	(411)	(1,370)	(3,333)
Administrative expenses					
Share based payment expense	(20)	(4)	23	(38)	(39)
Depreciation & amortisation	(474)	(629)	(74)	(131)	(1,308)
Impairment	–	–	(23)	(352)	(375)
	(494)	(633)	(74)	(521)	(1,722)
Total administrative expenses	(2,471)	(2,281)	(599)	(1,891)	(7,242)
OPERATING LOSS	(1,470)	(1,209)	(485)	(1,891)	(5,055)
Finance costs					(187)
LOSS BEFORE TAXATION					(5,242)
Taxation					433
LOSS AFTER TAXATION					(4,809)
Additions to non-current assets	1,533	72	36	–	1,641
Segment assets	4,159	7,225	341	2,738	14,463
Segment liabilities	(2,386)	(4,486)	(114)	(429)	(7,415)

Geographical information

All revenues of the Group are derived from its principal activities as set out on page 3. The Group's revenue from external customers by geographical location are detailed below.

	2023 £'000	2022 £'000
By destination		
United Kingdom	**563**	769
Europe	**813**	685
United States of America	**1,822**	1,051
China	**180**	127
Thailand	**61**	158
South Korea	**145**	86
Japan	**678**	–
Rest of the World	**39**	25
	4,301	2,901

During 2023, £0.95 million (22%) (2022: £0.73 million (25%)) of the Group's revenue depended on a single customer. During 2023 £0.68 million (16%) (2022: £0.58 million (20%)) of the Group's revenue depended on a second single customer.

All amounts shown as other operating income within the Statement of Comprehensive Income are generated within and from the United Kingdom, EU and the US. These amounts include income earned as part of a number of grant funded projects in the United Kingdom and EU and a government grant in the US.

Dis-aggregation of revenues

The split of revenue by type:

	2023 £'000	2022 £'000
Services	**387**	306
Reactor rental	**124**	134
Products (Goods)	**3,790**	2,461
	4,301	2,901

2023

	UK & Europe £'000	**North America £'000**	**Asia Pacific £'000**	**Total £'000**
Services	303	–	84	387
Reactor rental	124	–	–	124
Products (Goods)	359	3,190	241	3,790
	786	**3,190**	**325**	**4,301**

2022

	UK & Europe £'000	**North America £'000**	**Asia Pacific £'000**	**Total £'000**
Services	275	–	31	306
Reactor rental	134	–	–	134
Products (Goods)	575	1,673	213	2,461
	984	1,673	244	2,901

Services and reactor rental revenues are recognised over time, whereas goods and reactor sales are recognised at a point in time.

The Group acquired non-current assets during the year, split by geographical location as detailed below:

Non-current asset additions

	2023 £'000	2022 £'000
By destination		
United Kingdom	**658**	1,533
United States of America	**–**	72
Thailand	**80**	36
	738	1,641

The carrying value of the Group's non-current assets split by geographical location is detailed below:

	2023 £'000	2022 £'000
By destination		
United Kingdom	**2,500**	2,732
United States of America	**5,781**	7,240
Thailand	**76**	49
South Korea	**3**	1
	8,360	10,022

5. Other Operating Income

	2023 £'000	2022 £'000
Grant Income	**377**	373
Federal Support Schemes	**–**	69
	377	442

There are no unfulfilled conditions attached to the above income.

6. Loss before taxation

Loss before taxation is arrived at after charging:

	2023 £'000	2022 £'000
Amortisation of intangibles	**335**	232
Impairment of intangibles	**–**	375
Depreciation of property, plant and equipment	**1,216**	1,076
Impairment of tangibles	**531**	–
Foreign Exchange	**105**	58
Operating lease rental: plant and machinery	**1**	1

The service fees of the Group's auditor, Crowe U.K. LLP are analysed below:

	2023 £'000	2022 £'000
Fees payable to the Company's auditor for the audit of the Group's financial statements	**62**	56

There are no other fees payable to the Company's auditors and its associates for other services (2022: £Nil).

7. Employees

The average number of employees during the year, including executive directors, was:

	2023 No.	2022 No.
Administration	**27**	26
Research, development and production	**40**	34
	67	60

Staff costs for all employees, including executive directors, consist of:

	2023 £'000	2022 £'000
Wages and salaries	**3,224**	2,958
Social security costs	**397**	269
Defined contribution pension costs	**221**	193
Defined benefit pension costs	**–**	8
Share-based payment expense	**366**	39
	4,208	3,467

Directors' remuneration

	2023 £'000	2022 £'000
Short-term employee benefits and fees	**553**	522
Post-retirement benefits	**39**	36
	592	558

The total amount payable to the highest paid director in respect of emoluments was £269,000 (2022: £273,000), excluding pension costs of £24,000 (2022: £24,000). Further details on Directors' Remuneration can be found in the Directors' Remuneration Report on pages 20 to 21.

8. Income tax

	2023 £'000	2022 £'000
Current tax credit		
Total income tax credits:		
– for the financial year	**406**	427
– under provision in the previous financial year	**1**	6
Total current tax	**407**	433

The reason for the difference between the actual tax charge for the year and the standard rate of corporation tax in the United Kingdom applied to the losses for the year are as follows:

	2023 £'000	2022 £'000
Loss for the year	**(6,165)**	(4,809)
Income tax credit	**(407)**	(433)
Loss before income taxes	**(6,572)**	(5,242)
Tax using the Group's domestic tax rates of 20.5% (2022: 19%)	**1,347**	996
Expenses not deductible for tax purposes	**(376)**	(906)
Income not taxable	**581**	1,017
Different tax rates applied in overseas jurisdictions	**(5)**	(53)
R&D enhancement	**410**	396
Surrender for R&D tax credit	**(571)**	(519)
Adjustment for over provision in comparative year	**1**	10
Movement in unrecognised losses carried forward	**(955)**	(515)
Amounts not recognised	**–**	26
Non qualifying assets	**(25)**	(19)
Total tax credit	**407**	433

Changes in tax rates and factors affecting the future tax charge
The main rate of corporation tax for UK companies is currently 25%.

The Group has tax losses that are available indefinitely for the UK and a maximum of 20 years for the US to be offset against future taxable profits of the companies approximately amounting to £31.82 million (2022: £24.99 million). US tax losses of £0.4m are expected to expire in 13 years, with all other losses being available indefinitely. The group currently expects to be able to utilise its US tax losses in the foreseeable future and a deferred tax asset has been recognised in respect of these tax losses up to the value of the timing difference of fixed assets and therefore no overall deferred tax asset has been created.

9. Loss per share

The calculations of loss per share are based on the following losses and number of shares:

	2023 £'000	2022 £'000
Loss after tax attributable to owners of Haydale Graphene Industries Plc	**(6,165)**	(4,809)
Weighted average number of shares:		
Basic and Diluted	**729,239,439**	483,770,289
Loss per share:		
Basic (£) and Diluted (£)	**(0.01)**	(0.01)

The loss attributable to ordinary shareholders and weighted average number of ordinary shares for the purpose of calculating the diluted earnings per ordinary share are identical to those used for basic earnings per share. This is because the exercise of share options would have the effect of reducing the loss per ordinary share and is therefore not dilutive under the terms of IAS 33. At 30 June 2023, there were 242,033,392 (2022: 48,685,000) options and warrants outstanding as detailed in note 17. All of the options are potentially dilutive.

Post year end 1,012,609,000 of new Ordinary Shares were issued on 3 October 2023, these Ordinary Shares are dilutive. There were also 576 shares under Warrants issued on 13 September 2023 which are dilutive, the remaining Warrants of 138,757,816 lapsed on 14 September 2023.

10. Intangible assets

	Customer Relationships £'000	**Development expenditure £'000**	**Goodwill £'000**	**Total £'000**
Cost				
At 1 July 2021	1,021	2,319	1,975	5,315
Additions	–	340	–	340
FX translation	137	2	142	281
At 30 June 2022	1,158	2,661	2,117	5,936
Additions	–	421	–	421
FX translation	(50)	–	(72)	(122)
At 30 June 2023	**1,108**	**3,082**	**2,045**	**6,235**
Accumulated amortisation and impairment				
At 1 July 2021	637	1,529	634	2,800
Charge for the year	87	145	–	232
Impairment	–	23	352	375
FX translation	85	1	–	86
At 30 June 2022	809	1,698	986	3,493
Charge for the year	87	248	–	335
Impairment	–	–	–	–
FX translation	(38)	–	–	(38)
At 30 June 2023	**858**	**1,946**	**986**	**3,790**
Net book value				
At 30 June 2023	**250**	**1,136**	**1,059**	**2,445**
At 30 June 2022	349	963	1,131	2,443
At 30 June 2021	384	790	1,341	2,515

All of the above Development expenditure is currently in use.

Goodwill

Goodwill of £24,000 arose on the acquisition of Haydale Ltd on 21 May 2010. On the 9 September 2016, goodwill of £327,151 arose on the acquisition of Innophene Co. Ltd (now Haydale Technologies Thailand Ltd ("HTT")). Goodwill arose on the acquisition of ACM (now Haydale Composite Technology LLC ("HCT") on 13 October 2016 of £1,102,620.

Customer Relationships

The customer relationships intangible asset arose on the fair value of assets on the acquisition of HCT on 13 October 2016 amounting to £868,676.

Development costs

Development costs brought forward are made up of three areas. The first relates to the fair value of assets on the acquisition of Haydale Ltd on 21 May 2010 for development of nano-technology projects, where it is anticipated that the costs will be recovered through future commercial activity. The second relates to capitalised patent costs that were acquired as part of the acquisition of Innophene Co Ltd. (now HTT) in 2015. The third relates to the development of nano enhanced products within Haydale Limited, Haydale Composite Solutions Limited ("HCS") and HTT.

Development expenditure of £421,000 was capitalised during the year in accordance with IAS 38 in connection with the Group's expenditure with the development of nano enhanced products (including inks, epoxy resins, elastomers and composites), where the Directors believe that future economic benefit is probable (2022: £340,000). Capitalised development expenditure is not amortised until the products or services are ready for sale or use.

Amortisation

Capitalised development costs are amortised over the estimated useful life of between 5 and 20 years. The amortisation charge is recognised in administrative expenses.

The Customer relationships intangible is amortised over the estimated useful life of 10 years. The amortisation charge is recognised in administrative expenses.

Goodwill impairment

Goodwill acquired in a business combination is allocated at acquisition to the CGUs that are expected to benefit from that business combination. Following the acquisitions of Haydale, HCT and HTT, the Group is operating a number of different CGUs and therefore Haydale and ACM goodwill has been considered against the future forecast trading outcomes of HCT, Haydale and HTT as separate CGU's.

An analysis of the pre-tax discount rates used and the goodwill balance as at the year-end by principal CGU's is shown below:

	2023 %	2022 %	**2023 £'000**	2022 £'000
Haydale	**10%**	10%	**24**	24
HCT	**14%**	12%	**1,035**	1,107
HTT	–	10%	–	–

The Group tests goodwill at least annually for impairment or more frequently if there are indications that goodwill might be impaired.

The recoverable amounts of the CGUs are determined from value-in-use calculations. The key assumptions for the value-in-use are those regarding the discount rates, the growth rates and expected changes to cash flows during the period for which management have detailed plans. Discount rates are estimated using pre-tax rates that reflect current market assessments of the time value of money and the risks specific to the CGUs.

Pre-tax discount rates, derived from the Group's post-tax weighted average cost of capital ("WACC") of 14% (FY22: 12%), have been used to discount projected cash flows.

The impairment calculations for the current year have been derived from the longer term forecasts (the "Forecasts") that have been approved by the Board.

The HCT model assumes that its turnover is in in line with the Forecasts and then reduces to 2% growth in perpetuity. The growth rates used are based on management's internally estimated growth forecasts which are predicated on continued recovery in the aerospace industry and growth in the US tool product range. Further information on this trading unit is given in the Strategic Report on page 6 under the subheading "Silicon Carbide powders and tooling".

10. Intangible assets (continued)

As part of the impairment sensitivity analysis several performance assumptions were adjusted which involved either reducing forecasted revenue or increasing the WACC to a point where the carrying value of the assets were equal to the HCT discounted cashflows. One of the sensitivity scenarios adjusted the model by the following criteria, resulting in the carrying value being equal to the HCT discounted cashflow.

Turnover reduction	GP% reduction	Admin Expenses	WACC
30%	20%	+3%	+2%

Management does not feel that this scenario, or any change in a single assumption that would result in an impairment, is reasonably possible in the next twelve months.

Due to uncertainty over the timings of the recovery in revenue at HTT the Directors impaired the intangible assets of HTT in the comparative year.

Following this review, the Directors have determined there is no impairment charge which should be recognised against the intangible assets of the Group.

11. Property, plant and equipment

	Leasehold and leasehold improvements £'000	Plant and machinery £'000	Fixtures and fittings £'000	Motor vehicles £'000	Total £'000
Cost					
At 1 July 2021	4,204	7,223	500	29	11,956
Additions	422	851	28	–	1,301
FX translation	429	592	38	4	1,063
Disposals	(125)	(15)	–	–	(140)
At 1 July 2022	4,930	8,651	566	33	14,180
Additions	120	170	27	–	317
FX translation	(161)	(218)	(17)	(1)	(397)
Disposals	(93)	–	(1)	–	(94)
At 30 June 2023	**4,796**	**8,603**	**575**	**32**	**14,006**
Accumulated depreciation and impairment					
At 1 July 2021	1,438	3,550	319	27	5,334
Charge for the year	559	468	47	2	1,076
FX Translation	124	174	22	4	324
Disposals	(125)	(8)	–	–	(133)
At 30 June 2022	1,996	4,184	388	33	6,601
Charge for the year	567	599	50	–	1,216
Impairment	–	531	–	–	531
FX Translation	(66)	(85)	(11)	(1)	(163)
Disposals	(93)	–	(1)	–	(94)
At 30 June 2023	**2,404**	**5,229**	**426**	**32**	**8,091**
Net book value					
At 30 June 2023	**2,392**	**3,374**	**149**	**–**	**5,915**
At 30 June 2022	2,934	4,467	178	–	7,579
At 30 June 2021	2,766	3,673	181	2	6,622

Including in the net carrying amount of property, plant and machinery are right-of-use assets as follows:

	30 June 2023 £'000	30 June 2022 £'000
Leasehold and leasehold improvements cost	**4,044**	4,182
Leasehold and leasehold improvements depreciation	**(1,842)**	(1,486)
Leasehold and leasehold improvement NBV	**2,202**	2,696

Plant and Machinery Impairment

The group tests for fixed asset impairment at least annually. During the year an impairment charge of £531k was recognised in respect of one asset where the useful economic life, which is based on an estimate of the units produced, was reassessed. If the estimate of units produced increased/decreased by 5% the resulting impairment charge would have been reduced/increased by £76k.

12. Inventories

	2023 £'000	2022 £'000
Raw materials	**279**	286
Work in progress	**460**	554
Finished goods	**994**	675
	1,733	1,515

The total value of inventories recognised in cost of sales during the year was £1,910,950 (2022: £1,028,486). Raw materials and finished goods comprise of SiC, blanks, functionalised carbon, chemicals and associated raw materials. Work in progress comprises recoverable costs on long-term contracts.

13. Trade receivables

	2023 £'000	2022 £'000
Trade receivables	**564**	667

14. Other receivables

	2023 £'000	2022 £'000
Other receivables	**188**	236
Prepayments and accrued income	**227**	364
Lease Asset	**31**	46
	446	646

	2023 £'000	2022 £'000
Corporation tax	**406**	427

15. Deferred income

Deferred income is recognised for both capital and revenue grants from governments and other funding parties and released as income in accordance with the relevant conditions of the grant concerned. All income will be recognised within one year.

	2023 **£'000**	2022 £'000
Commercial deferred income	**103**	68

As at 30 June 2023, deferred income of £58,561 (2022: £52,055) arose in relation to the rental of a reactor, which had been invoiced during the year for a full year's rental charge. The charge is being released over the course of the year. The remaining deferred income relates to grant income which will be recognised in the profit and loss within a year.

16. Share capital and share premium

	Number of shares No.	**Share capital £'000**	**Share premium £'000**	**Total £'000**
At 30 June 2021	425,279,798	8,505	28,820	37,325
Issue of £0.02 ordinary shares	85,055,893	1,702	3,092	4,794
At 30 June 2022	510,335,691	10,207	31,912	42,119
Issue of £0.02 ordinary shares	275,516,784	5,510	–	5,510
At 30 June 2023	**785,852,475**	**15,717**	**31,912**	**47,629**

On 14 September 2022, the Company issued 275,516,784 new ordinary shares of 2p each.

Issue costs amounting to £371,000 have been charged through the Retained Losses Account during the year due to the new share issue being at nominal value (2022: £309,000, charged to the Share Premium Account).

17. Share-based payment transactions

Options

The Company operates both an approved EMI share option scheme and an unapproved share option scheme for the benefit of employees and directors of the Group.

The exercise price of the 2020 EMI options granted on 13 January 2020 was 2.25p per Ordinary Share (being a 19.7% premium to the closing mid–market price of the Company's Ordinary Shares on 10 January 2020, the last trading day before the grant). The options vest three years from the date of grant.

The exercise price of the 2022 EMI options granted on 20 January 2022 was 6.25p per Ordinary Share (being a 12.6% premium to the closing mid–market price of the Company's Ordinary Shares on 20 January 2022). The options vest three years from the date of grant.

The exercise price of the 2022 EMI options granted on 14 November 2022 was 2.25p per Ordinary Share (being a 20% premium to the closing mid–market price of the Company's Ordinary Shares on 11 November 2022). The options vest three years from the date of grant.

The exercise price of the 2023 EMI options granted on 25 April 2023 was 2.25p per Ordinary Share (being a 42% premium to the closing mid–market price of the Company's Ordinary Shares on 25 April 2023). The options vest three years from the date of grant.

The options are accounted for as equity settled share-based payment transactions.

The following table which illustrates the number and weighted average exercise prices (WAEP) of, and movements in, share options during the year:

	Number of options No.	**2023 WAEP Pence**	Number of options No.	2022 WAEP Pence
Balance at beginning of year	**47,685,000**	**2.25**	39,734,928	2.39
Granted	**55,450,000**	**2.25**	11,835,000	6.25
Lapsed	**(1,860,000)**	**6.03**	(3,872,768)	3.10
Forfeited	**–**	**–**	(12,160)	175.81
Balance at end of year	**101,275,000**	**2.65**	47,685,000	2.25

At 30 June 2023, there were options outstanding over 101,275,000 un-issued ordinary shares, equivalent to 12.9% of the issued share capital as follows:

	Number of shares	**Exercise price**	**Earliest exercise date**	**Latest exercise date**
Unapproved scheme				
8 July 2020	5,000,000	2.25p	8 July 2023	8 July 2030
20 January 2022	3,500,000	6.25p	19 January 2025	19 January 2032
14 November 2022	10,250,000	2.25p	13 November 2025	13 November 2032
25 April 2023	2,000,000	2.25p	24 April 2023	24 April 2032
Approved EMI scheme				
13 January 2020	30,750,000	2.25p	13 January 2023	13 January 2030
20 January 2022	6,575,000	6.25p	19 January 2025	19 January 2032
14 November 2022	42,450,000	2.25p	13 November 2025	13 November 2032
25 April 2023	750,000	2.25p	24 April 2023	24 April 2032
	101,275,000			

The estimated fair value was calculated by applying a Black-Scholes option pricing model.

	Type of award	**Number of shares**	**Share price at date of grant (Pence)**	**Fair value per option (Pence)**	**Award life (years)**	**Risk free rate (%)**	**Expected volatility rate (%)**	**Performance conditions**
8 July 2020	Unapproved	5,000,000	3.65	0.63	10	0.50	80.5	See below
13 January 2020	EMI	30,750,000	1.88	1.71	10	0.50	80.5	See below
20 January 2022	Unapproved	3,500,000	5.50	1.13	10	0.50	63.6	See below
20 January 2022	EMI	6,575,000	5.50	1.13	10	0.50	63.6	See below
14 November 2022	Unapproved	10,250,000	1.88	0.37	10	0.50	68.7	See below
14 November 2022	EMI	42,450,000	1.88	0.37	10	0.50	68.7	See below
25 April 2023	Unapproved	2,000,000	1.58	0.20	10	0.50	59.1	See below
25 April 2023	EMI	750,000	1.58	0.20	10	0.50	59.1	See below
		101,275,000						

January & July 2020 Performance Conditions

Should the Company's closing mid-market share price reach and remain at or above £0.04 for at least 15 consecutive trading days, commencing after the grant date and ending on or before 30 September 2021, 30% of share options are capable of vesting.

Should the Company's closing mid-market share price reach and remain at or above £0.08 for at least 15 consecutive trading days, commencing after the grant date and ending on or before 30 September 2022, an additional 30% of share options are capable of vesting.

Should the Company's closing mid-market share price reach and remain at or above £0.16 for at least 15 consecutive trading days, commencing after the grant date and ending on or before 30 September 2023, the final 40% of share options are capable of vesting.

17. Share-based payment transactions (continued)

January 2022 Performance Conditions

Should the Company's closing mid-market share price reach and remain at or above £0.10 for at least 15 consecutive trading days, commencing after the grant date and ending on or before 30 September 2023, 30% of share options are capable of exercise.

Should the Company's closing mid-market share price reach and remain at or above £0.15 for at least 15 consecutive trading days, commencing after the grant date and ending on or before 30 September 2024, an additional 30% of share options are capable of exercise.

Should the Company's closing mid-market share price reach and remain at or above £0.20 for at least 15 consecutive trading days, commencing after the grant date and ending on or before 30 September 2025, the final 40% of share options are capable of exercise.

November 2022 & April 2023 Performance Conditions

Should the Company's closing mid-market share price reach and remain at or above £0.04 for at least 15 consecutive trading days, commencing after the grant date and ending on or before 30 September 2024, 30% of share options are capable of exercise.

Should the Company's closing mid-market share price reach and remain at or above £0.06 for at least 15 consecutive trading days, commencing after the grant date and ending on or before 30 September 2025, an additional 30% of share options are capable of exercise.

Should the Company's closing mid-market share price reach and remain at or above £0.08 for at least 15 consecutive trading days, commencing after the grant date and ending on or before 30 September 2026, the final 40% of share options are capable of exercise.

The weighted average remaining contractual life of share options outstanding at 30 June 2023 is 9 years (2022: 8 years). The charge for the year for share-based payment amounted to £0.03 million (2022: £0.03 million).

Warrants

	Number of warrants No.	**2023 Weighted average exercise price Pence**	Number of warrants No.	2022 Weighted average exercise price Pence
Balance at beginning of year	**1,000,000**	**8.00**	67,398	208.00
Lapsed	**–**	**–**	(67,398)	208.00
Granted	**139,758,392**	**2.00**	1,000,000	8.00
Balance at end of year	**140,758,392**	**2.04**	1,000,000	8.00

500,000 warrants outstanding at 30 June 2023 were held by employees (2022: Nil).

Warrants granted in July 2021 have a share price performance condition of £0.16 for 15 consecutive working days on or before 30 September 2023.

Warrants granted in September 2022 were issued as part of the September 2022 fundraise and do not have share performance conditions and lapsed on 14 September 2023.

The same pricing model was used for calculating the cost of warrants to the Group as was used for calculating the cost of the options to the Group.

The weighted average remaining contractual life of warrants outstanding at 30 June 2023 is 0.4 years (2022: 8 years). The charge for the year for warrant payment amounted to £460k (2022: £9k).

18. Reserves

Share capital

The share capital represents the nominal value of the equity shares in issue.

Share premium account

The share premium account represents the amount received on the issue of ordinary shares in excess of their nominal value, less any costs associated with the issuance of the shares, and is non-distributable.

Share-based payment reserve

The share-based payment reserve comprises the cumulative expense representing the extent to which the vesting period of share options has passed and management's best estimate of the achievement or otherwise of non-market conditions and the number of equity instruments that will ultimately vest.

Retained Losses

The retained profits and losses reserves comprise the cumulative effect of all other net gains, losses and transactions with owners (e.g. dividends) not recognised elsewhere.

Foreign Exchange

The foreign exchange reserve comprises the translation differences arising from the translation of the overseas subsidiary results into pound sterling.

19. Trade and other payables

	Current Liabilities		Non-Current Liabilities	
	2023	2022	**2023**	2022
	£'000	£'000	**£'000**	£'000
Trade payables	**789**	1,178	**–**	–
Tax and social security	**70**	57	**–**	–
Lease liability	**473**	480	**1,962**	2,440
Accruals and other creditors	**567**	484	**–**	–
	1,899	2,199	**1,962**	2,440

20. Bank loans

	2023	2022
	£'000	£'000
Bank loans	**1,374**	1,352
The borrowings are repayable as follows:-		
– within one year	**11**	11
– in the second year	**605**	15
– in the third year and above	**758**	1,326
	1,374	1,352

The Group's borrowings are denominated in US dollars and Pounds Sterling. The directors consider that there is no material difference between the fair value and carrying value of the Group's borrowings.

	2023	2022
Average interest rates paid	**6.85%**	6.3%

20. Bank loans (continued)

In October 2016, a five year bank loan of $1,720,000 (equivalent to approximately £1.4 million at the time) was drawn by HTI, the Company's US holding company, secured on the fixed assets of HTI and its newly acquired operating subsidiary, HCT. This loan carried an interest rate of 4% and was repayable in equal instalments. HTI also had a working capital facility of up to $900,000 which was secured on a combination of the fixed assets, inventory and trade receivables of the US business. The rate of interest of this was fixed at 5.25%. Both the above loans were repaid during the comparative year.

In June 2020, as part of the Government Bounce Back Loan scheme, HCS entered into a six year loan agreement with NatWest for £50,000. The loan had a repayment holiday and did not accrue interest during the first 12 months. Following the initial 12 months, interest has been charged at 2.5% p.a. and the loan and interest are repayable in equal instalments over the remaining period.

In March 2021, HCS secured a five year loan of £1,100,000 from Innovate Loans UK Limited. At the year end the Company had fully drawn down this facility. The loan has a repayment holiday until March 2024 and is fully repayable by March 2026. Interest will be charged at 7.4% p.a. for the period of the loan. For the initial 36 months interest will be paid at 3.7% p.a. and for the final 24 months interest with be paid at 10.7% p.a. There are no penalties for early repayment.

During the prior year, the US operation secured a loan through the COVID-19 Economic Injury Disaster Loan scheme of $200,000. The loan is for a period of 30 year with a fixed interest rate of 3.75% and deferred repayments for the first two years. At the year end the balance on the loan was £164,000.

21. Related party disclosures

Balances and transactions between Haydale Graphene Industries Plc and its subsidiaries are eliminated on consolidation and are not disclosed in this note. Balances and transactions between the Group and other related parties are disclosed below.

Remuneration of directors and key management personnel

The remuneration of the directors of the Company is set out below in aggregate for each of the categories specified in IAS 24 'Related Party Disclosures'.

	2023	2022
	£'000	£'000
Short-term employee benefits and fees	**553**	522
Social security costs	**73**	62
Post-retirement benefits	**39**	36
	665	620

Other transactions – Group and parent company

Fees totalling £26,750 (2022: £12,352) were paid to Evesco International Business for support during the year ending June 2023. Mr G Eves served as a director of the Company during the year and is a director of Evesco International Business Services. At 30 June 2023, the balance owed to Evesco International Business Services was £Nil (2022: £Nil).

Other transactions – Group

Other related party transactions during the year under review are shown in the table below:

	2023	2022
	£'000	£'000
Services Received		
QM Holdings	**–**	175

QM Holdings is owned by Thomas Quantrille and Marvin Murrell who are officers of HCT. QM Holdings owned the HCT facilities and leased these to the Company. QM Holdings sold the property during the comparative year and following the sale the rental is no longer deemed a related party transaction. During the year an amount of £Nil was paid to QM Holdings in respect of property rent (2022: £174,914). The balance outstanding to QM Holdings at the year-end was £Nil (2022: £Nil).

22. Financial instruments

The Group's activities are exposed to a variety of market risk (including foreign currency risk and interest rate risk), credit risk and liquidity risk. The Group's overall financial risk management policy focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance.

a) Financial risk management policies

The Group's policies in respect of the major areas of treasury activity are as follows:

i) Market risk

Foreign currency risk

The Group is exposed to foreign currency risk on transactions and balances that are denominated in currencies other than Pounds Sterling. The currencies giving rise to this risk are primarily the United States Dollar and the Euro. Foreign currency risk is monitored closely on an ongoing basis to ensure that the net exposure is at an acceptable level. The Group maintains the ability to provide a natural hedge wherever possible by matching the cash inflows (revenue stream) and cash outflows used for purposes such as operational expenditure in the respective currencies.

The carrying amounts of the Group's foreign currency denominated monetary assets and liabilities at the end of each reporting period were as follows:

	United States Dollar £'000	Euro £'000	Total £'000
2023			
Financial assets	**51**	**2**	**53**
Financial liabilities	**36**	**57**	**93**
2022			
Financial assets	5	211	216
Financial liabilities	44	73	117

Foreign currency sensitivity analysis

The following table details the sensitivity analysis to possible changes in the relative values of foreign currencies to which the Group is exposed as at the end of the respective financial periods, with all other variables held constant:

Effects on loss after taxation/equity	**2023 Increase/ (decrease) £'000**	2022 Increase/ (decrease) £'000
United States Dollar:		
– strengthened by 10%	**2**	(4)
– weakened by 10%	**(1)**	4
Euro:		
– strengthened by 10%	**(8)**	14
– weakened by 10%	**5**	(12)

ii) Interest rate risk

The Group's exposure to interest rate risk arises mainly from interest-bearing financial assets. The Group's policy is to obtain the most favourable interest rates available, while ensuring minimal risk to capital. Any surplus funds will be placed with licensed financial institutions to generate interest income.

Interest rate risk sensitivity analysis

A 100 basis points strengthening or weakening of the interest rate as at the end of each financial period would have an immaterial impact on loss after taxation and / or net assets. This assumes that all other variables remain constant.

22. Financial instruments (continued)

b) Credit risk

The Group's exposure to credit risk, or the risk of third parties defaulting, arises mainly from trade and other receivables. The Group manages its exposure to credit risk by the application of credit approvals, credit limits and monitoring procedures on an ongoing basis. For other financial assets (including cash and bank balances), the Group minimises credit risk by dealing exclusively with high credit rating financial institutions.

The Group establishes an allowance for impairment that represents its expected credit losses in respect of the trade and other receivables as appropriate. The main components of this allowance are a specific loss component that relates to individually significant exposures, and a collective loss component established for groups of similar assets in respect of losses that are expected but not yet identified. Impairment is estimated by management based on prior experience, current market and third party intelligence while considering the current economic environment.

Credit risk concentration profile

To date, modest sales have meant that the credit risk profile of the Group has tended to focus on a handful of customers only. As such, no meaningful analysis can be drawn from the customer profile of the receivables outstanding at each period end under review.

Exposure to credit risk

As the Group does not hold any collateral, the maximum exposure to credit risk is represented by the carrying amount of the financial assets at the end of each financial period.

The exposure of credit risk for trade receivables by geographical region as at the year-end is as follows:

	2023 £'000	2022 £'000
United Kingdom	**39**	298
Europe	**19**	29
North America	**230**	280
Rest of the world	**276**	60
	564	667

Maturity analysis

The ageing analysis of the Group's trade receivables as at the year-end is as follows:

	2023 £'000	2022 £'000
Not past due	**530**	604
Past due:		
– less than 3 months	**20**	29
– between 3 and 6 months	**13**	14
– more than 6 months	**1**	20
Gross amount	**564**	667

At the end of each financial period, trade receivables that are individually impaired were those in significant financial difficulties and have defaulted on payments. These receivables are not secured by any collateral or credit enhancement.

Collective impairment allowances, are determined based on estimated irrecoverable amount from the sale of goods and services, determined by reference to past default experience. Impairment provision is not material and therefore has not been recognised in either the current or prior year.

Trade receivables that are past due but not impaired

The Board believes that no further impairment allowance is necessary in respect of these trade receivables.

iii) Liquidity risk

Liquidity risk is the risk that the Group will not be able to meet its financial obligations as they fall due. The Group exposure to liquidity risk arises primarily from mismatches of the maturity of financial assets and liabilities.

The Group maintains a level of cash and cash equivalents and bank facilities deemed adequate by management to ensure as far as possible, that it will have sufficient liquidity to meet its liabilities when they fall due.

All of the financial liabilities of the Group are due within one year, with the exception of certain long-term bank loans – see note 20.

Maturity analysis

The ageing analysis of the Group's non-derivative financial liabilities as at the year-end is as follows:

	Under 1 Yr	1 to 2 Yrs	3+ Yrs	Total
2023	**£'000**	**£'000**	**£'000**	**£'000**
Trade payables	**789**	**–**	**–**	**789**
Secured bank loan	**–**	**592**	**590**	**1,182**
Unsecured bank loan	**11**	**13**	**168**	**192**
Lease liability	**473**	**477**	**1,485**	**2,435**
Total	**1,273**	**1,082**	**2,243**	**4,598**

	Under 1 Yr	1 to 2 Yrs	3+ Yrs	Total
2022	£'000	£'000	£'000	£'000
Trade payables	1,178	–	–	1,178
Secured bank loan	–	–	1,141	1,141
Unsecured bank loan	11	15	185	211
Lease liability	480	461	1,979	2,920
Total	1,669	476	3,305	5,450

c) Capital risk management

The Group defines capital as the total equity of the Group. The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

d Classification of financial instruments (at amortised cost and fair value)

	2023	2022
	£'000	£'000
Financial assets		
Trade receivables	**564**	667
Other receivables	**219**	282
Cash and bank balances	**1,378**	1,186
Financial Assets (at amortised cost)	**2,161**	2,135
Financial liabilities		
Bank loans	**1,374**	1,352
Trade payables	**789**	1,178
Lease Liability	**2,435**	2,920
Financial Liabilities (at amortised cost)	**4,598**	5,450

There is no difference between the fair value and book value for the assets and liabilities.

e Fair value of financial instruments

The Group has no financial assets or liabilities carried at fair values at the end of each reporting date.

23. Capital commitments

The Group had the following capital commitments in the respective years:

	2023 **£'000**	2022 £'000
Authorised by the directors for Plant & Machinery	**–**	52

24. Ultimate controlling party

The Directors do not consider any one shareholder, individually or acting in consort with others, to have ultimate control of the Group.

25. Lease arrangements

The amounts of minimum lease payments under non-cancellable operating leases are as follows:

	2023 Land and buildings £'000	**2023 Plant and machinery £'000**	2022 Land and buildings £'000	2022 Plant and machinery £'000
– within one year	**–**	**1**	–	1
– within two to five years	**–**	**2**	–	2
Aggregate amounts payable	**–**	**3**	–	3

Payments recognised as an expense under these leases were as follows:

	2023 Land and buildings £'000	**2023 Plant and machinery £'000**	2022 Land and buildings £'000	2022 Plant and machinery £'000
Operating lease expense	**–**	**1**	–	1

Within the minimum lease payments for plant and machinery is the cost relating to general office equipment.

26. Defined Benefit Pension Scheme

HCT operated a defined benefit pension scheme. The scheme was closed in November 2006 for any new participants and frozen in February 2009 for all participants.

Contributions of £180,000 were made to the scheme during the year ended 30 June 2023 (2022: £92,000).

Included in the loss before tax during the year:

	2023 **£'000**	2022 £'000
Net Interest Expense	**122**	9

Included in other comprehensive income during the year:

	2023 **£'000**	2022 £'000
Actuarial gain from demographic assumptions	**495**	113

The following table sets forth the pension plan's funded status as of 30 June:

	2023	2022
	£'000	£'000
Accumulated benefit obligation	**(3,307)**	(4,076)
Projected Benefit obligation	**(3,307)**	(4,076)
Plan assets at fair value	**2,730**	2,720
Funded Status	**(577)**	(1,356)
Accrued Pension Cost	**(577)**	(1,356)

Net amount recognised in the Consolidated Statement of Financial Position as of 30 June, consisted of the following:

	2023	2022
	£'000	£'000
Non-current Liabilities	**(577)**	(1,356)

The discount rate is based on the yield curve of government bonds in the applicable region adjusted with a credit spread of one of the two highest ratings given by a recognized ratings agency. Future cash outflows of the plans are then related with the yield curve. The average is the discount rate. The weighted average assumptions used to develop the actuarial present value of benefit obligations and net periodic benefit costs for the pension plan are as follows for the year ended 30 June 2023:

Discount rate for periodic benefit costs	5.00%
Discount rate for benefit obligations	5.00%
Rate of increase in compensation levels	3.61%
Investment return rate	3.67%

Mortality Assumptions are as follows:

Longevity at retirement age (current & future pensioners)	**2023**	2022
– Males	**20.6 years**	20.5 years
– Females	**22.5 years**	22.4 years

Plan Assets

Pension assets are managed by an outside investment manager and are rebalanced periodically. The Company establishes policies and strategies and regularly monitors performance of the assets, including the selection of investment managers, setting long-term strategic targets, and monitoring asset allocations. Target allocation ranges are guidelines, not limitations, subject to variation from time-to-time or as circumstances warrant, and occasionally, the Company may approve allocations above or below a target range.

The pension plan's investment strategy with respect to pension assets is to invest the assets in accordance with ERISA and fiduciary standards. The long-term primary objective for the pension plan assets are to protect the assets from erosion of purchasing power and to provide a reasonable amount of long-term growth of capital, without undue exposure to risk. Currently, the strategic targets are 45% for equity securities, 50% for debt securities, and no more than 5% for other categories.

The fair value of the Company's pension plan assets valued at 30 June 2023, by asset category were as follows:

			Fair Value Measurements at 30 June 2023 using	
Description	**Total Carrying Amount £'000**	**Assets/ Liabilities Measured at Fair Value £'000**	**Level 1 Inputs £'000**	**Level 2 Inputs £'000**
Cash	196	196	196	–
Corporate Equities	1,423	1,423	1,423	–
Fixed Income:				
US Government	175	175	–	175
Corporate debt	836	836	–	836
Mutual Funds	100	100	100	–
	2,730	2,730	1,719	1,011

26. Defined Benefit Pension Scheme (continued)

All corporate equities are quoted securities.

The changes in the fair value of the Company's pension plan assets for the year ending 30 June 2023, were as follows:

	2023 £'000	2022 £'000
Opening Balance	**2,720**	2,808
Contributions	**180**	92
Distributions	**(240)**	(269)
Net realised gain/(loss)	**207**	(271)
Foreign exchange (loss)/gain	**(137)**	360
Balance at Year End	**2,730**	2,720

Cash Flows

The Company expects benefits paid for the next five fiscal years and the five years thereafter as follows:

	2023 £'000	2022 £'000
2024	**282**	280
2025	**281**	279
2026	**281**	284
2027	**289**	283
2028	**301**	283
Thereafter	**1,360**	1,442
	2,794	2,850

The Company's pension plan asset allocations by asset category were as follows as of 30 June 2023:

Asset Category	
Cash	7.2%
Equity Mutual Funds	55.0%
Fixed Income	34.3%
Other	3.5%

Plan Obligations

	2023 £'000	2022 £'000
Benefit Obligation at 1 July	**(4,076)**	(3,834)
Foreign exchange movement	**156**	(518)
Interest cost	**(122)**	(106)
Actuarial gain/(loss)	**495**	113
Benefits paid	**240**	269
Benefit Obligation at 30 June	**(3,307)**	(4,076)
Fair Value of Plan Assets at 1 July	**2,720**	2,808
Foreign Exchange movement	**(137)**	360
Actual Return on plan assets	**207**	(271)
Interest Income	**–**	–
Employer contributions	**180**	92
Benefits paid	**(240)**	(269)
Fair Value of Plan Assets at 30 June	**2,730**	2,720
Funded Status at 30 June	**(577)**	(1,356)

Defined benefit obligation – sensitivity analysis.

The impact to the value of the defined benefit obligation of a reasonably possible change to one actuarial assumption, holding all other assumption constant, is presented in the table below:

Actuarial Assumption	Reasonably Possible Change	Defined Benefit Obligation (£'000) Increase	Decrease
Discount Rate	(+/- 0.25%)	64	(66)
Mortality Rate	(+/-1.00%)	15	(15)

HCT also has a defined contribution plan under Section 401(k) of the Internal Revenue Code which provides for voluntary participation. All employees who have completed one hour of service are eligible to participate in this plan beginning the first pay period of the month following the date an hour of service is first performed. Participants may contribute on a pre-tax basis from 1% to 60%, in 1% increments, of their annual base salary. Company contributions under the plan are required to be equal to 100% of that portion of participant contributions which do not exceed 6% of the participant's annual base compensation rate. Participants are immediately vested in their voluntary contributions plus actual earnings and Company contributions. The Company contributions for the year ended 30 June 2023, were £180,000 (2022: £92,000).

27. Taxes

Deferred tax is calculated in full on temporary differences under the liability method. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset realised, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

There was no movement on the deferred tax account in the year and the balance at the year end is £Nil (2022 - £Nil).

Detail of the deferred tax liability, amounts recognised in profit and loss and amounts recognised in other comprehensive income are as follows:

	Asset 2023 £'000	Liability 2023 £'000	Net 2023 £'000	(Charged)/ credited to profit or loss 2023 £'000
Employee pension liabilities	**122**	**–**	**122**	**(163)**
Available losses	**954**	**–**	**954**	**440**
Business combination	**–**	**(1,076)**	**(1,076)**	**(277)**
Net tax assets/(liabilities)	**1,076**	**(1,076)**	**–**	**–**

	Asset 2022 £'000	Liability 2022 £'000	Net 2022 £'000	(Charged)/ credited to profit or loss 2022 £'000
Employee pension liabilities	285	–	285	70
Available losses	515	–	515	21
Business combinations	–	(800)	(800)	(91)
Net tax assets/(liabilities)	800	(800)	–	–

27. Taxes (continued)

A deferred tax asset has not been recognised for the following:

	2023 £'000
Accelerated capital allowances	**5**
Unused tax losses	**12,137**
	12,142

The unused tax losses can be carried forward indefinitely in the UK and up to a maximum of 20 years in the US.

28. Post Balance Sheet Event

On 3 October 2023, the Company raised £5.1 million (gross) through a placing, retail offer and subscription of 1,012,609,000 new Ordinary Shares at 0.5 pence per share. The funds raised will be principally used to fund the general working capital needs of the business. As part of this process, the Company's share capital was restructured to in effect reduce the nominal value of each ordinary share from 2.0 pence to 0.1 pence.

Save for 576 shares issued following an exercise of warrants, all other warrants issued following the fundraise on 13 September 2022 of 138,758,392 lapsed on 14 September 2023 and are no longer exercisable.

29. Reconciliation of liability movement as a result of financing activities

	Non-current Loans and borrowings £'000	Current loans and borrowings £'000	Total £'000
At 1 July 2021	3,214	1,250	4,464
Interest accruing in period	108	16	124
New loan in year	454	–	454
Loan repayments in year	–	(842)	(842)
Lease liability addition	260	–	260
Lease liability repayments in year	–	(548)	(548)
Effect of foreign exchange	348	12	360
Loans classified as non-current at 30 June 2021 becoming current during year.	43	(43)	–
Lease liability classified as non-current at 1 July 2021 becoming current during year	(646)	646	–
At 30 June 2022	**3,781**	**491**	**4,272**
Interest accruing in period	**117**	**82**	**199**
Loan repayments in year	**–**	**(53)**	**(53)**
Lease liability addition	**114**	**–**	**114**
Lease liability repayments in year	**–**	**(603)**	**(603)**
Effect of foreign exchange	**(113)**	**(7)**	**(120)**
Loans classified as non-current at 30 June 2022 becoming current during year.	**22**	**(22)**	**–**
Lease liability classified as non-current at 1 July 2022 becoming current during year	**(596)**	**596**	**–**
At 30 June 2023	**3,325**	**484**	**3,809**

PARENT COMPANY BALANCE SHEET
As at 30 June 2023

Company Registration No. 07228939

PARENT COMPANY REPORT

	Note	2023 £'000	2022 £'000
Fixed assets			
Property, plant and equipment		**7**	17
Investments	6	**1,317**	1,238
		1,324	1,255
Current assets			
Debtors – within one year	7	**154**	278
Debtors – after more than one year	7	**9,867**	7,097
Cash at bank and in hand		**816**	695
		10,837	8,070
Creditors: amounts falling due within one year	8	**(237)**	(429)
NET CURRENT ASSETS		**10,600**	7,641
TOTAL ASSETS LESS CURRENT LIABILITIES		**11,924**	8,896
Creditors: amounts falling due after more than one year		**–**	–
NET ASSETS		**11,924**	8,896
Capital and reserves			
Called up share capital	9	**15,717**	10,207
Share premium account	9	**31,912**	31,912
Profit and loss account		**(35,705)**	(33,223)
SHAREHOLDER'S FUNDS		**11,924**	8,896

As permitted by section 408 of the Companies Act 2006, the Company's profit and loss account has not been included in these financial statements. The loss of the Company for the year ended 30 June 2023 was £2,701,000 (2022: £3,728,000).

The financial statements on pages 63 to 67 were approved and authorised for issue by the Board of directors on 25 October 2023 and signed on its behalf by:

David Banks
Chair

Keith Broadbent
Chief Executive Officer

COMPANY STATEMENT OF CHANGES IN EQUITY

For the year ended 30 June 2023

	Share capital £'000	Share Premium £'000	Profit and loss account £'000	Total Equity £'000
At 1 July 2021	8,505	28,820	(29,533)	7,792
Comprehensive Income for the year				
Loss for the year	–	–	(3,728)	(3,728)
Contributions by and distributions to owners				
Recognition of share-based payments	–	–	38	38
Issue of ordinary share capital, net of transaction costs	1,702	3,401	–	5,103
Share issue costs	–	(309)	–	(309)
At 30 June 2022 and 1 July 2022	10,207	31,912	(33,223)	8,896
Comprehensive Income for the year				
Loss for the year	–	–	(2,701)	(2,701)
Contributions by and distributions to owners				
Recognition of share-based payments	–	–	590	590
Issue of ordinary share capital	5,510	–	–	5,510
Share issue cost	–	–	(371)	(371)
At 30 June 2023	**15,717**	**31,912**	**(35,705)**	**11,924**

NOTES TO THE PARENT COMPANY BALANCE SHEET
For the year ended 30 June 2023

1. Basis of preparation

The parent company financial statements of Haydale Graphene Industries Plc, a public company incorporated and registered in England and Wales under the Companies Act 2006 with company number 07228939 which is limited by shares, have been prepared in accordance with Financial Reporting Standard 101 Reduced Disclosure Framework. The principal accounting policies adopted in the preparation of the financial statements are set out below. The policies have been consistently applied to the years presented, unless otherwise stated.

The financial statements have been prepared on a historical cost basis. The presentation currency used is sterling and amounts have been presented in round thousands.

Disclosure exemptions adopted

In preparing these financial statements the company has taken advantage of all disclosure exemptions conferred by FRS101. Therefore these financial statements do not include:

- certain comparative information as otherwise required by IFRS;
- certain disclosures regarding the company's capital;
- a statement of cash flows;
- the effect of future accounting standards not yet adopted;
- the disclosure of the remuneration of key management personnel; and
- disclosure of related party transactions with other wholly owned members of the group headed by Haydale Graphene Industries Plc.

In addition, all in accordance with FRS 101, further disclosure exemptions have been adopted because equivalent disclosures are included in the consolidated financial statements of Haydale Graphene Industries Plc. These financial statements do not include certain disclosures in respect of:

- Share based payments;
- Business combinations; and
- Financial Instruments

2. Accounting policies

With the exception of the adoption of IFRS 16 discussed further below, the following accounting policies have been applied consistently in dealing with items which are considered material to the company's financial statements:

Investment in subsidiary undertakings

Where the Company has control over an investee, it is classified as a subsidiary. The Company controls an investee if all three of the following elements are present: power over the investee, exposure to variable returns from the investee, and the ability of the investor to use its power to affect those variable returns. Control is reassessed whenever facts and circumstances indicate that there may be a change in any of these elements of control.

Investments in subsidiary undertakings where the company has control are stated at cost less any provision for impairment.

Financial assets

Impairment of financial assets
The Company assesses at each balance sheet date whether a financial asset or group of financial assets is impaired.

Assets carried at amortised cost
These assets arise principally from the provision of services and advancing of monies to the company's subsidiaries, but also incorporate other types of financial assets where the objective is to hold these assets in order to collect contractual cash flows and the contractual cash flows are solely payments of principal and interest. They are initially recognised at fair value plus transaction costs that are directly attributable to their acquisition or issue, and are subsequently carried at amortised cost using the effective interest rate method, less provision for impairment.

2. Accounting policies (continued)

The Company's financial assets measured at amortised cost comprise intercompany receivables, trade and other receivables and cash and cash equivalents in the consolidated statement of financial position.

The intercompany receivables are interest-free loans that are repayable on demand. In applying IFRS 9 to these balances, the company assesses the ability of the debtor subsidiary to repay the loan on demand at each reporting date. A loan is considered to be in default where there is evidence that the borrower has insufficient liquid assets to repay the loan on demand. This is assessed with reference to key liquidity and solvency ratios. Where the borrowing subsidiary has sufficient liquid assets to repay the loan immediately, meaning the risk of default is very low, the loan is considered to be in Stage 1 of the expected credit loss model, meaning that there is deemed to have been no significant increase in credit risk. However, should the borrowing subsidiary not have sufficient liquid assets to repay the loan on demand, the loan is considered to be at Stage 3 of the expected credit loss model and credit impaired. Where a loan is deemed to be credit impaired, an expected credit loss provision is recognised based on a 'repay over time' approach applying a discounted cashflow analysis.

Cash and cash equivalents includes cash in hand for the purpose of the statement of cash flows - bank overdrafts. Bank overdrafts are shown within loans and borrowings in current liabilities.

Share-based payments

When the Company grants options over equity instruments directly to the employees of a subsidiary undertaking, the effect of the share-based payment is capitalised as part of the investment in the subsidiary as a capital contribution, with a corresponding increase in equity.

Depreciation

Depreciation is provided to write off cost, less estimated residual values, of all tangible fixed assets, evenly over their expected useful lives. It is calculated at the following rates:

Furniture and fittings	33% per annum straight line
Computer equipment	33% per annum straight line

Impairment

The need for any fixed asset impairment write-down is assessed by comparison of the carrying value of the asset against the higher of realisable value and value in use.

Taxation

The charge for taxation is based on the loss for the period and takes into account taxation deferred.

Current tax is measured at amounts expected to be paid using the tax rates and laws that have been enacted by the balance sheet date. The substantively enacted rate has been used for deferred tax balances, which are recognised in respect of all timing differences that have been originated but not reversed by the reporting date, except that the recognition of deferred tax assets is limited to the extent that the Company anticipates making sufficient taxable profits in the future to absorb the reversal of the underlying timing differences.

Foreign Currency

Foreign currency transactions are translated at the rates ruling when they occurred. Foreign currency monetary assets and liabilities are translated at the rate of exchange ruling at the balance sheet date. Any differences are taken to the profit and loss account.

Critical accounting judgements and key sources of estimation uncertainty

The preparation of financial information in conformity with IFRSs requires the use of certain critical accounting estimates. It also requires the directors of the Company to exercise their judgement in the process of applying the accounting policies which are detailed below. These judgements are continually evaluated by the directors and management and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The key estimates and underlying assumptions concerning the future and other key sources of estimation uncertainty at the statement of financial position date, that have a significant risk of causing material adjustment to the carrying amounts of assets and liabilities within the next financial period are reviewed on an ongoing basis. Revision to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Share Based Payments
The costs of the share-based payments plans (and warrant plans) are determined on the basis of the fair value of the equity instrument at grant date. Determining the fair value assumes choosing the most suitable valuation model for these equity instruments, for which the characteristics of the grant have a decisive influence. This assumes also the input into the valuation model of some relevant judgments, like the estimated expected life of the warrant and the volatility. The judgments made and the model used are further specified in note 17 of the Consolidated Financial Statements.

Impairment of Investments
The Company considers the impairment of investments on an annual basis. An estimate of the values of investments is calculated on a discounted cash flow basis. Our value in use calculations require estimates in relation to uncertain items, including management's expectations of future revenue growth, operating costs, profit margins, operating cashflows and the discount rate applied.

Future cash flows used in the value in use calculations are based on our latest Board approved longer term projections. Expectations about future growth reflect expectations of growth in the markets applicable to the group. The future cashflows are discounted using a pre-tax discount rate that reflects current market assessments of the time value of money. The impairment of investments has been considered under note 10 of the consolidated financial statements.

Impairment of debtors
The Company applies the expected credit loss model under IFRS 9 in assessing the impairment of receivables. As intercompany receivables are repayable on demand, the debtor is considered to be in default if they would be unable to repay the balance at the reporting date. In such circumstances, the receivables are impaired to the extent that the debtor company is not considered able to repay the receivable if it were to be recalled at the balance sheet date. Where a loan is deemed to be credit impaired, an expected credit loss provision is recognised based on a 'repay over time' approach applying a discounted cashflow analysis.

3. Audit Fees
The audit fees of the parent company have been disclosed within note 6 of the consolidated financial statements, which form part of these financial statements.

4. Employees
The average number of employees during the year, including executive directors, was:

	2023 No.	2022 No.
Administration	**13**	10

Staff costs for all employees, including executive directors, consist of:

	2023 £'000	2022 £'000
Wages and Salaries	**849**	723
Social Security Costs	**104**	91
Pension Costs	**71**	62
Share based payment expense	**165**	38
	1,189	914

5. Directors' remuneration
In respect of directors' remuneration, the disclosures required by Schedule 5 to the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 are included in the detailed disclosures in the audited Group accounts in Note 7, which are ascribed as forming part of these financial statements.

6. Fixed asset investments

	Investment £'000
Cost	
At 1 July 2022	1,238
Additions during the year	79
At 30 June 2023	**1,317**

The impairment reviews have been carried out on the same basis as those applied to goodwill and intangibles of the Group (see note 10 in the Group accounts for further detail).

The undertakings in which the Company's interest at the period end is 20% or more are as follows:

Name of subsidiary company	Country of incorporation or registration	Proportion of ordinary share capital held	Nature of business
Haydale Ltd	England & Wales	100%	R&D, sales and distribution
Haydale Composite Solutions Limited	England & Wales	100%	R&D, sales and distribution
Haydale Composites Ltd	England & Wales	100%	Dormant
EPL Composites Limited	England & Wales	100%	Dormant
Haydale Technologies Korea Co., Ltd	South Korea	100%	Sales and distribution
Haydale Technologies Incorporated LLC	North America	100%	Holding Company
Haydale Technologies Thailand Ltd	Thailand	100%	R&D, sales and distribution
Haydale Ceramic Technologies LLC	North America	100%	Sales and distribution

Haydale Composites Ltd & EPL Composite Limited are exempt from audit in accordance with the Companies Act 2006, as a result of them remaining dormant throughout the current and previous financial years. Haydale Technologies Korea Co., Ltd is also exempt from audit.

Subsidiary	Registered office
Haydale Ltd	Clos Fferws, Parc Hendre, Capel Hendre, Ammanford, Carmarthenshire, SA18 3BL
Haydale Composites Ltd	Clos Fferws, Parc Hendre, Capel Hendre, Ammanford, Carmarthenshire, SA18 3BL
EPL Composites Ltd	Clos Fferws, Parc Hendre, Capel Hendre, Ammanford, Carmarthenshire, SA18 3BL
Haydale Composite Solutions Limited	Unit 10 Charnwood Business Park, North Road, Loughborough, Leicestershire, LE11 1QJ
Haydale Technologies Korea Co., Ltd	16F, Gangnam Bldg. 396, Seocho-daero, Seocho-gu, Seoul 137-857, South Korea
Haydale Technologies Thailand Ltd	Room 510 - 515, Tower D, 5th Floor, Thailand Science Park Phahon Yothin Road, Luang District, Pathum Thani Province, 12120, Thailand
Haydale Technologies Incorporated LLC	1446 South Buncombe Road, Greer, South Carolina. 29651, USA
Haydale Ceramic Technologies LLC	1446 South Buncombe Road, Greer, South Carolina. 29651, USA

7. Debtors

	2023 £'000 < 1 yr	2023 £'000 > 1 yr	2022 £'000 < 1 yr	2022 £'000 > 1 yr
Amounts owed by group companies	–	9,867	–	7,097
Corporation tax	89	–	76	–
Other debtors	57	–	188	–
Prepayments and accrued income	8	–	14	–
	154	9,867	278	7,097

During the year an impairment provision of £118,000 (2022: £909,000) was recognised in relation to Haydale Technologies Thailand Limited and Haydale Technologies Korea Co Ltd intercompany balances.

Loans to subsidiary organisations are denominated in their local currency in line with IAS21, for consolidation purposes these loans are classified as part of the net investment in the subsidiary and foreign exchange movements on these balances are recorded through the Other Comprehensive Income.

Amounts owed by group companies are in foreign currencies, predominantly in USD. A 1% movement in the exchange rate would result in a gain of £0.08m or a loss of £0.08m.

8. Creditors: amounts falling due within one year

	2023 £'000	2022 £'000
Trade creditors	42	152
Other creditors including tax and social security	64	89
Accruals and deferred income	131	188
	237	429

9. Share capital and share premium

	Number of shares No.	Share capital £'000	Share premium £'000	Total £'000
At 1 July 2022	510,335,691	10,207	31,912	42,119
Issue of £0.02 ordinary shares	275,516,784	5,510	–	5,510
At 30 June 2023	785,852,475	15,717	31,912	47,629

The Company issued 275,516,784 new ordinary shares of 2p each in September 2022. There were £371,000 issue costs associated with the new ordinary share issue, charged to the Profit and Loss account due to the share issue being at nominal value.

10. Ultimate controlling party

The directors do not consider any one shareholder, individually or acting in consort with others, to have ultimate control of the Company.

11. Related party transactions

The Company is exempt from disclosing transactions with wholly owned subsidiaries within the Group. Other related party transactions are included within those given in note 21 of the consolidated financial statements.

Corporate Information

Registered and Head Office	Clos Fferws, Parc Hendre, Capel Hendre, Ammanford, Carmarthenshire, Wales, SA18 3BL	*Secretary*	Matt Wood cosec@haydale.com
Company Number	07228939	*Website*	www.haydale.com
Investor Relations	investor.relations@haydale.com	*General enquiries*	info@haydale.com
Independent Auditor	Crowe U.K. LLP 55 Ludgate Hill, London, EC4M 7JW	*Nominated Advisor and Broker*	Cavendish One Bartholomew Close, London, EC1A 7BL
Corporate Solicitors	Field Fisher LLP Riverbank House, 2 Swan Lane, London EC4R 3TT	*Intellectual Property Solicitors*	Mewburn Ellis LLP 33 Gutter Lane, London, EC2V 8AS
Registrars	Share Registrars Limited 3, The Millennium Centre, Crosby Way, Farnham, Surrey, GU9 7XX		

Investor relations

The shares of Haydale Graphene Industries Plc are listed on the Alternative Investment Market (AIM) of the London Stock Exchange.

Tradeable Instrument Display Mnemonic (TIDM): HAYD

Stock Exchange Daily Official List (SEDOL) code: BKWQ113

International Securities Identification Number (ISIN): GB00BKWQ1135

In accordance with AIM Rule 26 regarding company information disclosure, various investor orientated information is available on our website at www.haydale-ir.com/

Registrars

Enquiries relating to matters such as loss of a share certificate, dividend payments or notification of a change of address should be directed to Share Registrars Limited who are the Company's registrars by post: 3 The Millennium Centre, Crosby Way, Farnham, Surrey, GU9 7XX; by email: enquiries@shareregistrars.uk.com; or by telephone: 01252 821390.

Donate your shares to charity

The Company supports ShareGift, the charity share donation scheme administered by The Orr Mackintosh Foundation (registered charity number: 1052686).

Through ShareGift, shareholders who only have a small number of shares which might be considered uneconomic to sell are able to donate them to charity. Donated shares are aggregated and sold by ShareGift, the proceeds being passed onto a wide range of UK charities.

Donating shares gives rise neither to a gain or loss for UK capital gains tax purposes and UK taxpayers may also be able to claim income tax relief on such gifts of shares.

Full details about ShareGift can be obtained from their website at www.sharegift.org or by contacting them by email at help@sharegift.com.

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