Haydale Graphene Industries Plc

Annual Report
And Accounts

For the year ended
30 June 2020

Creating Material Change

Contents

Chairman'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 2020 ("FY20").

During the year the Group has made significant progress in moving from a research and development organisation to one focussed on the delivery of sustainable commercial revenues. Notwithstanding the impact of Covid-19 on revenue in the latter part of the year, the Group has made positive strides in driving profitable sales, developing its operational and technical capacity and controlling its cost base.

Summary Financials

Commercial revenue for FY20 of £2.95 million (FY19: £3.47 million) showed a disappointing fall on the prior year. This reflects the adverse impact of Covid-19 which has restrained revenues, especially in the US division where demand for our proprietary Silicon Carbide ('SiC') blanks has been significantly affected by subdued demand for global aviation. Despite the fall in revenue, Gross Profit increased marginally to £2.06 million (FY19: £1.90 million). The Gross profit margin of 69.9% (FY19: 54.8%) showed a significant year on year improvement and this was principally due to reduced sales of lower margin SiC into the US fracking industry. Other operating income in the year at £0.76 million (FY19: £0.79 million) is broadly in line with prior year, although it has benefitted from the support offered by the US Cares Act during the latter part of the year.

The focus on reducing costs continued in the year with adjusted Administrative Expenses falling by £0.87 million (12.7%) to £5.99 million (FY19: £6.86 million) on a like-for-like basis. Over the last two reporting periods, the Company has reduced its operating cost base by £1.7 million in total. Non-recurring one off restructuring costs, principally relating to the closure of the Taiwan facility during the year, were £0.06 million (FY19: £0.35 million). Total Trading Admin Expenses are £7.05 million (FY19: £8.53 million).

Total comprehensive loss for the year was £4.23 million (FY19: £7.12 million), including the £0.06 million of restructuring costs (FY19: £2.13 million including an impairment of intangible assets of £1.79 million) the loss from trading activities was £4.23 million (FY19: £5.85 million).

Operations

Whilst Covid-19 may have overshadowed the past year it has certainly not defined it for the Group. The path towards the goals that were put in place in 2019 has evolved to cope with the Coronavirus pandemic but the priorities of focussed investment in our technology, delivery of commercial revenue and reduction of operating costs remains at the heart of our strategy.

FOCUSSED INVESTMENT IN R&D

Haydale brings together two state of the art technologies – the patented HDPlas® functionalisation process and an understanding of graphene and other nano materials. The Company has continued to increase the level of surface functionalisation that it can achieve and this is leading to a marked improvement in the enhancements that we can deliver for our customers. For example, during the year the Group has invested in the next generation of functionalised inks delivering reduced resistivity to circa 10 ohms. This development allows for a cost effective and environmentally friendly replacement of silver, copper and aluminium etch in certain elements of the growing radio-frequency identification ('RFID') and near field communication ('NFC') sectors.

COMMERCIAL GOALS

The focussed investment in R&D is not an end goal but a means through which the Group can deliver sustainable revenue growth. During the year, all of the operating units have made positive progress in commercialising our technology portfolio despite the difficult operating environment. In April we signed a four-year agreement with Uniqe Aviation Inc/Dalian Yi Bang Science and Technology Co Ltd ("Uniqe") for the supply of electrically enhanced masterbatch into the Chinese civilian aviation and wind turbine sectors. The work that we are doing in conjunction with Uniqe in aviation should demonstrate that our electrical masterbatch can offer significant weight savings and application efficiencies without compromising passenger safety and should facilitate the wider rollout of this solution to the global aerospace sector.

GROUP RESTRUCTURING AND COST REDUCTIONS

During the year under review we re-evaluated our operating footprint and in January 2020 announced the closure of the Group's loss-making Taiwan facility and the transfer of its operations to our ink development hubs in Ammanford and Bangkok. Subsequently, we concluded a commission agreement with U-Win, a specialist sales organisation, to sell our portfolio of technologies into the biomedical sensor, automotive and other sectors in Taiwan. We have also signed a memorandum of understanding with a Sino-UK facilitator for business development in China. Whilst it is early days, management are encouraged by the progress made by both of these initiatives and believes the reorganisation will have a positive effect on the development of our ink technology and the realisation of commercial revenue in Taiwan and China.

The Group has continued to realign its costs base and during the year it has reduced its overall headcount whilst continuing to invest in its global sales presence. The Group has also realised significant cost savings and, as noted above, like-for-like administrative costs have reduced by £0.87 million, (12.7%) in the year and this has been achieved without impacting the operational effectiveness of the Group.

Chairman's Statement continued

IMPACT OF COVID-19

Demand for SiC and the SiC blanks that we manufacture at our US facility has been severely impacted by the slowdown in the aviation sector. Whilst this has undoubtedly restrained the Company's progress it has also acted as a catalyst for change in that business unit. The Group has acted decisively to reduce medium term exposure to the aviation sector by embracing new markets for its existing products and by adopting complementary products for new markets and customers. In April the US division signed an agreement to distribute CeramycShield™, a product that renews and restores old or decaying concrete, into the UK water industry. I am pleased to report that subsequent to the year end the Group shipped its first order for the product.

Within the wider business we saw an immediate slowdown when the UK lockdown was introduced in March 2020. The closure of accredited testing facilities and the furlough of staff at our customers meant that a number of projects were postponed or delayed. I am pleased to report that, as the UK moved out of the first wave, those projects and contracts have now generally started and are progressing to the revised plans.

The Group has taken advantage of national Covid-19 schemes and has accessed support from the US Cares Act and the UK Bounceback loan scheme. At no time during the crisis were any of the Group's sites closed and the Company acted and continues to act in accordance with the relevant guidelines in the jurisdictions in which it operates. In the UK, vulnerable employees were allowed to work from home and those employees who were able to work on site operated in accordance with the UK and Welsh Governments Covid-19 safety advice. The Company did access the UK Coronavirus Job Retention Scheme but at the time of this report I am pleased to say that all of our UK employees have returned to work, albeit some on a part time basis.

Director Changes

In November 2019 Haydale welcomed Mark Chapman as the Group's new Chief Financial Officer, who replaced Laura Redman-Thomas, and in June 2020 Theresa Wallis as a new independent Non-Executive Director, who replaced Roger Humm. I would like to take this opportunity to thank Laura and Roger for their services to the Group, and particularly Roger who had served as a director before the Company's AIM IPO in 2014.

Outlook

Whilst the business is well placed to benefit from a recovery in the aviation industry, given the uncertainty surrounding this sector the Board believes that it has put in place robust plans to grow the business whilst reducing reliance on individual products or sectors. As part of those plans, on 9 September 2020 the Company completed an equity placing raising £2.8 million (net of expenses) to provide additional working capital to finance operations. This injection of capital provides a solid foundation and allows the Company to focus on the delivery of its strategic goals. I would like to welcome our new shareholders and to thank our existing shareholders for their continued support at this time.

The Board is mindful of the ongoing uncertainty created by Covid-19 but considers that the long-term outlook remains positive and believe that Haydale's proprietary technology and its capacity to functionalise nano and other materials to significantly enhance the properties of host materials continues to deliver confidence in the prospects of the Group.

I would like to thank the executive team who have reacted so positively to the demands of the Covid-19 pandemic and, whilst challenges remain, I am confident in their ability to overcome them. I would also like to thank the staff, our advisors and my fellow non-executive directors for their hard work and dedication during the year.

David Banks
Chairman
29 October 2020

Strategic Report

The directors present their Strategic Report for the year-ended 30 June 2020.

Haydale brings together the cutting-edge technology of the patented HDPlas® process with our engineering expertise to functionalise graphene and other nanomaterials. Our technology has the potential to deliver benefits across a multitude of sectors helping to increase the technical performance of a wide range of host materials. The Group's vision is to be in the forefront of nano advanced materials and dispersion and to become a world leader in the creation of material change through understanding the potential of those materials.

At the core of our product offering is Haydale's patented HDPlas® functionalisation process which tailors advance materials to enhance the quality and performance of our customers' products, through a cost effective and environmentally friendly process. We have the engineering expertise to:

- create nano-material resins and composites to deliver enhanced electrical, mechanical (strength) and thermal performance; and
- formulate proprietary nanomaterial-based inks and coatings for the print and sensor markets, including biomedical and piezo resistive inks and sensors and the PATit anti-counterfeiting eco system.

From our US facility, we manufacture unique, proprietary SiC fibres and whiskers that strengthen ceramics and produce highly wear resistant ceramic 'blanks' for use in the aerospace industry and for abrasion resistant coatings. The Company has not historically functionalised its SiC.

At the year-ended 30 June 2020, the Group has the following operational activities in its five facilities.

Haydale subsidiary	*Location*	*Principal activities*
Haydale Limited	Ammanford, Wales	Specialist functionalisation and main manufacturing facility producing inks, resins, 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 and other nanomaterials and the provision of advanced consulting and test services to various parties including the EU and UK national institutions via R&D grants.
Haydale Technologies (Korea) Limited ("HTK")	Seoul, South Korea	Dedicated sales office servicing the fast-moving Korean and other APAC markets.
Haydale Technologies (Thailand) Company Limited ("HTT")	Bangkok, Thailand	Ink development focused on commercial applications with plasma functionalisation facilities. Services the APAC region.
Haydale Technologies, Inc. ("HTI") and its wholly owned subsidiary Haydale Ceramic Technologies LLC	Greer, SC, USA	Produces and sells SiC microfibres and whiskers, ceramic blends and ceramic blanks to the cutting tool and coatings industries

The Group safeguards its business across these sites and the territories in which it operates through the use of patents 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. At the year-end it had two applications for patents pending.

Strategic Report continued

CONSOLIDATION AND COMMERCIAL FOCUS

The financial year-ended 30 June 2020 has been one of consolidation in the wake of the major reorganisation and resetting of commercial priorities which commenced in the second half of FY19. This consolidation has latterly taken place against the backdrop of the Covid-19 pandemic which, whilst restraining revenue, has acted as a further catalyst to deliver on the strategic priorities that the Company set out in 2019.

The Group needed to transform itself from an organisation with a focus on research and development with longer term revenue ambitions to an efficient manufacturing business focussed on commercialising its portfolio of technology and securing profitable outcomes.

Under this broad theme, the Directors identified the following goals that would promote short term benefit whilst creating a sustainable long-term business model:

- Scale up blanks production at the US facility to commercial levels and ensure that the FY19 investment in the blanks machinery increased the Group's revenue and facilitated a move up the value chain for that operating division;
- Focussed R&D Investment on the technology that would support Haydale's commercial proposition and show a pathway to enhancing our core commercial offering;
- Priority in identifying and investing resource in grant funded projects where there is a clear commercial potential realisable in defined time scales;
- Embedding the structures, process and teams set up in FY19 to drive sales and maximise revenue;
- Increasing the manufacturing and functionalisation capability at Ammanford and commencing the process of planning for the medium-term expansion of production capacity to meet anticipated volume demands; and
- Realigning and reducing the Group's cost base to ensure that it supports the operational priorities of the business – cost control as a necessity and cost reduction where prudent.

SCALE UP OF BLANKS PRODUCTION

Revenue at the Group's US SiC manufacturing facility lagged our initial expectations in the first half of FY20 as the business was subject to the issues that were widely reported during 2019 in the US aerospace and petrochemical sectors. Despite the on-going sector issues, we did see demand increase in the latter part of calendar 2019 and early 2020 and strong traction with customers that had pre-approved the blanks gave us the confidence to move the facility to a double shift pattern in February 2020.

From March 2020, Covid-19 had a significant impact on forecast revenues at this division and we saw a marked slowdown in demand for SiC and blanks as the global aviation industry was grounded by the pandemic. Against a backdrop of industry predictions of a possibility of long-lasting impact on the civil aviation sector, the Directors took defensive measures to mitigate the immediate revenue impact and put in place plans that will lead towards a reduced reliance on the US civilian aviation sector going forward.

Specifically, the business received a commitment from a long-standing customer to underpin the SiC whisker volume by maintaining its short-term order patterns during the current year despite the general economic uncertainty. Whilst it is likely that this will result in reduced orders in the year-ending June 2022, this support should offer the business valuable time to deliver on the initiatives detailed below. In addition, the US business accessed funds through the US Cares Act which afforded short term support whilst the impact of the Covid-19 pandemic was assessed. Subsequent to this support ending, the division had to reluctantly reduce its workforce and, in July 2020, circa one third of the production team was made redundant at that facility.

The Directors have also taken steps to address the US division's over-reliance on the US civil aviation sector by looking outside of the US for blanks and other cutting tools customers. The Company has contracted with an experienced European agent for the marketing and sale of SiC blanks into parts of the European market and other contiguous markets. Initial samples have been provided to a manufacturer and we are awaiting test results. In the UK specifically, we have established ties with an engineering tooling supplier for the distribution of SiC blanks and subsequent to the year-end they have informed us that they have distributed our blanks to their customers for field trials.

As previously announced, we have been looking to enter the wider carbide tooling market with cost effective lower grade SiC blanks that would serve the automotive and other cutting tool markets. We have been collaborating with an Asian supplier to develop these blank tools and subsequent to the year-end have successfully completed initial tests. We are now looking to commission field trials with tooling customers in the US whilst simultaneously addressing with our supply partner operational challenges involved in scaling production to required commercial levels.

The Company has also diversified from the aviation and cutting tools sector and has looked to take advantage of the enhanced properties that SiC microfibres can deliver for coatings. In July 2020, Haydale was appointed the exclusive UK distributor to the UK water infrastructure market for US based Zirconia Inc for CeramycShield™, a one stop solution that renews and restores old or partly decaying concrete in-situ in certain applications. This product is an advanced Ceramic Surface Treatment technology in a new class of inorganic ceramic polymers, that uses Haydale's SiC microfibre as part of the reinforcement. Haydale is working closely with a UK water utility company and other water facility management companies and is pleased to announce that post year-end it shipped its first order of the product. We believe there is good potential that this cutting-edge solution could be very important to the UK water industry as it seeks to meet its obligations under the new AMP-7 five-year plan which started in 2020 and we are looking to further extend its uses by securing DW31 (Clean Water) accreditation in the current financial year.

FOCUSSED R&D INVESTMENT: PROGRESS ON PLASMA FUNCTIONALISATION

The HDPlas® functionalisation process continues to be the cornerstone of the Group's offering and good progress has been made with several new and different treatments enabling more tuneable and enhanced offerings to meet customers' requirements. This enables a much greater range of graphene and other nanomaterial treatments and facilitates potential improvements in dispersal and mechanical strength, electrical conductivity and thermal conductivity. The loaded matrix can and is being added to commercial applications such as pre-preg, compounded into polymers or elastomers, or sold as masterbatch in many ongoing programmes supported by technical datasheets that have been verified by accredited third party testing facilities. We highlight the following step change improvements in the year which have been achieved at the Ammanford and Bangkok centres of excellence. These developments demonstrate the capabilities of Haydale's unique offering:

- An increase in the surface oxygen levels from 20% up to 28%, a level which allows Haydale potential access to the graphene oxide ("GO") market and indirectly elements of the electronics sector. Existing GO is typically manufactured by stripping graphite with hazardous chemicals such as sulphuric acid and leaves a toxic bi-product whereas Haydale's GO production is a clean powder in/powder out process;
- Development of next generation functionalised inks with resistivity reduced to circa 10 ohms. This lower level resistivity potentially allows graphene functionalised inks to replace silver, copper and aluminium etch in certain metal antenna elements of the growing RFID and NFC sectors and provides a cost effective and environmentally friendly application. Existing 'tags' are generally single use and as such are consigned to landfill after use whilst Haydale functionalised inks are manufactured using a clean process and there is reduced waste to landfill on disposal;
- Further to previous work with the English Institute of Sport, Haydale has developed inks to surface coat fabrics and other garment substrates to create anti-microbial and anti-bacterial applications. The resulting fabrics are washable and can be sterilised using UV light without damaging the core properties of the fabric; and
- Further refinement of a range of graphene-enhanced prepreg materials for lightning-strike protection, utilising functionalised nanomaterials to improve the electrical conductivity of aerospace and other resins and polymers. Developed through the NATEP sponsored GraCELS 2 project, the materials developed potentially replaces the copper mesh in various parts of structures including commercial aircraft which can reduce the unloaded weight of an airliner cost effectively with clear environmental benefits. These applications also extend to other markets such as UAVs (drones), commercial and military aviation, wind generation and other sectors where risk of damage from lightning strikes exists.

The core thread running through our continued investment in R&D is the focus on creating and maintaining technological advantage where we see a clear commercial pathway. Whilst the gestation period for some of these developments, such as lightning strike protection on commercial aircraft, is governed by the long product life cycle of the end user and high safety thresholds that need to be validated, other developments such as the adoption of inks to surface coat fabric can be delivered to market in a much shorter time horizon. It remains core to our business model that we invest for the long term whilst taking advantage of the numerous short-term commercial opportunities presented by the commercial adoption of our technology.

GRANT FUNDED PROJECTS

Collaboration on grant funded projects has continued over the last twelve months with the emphasis that only projects that have a clear commercial pathway or add significantly to the Group's knowledge bank on applications with commercial potential in defined time scales will be undertaken. This rigorous criterion has reduced the number of projects that Haydale has accepted in the year but this has not diminished the importance of this work in support of the R&D investment made by Haydale. In FY20 all grant projects were funded from UK or European quasi-governmental bodies such as Innovate UK or NATEP. Amongst other projects awarded in the year, Haydale commenced the following:

- *HiBarFilm* – is a novel packaging design based on coatings for compostable-recyclable high barrier packaging film with potential applications across food packaging and other consumer products. Current food contact films require multi-layer structures to achieve the barrier performance needed but these structures make them difficult to recycle. HiBar is looking to replace these multi-layer structures with a functionalised single layer that could provide the necessary barrier protection whilst allowing for widespread recycling of these single use films. The project is in collaboration with Bangor University, Parkside Flexibles and Dunbia, the leading meat processor.
- *Affinity* – Analysis of functionalised nanomaterial interactions with polymers to better understand how functionalisation imparts specific functional groups to the nanomaterial surface for improved compatibility with the host polymer. The project is a collaboration between Haydale, the National Physical Laboratory and the Science

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and Technology Facilities Council and will be important in understanding and further enhancing the level and consistency of our functionalisation process and in allowing quick and efficient selection of improved chemistries to optimise the performance of our current portfolio.

This structured approach to development is facilitating the internal learning experience and creating potential products to fit with the organic growth momentum at the centre of our strategic drive.

GLOBALISATION OF THE STRATEGIC BUSINESS UNITS

The realignment of the strategic business units and the establishment of a global sales team in the year ended June 2019 created the opportunity for greater cross-selling of products. As noted above, subsequent to the year-end we shipped the first order for CeramycShield™ to a UK water company. The initial contact with Zirconia Inc was made by our US division whilst the introduction of the product to the UK water utility was facilitated by our UK sales and innovation team. They have collaborated through initial workshop trials, technical updates and commercial negotiations to the point where a field asset has been identified for application and the UK technical team will attend that trial.

We further strengthened the sales team in this year with the addition of UK expertise in both the inks and composites sectors. Despite the challenging environment the enlarged team is delivering some excellent business wins and we would highlight the following:

- A four-year exclusive distribution agreement with Uniqe to market Haydale's electrically conductive masterbatch in the Chinese market. The parties will work towards completion of initial testing, securing the requisite licences and final certifications from the relevant authorities before the contract is expected to move to the commercial phase in early 2021. Subject to successful trials, the agreement stipulates minimum annual revenue thresholds which commence at US$300,000 for the calendar year 2021 and increase annually thereafter.
- In March 2020 Haydale announced that its graphene nanoplatelets were to be incorporated into cosmetic face sheets manufactured by iCraft, a South Korean company. The face mask sheets utilise the thermal and electrical conductivity of graphene to help the skin absorb its contents through bioelectric currents. Subsequent to the year- end, a three-year supply contract was agreed for one metric tonne of functionalised graphene nanoplatelets in the first year, two metric tonnes in the second year, and three metric tonnes in the final year. This is an exclusive agreement for the mask application within the APAC region, excluding Thailand, and represents the largest contract by volume that Haydale has signed for functionalised nanomaterial.
- Shortly after the end of the financial year in early July 2020, the Company announced that it had signed an agreement with IRPC (a Thailand based subsidiary of PTT Global Chemical Public Company Limited) to develop a graphene and functionalised acetylene black conductive inks for RFID, NFC and related applications. The screen-printing inks are to be developed as a collaboration between our Ammanford and Bangkok teams based on initial development work completed at the UK site.

These wins are supported by a strong pipeline of profitable and exciting opportunities and a number of these were listed in our announcement of 9 September 2020. Subsequent to the year-end, the cross selling of group products has continued with the commencement of blanks trials with an EMEA cutting tools end user, sales of SiC whiskers to customers in APAC and the sale of functionalised inks produced at the Ammanford site for the manufacture of anti-microbial masks by IRPC. As announced on 15 September 2020, Haydale has signed contracts for the provision of services to Dowty Propellors which will see the Company assist Dowty in examining the feasibility of various material technologies pertinent to Dowty's future product development. The projects will involve the incorporation of graphene, SiC microfibres and other nano scale materials into applications that may include erosion resistant coatings and functionalised inks for non-invasive strain sensing.

As noted, inter-site cooperation on technology, new product development and sales has created exciting and profitable opportunities for the Group. This collaboration has increased the need for all units to contribute both technically, operationally and financially to the Group. Notwithstanding the previous investment in the Taiwan operation, the Directors could see no realistic prospect of that business unit moving into profitability in the medium term. The Board therefore took the decision during the year to close the Taiwan facility and move production to the Group's Bangkok and Ammanford sites. Haydale moved decisively to fill the gap created by the closure of this facility and recently signed a distribution agreement with U-Win, a specialist materials and technology focused sales organisation, who have a mandate to sell Haydale's specialist inks and composites into biomedical sensor, automotive and sports equipment manufacturers in Taiwan. Management are pleased with the early progress of this arrangement and the collaboration between U-Win and the teams at Ammanford and in Bangkok. Within the wider APAC region, Haydale has established a memorandum of understanding with a Sino-UK facilitator for business development purposes in China. Whilst it is still early days, we are seeing encouraging interest in the region for our PATit anti-counterfeiting product and, subsequent to the year-end, we received two orders for SiC microfibres from customers introduced by this intermediary.

It is perhaps the shift in marketing that concisely sums up how the Group has embedded the one company ethos to support the drive to commercialise the technology portfolio. The focus of the marketing team has successfully pivoted to trade marketing to support product sales and this move was reinforced during the year when the Haydale website was overhauled and business units in the US and APAC were incorporated to ensure that we had one website supporting the global outlook. The website is not only a window into the Group but an integrated part of the sales process and has product descriptions and the latest technical data specifications available for download.

To underpin the One Company philosophy, in January 2020, Haydale adopted a new EMI share option scheme in the UK to incentivise and retain existing employees and to help recruit new members of the team. Subsequent to the year-end, this scheme was rolled out in the form of a Stock Appreciation Rights plan to our US division and it remains our intention that this will eventually cover most of the wider Haydale team.

INCREASING PRODUCTION CAPACITY AT AMMANFORD

Haydale has over the last few years gradually increased its capacity to functionalise graphene at its Ammanford facility and in FY18 it successfully introduced an HT200 plasma reactor which offered seven times the capacity of the smaller HT60 reactors. This investment ahead of the production curve is now allowing Haydale to meet the demands of its commercial commitments and in particular will support the manufacturing requirements of the new iCraft cosmetic face sheet supply agreement. To support this increased demand, the Group has approved plans to invest circa £0.05 million in a new gas delivery and piping system to reduce our production changeover times, enhance output consistency and to further improve on our exacting health and safety standards.

Whilst we have a number of options to further increase our functionalisation capacity utilising our existing reactor capabilities in the current year, we anticipate the need to invest in larger capacity reactors in the medium term. Collaboration with our key OEM on plans to design the next generation of HDPlas® reactors has continued during the year and no significant technical challenges are foreseen at this time to the introduction of larger capacity plasma reactors when they are required.

REALIGNING AND REDUCING THE GROUP'S COST BASE

During the year, the Directors have continued to realign the cost base to ensure that the Group focuses resources on achieving its strategic goals. As the Group has reorganised its operations and streamlined its reporting lines, it has achieved both a more efficient and effective operating structure and delivered significant cost savings. The process that started last year has continued during the current year and adjusted administrative expenses have reduced by a further £0.87 million (FY19: £0.85 million reduction on FY18) in the year and we anticipate that costs will reduce further as a result of the annualised impact of reductions made this year and further savings that we anticipate can be realised in the year-ending June 2021.

The main savings have been achieved in the following areas:

- Realignment and reduction in the workforce with the principal savings being achieved by streamlining reporting lines. Overall headcount has reduced by circa one third in the last two years whilst the business has increased its investment in sales resource and commercial support functions;
- Closure of the loss-making Taiwan facility and relocation of the production to the Bangkok and Ammanford sites with minimal loss of revenue or customers; and
- Cost reductions across all areas of the business including reducing travel expenses, professional fees and consulting costs and making numerous smaller and, in themselves, non-material adjustments which taken together have contributed to controlling spend.

The savings secured have been achieved in a timely but not hurried timeframe and the Company has focussed first on operational efficiency and then on achieving that in the most cost-effective manner. This approach has ensured that, despite the savings achieved, Haydale is now operating in a more flexible, responsive and productive manner that supports a can-do culture across the business units.

FUTURE STRATEGIC DIRECTIONS

FY20 was a year of consolidation in the wake of the reorganisation and resetting of priorities in the second half of FY19. This consolidation has, from March 2020, been in the shadow of the Covid-19 pandemic which has depressed demand, subdued our revenue expectations and obliged the Directors to revisit the priorities set in 2019.

As detailed above, the direction of travel of the Group has not altered and it remains our fundamental priority to commercialise our exciting cutting-edge technology portfolio. Within this overarching goal we have had to refine our operational strategy to ensure that we meet the challenges of the pandemic. The Directors remain mindful that we are in uncertain times, and that the longer-term impact of Covid-19 either directly on sectors such as aerospace and indirectly on the sports and leisure, automotive and other industries may have as yet unforeseen effects on the Group's development. However, the efforts of the Haydale team and the progress made during the year continue to reinforce the Directors' belief that, whilst navigating the challenges ahead will be demanding, it is in the knowledge that the Company is moving purposely in the right direction.

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 as adopted by the European Union and are set out on pages 33 to 70. The

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financial statements of the Company continue to be prepared in accordance with FRS 101 and are set out on pages 71 to 78.

Statement of Comprehensive Income

In the year under review, the Group's three principal areas of income were sale of SiC fibres, whiskers and blanks; Specialty Inks; and graphene enhanced composites. There is a further category of grant funded income which is included in Other Operating Income and will be discussed separately.

The Group's revenue for the year-ended 30 June 2020 of £2.95 million (FY19: 3.47 million), showed an overall decrease of £0.52 million on that of the prior year. This reduction reflected a fall in the Advanced Materials and RPC&I[1] business units of £0.45 million and £0.08 million respectively which was only partially offset by a £0.01 million increase in APAC sales. Other operating income, which is principally grant funded projects, at £0.76 million (FY19: £0.79 million) is broadly in line with prior year, but has benefitted from the support offered by the US Cares Act during the latter part of FY20.

Notwithstanding the fall in Revenue, the Group's Gross Profit, which excludes Other Operating Income, increased marginally to £2.06 million (FY19: £1.9 million) delivering a Gross Profit margin of 70% (FY19: 55%). The increase in margin was principally due to the reduced level of sales of SiC ceramic blends into the US fracking industry.

The focus on reducing costs continued in the year and adjusted Administrative Expenses fell by £0.87 million 12.7% to £5.99 million (FY19: £6.87 million) on a like for like basis, ignoring the impact of IFRS 16 on the presentation of the results. The adoption of IFRS 16 reduced adjusted Administrative Expenses by £0.63 million to £5.36 million and increased the charge for Depreciation and Amortisation by the same amount. In line with the transitional reliefs available, no adjustments have been made to the prior year figures. Over the last two reporting periods the Company has reduced its operating cost base by £1.72 million. Adjusted administrative expenses exclude non-cash items such as share based payment charges, depreciation and amortisation as well as one-off restructuring and impairment costs and, as such, gives visibility of the ongoing cash impact of our operating cost base. Total administrative expenses for the year were £7.05 million (FY19: £8.53 million).

The Group continued to direct resource to research and development with the focus for that investment on products and process that could develop into sustainable and profitable revenue streams. R&D spend for the year was £1.42 million (FY19: £1.84 million[2]), of which £0.25 million was capitalised (FY19: £0.27 million). During the year the Group claimed R&D tax credits of £0.39 million (FY19: £0.44 million) and it is expected that this claim will be received during the current year.

Total comprehensive loss for the year was £4.23 million (FY19: £7.12 million), including the £0.06 million of restructuring costs (FY19: £2.13 million including an impairment of intangible assets of £1.79 million), the loss from trading activities for FY20 was £4.23 million (FY19: £5.85 million). There is no impairment of intangible assets in the year.

The loss per share for the year reduced to £0.01 (FY19: £0.06 loss).

Statement of Financial Position and Cashflows

As at 30 June 2020, net assets amounted to £7.45 million (2019: £11.25 million), including cash balances of £0.82 million (2019: £4.69 million). Other current assets increased to £3.32 million at the year-end (2019: £3.13 million) and this was mainly related to the increase in inventory of £0.53 million at the US facility during the year. We anticipate reducing inventory levels over the next 12 – 18 months. Current liabilities reduced to £2.92 million as at 30 June 2020 (2019: £3.12 million) due principally to the reduction in loan balances.

Tangible Fixed Assets and non current liabilities were impacted by the adoption of IFRS 16 and the Group recognised a Right of Use Asset in respect of its leased premises of £1.59 million and a Right of Use Liability of £1.65 million. These 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.

Net cash outflow from operating activities before working capital movements for the year reduced to £2.58 million (2019: £4.59 million), the principal contributing factors being the adjusted operating loss of £4.02 million (2019: £7.19 million). Capital expenditure in the year, excluding the IFRS 16 adjustments set out below, of £0.04 million (FY19: £1.2 million) was significantly less than the prior year when the Group invested in the US blanks production equipment. The Group received a R&D tax credit inflow of £0.85 million in FY20 (FY19: £0.08 million), which included repayments for the R&D claims made in both FY18 and FY19.

Capital Structure and Funding

As at 30 June 2020, the Company had 340,223,848 ordinary shares in issue (2019: 317,723,848). In November 2019, the Company issued 22,500,000 new ordinary shares in connection with an equity subscription at 2 pence per ordinary share which raised £0.45 million (before expenses). No options were exercised into ordinary shares during the year (FY19: none).

The Group repaid borrowings of £0.84 million during the year under review (FY19: £0.50 million), of which £0.58 million related to the full repayment of the £0.75 million loan secured from the Development Bank of Wales in December 2019 and the remainder related to the Group's US borrowing facilities which

[1] Resins, Polymers, Composites & Inks

[2] The method of calculating R&D spend has been changed during the year to align with the calculations submitted to HMRC for the R&D tax credit.

are secured on the Group's US based tangible assets. The Company received £0.05 million under the UK Government's Bounceback loan scheme on 2 June 2020. The Group's $900,000 working capital facility, which is included in Bank Loans, is secured on the inventory and trade receivables of the US business and was fully utilised at the year-end (2019: fully utilised). The net result was that Group's total borrowings at the year-end were £1.25 million (2019: £1.96 million), of which £0.05 million was in the UK and the balance held by the Group's US subsidiaries. There were no financial covenants extant in respect of either the Group's UK or US borrowings.

Haydale's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide return to equity holders of the Company and benefits to other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. The Group manages this objective through tight control of its cash resources to meet its forecast future cash requirements.

Post Balance Sheet Event

Subsequent to the year-end and in recognition of the general uncertainty created by Covid-19, the Company looked to improve its immediately available liquidity through an issue of new equity shares. On 9 September 2020, the Company raised £2.98 million (gross) through the placing and subscription of 85,055,950 new Ordinary Shares at 3.5 pence per share. The funds raised through the fundraising are being used predominantly as working capital to finance the operations of the Group.

Key Performance indicators

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

	FY20 (£m)	*FY19 (£m)*
Revenue	2.95	3.47
Gross profit margin	70%	55%
Adjusted operating loss[3]	(3.17)	(4.18)
Cash position	0.82	4.69
Borrowings	1.25	1.96

Due to the impact of Covid-19 in the second half of the year some of the Group's KPIs were lower than targeted in particular Revenue.

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

SECTION 172(1) STATEMENT

The Directors acknowledge their duty under s.172 of the Companies Act 2006 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 Chairman's Corporate Governance Statement on page 16.

PRINCIPAL RISKS AND UNCERTAINTIES

The Board has ultimate responsibility for risk management throughout the Group and determines the nature and extent of risk that the Company is willing to take to achieve its objectives. The Board considers that the principal risks and uncertainties facing the Group may be summarised as follows:

Impact of Covid-19

The Covid-19 pandemic has adversely affected Group revenues during the latter part of the year under review. The Directors accept that there remains a a varying degree of uncertainty in all of the countries in which it has facilities and in the markets in which it operates. The potential impact of Covid-19 on the future performance and liquidity of the Group has been considered.

As reported in the Post Balance Sheet Event above, the Group raised further capital after the year-end and it continues to monitor its future funding needs to ensure that it remains a viable operation.

Health and Safety

Many of the Group's products of advanced materials 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.

Covid-19 has added a further health and safety risk during the current year. The Group has carried out risk assessments at each of its facilities and continues to monitor these assessments and the procedures that are in place against the latest national, regional and state guidance in the jurisdictions in which it

[3] Adjusted Operating Loss of £3.17 million is on a like for like basis and includes the £0.63 million of rental costs which in line with IFRS 16 has been included within depreciation in the consolidated statement of comprehensive income.

Strategic Report continued

operates. Special attention has been paid to vulnerable workers and those that are required to shield to protect other members of their household and the Group has embraced video and other technology to ensure that it communicates and monitors the physical and mental wellbeing of colleagues working from home.

Client Concentration Risk

The Company's two largest customers accounted for 49% of revenue in the year (FY19: 50%) and any breakdown in these relationships could damage the business. Notwithstanding that the Company has contracts with or long term commitments from its larger customers it worked hard during challenging trading conditions to maintain good relations with its key customers.

The Company is anticipating that as its customer base expands it will naturally reduce the reliance on any one single customer although it acknowledges that it will take time to reduce its reliance on these two key customers to fully mitigate the current exposure.

Acceptance of the Group's Products

The success of the Group will depend on the market's acceptance of, and attribution of value to, advanced materials technology developed by the Group based on successfully mixing and dispersing raw, mined graphite and other synthetically produced graphenes into customers' existing products in order to improve the mechanical, thermal or electrical properties of the customers' existing products.

Notwithstanding the technical merits of the processes developed by the Group, and the extensive market and product research carried out by management to assess the likelihood of acceptance of the Group's products, there can be no guarantee that its targeted customer base for the processes will ultimately purchase the Group's products.

Speed of product adoption

While the Group makes every effort to establish sensible timelines for customer engagement 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. Additionally, a change of senior management or a corporate event such as a merger can cause revisions in customer requirements and potentially cessation of product development. The improvement in focus and direction has been a recent change to ensure commercial product sales are an absolute priority not withstanding 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 maintain adequate protection of its IP portfolio, covering its manufacturing process, additional processes, products and applications, including in relation to the development of specific functionalisation of graphene and other types of carbon-based nanomaterials for use in particular applications. The IP on which the Group's business is based is a combination of granted patents, patent applications and confidential know-how.

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 assist.

Growth Risk

Expansion of the business of the Group may place additional demands on the Group's management administrative and technological resources and marketing capabilities and may require additional capital expenditure. The Group monitors the additional demands on resources on a regular basis and strengthens resources as necessary. If the Group is unable to manage any such expansion effectively, then this may adversely impact the business, development, financial condition, results of operations, prospects, profits, cash flow and reputation of the Group.

Competition Risk

The Group's current and potential competitors include companies and academic institutions, many of whom have significantly greater financial resources than the Group and management regularly reviews the competitive landscape. There can be no assurance that competitors will not succeed in developing products that are more effective or economic than any developed by the Group or which would render the Group's products non-competitive or obsolete.

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 ensure our ability to attract and retain key employees. The EMI scheme introduced in January 2020 demonstrates the Directors' commitment to incentivising and rewarding its employees.

The impact of the UK leaving the European Union

The UK entering the transition period with the EU on the 1 January 2020 has not had a material impact on the Group's performance in the current reporting period. However, in light of the uncertain progress on agreeing a future trading arrangement, as the country exits the transition period on the 31 December 2020 it is likely that the Company will have to manage some uncertainty in the following areas:

- Materials: any hindrance to the ability of the Group to import graphene and export its products, together with fluctuations in the value of Sterling, may have an impact on the Group's operations.
- Regulations: the Group is subject to the relevant regulations, including materials handling, within the jurisdictions that it operates, which include the EU. Any material adverse changes to the requirement for UK based business to adopt additional regulations as a result of Brexit may have a detrimental effect on the Group's operations.
- Grant income: the Group has previously benefitted from EU grant funds, The Group is seeking to replace EU grant funds with additional grant awards from Innovate UK or other UK national or regional assembly bodies that support inward investment, innovation and research and development work.

By order of the Board

David Banks
Chairman
29 October 2020

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 Doidge Richard Banks,
Non-Executive Chairman

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 Chairman in July 2017 and was appointed as Interim-executive Chairman on 5 September 2018 and, following the general meeting on the 12 March 2019 reverted to Non-executive Chairman.

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.

Mark Chapman,
Chief Financial Officer

For the last 19 years, Mark held a number of CFO and COO roles within international companies operating in the med-tech, beverages and consumer sectors, where he has helped deliver strong improvements in business sustainability and EBITDA growth. Prior to moving into industry, Mark spent 8 years in professional services firms, including 5 years as a corporate financier with Deloitte. Before embarking on his career in finance, Mark was a commissioned officer in the British Army. Mark qualified as a chartered accountant in 1995 and holds a degree in Economics from the University of Birmingham. Mark joined Haydale as CFO in November 2019.

Graham Dudley Eves MA,
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 chairman 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 and has a Master of Arts degree in Modern and Medieval Languages from the University of Cambridge.

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 end 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 chairman, 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 degree in Zoology from the University of Oxford and a Diploma in Company Direction from the Institute of Directors. Theresa brings a range of corporate governance, business development, financial and commercial skills and experience. 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 under the Companies Act 2016 with company number 07228939, and its subsidiaries (together the "Group") for the year ended 30 June 2020.

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 11 covers the following matters:

- Principal Activities;
- Review of the Business and Future Developments;
- Key Performance Indicators; and
- Research and Development.

The directors' responsibilities in respect of the annual report and the financial statements are included on page 25.

Dividends
The directors do not propose the payment of a dividend (2019: nil).

Directors
The following directors have held office since 1 July 2019 and up to the date of signing the financial statements:

David Banks
Graham Eves
Roger Humm (resigned 10 June 2020)
Theresa Wallis (appointed 10 June 2020)
Keith Broadbent
Laura Redman-Thomas (resigned 22 November 2019)
Mark Chapman (appointed 22 November 2019)

Directors' Interests in Ordinary Shares
The directors, who held office at 30 June 2020, had the following interests in ordinary shares of the Company at the 30 June 2020 and at the date of this report:

Director	*Number of Shares at 30 June 2020*	*% of Share Capital*	*Number of Shares at 29 October 2020*	*% of Share Capital*
David Banks	2,241,667	0.66	3,098,809	0.73
Keith Broadbent	500,000	0.15	785,714	0.18
Mark Chapman	275,000	0.08	560,714	0.13
Graham Eves	–	–	142,857	0.03
Theresa Wallis	–	–	428,571	0.10

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.

Post Balance Sheet Events
On 9 September 2020, the Company raised £2.98 million (gross) through the placing and subscription of 85,055,950 new Ordinary Shares at 3.50 pence per share.

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.

Directors' Report continued

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 December 2021. 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 as our understanding of the potential impact of the Covid-19 pandemic has deepened. The Directors are also mindful of the impact that the other risks and uncertainties set out on pages 9 to 11 may have on these estimates and in particular the speed of adoption of new technology during these uncertain times.

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

Revenue

The underlying methodology has been to split the forecast revenue into two groups. The first group consists of revenue streams which are underpinned by contracts or some other form of customer guarantee or commitment and therefore have a high certainty of delivery. The second group consists of all other revenue lines. For this second tranche, in October 2020, we have assessed the potential value and the likelihood of delivery of each revenue line based on management's latest information and this has given us a weighted average unconfirmed revenue estimate by month to December 2021. We have then applied further general sensitivities to that estimate to assess the margin of error that would need to exist in those estimates before the Group would have a requirement to raise further funds.

Working Capital Facilities

The Directors have also stress tested the forecasts to assess the likely impact if existing working capital facilities were either not, or not fully renewed during the period under review. The non-renewal of existing facilities reduces the general sensitivity level on unconfirmed revenue streams to circa 55% of managements estimates before the forecast shows a cash negative position.

Cost Mitigation

The Directors have not included any assumptions regarding cost savings that might be achievable if the forecast fails to meet the sensitised estimates. Whilst the Directors do believe that there would be scope for further cost reductions these have not been factored into their assessment of going concern.

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 publicly available information and included the results of these assessments in our forecasts.

Summary

Therefore, after due consideration of the forecasts prepared and the sensitivities applied, the Group's current cash resources and its borrowing 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.

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

Following a tender process Grant Thornton LLP were appointed as auditors to the Group during the year. The comparative results for FY19 were audited by the Group's previous auditor, BDO LLP. The auditors have expressed their willingness to continue in office and a resolution concerning their re-appointment 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
Chairman
29 October 2020

Chairman's Corporate Governance Statement

Overview

As Chair of the Board of Directors of Haydale Graphene Industries Plc ("Haydale", the "Group" or the "Company"), 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. We regularly review our governance processes to ensure we are constantly improving. 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.

The Board believes that corporate governance is more than just a set of guidelines; we believe that good corporate governance improves long-term success and performance, whilst reducing or mitigating risks.

During the year the following changes were made to the Board's composition:

- The resignation of Laura Redman-Thomas as Chief Financial Officer on 28 October 2019, with Laura leaving the Company on 22 November 2019;
- The appointment of Mark Chapman as Group Chief Financial Officer on 22 November2019;
- The appointment of Theresa Wallis as an independent non-executive Director on 10 June 2020; and
- The resignation of Roger Humm as an independent non-executive Director on 10 June 2020.

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 has concluded that the highest medium and long-term value can be delivered to its shareholders by the adoption of a single purpose for the Company: *To use our knowledge of advanced materials and dispersion to be one of the world's foremost creators of material change, enabling our customers to improve the performance of their products.* 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. Haydale's business model and strategy, together with the principal risks and uncertainties facing the Group, are set out in the Strategic Report on pages 3 to 11 of this Annual Report.

The Company intends to deliver shareholder returns initially through capital appreciation and eventually through distributions via dividends.

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. David Banks is the Director appointed as the main point of contact for shareholder liaison. The Directors ensure that shareholder enquiries are responded to and take on board shareholder views.

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. In normal years all shareholders are encouraged to attend the Company's Annual General Meeting ("AGM") but unless the current Government guidance on non essential gatherings and social distancing is materially changed before the AGM and the Company is able to comply with that revised guidance then shareholders will, unfortunately, be unable to attend the next AGM. If there is a resolution passed at a general meeting with a significant number of votes against, the Board seeks to understand the reason for the result and, where appropriate, takes suitable action.

The whole Board normally attends the AGM although due to current restrictions the minimum required to meet quorate will attend the next AGM. The AGM is normally regarded as an opportunity to meet, listen and present to shareholders and shareholders are

Chairman’s Corporate Governance Statement continued

encouraged to attend and the Board regrets that this will not be possible this year due to the current restrictions, however, we will provide further information as to how shareholders can submit questions to the Board in the notice to AGM.

The Company's broker and nominated advisor, Arden Partners, is briefed regularly and updates the Board during the year on shareholders' expectations.

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 s172 of the Companies Act and has worked throughout the year to promote the success of the Company for the benefit of its members as a whole. 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 s172 or not. The Board ensures that there is close oversight and contact with its key resources and relationships and, whilst this has been more challenging since the introduction of Covid-19 meeting, travel and other restrictions the Company has used video conferencing and other modes of communication to maintain its efforts in this regard. 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 Company prepares a detailed budget annually which takes into account the Group's long-term strategy and its available key resources including staffing, working capital, production capacity and functionalisation capabilities.

In depth analysis and reviews of each business unit’s budgeted business plan are agreed at the start of each financial year, with contributions from all involved parties which facilitates a two-way communication channel with agreement on the goals, targets and aspirations of the Company. This provides each strategic business unit with the opportunity to raise issues and provide feedback to the Board. 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 ongoing relationships with a broad range of its stakeholders and provides them with the opportunity to raise issues and provide feedback to the Company. The Company seeks regular feedback from 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. Feedback received from stakeholders is reviewed, considered, and, if changes are required, 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.

The Directors believe that the Group does not have a significant environmental or community impact and will continue to monitor and will take action if this changes in the future.

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 Company has adopted a risk register, which is reviewed regularly by senior management and the Audit Committee. The principal risks and uncertainties to the business are set out in the Strategic Report in this Annual Report on pages 3 to 11.

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 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:

- Monthly management accounts information is prepared and reviewed by the Board, including variances against the annual budget, latest forecasts 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 Company is ISO 90001:2015 and ISO 14001:2015 certified.

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: Mark Chapman;

Non-executives

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

Biographical details of the Directors can be found here at www.haydale.com.

All the Non-Executive Directors are expected to dedicate at least 24 days per annum to the Company. Mr Broadbent and Mr Chapman are full time. One third of Board are subject to re-election at each AGM.

Board meetings are open and constructive, with every Director participating fully. Senior management are also invited to meetings, providing the Board with further insights into the Company's activities and performance.

The full Board has at least eight regular meetings in the year, that are scheduled in advance, and also as and when required. In order to be efficient, the Directors meet formally and informally both in person by telephone or videoconference, which became the norm during the Covid-19 lockdown. Board and Committee document authors are made aware of proposed monthly deadlines through the schedule of meetings. Board papers are prepared by the relevant personnel (for example Chair, CEO, CFO, business unit heads) and 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.

Chairman's Corporate Governance Statement continued

During the year ended 30 June 2020, the Company held 20 board meetings (FY19: 27), with each member's attendance as follows:

	Number of board meetings attended			
Director	*Scheduled FY20*	*Ad hoc FY20*	*Total FY20*	*Total FY19*
David Banks	11/11	9/9	20/20	27
Keith Broadbent	11/11	8/9	19/20	24
Laura Redman-Thomas (resigned 22 November 2019)	3/3	3/4	6/7	13
Graham Eves	10/11	6/9	16/20	21
Roger Humm (resigned 9 June 2020)	10/10	4/4	14/14	22
Mark Chapman (appointed 22 November 2019)	8/8	6/6	14/14	–
Theresa Wallis (appointed 10 June 2020)	1/1	–	1/1	–

Attendance at the Company's audit, remuneration and nomination committee meetings during FY20 and the prior year were as follows:

	Number of committee meetings attended					
Committee member	*Audit*		*Remuneration*		*Nominations*	
	FY20	FY19	FY20	FY19	FY20	FY19
David Banks	3/3	1/1	8/8	8/8	3/3	3/3
Graham Eves	3/3	1/1	6/8	6/8	3/3	3/3
Roger Humm (resigned 10 June 2020)	1/2	1/1	8/8	8/8	3/3	3/3
Theresa Wallis (appointed 10 June 2020)	1/1	-/-	-.-	-/-	-/-	-/-

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.

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 are outlined on page 12 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 assistance to the Company in its Company Secretarial and MAR compliance needs. Matt Wood, a director of ONE Advisory Limited, is Haydale's Company Secretary.

If required, the Directors are entitled to take independent legal advice and, if the Board is informed in advance, the cost of the advice will be reimbursed by the Company.

In addition the Company is a member of the QCA and as such all the directors have access to briefings issued by the QCA.

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

We stated last year that every other year the Board expects to carry out an internal Board and Committee evaluation exercise, including that of the Chair and individual directors. With further significant board changes having taken place during the past year, the exercise will be performed in the year ending June 2021, led by the Chair. A Non-executive Director will lead the review of the performance of the Chair.

The Nomination Committee, comprised entirely of the Non-executive Directors, reviews the structure, size and composition required of the Board compared to its current position, makes recommendations to the Board, considers succession planning and oversees the process to fill Board vacancies. However as with many small companies, due to financial constraints and limited human resources, internal opportunities for succession to board director roles are circumscribed.

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.

Our culture acts as the glue that binds our staff around the world together - tenacious, professional and humble with a focus on doing the very best we can for each project entrusted to us. Group culture is at the centre of everything we do and to ensure and assist all of our employees across our five sites to be aligned with the Haydale culture is important in improving operations and ultimately our performance.

A large part of the Company's activities is centred upon what needs to be an open and respectful dialogue with employees, clients and other stakeholders. Therefore, the importance of sound ethical values and behaviours is crucial to the ability of the Company to successfully achieve its corporate objectives. The Board places great importance on this aspect of corporate life and seeks to ensure that this flows through all that the Company does. The Board is working to achieve a shared culture across each of our regions of operation, ensuring more effective communications and cooperation between employees across the Group.

The Company intends to carry out a Group-wide employee engagement survey every other year, to commence during the financial year to 30 June 2021, that will determine if ethical values and the Company's corporate culture are recognised and respected, and seek to understand any underlying issues that employees may have.

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, in particular strategic decisions, receive adequate time and attention at Board meetings. 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 robust.

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 and changes in senior personnel
- Board membership
- Approval of major capital expenditure
- Financial reporting, risk management and internal controls

Chairman's Corporate Governance Statement continued

- 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
- 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. For most of the year under review, Roger Humm was a member and Chair of the Committee, with Ms Wallis taking over this role on 10 June 2020. The CFO 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 the financial reporting, risk management and internal control. The Audit Committee 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 intend to meet not less than twice in each financial year.

During the year the Committee met twice. At the first meeting in September 2019 it reviewed the feedback from the auditors (BDO) on the audit for the financial year ended 30 June 2019 and considered the specific representations set out in the draft letter of representation. Key audit matters were discussed including going concern and impairment of intangible assets. At this meeting the Committee also considered the risk register and the draft governance statement.

The second meeting of the Committee was held in June 2020 following the appointment of the new Committee chair, Theresa Wallis. The meeting considered the terms of engagement between the Company and Grant Thornton UK LLP, who would be taking over as the Company's financial auditors as well as the audit plan for the Company and its subsidiaries.

The Committee met on 26 October 2020 to consider the report and accounts for the year ended 30 June 2020, including the key judgements and estimates including revenue recognition, going concern, impairment of intangibles and valuation of the defined benefit pension scheme set out in notes 1, 10 and 26 to the accounts on pages 37, 52 and 66, as well as the independence of the auditors and their fees.

Remuneration Committee

The Remuneration Committee has three members, David Banks (Chair), Graham Eves and Theresa Wallis. Roger Humm was a member of the Committee until 10 June 2020, when Ms Wallis was appointed. The Directors' Remuneration Report is set out on pages 22 to 24 of this Annual Report. The members are all Independent 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 determine and agree with the Board the framework or broad policy for the remuneration of the Company's Executive Directors and the Senior Management of the Group. The Remuneration 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 also considers the granting of share options pursuant to the Company's share option schemes. The Remuneration Committee shall meet not less than twice a year and will meet on other occasions as and when required.

The Directors' Remuneration Report is on pages 22 to 24.

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.

Set out below is an update on the activities of the Committee for the year ended 30 June 2020, in which positive progress was made and which involved a number of significant changes.

The composition of the Committee changed during the year. Graham Eves took over the chair from David Banks, who remains on the Committee, and Theresa Wallis replaced Roger Humm.

The Committee met twice during the year and held a number of additional meetings involving the Chief Executive Officer (CEO) as well as telephone conference calls to discuss two key appointments: the recruitment of a new Chief Financial Officer (CFO); and, the appointment of a Non-Executive Director to replace Roger Humm, who was retiring from the Board. I am pleased to report that we have been very fortunate with the two appointments. Mark Chapman as CFO has had a major impact on the Company's financial controls and he is supporting the CEO. Theresa Wallis brings considerable AIM company experience and has taken over as chair of the Audit Committee. Both are enhancing the Company's corporate governance.

Tasked with succession planning, the Committee feels that it has carried out its role with the above-mentioned appointments and that the Company now needs a period of stability before evaluating the success of the business and any further Board developments that might be required.

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.

In addition, the Company engaged Hardman & Co in the year ended 30 June 2020 to publish research on the Company that can be distributed to both private and institutional existing and potential shareholders.

The Board 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 will 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, in order to maximise efficiency.

A summary of the work carried out by the Audit and Nomination committees during the year is set out in section 9 above. The Directors' Remuneration Report is on pages 22 to 24.

By order of the Board on 29 October 2020

David Banks
Chairman

Directors' Remuneration Report

REMUNERATION COMMITTEE

The Company's remuneration policy is the responsibility of the Remuneration Committee which was first established at the time of the Company's admission to trading on AIM. The terms of reference of the Remuneration Committee are outlined below and in the Chairman's Corporate Governance Statement on page 20. The members of the Remuneration Committee during the year under review were Graham Eves (Chairman), David Banks and Roger Humm to 10 June 2020, with Theresa Wallis joining the Committee on the same day. There is no requirement for the Company to prepare a Directors' Remuneration Report under the AIM Rules, however the Directors have included this report voluntarily. The requirements of the 2006 Companies Act in respect of the Directors' Remuneration Report have been applied to this report.

The Remuneration Committee is required to meet at least twice per year and is responsible for considering executive remuneration. Executives may be invited to attend to assist the Remuneration Committee, but no director or manager of the Company may be involved in any decisions as to their own remuneration.

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

Directors' remuneration for the year to 30 June 2020 is set out on page 24.

The Remuneration Committee terms of reference require it to develop 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 form a significant proportion of the total remuneration package of executives and that such elements be designed to align executives' interests with those of shareholders and to give such executives incentives to perform at the highest levels.

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 a new EMI share option scheme ("2020 EMI Scheme"). As part of the adoption of the 2020 EMI Scheme, the Company's two existing share incentive schemes, the 2014 EMI share option scheme adopted by the Company in April 2014 ("2014 Option Scheme") and the 2017 LTIP adopted by the Company in December 2017 ("2017 LTIP") were cancelled. All options granted to Directors under the 2017 LTIP and all EMI options under the EMI element of the 2014 Option Scheme have been surrendered and the Directors have no options outside of those granted under the 2020 EMI Scheme, as set out below.

2020 EMI Scheme

The 2020 EMI Scheme is designed to directly aligning the interests of the Directors and other employees with those of shareholders, as set out below.

Under the 2020 EMI Scheme, the Company granted a total of 34,100,000 options ("2020 Options"), of which 19,000,000 were granted to the Company's Executive directors and a further 3,500,000 options were granted to directors of subsidiaries of the Company. All of the 2020 Options granted have an exercise price of 2.25p per Ordinary Share and can only be exercised between the third and tenth anniversary of Grant ("Exercise Period"). The proportion of the 2020 Options granted that are capable of vesting is dependent on certain performance conditions being met, with such performance being directly linked to the performance of the Company's share price from the date of grant to 30 September 2023 as follows:

% of Grant subject to the Performance Condition	*Performance Condition*
30%	For a period of 15 consecutive dealing days, commencing after the date of Grant and ending on or before the 30 September 2021, the closing price of the Ordinary Shares exceeds 4.0p (four pence) per Ordinary Share.
30%	For a period of 15 consecutive dealing days, commencing after the date of Grant and ending on or before the 30 September 2022, the closing price of the Ordinary Shares exceeds 8.0p (eight pence) per Ordinary Share.
40%	For a period of 15 consecutive dealing days, commencing after the date of Grant and ending on or before the 30 September 2023, the closing price of the Ordinary Shares exceeds 16.0p (sixteen pence) per Ordinary Share.

Should the Company's closing mid-market share price not meet the performance conditions specified then the specified percent of the grant shall lapse. Subsequent to the year end the closing price of the Ordinary Shares remained above 4p (four pence) for a period of 15 consecutive days and the first performance condition has been met.

DIRECTORS' INTERESTS IN SHARE OPTIONS

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

Director	*Number of 2020 EMI Options*	*Date of Grant*	*First Exercise Date*	*Exercise Price*	*Expiry Date*
David Banks	nil				
Keith Broadbent	12,000,000	13 January 2020	13 January 2023	2.25p	12 January 2030
Mark Chapman	7,000,000	13 January 2020	13 January 2023	2.25p	12 January 2030
Graham Eves	nil				
Theresa Wallis	nil				

No options were exercised by the directors during the year under review. None of the directors had any unapproved options at the 30 June 2020.

The mid-market price of the Company's ordinary shares at 30 June 2020 was 2.05p (2019: 1.9p). During the year to 30 June 2020, the mid-market price ranged from 1.0p to 2.1p (2019: 1.8p to 70.6p).

Directors' Remuneration Report continued

DIRECTORS' REMUNERATION

The aggregate remuneration received by directors who served during the years ended 30 June 2020 and 30 June 2019 was as follows:

£'000	Salary/Fee	Bonus	Benefits	Year Ended June 2020 Total exc. pension	Year Ended June 2020 Pension	Year Ended June 2020 Total inc. pension	Year Ended June 2019 Total exc. pension	Year Ended June 2019 Pension	Year Ended June 2019 Total inc. pension
Executive Directors									
R Gibbs[4]	–	–	–	–	–	–	77	4	81
M Wood[5]	–	–	–	–	–	–	52	3	55
L Redman-Thomas[6]	43	–	5	48	–	48	74	1	75
K Broadbent[7]	170	50	12	232	20	252	181	8	189
R Smith[8]	–	–	–	–	–	–	5	–	5
M Chapman[9]	67	20	8	95	5	100	–	–	–
Non-Executive Directors									
D Banks[10]	51	–	–	51	–	51	56	–	56
G Eves	28	–	–	28	–	28	25	–	25
R Humm[11]	28	–	–	28	–	28	25	–	25
T Wallis[12]	2	–	–	2	–	2	–	–	–
	389	70	25	484	25	509	495	16	511

Bonuses are disclosed in the year for which they have been awarded. Bonuses received in FY19 of £30,000 for Keith Broadbent and £15,000 for Laura Redman-Thomas are included in Total exc. pension.

By order of the Board

David Banks
Chairman
29 October 2020

4 Resigned 20 December 2018
5 Part time Finance Director resigned 20 December 2018
6 Appointed 21 December 2018 and resigned on 22 November 2019
7 Appointed 5 September 2018, formerly subsidiary director
8 Part-time executive director, resigned 31 January 2019
9 Appointed as CFO on 22 November 2019.
10 Appointed as Independent Executive Chairman on 5 September 2018 until 12 March 2019 when reverted back to non-executive chairman
11 Resigned on 10 June 2020
12 Appointed on 10 June 2020

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 (IFRSs) as adopted by the European Union 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 as adopted by the European Union,;
- 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;
- Assess the Group and Parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and
- Use the going concern basis of accounting unless they either intend to liquidate the Group or the Parent Company or to cease operations, or have no realistic alternative but to do so.

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the 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.

Website Publication

The directors are responsible for ensuring that the Company's annual report and financial statements are made available on a website. Financial statements are published on the Group's website, www.haydale.com, in accordance with the AIM Rules for Companies published by the London Stock Exchange and legislation in the United Kingdom governing the preparation and dissemination of financial statements, which may vary from legislation in other jurisdictions. The maintenance and integrity of the Group's website is the responsibility of the directors. The directors' responsibility also extends to the ongoing integrity of the financial statements contained therein.

By order of the Board

Mark Chapman
Director
29 October 2020

Independent auditor's report to the members of Haydale Graphene Industries plc

Opinion

Our opinion on the financial statements is unmodified

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 2020, which comprise the Consolidated Statement of Comprehensive Income, the Consolidated Statement of Financial Position, the Consolidated Statement of Changes in Equity, the Consolidated Cash Flow Statement, the Parent Company Balance Sheet, the Company Statement of Changes in Equity and notes to the consolidated financial statements and parent company financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in the preparation of the group financial statements is applicable law and International Financial Reporting Standards (IFRSs) as adopted by the European Union. 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 2020 and of the group's loss for the year then ended;
- the group financial statements have been properly prepared in accordance with IFRSs as adopted by the European Union;
- 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.

The impact of macro-economic uncertainties on our audit

Our audit of the financial statements requires us to obtain an understanding of all relevant uncertainties, including those arising as a consequence of the effects of macro-economic uncertainties such as Covid-19 and Brexit. All audits assess and challenge the reasonableness of estimates made by the directors and the related disclosures and the appropriateness of the going concern basis of preparation of the financial statements. All of these depend on assessments of the future economic environment and the group's and the parent company's future prospects and performance.

Covid-19 and Brexit are amongst the most significant economic events currently faced by the UK, and at the date of this report their effects are subject to unprecedented levels of uncertainty, with the full range of possible outcomes and their impacts unknown. We applied a standardised firm-wide approach in response to these uncertainties when assessing the group's and the parent company's future prospects and performance. However, no audit should be expected to predict the unknowable factors or all possible future implications for a group or company associated with these particular events.

Conclusions relating to going concern

We have nothing to report in respect of the following matters in relation to which the ISAs (UK) require us to report to you where:

- the directors' use of the going concern basis of accounting in the preparation of the financial statements is not appropriate; or
- the directors have not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the group's or the parent company's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the financial statements are authorised for issue.

In our evaluation of the directors' conclusions, we considered the risks associated with the group's business model, including effects arising from macro-economic uncertainties such as Covid-19 and Brexit, and analysed how those risks might affect the group's financial resources or ability to continue operations over the period of at least twelve months from the date when the financial statements are authorised for issue. In accordance with the above, we have nothing to report in these respects.

However, as we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the absence of reference to a material uncertainty in this auditor's report is not a guarantee that the group or parent company will continue in operation.

Overview of our audit approach

- Overall materiality: £225,000, which represents approximately 5% of the group's loss before taxation;
- Key audit matters for the group were identified as going concern, revenue may be improperly recognised and valuation of goodwill and intangible assets. Key audit matters identified for the parent company were valuation of investments in subsidiaries and impairment of intercompany receivables; and
- We performed a full scope audit on the financial statements of the significant group components Haydale Graphene Industries Plc, Haydale Limited, Haydale Composite Solutions Limited, Haydale Technologies Incorporated LLC and Haydale Ceramic Technologies LLC. We performed specified procedures on the financial statements of Haydale Technologies Thailand Limited. We performed analytical procedures on the financial information of the remaining group components.

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 that 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.

Key Audit Matter – Group	*How the matter was addressed in the audit – Group*
Going concern	Our audit work included, but was not restricted to:
As stated in the 'The impact of macro-economic uncertainties on our audit' section of our report, Covid-19 is amongst the most significant economic events currently faced by the UK, and at the date of this report its effects are subject to unprecedented levels of uncertainty. It has had a particularly significant impact on the aviation industry, which has historically been a focus market for the group. This event could adversely impact the future trading performance of the group and the parent company and as such increases the extent of judgement and estimation uncertainty associated with management's decision to adopt the going concern basis of accounting in the preparation of the financial statements.	• Obtaining management's base case cash flow forecasts covering the period from 1 October 2020 to 31 December 2021, assessing how these cash flow forecasts were compiled and corroborating management's assessment that they assumption within the forecasts was in relation to revenue; • Assessing the accuracy of management's past forecasting by comparing management's forecasts for last year to the actual results for last year and considering the impact on the base case cash flow forecast; • Assessing the appropriateness of management's assumptions in relation to revenue through discussions with key members of the sales team and agreeing expected sales to supporting documentation, such as contracts, customer agreements and customer orders;

Independent auditor's report to the members of Haydale Graphene Industries plc continued

Key Audit Matter – Group	*How the matter was addressed in the audit – Group*
As a result of these factors, combined with the continued losses generated by the group, , we identified going concern as a significant risk, which was one of the most significant assessed risks of material misstatement.	• Examining sensitivity analysis carried out by management on the revenue assumptions in order to assess the levels of uncertainty inherent in the forecasts and the impact of sensitivities against the headroom; • Assessing the likelihood and impact of mitigating factors identified by reference to supporting documentation and discussions with management; and • Assessing the adequacy of related disclosures within the annual report. The group's accounting policy on going concern is shown in note 1 to the consolidated financial statements. The Audit Committee identified going concern as a key judgement in its report on page 20, and the Board has described the action that it has taken to address this issue on page 14 . Key observations We have nothing to report in addition to that stated in the 'Conclusions relating to going concern' section of our report.
Valuation of Goodwill and Intangible Assets The assessment of impairment of goodwill is carried out annually. Where there are indicators of impairment of intangible assets an impairment assessment is required. Given the continuing losses generated by the group, and changes to the group's strategy as highlighted in the annual report, there are clear indicators of potential impairment. The assessment of the carrying value of goodwill and intangible assets involves judgement and any impairment of the carrying value of such assets could have a material impact on the group's financial statements. We therefore identified valuation of goodwill and intangible assets as a significant risk, which was one of the most significant assessed risks of material misstatement.	Our audit work included, but was not restricted to: • Meeting with management and key operational personnel to update our understanding of discounted cash flow models with reference to current performance; • Examining, and sensitising, the model underpinning management's impairment assessment to identify the key underlying assumptions. This highlighted long-term revenue growth rates and discount rates as the key assumptions; • Assessing the long term revenue growth rates for reasonableness by examining management's commercialisation strategy, examining existing customer test feedback and existing orders. We also compared the long-term revenue growth rates with external market data, such as third party assessments of the global market; • Assessing the discount rates used by management for reasonableness by developing an expected range based on our knowledge of the business, the market and data from comparative businesses; • Assessing the overall reasonableness of the key assumptions used in management's impairment model based on our conclusions from our work identified above; • Assessing the appropriateness of the accounting and related disclosures, as set out in note 10. The group's accounting policies on goodwill and intangible assets are shown in note 3 to the consolidated financial statements and related disclosures are included in note 10.

Key Audit Matter – Group	*How the matter was addressed in the audit – Group*
	The Audit Committee identified valuation of goodwill and intangible assets as a key judgement in its report on page 20. The Audit committee reviewed the assumptions adopted by the management and concluded that they were fair and reasonable and that no further impairment was required in the year. The Audit Committee agreed that this should be continue to be monitored at future Audit Committee meetings. Key observations Based on our work, we concluded that the judgement made that no impairment was required for either goodwill or intangible assets as at 30 June 2020 was reasonable. The impairment review continues to be sensitive to changes in key assumptions. In particular, failure to achieve forecast revenue growth rates could give rise to an impairment in the future.

Key Audit Matter – Parent	*How the matter was addressed in the audit – Parent*
Valuation of Investments in Subsidiaries The assessment of impairment of investments in subsidiaries is carried out annually, where there are indicators of impairment. Given the continuing losses generated by the group, and changes to the group's strategy as highlighted in the annual report, there are clear indicators of potential impairment. The assessment of the carrying value of investments in subsidiaries involves judgement and any impairment of the carrying value of such assets could have a material impact on the parent company's financial statements. We therefore identified valuation of investments in subsidiaries as a significant risk, which was one of the most significant assessed risks of material misstatement.	Our audit work included, but was not restricted to: • Meeting with management and key operational personnel to update our understanding of discounted cash flow models with reference to current performance; • Examining, and sensitising, the model underpinning management's impairment assessment to identify the key underlying assumptions. This highlighted long-term revenue growth rates and discount rates as the key assumptions; • Assessing the long term revenue growth rates for reasonableness by examining management's commercialisation strategy, examining existing customer test feedback and existing orders. We also compared the long-term revenue growth rates with external market data, such as third party assessments of the global market; • Assessing the discount rates used by management for reasonableness by developing an expected range based on our knowledge of the business, the market and data from comparative businesses; • Assessing the overall reasonableness of the key assumptions used in management's impairment model based on our conclusions from our work identified above. The parent company's accounting policies on investments are shown in note 2 to the company financial statements and related disclosures are included in note 6. The Audit Committee identified valuation of investments in subsidiaries as a key judgement in its report on page 20. The Audit committee reviewed the assumptions adopted by the management and concluded that they were fair and reasonable and that no further impairment was required in the year. Key observations Based on our work, we concluded that the judgement made that no impairment was required for investments at 30 June 2020 was reasonable. The impairment review continues to be sensitive to changes in key assumptions. In particular, failure to achieve the forecast growth rates could give rise to an impairment in the future.

Independent auditor's report to the members of Haydale Graphene Industries plc continued

Our application of materiality

We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality in determining the nature, timing and extent of our audit work and in evaluating the results of that work.

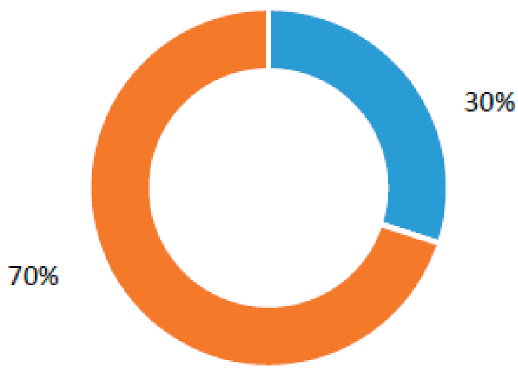
Materiality was determined as follows:

Materiality measure	*Group*	*Parent company*
Financial statements as a whole	£225,000 which is approximately 5% of the group's loss before taxation. This benchmark is considered the most appropriate because it is a prominent key driver of the business. Materiality for the current year is lower than the level determined by the predecessor auditor for the year ended 30 June 2019 due to a reduced loss being recognised in the current year.	£142,000 which is 2% of the parent company's gross assets. This benchmark is considered the most appropriate because the parent company is a non-trading holding company. Materiality for the year ended 30 June 2019 was not disclosed by the predecessor auditor in the prior year.
Performance materiality used to drive the extent of our testing	70% of financial statement materiality, being £157,500.	70% of financial statement materiality, being £99,400.
Specific materiality	We determined a lower level of specific materiality for certain areas such as Directors' remuneration and related party transactions.	We determined a lower level of specific materiality for certain areas such as Directors' remuneration and related party transactions.
Communication of misstatements to the audit committee	£11,250 and misstatements below that threshold that, in our view, warrant reporting on qualitative grounds.	£7,100 and misstatements below that threshold that, in our view, warrant reporting on qualitative grounds.

The graph below illustrates how performance materiality interacts with our overall materiality and the tolerance for potential uncorrected misstatements.

Overall materiality – Group

Overall materiality – Parent company



■ Tolerance for potential uncorrected mis-statements ■ Performance materiality

An overview of the scope of our audit

Our audit approach was a risk-based approach founded on a thorough understanding of the Group's business, its environment and risk profile and in particular included:

- Evaluating the Group's internal control environment and documenting our understanding of controls relevant to the audit;
- Performing walkthrough testing to evaluate the design and implementation of controls relevant to the Key Audit Matters and certain other risks in the financial reporting system identified as part of our risk assessment;
- Determining the scope of the Group audit based on the relative contribution of revenue, expenses and net assets of each component to the Group. We performed a full scope audit on the financial statements of Haydale Graphene Industries Plc (the Parent Company), Haydale Limited, Haydale Composite Solutions Limited, Haydale Technologies Incorporated LLC and Haydale Ceramic Technologies LLC. We performed specified procedures on revenue balances in the financial statements of Haydale Technologies Thailand Limited. We performed analytical procedures on the financial information of the remaining four group components;
- The Group sells products and services worldwide predominantly through UK and US trading subsidiaries, which have different characteristics. 100% of the Group's revenue, were included in the scope of our full scope and specified audit procedures outlined above; and
- 95.7% of the Group's total assets and 95.6% of the Group's net assets were included in the scope of our full scope and specified audit procedures.

Other information

The directors are responsible for the other information. 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.

In connection with our audit of the financial statements, 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 there is a material misstatement in the financial statements or a material misstatement of the other information. 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.

Our opinion on other matters prescribed by the Companies Act 2006 is unmodified

In our opinion, based on the work undertaken in the course of the 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 strategic report and the directors' report have been prepared in accordance with applicable legal requirements.

Matters on which we are required to report under the Companies Act 2006

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

Matters on which we are required to report by exception

We have nothing to report in respect of the following matters in relation to which 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.

Independent auditor's report to the members of Haydale Graphene Industries plc continued

Responsibilities of directors for the financial statements

As explained more fully in the statement of directors' responsibilities set out on page 25, 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 the 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.

A further description of our responsibilities for the audit of the financial statements is located 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.

Mark Bishop FCA *(Senior Statutory Auditor)*
for and on behalf of Grant Thornton UK LLP
Statutory Auditor, Chartered Accountants
Oxford

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
For the year ended 30 June 2020

	Note	**Year ended 30 June 2020 £'000**	Year ended 30 June 2019 £'000
REVENUE	4	**2,947**	3,467
Cost of sales		**(885)**	(1,567)
Gross profit		**2,062**	1,900
Other operating income	5	**756**	785
Adjusted Administrative expenses		**(5,357)**	(6,865)
Adjusted operating loss		**(2,539)**	(4,180)
Adjusting administrative items:			
Share based payment income/(expense)		**11**	(200)
Restructuring costs	6	**(63)**	(350)
Depreciation and amortisation		**(1,640)**	(1,118)
		(1,692)	(1,668)
Total trading administrative expenses		**(7,049)**	(8,533)
LOSS FROM TRADING		**(4,231)**	(5,848)
Impairment	10	**–**	(1,784)
Total administrative expenses		**(7,049)**	(10,317)
LOSS FROM OPERATIONS		**(4,231)**	(7,632)
Finance costs		**(176)**	(123)
LOSS BEFORE TAXATION	6	**(4,407)**	(7,755)
Taxation	8	**391**	570
LOSS FOR THE YEAR FROM CONTINUING OPERATIONS		**(4,016)**	(7,185)
Other comprehensive income:			
Items that may be reclassified to profit or loss:			
Exchange differences on translation of foreign operations		**82**	60
Items that will not be reclassified to profit or loss:			
Remeasurements of defined benefit pension schemes		**(291)**	2
TOTAL COMPREHENSIVE LOSS FOR THE YEAR FROM CONTINUING OPERATIONS		**(4,225)**	(7,123)
Loss for the year attributable to:			
Owners of the parent		**(4,016)**	(7,185)
Total comprehensive loss attributable to:			
Owners of the parent		**(4,225)**	(7,123)
Loss per share attributable to owners of the Parent			
Basic (£)	9	**(0.01)**	(0.06)
Diluted (£)	9	**(0.01)**	(0.06)

The notes from pages 37 to 70 form part of these financial statements.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION
As at 30 June 2020
Company Registration No. 07228939

	Note	30 June 2020 £' 000	30 June 2019 £' 000
ASSETS			
Non-current assets			
Goodwill	10	**1,454**	1,453
Intangible assets	10	**1,145**	1,024
Property, plant and equipment	11	**6,407**	5,556
		9,006	8,033
Current assets			
Inventories	12	**1,712**	1,182
Trade receivables	13	**886**	637
Other receivables	14	**334**	472
Corporation tax	14	**384**	836
Cash and bank balances		**823**	4,688
		4,139	7,815
TOTAL ASSETS		**13,145**	15,848
LIABILITIES			
Non-current liabilities			
Bank loans	20	**304**	388
Pension Obligation	26	**1,435**	1,085
Other payables	19	**1,031**	–
		2,770	1,473
Current liabilities			
Bank loans	20	**944**	1,568
Trade and other payables	19	**1,906**	1,347
Deferred income	15	**74**	209
		2,924	3,124
TOTAL LIABILITIES		**5,694**	4,597
TOTAL NET ASSETS		**7,451**	11,251
EQUITY			
Capital and reserves attributable to equity holders of the parent			
Share capital	16	**6,804**	6,354
Share premium account	16	**27,764**	27,764
Share-based payment reserve		**131**	828
Foreign exchange reserve		**(18)**	(100)
Retained losses		**(27,230)**	(23,595)
TOTAL EQUITY		**7,451**	11,251

The financial statements on pages 33 to 70 were approved and authorised for issue by the Board of directors on 29 October 2020 and signed on its behalf by:

David Banks
Chairman

Keith Broadbent
Chief Executive Officer

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
For the year ended 30 June 2020

	Share capital £' 000	Share premium £' 000	Share-based payment reserve £' 000	Foreign exchange reserve £' 000	Retained losses £' 000	Total equity £' 000
At 1 July 2018	547	27,539	1,298	(160)	(16,683)	12,541
Comprehensive Loss for the year						
Loss for the year	–	–	–	–	(7,185)	(7,185)
Other comprehensive loss	–	–	–	60	2	62
Total Comprehensive loss	547	27,539	1,298	(100)	(23,866)	5,418
Contributions by and distributions to owners						
Recognition of share-based payments	–	–	200	–	–	200
Share based payment charges – lapsed and cancelled options	–	–	(670)	–	670	–
Issue of ordinary share capital	5,807	225	–	–	–	6,032
Transaction costs in respect of share issues	–	–	–	–	(399)	(399)
At 30 June 2019	6,354	27,764	828	(100)	(23,595)	11,251
Comprehensive Loss for the year						
Loss for the year	–	–	–	–	(4,016)	(4,016)
Other comprehensive loss	–	–	–	82	(291)	(209)
Total comprehensive loss	6,354	27,764	828	(18)	(27,902)	7,026
Contributions by and distributions to owners						
Recognition of share-based payments	–	–	(11)	–	–	(11)
Share based payment charges – lapsed options	–	–	(686)	–	686	–
Issue of ordinary share capital	450	–	–	–	–	450
Transaction costs in respect of share issues	–	–	–	–	(14)	(14)
At 30 June 2020	**6,804**	**27,764**	**131**	**(18)**	**(27,230)**	**7,451**

CONSOLIDATED STATEMENT OF CASH FLOWS
For the year ended 30 June 2020

	Note	**Year ended 30 June 2020 £' 000**	Year ended 30 June 2019 £' 000
Cash flow from operating activities			
Loss before taxation		**(4,016)**	(7,185)
Adjustments for:-			
Amortisation of intangible assets	10	**129**	2,007
Depreciation of property, plant and equipment	11	**1,511**	895
Loss on disposal of property, plant and equipment		**–**	16
Share-based payment charge	17	**(11)**	200
Pension plan contributions		**–**	(118)
Finance costs		**176**	123
Pension – net interest expense	26	**24**	42
Taxation		**(391)**	(570)
Operating cash flow before working capital changes		**(2,578)**	(4,590)
(Increase) in inventories		**(531)**	(401)
(Increase)/decrease in trade and other receivables		**(111)**	200
(Decrease)/increase in payables and deferred income		**(104)**	13
Cash used in operations		**(3,324)**	(4,778)
Income tax received		**847**	76
Net cash used in operating activities		**(2,477)**	(4,702)
Cash flow used in investing activities			
Purchase of property, plant and equipment		**(44)**	(1,205)
Purchase of Intangible Assets		**(251)**	(267)
Net cash used in investing activities		**(295)**	(1,472)
Cash flow used in financing activities			
Finance costs		**(94)**	(123)
Finance costs – right of use asset		**(82)**	–
Payment of lease liability		**(631)**	–
Proceeds from issue of share capital	16	**450**	5,634
New bank loans raised	29	**50**	750
Repayments of borrowings	29	**(835)**	(500)
Net cash flow from financing activities		**(1,142)**	5,761
Effects of exchange rates changes		**49**	9
Net (decrease) in cash and cash equivalents		**(3,865)**	(404)
Cash and cash equivalents at beginning of the financial year		**4,688**	5,092
Cash and cash equivalents at end of the financial year		**823**	4,688

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 June 2020

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 (collectively "IFRSs") as adopted by the European Union ('Adopted IFRSs') and with the requirements of the Companies Act 2006.

The Group's financial statements have been prepared under the historical cost convention.

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 2020 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 over 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 Group consolidated financial statements are prepared on a going concern basis which the Directors believe continues to be appropriate.

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 December 2021. 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 as our understanding of the potential impact of the Covid-19 pandemic has deepened. The Directors are also mindful of the impact that the other risks and uncertainties set out on pages 9 to 11 of the Strategic Report may have on these estimates and in particular the speed of adoption of new technology during these uncertain times.

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

Revenue

The underlying methodology has been to split the forecast revenue into two groups. The first group consists of revenue streams which are underpinned by contracts or some other form of customer guarantee or commitment and therefore have a high certainty of delivery. The second group consists of all other revenue lines. For this second tranche, in October 2020, we have assessed the potential value and the likelihood of delivery of each revenue line based on management's latest information and this has given us a weighted average unconfirmed revenue estimate by month to December 2021. We have then applied further general sensitivities to that estimate to assess the margin of error that would need to exist in those estimates before the Group would have a requirement to raise further funds.

1. Accounting policies (continued)

Working Capital Facilities

The Directors have also stress tested the forecasts to assess the likely impact if existing working capital facilities were either not, or not fully renewed during the period under review. The non-renewal of existing facilities reduces the general sensitivity level on unconfirmed revenue streams to circa 55% of managements estimates before the forecast shows a cash negative position.

Cost Mitigation

The Directors have not included any assumptions regarding cost savings that might be achievable if the forecast fails to meet the sensitised estimates. Whilst the Directors do believe that there would be scope for further cost reductions these have not been factored into their assessment of going concern..

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 publicly available information.

Summary

Therefore, after due consideration of the forecasts prepared and the sensitivities applied, the Group's current cash resources and its borrowing 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),

2. Changes in accounting policies

IFRS 16 is the only new standard impacting the Group that has been adopted in the annual financial statements during the year, and which has given rise to changes in the Group accounting policies.

IFRS 16 'Leases' replaces IAS 17 'Leases' along with three Interpretations (IFRIC 4 'Determining whether an Arrangement contains a Lease', SIC 15 'Operating Leases-Incentives' and SIC 27 'Evaluating the Substance of Transactions Involving the Legal Form of a Lease')

The adoption of this new Standard has resulted in the Group recognising a right-of-use-asset and related lease liability in connection with all former operating leases except for those identified as low-value or having a remaining lease term of less than 12 months from the date of initial application.

The new Standard has been applied using the modified retrospective approach, recognising a right of use asset at the date of initial application for leases previously classified as an operating lease at an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payment relating to that lease recognised in the statement of financial position immediately before the date of initial application.

For contracts in place at the date of initial application, the Group has elected to apply the definition of a lease from IAS 17 and IFRIC 4 and has not applied IFRS 16 to arrangements that were previously not identified as lease under IAS 17 and IFRIC 4.

The Group has elected not to include initial direct costs in the measurement of the right-of-use asset for operating leases in existence at the date of initial application of IFRS 16, being 1 July 2019. At this date, the Group has also elected to measure the right-of-use assets at an amount equal to the lease liability adjusted for any prepaid or accrued lease payments that existed at the date of transition.

Instead of performing an impairment review on the right-of-use assets at the date of initial application, the Group relied on its historic assessment as to whether leases were onerous immediately before the date of initial application of IFRS 16.

On transition, for leases previously accounted for as operating leases with a remaining lease term of less than 12 months and for leases of low-value assets the Group has applied the optional exemptions to not recognise right-of-use assets but to account for the lease expense on a straight line basis over the remaining lease term.

On transition to IFRS 16 the incremental borrowing rate applied to lease liabilities recognised under IFRS 16 was based on the average borrowing rate for each relevant country and was between 4% and 6.25%.

The following is a reconciliation of the financial statements line items from IAS 17 to IFRS 16 at 1 July 2019:

	Carrying amount at 30 June 2019 £'000	Remeasurement £'000	IFRS 16 carrying amount at 1 July 2019 £'000
Property, plant and equipment	5,556	2,207	7,763
Lease liabilities	–	(2,207)	(2,207)
	5,556	–	5,556

	£'000
Operating lease commitments at 30 June 2019 as disclosed under IAS 17 in the Group's consolidated financial statements	1,244
Discounted using the incremental borrowing rate at 1 July 2019	1,017
Recognised exemption for leases of low-value assets	(4)
Recognition exemption for leases with less than 12 months of lease term at transition	(50)
Lease liabilities recognised at 1 July 2019	2,207

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 European 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 between three and ten years.

3. Summary of significant accounting policies (continued)

Goodwill

Business combination 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 represent 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
5. Recognising revenue when/as performance obligation(s) are satisfied.

Revenue arises mainly as:

(i) *Goods*

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 typically on delivery or customer acceptance, and 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 notes 22.

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.

(ii) 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.

3. Summary of significant accounting policies (continued)

(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
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 income statement 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 receipts are recognised in income tax within the Statement of Comprehensive Income.

(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 16 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, based on the Group's estimate of the number of equity instruments that will eventually vest, 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

As mentioned above, the Group has applied IFRS 16 using the modified retrospective approach and therefore comparative information has not been restated. This means comparative information is still reported under IAS 17 and IRFIC 4.

Accounting policy applicable from 1st July 2019

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;

3. Summary of significant accounting policies (continued)

- 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 reducing for payment made and increased for interest. It is remeasured to reflect any reassessment or modification, or if there are changes in in-substance 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.

Comparative period
Operating lease payments are recognised as an expense on a straight line basis over the lease term, except where another systematic basis is more representative of the time pattern in which economic benefit from the leased asset are consumed.

(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 estimates and judgements

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.

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

In determining the pension valuation movement and the defined benefit obligation of the groups 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

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 five-year financial plans. 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

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.

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 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 segments:

- Resins, Polymers, Composites & Inks (focussing on the composites market in Europe (known as RPC&I);
- Advanced Materials (focussing on SiC & blank products for tooling) (known as AMAT); and
- Asia-Pacific (focusing on Ink sales to the Asian markets) (known as APAC)

4. Segment analysis (continued)

2020

	Resins, Polymers Composites & Inks £'000	Advanced Materials £'000	Asia-Pacific £'000	Adjustments, Central & Eliminations £'000	Consolidated £'000
REVENUE	357	2,169	421	–	2,947
Cost of sales	(119)	(517)	(249)	–	(885)
Gross profit	238	1,652	172	–	2,062
Other operating income	550	206	–	–	756
Adjusted administrative expenses	(1,689)	(1,687)	(587)	(1,394)	(5,357)
Adjusted operating loss	(901)	171	(415)	(1,394)	(2,539)
Administrative expenses					
Share based payment expense	6	(8)	13	–	11
Depreciation & amortisation	(411)	(868)	(229)	(132)	(1,640)
Restructuring costs	–	–	(63)	–	(63)
	(405)	(876)	(279)	(132)	(1,692)
Total administrative expenses	(2,094)	(2,563)	(866)	(1,526)	(7,049)
OPERATING LOSS	(1,306)	(705)	(694)	(1,526)	(4,231)
Finance costs					(176)
LOSS BEFORE TAXATION					(4,407)
Taxation					391
LOSS AFTER TAXATION					(4,016)
Additions to non-current assets	40	–	4	–	44
Segment assets	2,486	7,573	567	2,519	13,145
Segment liabilities	(698)	(4,173)	(239)	(584)	(5,694)

Exceptional Items

Exceptional items	**2020 £'000**	2019 £'000
Impairment of goodwill	–	634
Impairment of customer relationships	–	142
Impairment of development expenditure	–	1,008
	–	1,784

During the comparative year, the Group impaired intangible assets by £1.78 million in respect of Haydale Composite Solutions Limited.

2019

	Resins, Polymers Composites & Inks £'000	Advanced Materials £'000	Asia-Pacific £'000	Adjustments, Central & Eliminations £'000	Consolidated £'000
REVENUE	441	2,619	407	–	3,467
Cost of sales	(244)	(1,128)	(195)	–	(1,567)
Gross profit	197	1,491	212	–	1,900
Other operating income	766	–	19	–	785
Adjusted administrative expenses	(1,488)	(2,523)	(1,003)	(1,851)	(6,865)
Adjusted operating loss	(525)	(1,032)	(772)	(1,851)	(4,180)
Administrative expenses					
Share based payment expense	(40)	(14)	(20)	(126)	(200)
Depreciation & Amortisation	(366)	(339)	(72)	(341)	(1,118)
Restructuring costs	–	–	–	(350)	(350)
Impairment	(1,784)	–	–	–	(1,784)
	(2,190)	(353)	(92)	(817)	(3,452)
	(3,678)	(2,876)	(1,095)	(2,668)	(10,317)
OPERATING LOSS	(2,715)	(1,385)	(864)	(2,668)	(7,632)
Finance costs					(123)
LOSS BEFORE TAXATION					(7,755)
Taxation					570
LOSS AFTER TAXATION					(7,185)
Additions to non-current assets	241	885	79	–	1,205
Segment assets	2,177	7,765	613	5,293	15,848
Segment liabilities	(405)	(2,828)	(216)	(1,148)	(4,597)

Geographical information

All revenues of the Group are derived from its principal activity, the sale and distribution of nano-technology and silicon carbide products or the delivery of research projects into those nano materials. The Group's revenue from external customers by geographical location are detailed below.

	2020 £'000	2019 £'000
By destination		
United Kingdom	**278**	328
Europe	**378**	657
United States of America	**597**	632
China	**2**	3
Thailand	**345**	239
South Korea	**198**	414
Japan	**1,113**	1,133
Rest of the World	**36**	61
	2,947	3,467

4. Segment analysis (continued)

During 2020, £1.1 million (37%) (2019: £1.13 million (33%)) of the Group's revenue depended on a single customer. During 2020 £0.35 million (12%) (2019: £0.58 million (17%)) of the Group's revenue depended on a second single customer.

Revenue as a proportion of total group turnover for the year within Europe was predominantly to Germany £0.38 million (13%) (2019: Germany £0.58 million (17%))),.

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.

Revenue from goods was £2.45 million (83%) of the Group's revenue (2019: £2.98 million or 86%) and revenue from services was £0.4 million (14%) (2019: £0.34 million or 10%).

Dis-aggregation of revenues

The split of revenue by type:

	2020 £'000	2019 £'000
Services	**406**	342
Reactor sales	**–**	77
Reactor rental	**89**	69
Goods	**2,452**	2,979
	2,947	3,467

2020

	RPC&I £'000	**AMAT £'000**	**APAC £'000**	**TOTAL £'000**
Services	104	–	302	406
Reactor rental	89	–	–	89
Goods	164	2,169	119	2,452
	357	2,169	421	2,947

2019

	RPC&I £'000	**AMAT £'000**	**APAC £'000**	**TOTAL £'000**
Services	184	–	158	342
Reactor sales	–	–	77	77
Reactor rental	69	–	–	69
Goods	188	2,619	172	2,979
	441	2,619	407	3,467

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

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

Non-current asset additions

	2020 £'000	2019 £'000
By destination		
United Kingdom	**40**	241
United States of America	**–**	885
Thailand	**4**	14
Taiwan	**–**	65
	44	1,205

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

	2020 £'000	2019 £'000
By destination		
United Kingdom	**3,564**	3,387
United States of America	**5,257**	4,344
Thailand	**184**	148
South Korea	**1**	1
Taiwan	**–**	153
	9,006	8,033

5. Other Operating Income

	2020 £'000	2019 £'000
Grant Income	**550**	785
Federal Support Schemes	**206**	–
	756	785

There are no unfulfilled conditions attached to the above income.

6. Loss before taxation

Loss before taxation is arrived at after charging:

	2020 £'000	2019 £'000
Impairment of intangibles – Note 10	**–**	1,785
Amortisation of other intangibles	**129**	222
Restructuring costs	**63**	350
Depreciation of property, plant and equipment	**1,511**	867
Loss/ (profit) on disposal of property, plant and equipment	**–**	16
Foreign Exchange	**(9)**	(24)
Operating lease rentals:		
– land and buildings	**–**	614
– plant and machinery	**2**	6

6. Loss before taxation (continued)

The service fees of the Group's auditor, Grant Thornton UK LLP and BDO LLP for the comparative period, are analysed below:

	2020 £'000	2019 £'000
Fees payable to the Company's auditor for the audit of the Group's financial statements	67	27
Fees payable to the Company's auditor and its associates for other services:		
– Audit of the company's subsidiaries	–	50
– Taxation related compliance services	40	18
– Other non-audit services	–	7
	107	102

All service fees for the current year relate to Grant Thornton UK LLP and service for 2019 relate BDO LLP.

7. Employees

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

	2020 No.	2019 No.
Administration	23	25
Research, development and production	40	54
	63	79

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

	2020 £'000	2019 £'000
Wages and salaries	3,243	4,140
Social security costs	287	339
Defined contribution pension costs	170	120
Defined benefit pension costs	24	42
Share-based payment (income)/expense	(11)	200
	3,713	4,841

Directors remuneration

	2020 £'000	2019 £'000
Short-term employee benefits and fees	484	495
Post-retirement benefits	25	16
	509	511

The total amount payable to the highest paid director in respect of emoluments was £252,000 (2019: £189,000), including pension costs of £20,000 (2019: £8,000).

8. Income tax

	2020 £'000	2019 £'000
Current tax credit		
Total income tax credits:		
– for the financial year	**384**	442
– under provision in the previous financial year	**7**	–
Total Current Tax	**391**	442
Deferred tax credit		
Origination and reversal of temporary differences	**–**	128
Recognition of previously unrecognised deferred tax assets	**–**	–
	–	128
	391	570

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:

	2020 £'000	2019 £'000
Loss for the year	**(4,016)**	(7,185)
Income tax credit	**(391)**	(570)
Loss before income taxes	**(4,407)**	(7,755)
Tax using the Group's domestic tax rates of 19% (2019 – 19%)	**837**	1,474
Expenses not deductible for tax purposes	**(143)**	(409)
Different tax rates applied in overseas jurisdictions	**24**	17
R&D enhancement	**259**	275
R&D costs capitalised	**45**	43
Surrender for R&D tax credit	**(109)**	(44)
Adjustment for over provision in comparative year	**7**	–
Movement in unrecognised losses carried forward	**(492)**	(681)
Movement in unrecognised fixed asset temporary differences	**(37)**	(233)
Deferred tax: Origination and reversal of temporary differences	**–**	128
Total tax credit	**391**	570

Changes in tax rates and factors affecting the future tax charge
The main rate of corporation tax for UK companies is currently 19%. In the Spring Budget 2020, the Government announced that from 1 April 2020 the corporation tax rate would remain at 19% (rather than reducing to 17%, as previously enacted). This new law was substantively enacted on 17 March 2020.

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 £23.96 million (2019: £21.85 million) and £4.16 million (2019: £4.53 million) of fixed asset timing differences. No tax losses are expected to expire within the next 15 years. 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:

	2020 £'000	2019 £'000
Loss after tax attributable to owners of Haydale Graphene Industries Plc	**(4,016)**	(7,185)
Weighted average number of shares: – Basic and Diluted	**331,162,204**	115,060,850
Loss per share: Basic (£) and Diluted (£)	**(0.01)**	(0.06)

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 2020, there were 34,248,583 (2019: 2,632,199) options and warrants outstanding as detailed in note 17.

All of the above options are potentially dilutive.

10. Intangible assets

	Customer Relationships £'000	Development expenditure £'000	Goodwill £'000	Total £'000
Cost				
At 1 July 2018	1,154	1,548	2,087	4,789
Additions	–	267	–	267
At 1 July 2019	1,154	1,815	2,087	5,056
Additions	–	250	1	251
FX translation	–	1	–	1
At 30 June 2020	**1,154**	**2,066**	**2,088**	**5,308**
Accumulated amortisation				
At 1 July 2018	288	284	–	572
Charge for the period	115	107	–	222
Impairment	143	1,008	634	1,785
At 1 July 2019	546	1,399	634	2,579
Charge for the year	87	42	–	129
FX translation	–	1	–	1
At 30 June 2020	**633**	**1,442**	**634**	**2,709**
Net book value				
At 30 June 2020	**521**	**624**	**1,454**	**2,599**
At 30 June 2019	608	416	1,453	2,477
At 30 June 2018	866	1,264	2,087	4,217

All of the above Development expenditure is currently in use.

Goodwill

Goodwill arose on the acquisition of EPL Composite Solutions Ltd (now Haydale Composite Solutions Limited "HCS") on 1 November 2014 (£634,000), on the acquisition of Haydale Ltd on 21 May 2010 (£24,000). On the 9 September 2016, goodwill of £327,151 arose on the acquisition of Innophene Co. Ltd (now Haydale Technologies Thailand ("HTT")). Goodwill arose on the acquisition of HCT (formerly ACM) on the 13TH October 2016 of £1,102,620.

During the comparative year, the decision was taken to impair the carrying value of intangible assets held by Haydale Composite Solutions Limited by £634,000.

Customer Relationships

The Customer relationships intangible asset arose on the fair value of assets on the acquisition of EPL Composite Solutions Ltd (now HCS) on 1 November 2014. Additions to the assets were brought in through the acquisition of HCT (formerly ACM) on the 13 October 2016 amounting to £868,676.

During the comparative year the Customer Relationships in HCS were impaired to nil.

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 graphene enhanced epoxy resins within Haydale Limited, HCS and HTT.

Development expenditure of £251,000 was capitalised during the year in accordance with IAS 38 in connection with the Group's expenditure with the development of graphene enhanced products (including inks and epoxy resins), where the Directors believe that future economic benefit is probable (2019: £267,000). Capitalised development expenditure is not amortised until the products or services are ready for sale or use.

Due to uncertainty relating to the timings of significant growth in HCS the Development Expenditure relating to enhanced epoxy resin were impaired to nil during the comparative year.

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 HCS, HCT and HTT, the Group is operating a number of different CGUs and therefore HCS and ACM goodwill has been considered against the future forecast trading outcomes of HCT, HCS and HTT as separate CGU's.

10. Intangible assets (continued)

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:

	2020	2019	**2020**	2019
	%	%	**£'000**	£'000
Haydale Composite Solutions	**10%**	10%	**–**	–
Haydale	**n/a**	n/a	**23**	23
Haydale Ceramic Technologies LLC (HCT)	**12%**	12%	**1,103**	1,103
Haydale Technologies (Thailand)	**10%**	10%	**327**	327

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. The Directors estimate discount rates 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 of 12% (2019: 12%), have been used to discount projected cash flows.

During the comparative year, due to the uncertainty and timing of HCS income, the Directors followed IAS 36 guidance and impaired the intangible assets relating to the CGU (see above).

The impairment calculations for the current year have been derived from the five year forecasts that have been reviewed by the Board.

The HCT model assumes that its turnover will grow at 15% in the current financial year, 45% in year two, 50% in year three and below 10% in years four and five and then reducing to 2% in perpetuity. The growth rates used are based on management's internally estimated growth forecasts which take into account blank sales and the adoption of the UK products and technology into the US market.

The HTT model assumes that its turnover will grow at 25% in the current financial year, 10% in year 2 to 5, reducing to 2% into perpetuity. The growth rates used are based on management's internally estimated growth forecasts which take into account current and future product commercialisation.

Following this review, the Directors have determined there is no impairment charge which should be recognised against the intangible assets of the Group for the year ended 20 June 2020.

Sensitivity to changes in assumptions

Management has completed sensitivity analysis on the impairment model which requires revenue to decrease by £13 million over a 5 year period to result in a material impairment. No reasonable change in the discount rate would cause an impairment.

11. Property, plant and equipment

	Leasehold and leasehold improvements £'000	Plant and machinery £'000	Fixtures and fittings £'000	Motor vehicles £'000	Assets under construction £,000	Total £'000
Cost						
At 1 July 2018	583	5,941	511	30	341	7,406
Additions	48	267	12	–	878	1,205
FX translation	4	179	20	–	–	203
Disposals	–	–	(21)	–	–	(21)
Transfers	–	1,188	–	–	(1,188)	–
At 1 July 2019	635	7,575	522	30	31	8,793
Transition to IFRS 16	2,207	–	–	–	–	2,207
	2,842	7,575	522	30	31	11,000
Additions	–	34	10	–	–	44
FX translation	–	126	10	1	1	138
At 30 June 2020	**2,842**	**7,735**	**542**	**31**	**32**	**11,182**
Accumulated depreciation						
At 1 July 2018	240	1,906	189	10	–	2,345
Charge for the year	68	732	61	6	–	867
FX translation	1	24	5	(1)		29
Disposals	–	–	(4)	–		(4)
At 1 July 2019	309	2,662	251	15	–	3,237
Charge for the year	684	765	56	6	–	1,511
FX Translation	1	23	4	(1)	–	27
At 30 June 2020	**994**	**3,450**	**311**	**20**	**–**	**4,775**
Net book value						
At 30 June 2020	**1,848**	**4,285**	**231**	**11**	**32**	**6,407**
At 30 June 2019	326	4,913	271	15	31	5,556
At 30 June 2018	343	4,035	322	20	341	5,061

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

	30 June 2020 £'000
Leasehold and leasehold improvements cost	**2,207**
Leasehold and leasehold improvements depreciation	**(613)**
Leasehold and leasehold improvement NBV	**1,594**

12. Inventories

	2020 £'000	2019 £'000
Raw materials	**242**	116
Work in progress	**125**	96
Finished goods	**1,345**	970
	1,712	1,182

The total value of inventories recognised in cost of sales during the year was £885,471 (2019: £725,986).

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

	2020 £'000	2019 £'000
Trade receivables	**886**	637

14. Other receivables

	2020 £'000	2019 £'000
Other receivables	**137**	158
Prepayments and accrued income	**197**	133
Grants receivable	**–**	181
	334	472

	2020 £'000	2019 £'000
Corporation tax	**384**	836

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.

	2020 £'000	2019 £'000
Grants	**–**	178
Commercial Deferred Income	**74**	31
	74	209

Commercial Deferred Income

As at 30 June 2020, deferred income of £30,769 (2019: £30,769) 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.

16. Share capital and share premium

	Number of shares No.	Share capital £'000	Share premium £'000	Total £'000
At 1 July 2018	27,328,773	547	27,539	28,086
Issue of £0.02 ordinary shares	290,395,075	5,807	225	6,032
At 30 June 2019	317,723,848	6,354	27,764	34,118
Issue of £0.02 ordinary shares	22,500,000	450	–	450
At 30 June 2020	**340,223,848**	**6,804**	**27,764**	**34,568**

During the year, the Company issued 22,500,000 new ordinary shares of 2p each.

Issue costs amounting to £14,000 have been charged to the profit and loss account during the year (2019: £399,000).

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 Company. The exercise price of the unapproved options is equal to the mid-market price of the shares on the date of grant. 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 either one year or 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.	2020 WAEP Pence	Number of options No.	2019 WAEP Pence
Balance at beginning of year	**2,504,691**	**62.0**	3,242,801	63.0
Granted	**34,100,000**	**2.25**	–	–
Lapsed	**(1,591,960)**	**113.0**	–	–
Forfeited	**(831,546)**	**113.0**	(738,100)	67.0
Balance at end of year	**34,181,185**	**23.0**	2,504,691	62.0

At 30 June 2020, there were options outstanding over 34,181,185 unissued ordinary shares, equivalent to 10% of the issued share capital as follows:

	Number of shares	Exercise price	Earliest exercise date	Latest exercise date
Unapproved scheme				
19 May 2016	4,665	171.50p	19 May 2019	19 May 2026
14 October 2016	6,759	198.14p	14 October 2019	14 October 2026
26 June 2017	32,984	178.50p	27 June 2020	27 June 2027
15 December 2017	36,777	125.50p	15 December 2020	15 December 2027
Approved EMI scheme				
13 January 2020	34,100,000	2.25p	13 January 2023	13 January 2030
	34,181,185			

17. Share-based payment transactions (continued)

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 (p)	Fair value per option (p)	Award life (years)	Risk free rate (%)	Expected volatility rate (%)	Performance conditions
19 May 2016	Unapproved	4,665	172	101	10	0.62	51	None
14 October 2016	Unapproved	6,759	198	113	10	0.50	49	None
26 June 2017	Unapproved	32,984	179	179	10	0.50	34	None
15 December 2017	Unapproved	36,777	126	55	10	0.50	51	None
13 January 2020	EMI	34,100,000	1.88	0.01	10	0.50	96	See below
		34,181,185						

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 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 2022, 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 £0.16 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 exercise.

The weighted average remaining contractual life of share options outstanding at 30 June 2020 is 9.5 years (2019: 8.1 years). The charge for the year for share-based payment amounted to £0.1 million (2019: £0.2 million).

Warrants

	Number of warrants No.	2020 Weighted average exercise price Pence	Number of warrants No.	2019 Weighted average exercise price Pence
Balance at beginning of year	**107,398**	**208**	385,719	193
Lapsed	**(40,000)**	**208**	(278,321)	187
Balance at end of year	**67,398**	**208**	107,398	208

No warrants were issued during the year under review. None of the warrants outstanding at 30 June 2020 are to employees or have performance conditions attached. 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 2020 is 0.72 years (2019: 1.33 years). The charge for the year for share-based payment amounted to £11,410 (2019: £48,254).

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 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 earnings

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 of translation differences arising from the translation of the overseas subsidiary results into pound sterling.

19. Trade and other payables

		Current Liabilities		Non-Current Liabilities
	2020	2019	**2020**	2019
	£'000	£'000	**£'000**	£'000
Current Liabilities				
Trade payables	**410**	473	**–**	–
Tax and social security	**181**	57	**–**	–
Lease liability	**617**	–	**1,031**	–
Accruals and other creditors	**698**	817	**–**	–
	1,906	1,347	**1,031**	**–**

A working capital bank facility in the US has been reclassified from Other Creditors to Bank Loans.

20. Bank loans

	2020	2019
	£'000	£'000
Bank loans	**1,248**	1,956
The borrowings are repayable as follows:-		
– within one year	**944**	1,568
– in the second year	**265**	267
– in the third to fifth years inclusive	**39**	121
	1,248	1,956

20. Bank loans (continued)

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.

	2020	2019
	%	%
Average interest rates paid	**7.9**	6.1

In October 2016, a five year bank loan of $1,720,000 (equivalent to approximately £1.4 million at the time) was drawn by Haydale Technologies Inc ("HTI"), the Company's US holding company, secured on the fixed assets of HTI and its newly acquired operating subsidiary, Advanced Composite Materials (now HCT). This loan carries an interest rate of 4% and is repayable in equal instalments. In addition to this, HTI has secured a working capital line of credit with a rate fixed at 5.25% on the remaining balance.

In January 2019, a 15 month loan of £750,000 was taken out with the Development Bank of Wales. The loan had an interest at a rate of 11% per annum and was repayable in 12 equal monthly instalments with the final repayment being paid in March 2020.

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 has a payment holiday and does not accrue interest during the first 12 month. Following the initial 12 months interest will be charged at 2.5% p.a. and is repaid in equal instalments over the remaining period.

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 senior Executive Management Committee members, who are the key management personnel of the Group, is set out below in aggregate for each of the categories specified in IAS 24 'Related Party Disclosures'.

	2020	2019
	£'000	£'000
Short-term employee benefits and fees	**484**	495
Social security costs	**50**	55
Post-retirement benefits	**25**	16
	559	566

Other transactions – Group and parent company

During the comparative year £18,519 was paid to ONE Advisory Ltd for financial, administration, compliance and support services, a company of which Mr M Wood, who served as a director of the Company until 20 December 2018. At 30 June 2019, the balance owed to ONE Advisory Ltd was £694.

Fees totalling Nil (2019: £49,323) were paid to the ATL Consulting Ltd, a company of which Mr R Smith, who served as a director of the Company until 31 January 2019, is a director, for business development consultancy. At 30 June 2020, the balance owed to ATL Consulting Ltd was Nil (2019: Nil).

Fees totalling £6,332 (2019: £14,233) were paid to the AVI Partners, a company based in Jersey of which Mr R Smith who served as a director of the Company until 31 January 2019 for business development consultancy. At 30 June 2020, the balance owed to AVI Partners was Nil (2019: £Nil).

Fees totalling £13,500 (2019: Nil) were paid to the Evesco International Business Services of which Mr G Eves who served as a director of the company during the year for support for the share issue during the year. At 30 June 2020, the balance owed to Evesco International Business Services was Nil (2019: £Nil).

Other transactions - Group

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

	2020 £'000	2019 £'000
Services Received		
PlanarTech	–	99
QM Holdings	468	443

During the year an amount of £467,741 was paid to QM Holdings in respect of property rent (2019: £443,003). QM Holdings is owned by Tom Quantrille and Marvin Murrell who are officers of HCT, a wholly owned subsidiary of the Group. The balance outstanding to QM Holdings at the year-end was £40,163 (2019: £36,697).

During the previous year, Haydale Limited procured business development services from PlanarTech, a company of which P Frantz, a director of Haydale Technologies Thailand Ltd, a subsidiary of the Company, is a director. The value of services provided by PlanarTech in the year was Nil (2019: £99,476). The balance outstanding to PlanarTech at the year-end was Nil (2019: 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

(i) 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
2020			
Financial assets	**952**	**47**	**999**
Financial liabilities	**111**	**1**	**112**
2019			
Financial assets	804	145	949
Financial liabilities	175	–	175

22. Financial instruments (continued)

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	**2020 Increase/ (decrease) £'000**	2019 Increase/ (decrease) £'000
United States Dollar:		
– strengthened by 10%	**93**	54
– weakened by 10%	**(76)**	(44)
Euro:		
– strengthened by 10%	**6**	16
– weakened by 10%	**(5)**	(13)

(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 no risk to capital. Any surplus funds will be placed with licensed financial institutions to generate interest income. The current loan and credit facilities maintain a fixed rate of interest.

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.

(ii) 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 equivalents), 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:

	2020	2019
	£'000	£'000
United Kingdom	**28**	106
Europe	**181**	71
North America	**115**	119
Rest of the world	**562**	341
	886	637

Maturity analysis

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

	2020	2019
	£'000	£'000
Not past due	**834**	604
Past due:		
– less than 3 months	**41**	31
– between 3 and 6 months	**11**	2
Gross amount	**886**	637

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. No impairment provision has been recognised in either the current or prior year.

Trade receivables that are past due but not impaired

The Group believes that no impairment allowance is necessary in respect of these trade receivables. They are substantially companies with good collection track record and no recent history of default, further this also applies to any trade receivables held at year end which are not past due.

(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.

22. Financial instruments (continued)

Maturity analysis

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

2020	**Under 1 Yr £'000**	**1 to 2 Yrs £'000**	**2 to 5 Yrs £'000**	**Total £'000**
Trade payables	**410**	**–**	**–**	**410**
Secured bank loan	**943**	**255**	**–**	**1,198**
Unsecured bank loan	**1**	**9**	**40**	**50**
Lease liability	**617**	**617**	**414**	**1,648**
Total	**1,971**	**881**	**454**	**3,306**

2019	Under 1 Yr £'000	1 to 2 Yrs £'000	2 to 5 Yrs £'000	Total £'000
Trade payables	473	–	–	473
Secured bank loan	1,568	267	121	1,956
Total	2,041	267	121	2,429

(b) 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. In order to maintain or adjust the capital structure, Haydale Graphene Industries PLC may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt. Haydale Graphene Industries PLC ensures that the distributions to shareholders do not exceed working capital requirements.

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

	2020 £'000	2019 £'000
Financial assets		
Trade receivables	**886**	637
Other receivables	**334**	158
Cash and bank balances	**823**	4,688
Financial Assets (at amortised cost)	**2,043**	5,483
Financial liabilities		
Bank loans	**1,248**	1,956
Trade payables	**410**	473
Right-of-Use Lease Liability	**1,648**	–
Accruals and other creditors	**698**	817
Financial Liabilities (at amortised cost)	**4,004**	3,246

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

(d) 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:

	2020 £'000	2019 £'000
Authorised by the Directors but not contracted for	**50**	17

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:

	2020 Land and buildings £'000	**2020 Plant and machinery £'000**	2019 Land and buildings £'000	2019 Plant and machinery £'000
– within one year	**–**	**1**	624	4
– within two to five years	**–**	**3**	473	4
– later than 5 years	**–**	**–**	139	–
Aggregate amounts payable	**–**	**4**	1,236	8

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

	2020 Land and buildings £'000	**2020 Plant and machinery £'000**	2019 Land and buildings £'000	2019 Plant and machinery £'000
Operating lease expense	**–**	**1**	614	6

As at 1 July 2020 the Group has applied IFRS 16 using the modified retrospective approach and therefore comparative information has not been restated. This means comparative information is still reported under IAS 17 and IRFIC 4. The implementation of IFRS 16 has resulted in the leases in relation to Land and Building being recognised under IFRS 16 and not as operational leases.

A significant proportion of the lease arrangements in the comparative year relate to the premises from which HTI and HCT operate in South Carolina, USA totalling £0.45 million. Other leases pertain to the office and unit contracts for the three UK facilities of in aggregate £0.16 million. Of the £0.16 million, certain leases are cancellable with three months' notice.

The facility in Thailand is leased. The cost is £0.01 million.

Within the minimum lease payments for plant and machinery is the cost relating the 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.

Contributions of Nil were made to the scheme during the year ended 30 June 2020 (2019: £118,220). No contributions are expected to be made during the year ended 30 June 2021.

Included in the loss before tax during the year:

	2020	2019
	£'000	£'000
Net Interest Expense	**24**	42

Included in other comprehensive income during the year:

	2020	2019
	£'000	£'000
Actuarial loss / (gain) from demographic assumptions	**292**	(2)

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

	2020	2019
	£'000	£'000
Accumulated benefit obligation	**(4,275)**	(3,960)
Projected Benefit obligation	**(4,275)**	(3,960)
Plan assets at fair value	**2,840**	2,875
Funded Status	**(1,435)**	(1,085)
Accrued Pension Cost	**(1,435)**	(1,085)

Net amount recognised in the consolidated balance sheet as of 30 June, consisted of the following:

	2020	2019
	£'000	£'000
Non-current Liabilities	**(1,435)**	(1,085)

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 2020:

Discount rate for periodic benefit costs	3.00%
Discount rate for benefit obligations	3.00%
Rate of increase in compensation levels	0.00%
Investment return rate	3.00%

Mortality Assumptions are as follows:

Longevity at retirement age (current & future pensioners)	**2020**	2019
– Males	**22.57 years**	23.80 years
– Females	**25.00 years**	25.90 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 2020, by asset category were as follows:

			Fair Value Measurements at 30 June 2020 using	
Description	**Total Carrying Amount £'000**	**Assets/ Liabilities Measured at Fair Value £'000**	**Level 1 Inputs £'000**	**Level 2 Inputs £'000**
Cash	137	137	137	–
Corporate Equities	1,554	1,554	1,554	–
Fixed Income:				
US Government	56	56	–	56
Municipal	6	6	–	6
Corporate debt	988	988	–	988
Mutual Funds	99	99	99	–
	2,840	**2,840**	**1,790**	**1,050**

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 2020, were as follows:

	2020 £,000	2019 £,000
Opening Balance	**2,875**	2,710
Contributions	**–**	118
Distributions	**(245)**	(245)
Earnings	**177**	63
Net realised gain	**20**	189
Administrative expenses	**(66)**	(75)
Foreign exchange gain/(loss)	**79**	115
Balance at Year End	**2,840**	2,875

Cash Flows

For current financial year, the Company expects contributions to be nil. The Company expects benefits paid for the next five fiscal years and the five years thereafter as follows:

	2020 £,000	2019 £,000
2020	**266**	268
2021	**274**	277
2022	**272**	274
2023	**276**	276
2024	**275**	274
Thereafter	**1,411**	1,389
	2,774	2,758

26. Defined Benefit Pension Scheme (continued)

The company's pension plan asset allocations by asset category were as follows as of 30 June 2020:

Asset Category	
Cash	4.8%
Equity Mutual Funds	54.7%
Fixed Income	37%
Other	3.5%

Plan Obligations

	2020	2019
	£'000	£'000
Benefit Obligation at 01 July 2019	**3,960**	3,830
Foreign exchange movement	**114**	155
Interest cost	**136**	152
Actuarial loss	**310**	68
Benefits paid	**(245)**	(245)
Benefit Obligation at 30 June 2020	**4,275**	3,960
Fair Value of Plan Assets at 01 July 2019	**2,875**	2,710
Foreign Exchange movement	**79**	115
Actual Return on plan assets	**19**	69
Interest Income	**112**	108
Employer contributions	**–**	118
Benefits paid	**(245)**	(245)
Fair Value of Plan Assets at 30 June 2020	**2,840**	2,875
Funded Status at 30 June 2020	**(1,435)**	(1,085)

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:

	Reasonably	**Defined Benefit Obligation (£'000)**	
Actuarial Assumption	**Possible Change**	**Increase**	**Decrease**
Discount Rate	(+/- 0.25%)	(103)	108
Mortality Rate	(+/-1.00%)	13	(14)

HCT (formerly ACM) 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 2020, were £24,000 (2019: £58,009).

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.

The movement on the deferred tax account is as shown below:

	2020 £'000	2019 £'000
At 1 July 2019	**–**	(125)
Recognised in profit and loss:		
Tax expense	**7**	128
Recognised in other comprehensive income:		
Actuarial gain on defined benefit pension schemes	**–**	–
Movement due to changes in exchange rates	**(7)**	(3)
At 30 June 2020	**–**	–

Deferred tax assets have been recognised in respect of tax losses and other temporary differences giving rise to deferred tax assets where the Directors believe it is probable that these assets will be recovered.

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

	Asset 2020 £'000	**Liability 2020 £'000**	**Net 2020 £'000**	**(Charged)/ credited to profit or loss 2020 £'000**
Employee pension liabilities	**301**	**–**	**301**	**73**
Available losses	**636**	**–**	**636**	**(30)**
Business combinations	**–**	**(937)**	**(937)**	**(43)**
Net tax assets/(liabilities)	**937**	**(937)**	**–**	**–**

	Asset 2019 £'000	Liability 2019 £'000	Net 2019 £'000	(Charged)/ credited to profit or loss 2019 £'000
Employee pension liabilities	228	–	228	(16)
Available losses	666	–	666	328
Business combinations	–	(894)	(894)	(184)
Net tax assets/(liabilities)	894	(894)	–	128

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

	2020 £'000
Accelerated capital allowances	**(63)**
Unused tax losses	**3,637**
	3,574

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 9 September 2020 the Group successfully raised £2.98 million of new funds before costs via a placing of new ordinary shares in the Company with existing and new investors.

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 1st July 2018	640	256	896
Interest accruing in period	88	35	123
New loans in year	–	750	750
Loan repayments in year	–	(500)	(500)
Working Capital Facility	–	709	709
Effect of foreign exchange	(16)	(6)	(22)
Loans classified as non-current at 30 June 2018 becoming current during year.	(324)	324	–
At 30th June 2019	388	1,568	1,956
Interest accruing in period	**14**	**30**	**44**
New loan in year	**–**	**50**	**50**
Loan repayments in year	**–**	**(835)**	**(835)**
Lease Liability transition to IFRS 16	**1,648**	**559**	**2,207**
Lease Liability repayments in year	**–**	**(559)**	**(559)**
Effect of foreign exchange	**9**	**24**	**33**
Loans classified as non-current at 30 June 2019 becoming current during year.	**(107)**	**107**	**–**
Lease Liability classified as non-current at 1 July 2019 becoming current during year	**(617)**	**617**	**–**
At 30th June 2020	**1,335**	**1,561**	**2,896**

PARENT COMPANY BALANCE SHEET
As at 30 June 2020
Company Registration No. 07228939

	Note	2020 £'000	2019 £'000
Fixed assets			
Property, plant and equipment		**129**	14
Investments	6	**1,299**	1,953
		1,428	1,967
Current assets			
Debtors	7	**5,297**	6,800
Cash at bank and in hand		**323**	4,106
		5,620	10,906
Creditors: amounts falling due within one year	8	**(584)**	(970)
NET CURRENT ASSETS		**5,036**	9,936
TOTAL ASSETS LESS CURRENT LIABILITIES		**6,464**	11,903
Creditors: amounts falling due after more than one year		**–**	–
NET ASSETS		**6,464**	11,903
Capital and reserves			
Called up share capital	9	**6,804**	6,354
Share premium account	9	**27,764**	27,764
Profit and loss account		**(28,104)**	(22,215)
SHAREHOLDER'S FUNDS		**6,464**	11,903

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 2020 was £5,720,000 (2019: £7,894,000).

The financial statements on pages 71 to 78 were approved and authorised for issue by the Board of Directors on 29 October 2020 and signed on its behalf by: -

David Banks
Chairman

Keith Broadbent
Chief Executive Officer

COMPANY STATEMENT OF CHANGES IN EQUITY
For the year ended 30 June 2020

	Share capital £'000	Share Premium £'000	Profit and loss account £'000	Total Equity £'000
At 1 July 2018	547	27,539	(1,764)	26,322
Comprehensive Income for the year				
Change in accounting policy – IFRS 9	–	–	(12,358)	(12,358)
1 July 2018 as restated	547	27,539	(14,122)	13,964
Loss for the year	–	–	(7,894)	(7,894)
Contributions by and distributions to owners				
Recognition of share-based payments	–	–	200	200
Issue of ordinary share capital, net of transaction costs	5,807	225	–	6,032
Share issue costs	–	–	(399)	(399)
At 30 June 2019 and 1 July 2019	6,354	27,764	(22,215)	11,903
Comprehensive Income for the year				
Loss for the year	–	–	(5,720)	(5,720)
Contributions by and distributions to owners				
Recognition of share-based payments	–	–	(155)	(155)
Issue of ordinary share capital	450	–	–	450
Share issue costs	–	–	(14)	(14)
At 30 June 2020	**6,804**	**27,764**	**(28,104)**	**6,464**

NOTES TO THE PARENT COMPANY BALANCE SHEET
For the year ended 30 June 2020

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 2016 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 ("£000's").

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 EU endorsed 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 understandings 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 to the extent that there are insufficient liquid resources in place.

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. 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 estimation uncertainty

The preparation of the financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities, at the end of the reporting period. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the assets or liabilities affected in future periods.

The key sources of estimation uncertainty that have a significant effect on the amounts recognised in the financial statements include estimation, where applicable, for items relating to revenue recognition and impairment of receivables.

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 five-year financial plans. 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.

Changes in accounting policies

As mentioned above, the Group has applied IFRS 16 using the modified retrospective approach and therefore comparative information has not been restated. This means comparative information is still reported under IAS 17 and IRFIC 4.

Accounting policy applicable from 1st July 2019

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 reducing for payment made and increased for interest. It is remeasured to reflect any reassessment or modification, or if there are changes in in-substance 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.

2. Accounting policies (continued)

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

Comparative period

Operating lease payments are recognised as an expense on a straight line basis over the lease term, except where another systematic basis is more representative of the time pattern in which economic benefit from the leased asset are consumed.

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:

	2020 No.	2019 No.
Administration	**9**	12

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

	2020 £	2019 £
Wages and Salaries	**715,596**	985,069
Social Security Costs	**85,876**	105,926
Pension Costs	**44,834**	30,671
Share based payment (income)/expense	**(40,190)**	202,514
	806,116	1,324,180

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 in subsidiary undertakings £'000	Capital contribution £'000	Total £'000
Cost			
At 1 July 2019	1,230	723	1,953
Additions	–	48	48
Disposals	(432)	(270)	(702)
At 30 June 2020	**798**	**501**	**1,299**

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%	R&D, sales and distribution
Haydale Technologies Thailand Ltd	Thailand	100%	R&D, sales and distribution
Haydale Ceramic Technologies LLC (Formerly ACMC Holdings 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 the them remaining dormant throughout the current and previous financial years.

Haydale Technologies Korea Co., Ltd and Haydale Technologies (Taiwan) Co Ltd are 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 (Formerly ACMC Holdings LLC)	1446 South Buncombe Road, Greer, South Carolina. 29651, USA

7. Debtors

	2020 £'000	2019 £'000
Amounts owed by group companies	**5,164**	6,477
Corporation tax	**95**	275
Other debtors	**16**	26
Prepayments and accrued income	**22**	22
	5,297	6,800

During the year an impairment provision of £1.42 million was recognised in relation to Inter company balances.

8. Creditors: amounts falling due within one year

	2020 £'000	2019 £'000
Bank loan	**–**	582
Trade creditors	**79**	41
Amounts owed to group companies	**–**	–
Other creditors including tax and social security	**84**	35
Accruals and deferred income	**421**	312
	584	970

In January 2019, a 15 month loan of £750,000 was taken out with the Development Bank of Wales. The loan is accruing interest at a rate of 11% per annum and was repayable in 12 equal monthly instalments which commenced in April 2019 with the final instalment paid in March 2020.

9. Share capital and share premium

	Number of shares No.	Share capital £'000	Share premium £'000	Total £'000
At 1 July 2019	317,723,848	6,354	27,764	34,118
Issue of £0.02 ordinary shares 6,354	22,500,000	450	–	450
At 30 June 2020	**340,223,848**	**6,804**	**27,764**	**34,568**

During the year, the Company issued 22,500,000 new ordinary shares of 2p each during November 2019. There were £14,000 issue costs associated with the new ordinary share issue.

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 Directory

Company Number	07228939
Directors	David Doidge Richard Banks Keith Broadbent Mark Chapman Graham Dudley Eves Theresa Wallis
Secretary	Matt Wood
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Website	www.haydale.com
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Advisers	
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Nominated Advisor and broker	Arden Partners 125 Old Broad Street, London, EC2N 1AR
Registrars	Share Registrars Limited Suite E, First Floor, 9 Lion and Lamb Yard, Farnham, Surrey, GU9 7LL
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Intellectual Property Solicitors	Mewburn Ellis LLP 33 Gutter Lane, London, EC2V 8AS

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