Haydale Graphene Industries Plc

Annual Report And Accounts

For the year ended 30 June 2019

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 2019 ("FY19").

The year under review has been a challenging one for Haydale. At management level, we have recruited a new Executive team lead by Keith Broadbent, who was promoted from COO to CEO in March 2019, and Laura Redman-Thomas, who joined as our CFO in December 2018. At an operational level, we have streamlined the business and rationalised our cost base, created a rigorous product and commodity analysis with subsequent clear focus, both inwardly and outwardly, introducing best manufacturing procedures and processes, created a Group sales force and refinanced the business with the fundraising announced in March 2019.

Summary financials

Total income for FY19 of £4.25 million (FY18: £4.23 million), comprised commercial revenues of £3.47 million (FY18: £3.40 million) and grant income of £0.79 million (FY18: £0.83 million).

FY19 has been a year of change and rationalisation, delivering an annualised cost base reduction of £1.6 million. During the year there was significant ($1.2 million) investment in the US blanks (SiC) business, further development of the ink market, the cost centres in the UK and Thailand were converted to profit centres and a global sales strategy was introduced.

As a result of these improvements the revenue in the second half of FY19 was up 12% on the first half of the year and 35% over the same time period in FY18 driven predominantly by the US SiC business. The FY19 £0.5 million revenue upside in the US SiC business and £0.14 million in APAC inks was offset by the £0.58 million reduction in the UK composites business where the focus was redirected towards commercial sales and well-funded, commercially viable grant related projects for longer-term growth.

The gross profit for the year was broadly in line with the prior year at £1.9 million (FY18: £2.0 million). Total administrative expenses for the year were adversely impacted by non-recurring one-off restructuring costs relating to actions by management to re-align the Group's cost base, such that total administrative expenses for the year including £0.35 million of exceptional items were £8.53 million (FY18: £8.85 million). Total comprehensive loss for the year was £7.12 million (FY18: £5.41 million), including the £2.13 million of restructuring costs and a non-cash, accounting adjustment for an impairment of intangible assets of £1.78 million. The loss from trading activities, including one-off restructuring costs, was £5.85 million (FY18: £6.02 million).

Operations

During the year under review we re-evaluated our products and services in order to align our cost base with our addressable markets. We are now using tailored advanced materials, including graphene, boron nitride and silicon carbide micro-fibre (SiC) to enable our customers to improve the quality and electrical, thermal and/or mechanical performance of their products. We have six international operating sites, with two in the UK and one in each of the USA, Thailand, South Korea and Taiwan.

In the Far East, our Thailand operation continues to grow following the successful commissioning of one of our HT60 plasma reactors for one of Thailand's leading petrochemical processors as well as our long-term consulting contracts. The customer intends to add value to certain by-products arising from their manufacturing process using our functionalisation capabilities.

Following a product review carried out in the year, we now have speciality inks and coatings capabilities in both the Far East and UK, covering the biomedical sensor market where commercial progress continues. Pleasingly, our inks and coatings expertise are now supplemented by piezo resistive and heating applications that are already in commercial applications across several sectors.

Our USA facility, Haydale Ceramic Technologies ("HCT"), manufactures a range of our proprietary SiC micro-fibres which add strength, toughness and anti- scratch properties to existing materials. Despite taking longer than we had expected to increase sales, HCT continues to supply against its existing long term contracts with world-wide businesses that incorporate HCT's SiC in the manufacture of their hard-edged cutting tools. As previously announced, in order to supplement the sale of our proprietary SiC "powder", we took the decision in FY18 to add value to our SiC micro-fibres by investing in our own in-house manufacturing capabilities at our US site to address a growing market in selling our own proprietary SiC cutting tools ("blanks"). The machinery is now commissioned, and we are expecting to ramp up production in the current financial year after positive feedback from our customers.

The graphene teams at our Loughborough and Ammanford sites have been developing customer solutions for resins that incorporate our functionalised graphene for the pre-preg carbon fibre market for enhanced electrical, thermal and mechanical applications following the positive work with NICHE and BAC Motors. In addition, following successful trials, the teams have developed a range of graphene enhanced elastomers that were launched post the period end at the IRC 2019 show at the KIA Oval earlier in September.

Chairman's Statement continued

The new Graphene Engineering Innovation Centre (GEIC) opened in December 2018 at the University of Manchester, where Haydale is a Tier 1 Partner. The GEIC has installed one of our HT60 plasma reactors for graphene functionalisation and is showcasing it to other partners and customers.

We continue to enhance the functionalisation performance of our reactors with further upgrades and are working on some exciting product improvement opportunities for the myriad of companies now looking at collaborating with the GEIC and its Tier-1 Graphene partners and with our other customers across the globe.

Outlook

We enter FY20 with two new graphene-enhanced product lines in pre-preg and Elastomers and a focussed sales force with the industry contacts to promote them.

I foresee significant growth opportunities for Haydale with the new and adapted approach of using our global footprint as one team, with cross-selling and cross R&D focus, a re-orientation to organic growth and cost monitoring. Business development surrounding the major advances we have seen in the core skills on inks, functionalisation and dispersion of graphene, in conjunction with the new market segment of SiC, sets Haydale up for the next phase of evolution and scale up. Under the new executive team the Group has focussed its development activities on areas where it considers there to be immediate commercial potential.

The Executives strategic review of the Group's operations in the US and UK is largely complete, and the review of the group's Far East operations is ongoing.

I would like to thank our new executive team who have worked tirelessly to address the Group's challenges in order to put in place the solid foundations required to deliver on our anticipated growth. A number of challenges remain to be addressed, and 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. I would also like to thank our shareholders for their continued support.

David Banks
Chairman
14 October 2019

Strategic Report

The directors present their Strategic Report for the year ended 30 June 2019

Haydale Graphene Industries Plc ("Haydale" or the "Group") is the AIM listed group that uses tailored advanced materials, including graphene, boron nitride and silicon carbide micro-fibre (SiC) to enable its customers to improve the quality and performance of their products and thereby creating additional value and market edge. The Group's vision is to be in the vanguard of nano advanced materials and dispersion to become a world leader in the creation of material change through understanding the potential of those materials through careful characterisation, and the incorporation of its bespoke and unique patented functionalisation process, as appropriate.

The Group's regulatory approved proprietary graphene-based and other speciality inks and coatings for the print and biomedical sensor markets that it has developed continue to progress commercially and have now been supplemented by offerings in piezo resistive and heating applications that are in commercial applications across several sectors. Progress in enhanced resins for the pre-preg carbon fibre market covering electrical, thermal and mechanical applications has also moved into the commercial phase.

In the USA, Haydale manufactures proprietary SiC micro-fibres and whiskers that strengthen ceramics and hard-edged cutting tools for fashioning jet engine turbine blades from solid super alloy billets. This application has now benefitted from substantial investment and moving up the value chain to produce blanks which incorporate the fibres and have helped to further strengthen the relationship with customers. Other applications including corrosion barriers for oil and gas pipelines and coatings where high scratch and wear resistant is required is another application that is addressed.

The Group has operational activities in its six chosen geographies worldwide. In summary, these are:

Haydale subsidiary	*Location*	*Principal activities*
Haydale Limited	Ammanford, Wales	Ex R&D operation now producing inks and supporting master batch production for direct sales to customers and other sites in the Group as a specialist functionalisation centre.
Haydale Composite Solutions Limited ("HCS")	Loughborough, England	Sale of pre-preg, and consulting services in advanced composites, elastomers and other nano materials and including test services. Its R&D involvement in grants focuses on products that could lead to commercial production.
Haydale Technologies (Korea) Limited ("HTK")	Seoul, South Korea	Dedicated sales servicing the fast-moving Korean, Chinese and Japanese markets.
Haydale Technologies (Thailand) Company Limited ("HTT")	Bangkok, Thailand	Ex R&D facility now focused on commercial plasma functionalisation facilities. Services the APAC region and supporting the Far East sales teams.
Haydale Technologies Taiwan Ltd ("HTW")	Kaohsiung, Taiwan	Established in July 2017 as the production facility and technical centre for sales of speciality inks, initially into the biomedical sensor market.
Haydale Technologies, Inc. ("HTI")	South Carolina, USA	Haydale Ceramic Technologies is HTI's wholly owned operating subsidiary which produces and sells novel SiC micro fibres and whiskers, as well as ceramic blanks to the cutting tool industry.

Strategic Report continued

Background to urgent business restructure and re-alignment

The lead in to FY19 was the trading statement announcement on 13 June 2018 which explained a delay in expected sales in FY18 and the intention of Ray Gibbs to resign as CEO in order to concentrate on business development. On 7 September 2018 David Banks stepped up from Non-executive Chairman to be appointed as Interim Executive Chairman and Keith Broadbent was appointed to the main board as Chief Operating Officer. On 9 November 2018, the Company announced that the planned $1.5 million sale and leaseback of the capital tools equipment at its US facility would not be available and that the Group was considering alternative sources of finance. At the same time a £1 million reduction of annualised SG&A costs was announced as the start of a new direction of business prudence and refocus. On 21 December 2018, an announcement was made that additional working capital had been raised through a loan with the Development Bank of Wales and a new equity subscription, concurrent with a change to the board of Directors ("Board") with Laura Redman-Thomas being appointed as the new CFO and Matt Wood stepping down from that position, and Ray Gibbs and Roger Smith also resigning from their Board positions.

The Group released its interim results on 22 February 2019 which continued to show a challenge on cash and short- term revenues. A proposed placing, subscription and open offer was announced on the same day which completed on 12 March 2019, raising £5.8 million (before costs). Following the General Meeting held on 12 March 2019, Keith Broadbent was appointed as the Group's new CEO and David Banks reverted to Non-executive Chairman.

Overall the year has been one of major reorganisation and resetting commercial priorities. In summary, this has meant that over the last six months:

- Board members reduced and new leadership team installed;
- A full review of the Group's business unit structure to ensure streamlining and efficiencies with a review of US and UK largely completed, with the review of the APAC region ongoing – with c£1.6 million of annual cost savings achieved to date;
- A major change of strategy whereby the focus is securely on commercial revenue, either project or product related, with grant income or free of charge R&D only to be used in applications where an immanent commercial opportunity was apparent;
- Core focus established in:
    - Growing the US business following significant investment (c$1.5 million) on the blanks (SiC) business;
    - The redirection of Ammanford from cost centre to profit centre;
    - Development of the ink market;
    - Composites focus to be maintained but with reduced resource given the timing of the major commercial revenues have been and are expected to be longer than first planned; and
    - Business unit strategy has been modified into a global sales strategy – to sell technology across the various sites and geographies i.e. cross selling.
- Formation of a cross site / cross commodity sales team headed by Neil Taylor, VP of HCT in the US (expertise SiC), and with a UK Sales Director having been recruited post year end (Composites) and a UK sales engineer part of the team (Inks).

This reorganisation will continue throughout the new financial year as we look to opportunities to further rationalise in conjunction with entering the growth phase.

Globalisation of the Strategic Business Units

As mentioned in previous reports, the setting up of two business units in 2017 (Resins, Polymers and Composites ("**RPC**") and Advanced Materials (including SiC and inks) ("**AMAT**") delivered some limited success and growth in the business, but did not facilitate the global approach necessary to leverage the Group's geographical and technological commercial advances. Consequently, a part of this dual BU structure has been split to provide a third reporting entity, "**APAC**". This has created a more flexible structure which aligns with commodity or product focus on one hand insofar as SiC, Inks, Composites and Elastomers naturally have a site-based expertise, but also encourages Project Managers and Sales personnel to look to other geographical areas for potential revenue.

This change to allow greater potential of cross-selling has been supplemented and re-enforced with the formation of a global sales team with accountability across the Group; and a new VP Sales, Neil Taylor, promoted from within the business; and a new UK Sales Director, Simon Green, recruited externally. Initial success has been reported previously with commercial activities on coatings with SiC in progress in the UK, with live commercial enquiries involving pre-preg composites and graphene offerings underway in the US. The combination of the Group's ink expertise is being pooled and leveraged. This methodology is set to continue as the template for growth as the one company one team mantra takes further hold.

Sharing best practice in Operational and other business systems and practices such as Health and Safety and Quality (ISO9001) continues to gather force. This, together with more central reporting structures underway in finance, will assist in cross group communication and enhanced governance.

Progress on Core Element - Plasma functionalisation

Building on the progress from last year, the HDPlas™ functionalisation process continues to be the cornerstone of the Company's offering. Good progress has been made with several new and different key treatments enabling much more varied offerings to customers' requirements. This enables a much greater range of graphene and other nano material 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.

Key to the investment this year has been the research allowing ramp up technology to be much better understood and has, therefore facilitated increased commercial quantity requirements as and when required.

New applications for the plasma functionalisation process include projects developing the treatment of materials to re-life such as Carbon Black and processing larger types of components to support external surface enhancements, including greater adherence.

Marketing

The focus on Marketing for graphene profiling that has served Haydale well in the past has fundamentally shifted to product marketing for product sales. Alterations to the website in the year will be further enhanced in the new financial year with an incorporation of the US and Far East offering onto a single website and presenting the one global face of Haydale.

SITE SPECIFIC PROGRESS

Loughborough, East Midlands (RPC)

In context of the overall strategic direction, the Loughborough Site has seen an emphasis on reducing cost overhead, reducing grant income in preference to commercial paid-for projects whilst maintaining the progress in relation to the further development of the main technologies. The focus continues with the application specific customer solutions which now includes composites, elastomers, inks and SiC. The incorporation of nano materials into the bespoke solutions has become a core competence.

Highlights have included the progress from the funding grant announced in October 2018 with the Niche Vehicle Network, BAC Mono and Pentaxia as part of the consortia to further develop pre-preg for tooling and automotive parts, to the showcase of the BAC Mono "R" at Goodwood Festival of Speed with the composite parts integral in the vehicle being exhibited (announced post period in July 2019). This product development of the tooling and component enhanced pre-preg could well be a steppingstone for graphene-enhanced composite body panels and tooling reaching the wider automotive industry soon. Haydale's Composites Transition Piece (CTP) was also a product of previous grant collaboration, and now endorsed by the National Grid, is another example of product development targeting commercial revenues. This, together with the enhanced portfolio and other applications coming through the same route, bodes well for future revenues and growth.

Ammanford, Wales (RPC)

Ammanford's transition from an R&D cost centre to a commercial profit centre got underway in the second half of FY19. The focus has been on ink sales initially and, to that end, we have recruited an experienced Sales Engineer from that industry. As previously announced, Haydale, in collaboration with The Welsh Centre for Printing and Coating (WCPC), has developed and refined a range of proprietary printing inks utilising functionalised graphene. This includes the development of advanced ink technology to be embedded into a range of apparel for elite athletes in training for the 2020 Olympic and Paralympic Games.

In order to further support this transition and provide a pipeline going forward, Haydale is a partner in the Smart Expertise Programmes funded by the Welsh Government which is designed to speed up the process required to take products from proof of concept into volume and profitable products. This involves close collaboration with our Taiwan operations whose focus is also inks.

As part of the bigger sales team led by Neil Taylor in the US, the intention is to look to sell the full portfolio of products across all SBU's including ink, composites, elastomers and SiC.

Significant progress has been made in many areas of the functionalisation process, including the ability to increase treatment levels across several materials. Examples include treatment to increase hydrophobicity, as well as increase the ability to treat low bulk density materials such as high grade FLG's (few layered graphene) and recovered carbon blacks. Additionally, Haydale is collaborating with the National Physical Laboratory for further understanding of the functionalisation process as part of an Innovate UK grant as the focus continues on real life products. Key will be the ability to continue to improve material throughput. Collaboration with our key OEM on plans to design the next generation of HDPlas™ reactors to provide the ability to meet commercial volumes in anticipation of the breakthrough driven by the increasing scope of the core and patented technology has also been a priority.

We continue to have an office in Harwell Business Park, Oxfordshire, leased from June 2018, to provide a central location for business development alongside significant potential customers operating in the aerospace and advanced materials sectors.

Greer, South Carolina (AMAT)

The US operation, Haydale Ceramic Technologies LLC ("HCT"), continues to deliver the bulk of revenues for the Group and, in FY19, achieved sales of SiC of £2.7 million (FY18: £2.11 million). During the year, it developed and extended a previously announced four-year agreement to supply SiC micro-fibre to a global group selling tooling and wear-resistant solutions. HCT renegotiated and extended the term of the agreement. This new sole supply agreement has a potential sales value of more than US$3.3 million over a now five-year term, which represented an increase of US$1.35 million in the order book at the time.

Strategic Report continued

The commissioning and installation of the equipment invested in last year at $1.5 million to produce engineered SiC ceramic blanks for the cutting tool industry has been well received and qualified with major jet engine and aerospace manufacturers worldwide and the team are now working towards scaling up to commercial production quantities. There have been some initial teething issues with the ramp up, but progress is being made and the expectation of good revenue growth is still very much anticipated. The support of customers in this process has been significant as the teams work together to realise the joint opportunities.

Efforts to introduce SiC in the powder-coating anti-corrosion market have continued with revenues also expected to grow in the current financial year. This application has been the subject of a paid for commercial contract in the UK and work is underway between the US and UK sites to develop a bespoke coating process to further address this market opportunity.

HCT has a long-term sales order book for delivery of SiC and, as at 12 September 2019, stood at approximately $3.55 million ($4.22 million, 10 September 2018).

Thailand Bangkok (APAC)

HTT, our high-class facility in the prestigious Thailand Science Park in Bangkok, has progressed well in the year and is also moving into more commercial project applications, including functionalisation projects of some of the by-products of a large petrochemical processor and entering first stages of their own bespoke product sales, in particular, PATit. PATit is Haydale's software driven anti-counterfeiting device that "reads" the unique conductive transparent and opaque inks when printed onto a product label, proving the authenticity (or otherwise) of the goods. There is currently an agreement that has been signed with TKS Siampress Management Co., Ltd to use the technology in commercial applications on an exclusive basis in Thailand and one other territory to be decided by the parties. Furthermore, there is another customer working with the technology to develop a different bespoke application.

The site continues additionally to be a technical and sales support service for our Korean and Taiwan activities.

Taiwan Kaohsiung, (APAC)

HTW continues to provide graphene and other speciality inks in lower quantities, principally to leading biomedical sensor printers in the diabetes testing market. We are receiving regular repeat orders from customers, albeit still in relatively small quantities and the joint development agreement with STAR RFID. The previously announced intention to relocate to bigger premises will be dependent on the sales achieving commercial volumes and will be reviewed as part of the ongoing strategic review.

Korea Seoul (APAC)

Our sales office in Seoul remains a good access route to Chinese and Japanese markets as we continue to progress in the commercial sphere. Our sales engineer is now part of the global sales structure and this will assist revenue growth going forward. The new PATit sales opportunity described above was one that originated from this source.

FUTURE STRATEGIC DIRECTIONS

FY19 has been a transitional and challenging year for Haydale and the much-discussed potential for a commercial focus to develop a sales team and reduce overheads has been affected. This will be the fulcrum of business in FY20 and onwards. The cross selling of products: pre-preg and Inks in the US; Composite technologies in the APAC regions; and SiC in the UK and Europe, is a crucial element in this growth direction. The new global sales team that is now in place has very specific objectives to leverage this geographical reach and expertise across all the focus product groups with robust back up of the core and unique functionalisation process to underpin the drive.

Further improvements in characterisation, dispersion, capital equipment modification, material treatment levels and innovations continue as part of customer paid for process, and the concurrent development of further know-how with additional potential IP is, of course, an essential element of this new intensity, which in turn helps support more business. Examples of this were evident at the innovations in elastomers recently announced at the IRC 2019 (International Rubber Conference) where we launched a range of functionalised nanomaterials pre-dispersed in process oils for improvements in mechanical and thermal conductivity of customer's rubber products. We also continue to spread this learning, expertise and best practice throughout the Group to our people.

Central to our future success is also our partnerships which have continued to be developed over the last twelve months and where we are looking to expand further. WCPC is part of Swansea University and is fully committed through the part-funded Smart Expertise Programme to support the path to commercialism. The combination of WCPC's significant expertise and equipment and Haydale's newly created commercial focus assists in expediting products to quality volume to deliver to customers' needs.

The relationship with University of Manchester's £60 million Graphene Engineering Innovation Centre ("GEIC") is similarly a major bridge in the commercialisation drive which, from June 2019, has one of our HT60 functionalisation reactors installed and commissioned. As a Tier One member of the GEIC, Haydale gains access to the materials knowledge, applications engineers and both analytical and processing equipment within the GEIC. This gives Haydale, through the GEIC's world-renowned development facilities, a quicker route to market and access to a greater reach and range of customers.

We continue to target the less regulated markets, including sporting goods, which provide potential significant short-term revenue opportunities for Haydale. An example of which has been the supply during the year of graphene-enhanced masterbatch to a customer involved in the hockey and lacrosse supply industry. However, any significant sales orders are predicated on the adoption of our products and technologies by our commercial partners and customers, timing of which is outside our control. The excellent work we have done over the last nine months to focus on our core products and expertise, an example of which is our datasheets on graphene enhanced pre-pregs and elastomers, has been extremely well received by industry and our newly created sales team are following up on these new leads.

Grant Funded Projects

Grant funded projects have continued over the last twelve months with the new emphasis that only projects that lead to commercial products in the short to medium term or add significantly to the Group's knowledge bank on applications with commercial potential in defined time scales will be undertaken. The type of projects involved have included the large petrochemical customer work detailed above in Thailand but most focus has been in the UK at our Ammanford and Loughborough sites. An example of this includes the development of graphene enhanced functionalised additives for use in elastomers. This involves highly loaded nanomaterial dispersions in process oils to offer enhanced mechanical, physical, electrical and thermal properties of elastomer compounds. The technical datasheet and product information was launched at IRC in September 2019.

Other examples include a plan of work to create a graphene sensor that will be able to detect defects in composite materials during both the manufacturing process and the normal service life of a component, to improve the electrical conductivity of epoxy resin structural adhesives using functionalised nanomaterials, and a product readiness project to produce graphene enhanced composite tooling using thermal pre-preg, and graphene enhanced components using mechanically improved pre-preg.

Further work is also underway on the enhancement of the electrical pre-preg offering for EMS shielding and lightning strike, and it is anticipated this will result in another product specified for FY20.

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

Management and Personnel

We have looked to make reductions in overheads this year whilst at the same time investing in the training of our staff as we continue to build organisational capability.

In September 2018, Keith Broadbent was promoted to the newly created role of the Group's Chief Operating Officer and as a director of the Company and, following the equity fundraise in March 2019, became the CEO of the Group, replacing David Banks who reverted to his previous role as Non-executive Chairman.

In December 2018, several directors decided to stand down, including Matt Wood, as part-time Finance Director, who was replaced by Laura Redman-Thomas as full-time CFO. Ray Gibbs also stepped down as a director of the Company in December 2018 and Roger Smith, NED, stepped down in January 2019.

Having discussed with our advisers and key shareholders, it is the Board's intention over the coming weeks to adopt a new EMI and Group wide share option scheme in order to incentivise, retain and recruit our staff. The new scheme will replace the Group's existing share option schemes and all options granted under the previous schemes are expected to be surrendered. Further details of the new scheme and any grants of options made will be issued in due course.

Cost Savings

Our focus on cost savings, which started in October 2018 and continued following the Group's securing of a loan from the Development Bank of Wales in December 2018 and through the equity fund raising that completed in March 2019, has achieved annualised savings to overheads of approximately £1.6 million to date. These predominantly relate to Senior Management salary costs, consultancy costs and travel.

Impairment Review

At the end of FY19, the Board, following extensive discussions with its advisors including its auditors, took the decision to impair the carrying value of intangible assets relating to the UK (RPC) composites business by £1.78 million. This was despite good pipeline opportunities and takes into consideration the company's current share price, its resulting market cap and the change in the composites business since its acquisition in 2014 from a predominantly grant funded sales business to a product sales business.

Patents, IP and Licensing

Haydale's critical IP remains its processing, mixing and dispersion knowledge and know-how derived from the work we have carried out in conjunction with Huntsman, together with the FDA-approved ink formulations that have been developed in the Far East.

The Group currently holds patents in the US, UK, Europe, China, Japan and Australia.

Strategic Report continued

Key Performance Indicators ("KPIs")

The Group's KPIs are its financial metrics, being its revenues, gross profit margin, adjusted operating loss, cash position, total borrowings and long-term sales order book as follows:

	FY19 (£'000)	FY18 (£'000)
Revenue	3,467	3,403
Gross profit margin	55%	59%
Adjusted operating loss	(4,180)	(4,880)
Cash position	4,688	5,092
Borrowings	1,247	896
Long-term sales order book, inclusive of grants*	3,557	4,674

* unwinding of multi-year contracts in the US of £0.8 million and timing in UK Composites £0.29 million

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 32 to 67. The financial statements of the Company continue to be prepared in accordance with FRS 101 and are set out on pages 68 to 74.

Statement of Comprehensive Income

In the year under review, the Group's three principal areas of income were: Sale of SiC fibers, whiskers and blanks, Specialty Inks and graphene enhanced composites. There is a further category of grant funded turnover which will be discussed separately.

The Group's total income for the year ended 30 June 2019 of £4.25 million (FY18: £4.23 million), comprised commercial revenues of £3.47 million (FY18: £3.40 million) and grant income of £0.79 million (FY18: £0.83 million). The increase in revenue from the US SiC business of £0.50 million and £0.14 million increase in APAC inks was offset by a £0.58 million reduction in the UK RPC business, where the focus was redirected towards commercial sales and well-funded, commercially viable grant related projects for longer-term growth. Although revenue was flat year on year, the Group's second half income increased by 12% compared to the first half of the year and by 35% on the same period in FY18, predominantly driven by growth in the US.

The Group's gross profit, which excludes the income from grant funded projects was £1.90 million (FY18: £2.0 million) delivering a gross profit margin of 55% (FY18: 59%). The reduction in margin was primarily due to a different sales mix and a below average yield from the US operations in the first half of FY19. This was further impacted by higher than expected graphite costs in the US, and pricing strategies as the business seeks to expand the markets for its products.

The Group's adjusted operating loss before non-cash items, such as depreciation, amortisation, share based payment charges, impairments, and one-off restructuring costs was a loss of £4.18 million (FY18: £4.88 million). The loss from trading, including one-off restructuring costs of £0.35 million was £5.85 million (FY18: £6.02 million). The Directors consider that adjusted operating loss is a more useful measure of the Group's performance and comparative performance than loss from operations, as it excludes a non-cash accounting adjustment for the impairment of intangible assets.

As stated in the Strategic Report, at the year end, the Board, following extensive discussions with its advisors including its auditors, took the decision to impair the carrying value of intangible assets relating to the UK (RPC) composites business by £1.78 million. This was despite good pipeline opportunities and takes into consideration the current share price, the resulting market cap and the change in the composites business since its acquisition in 2014 from a predominantly grant funded sales business to a product sales business.

During the year, we invested significantly in the US blanks business, realigned and refocused resource throughout the Group, particularly reducing the cost base in the UK composites business. R&D was redirected towards commercially viable products expected to deliver future strategic growth. Overall third-party R&D spend for the year was £0.76 million (FY18: £1.05 million), of which £0.49 million was expensed during the year (FY18: £0.88 million), with the balance of £0.22 million being capitalised, (FY18: £0.18 million).

The Group's adjusted administrative costs of £6.87 million (FY18: £7.71 million) exclude non-cash items of depreciation, amortisation, share based payment charges as well as one-off restructuring costs of £0.35 million to facilitate strategic change and future cost base reductions. Total administrative expenses for the year were £8.53 million (FY18: £8.85 million).

In the year the cost base was realigned achieving annualised savings of approximately £1.6 million of which £0.50 million was realised in the second half of FY19. Overall, the loss before tax for the year was £7.76 million (FY18: £6.12 million) and included non-cash items of £3.10 million and one-off costs of £0.35 million. Non-cash items included impairment of intangible assets, amortisation, depreciation and share based payment charges.

Total comprehensive loss for the year was £7.12 million (FY18: £5.41 million), including the £1.78 million non-cash charge for the impairment of intangible assets and one-off restructuring costs of £0.35 million.

At the year end, the Group's contracted order book stood at £3.56 million (FY18: £4.67 million) and, since the year end, additional long-term orders have been secured resulting in an order book as at 10 September 2019 of £3.55 million to be delivered over the coming years.

The loss per share for the year reduced to £0.06 (FY18: £0.21 loss).

Statement of Financial Position and Cashflows

As at 30 June 2019, net assets amounted to £11.25 million (2018: £12.54 million), including cash balances of £4.69 million (2018: £5.09 million). Other current assets increased to £3.13 million at the year-end (2018: £2.56 million), and current liabilities increased to £3.12 million as at 30 June 2019 (2018: £2.51 million). Net cash outflow from operating activities, before working capital movements for the year was £4.59 million (2018: £4.83 million). The principal contributing factors being the adjusted operating loss of £4.18 million (2018: £4.88 million) plus the one-off restructuring costs of £0.35 million. Capital expenditure of £1.2 million (FY18: £0.72 million) was predominantly for the US blanks equipment which utilised a significant portion of cash during the year.

Capital Structure and Funding

As at 30 June 2019, the Company had 317,723,848 ordinary shares in issue (2018: 27,328,773). During the year, the Company issued 290,395,075 new ordinary shares in connection with the Company's placing and offer for subscription which raised £5.81 million (before expenses) and was completed on 13 March 2019. No options were exercised into ordinary shares during the year (FY18: no options were exercised).

The Group repaid borrowings of £0.5 million during the year (FY18: £0.45 million), principally in relation to the Group's US borrowing facilities which are secured on the Group's US based tangible assets. A new loan was secured on 19TH December 2018 with the Welsh Development Bank for £0.75 million. The net result left Haydale's financing costs in line with the previous year at £0.12 million (FY18: £0.10 million). The Group's total borrowings at the year-end were £1.25 million (2018: £0.90 million), £0.58 million of which was in the UK and the balance held by the Group's US subsidiaries.

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.

PRINCIPAL RISKS AND UNCERTAINTIES

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

Health and Safety

Many of the Group's products 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 and restricting activities to only certain qualified individuals.

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. Nevertheless the excellent work undertaken over the last nine months to focus on the Group's core products and expertise, an example of which is Haydale's datasheets on graphene enhanced pre-pregs and elastomers, has been extremely well received by industry and the Group's newly created sales team are following up on these new leads.

Rapidity of product take up

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 often cessation of product development.

Strategic Report continued

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.

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. 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. A new share-based incentive scheme is expected to be adopted by the Group in the coming weeks.

The impact of Brexit

The UK vote to leave the EU (Brexit) has not had a direct material impact on the Group's performance in the current reporting period. However, Brexit is likely to bring uncertainty in the following areas:

- Materials: 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, specifically the Horizon 2020 Research and Innovation programme. However, the Group has, in the last 18 months, offset the loss of access to Horizon 2020, with additional grant awards from Innovate UK.

The Group will respond to the challenges that Brexit brings once negotiations are at an advanced stage.

By order of the Board

David Banks
Chairman
14 October 2019

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 Stock Broking 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 12TH March 2019 reverted to Non-executive Chairman.

Keith Broadbent;
Chief Executive Officer

Keith joined Haydale in July 2017 as head of its Resins, Polymers and Composites Strategic Business Unit (RPC SBU) and as Managing Director of Haydale Composites Solutions Ltd before becoming the Group's Chief Operating Officer on 5TH September 2018. Prior to joining Haydale, Keith held a number of senior operational and commercial positions which covered aerospace, automotive, defence, marine and medical sectors. His experience includes significant multi-site responsibilities in both the UK and internationally. The companies he has worked for include Princess Yachts International, Sunseeker, TT Electronics and most recently at Ultra Electronics. Keith has demonstrated a strong track record in the delivery of budgets, high level customer service and enhancing shareholder value. Following the general meeting on 12TH March 2019, Keith was appointed as the Group's Chief Executive Officer.

Laura Redman-Thomas
Chief Financial Officer

Laura is an experienced finance professional, having held a variety of senior finance roles over the last 19 years, latterly at Stadium Group Plc where she was the Finance Director of its Technology Product Division before its sale to TT Electronics Plc in 2018. Prior to that, Laura spent almost 14 years at De La Rue, as both Finance Director and Commercial Director of a number of De La Rue operating companies. Laura holds a Masters degree in Strategic Business Management and is an Associate Member of the Chartered Institute of Management Accountants. Laura joined Haydale as CFO in December 2018.

Roger James Humm MBA BSc (Hons) FCA,
Senior Independent Non-Executive Director

Roger is a chartered accountant with over 30 years technology business experience. He runs his own consultancy business and is currently CFO at Boxarr Limited and G-Volution Limited, a trustee director at Oxford Instruments Pension Trustee Limited and chairs the Investment Committee of the University of Bristol Enterprise Funds. He has recently held finance roles with Ixico Plc, Nanosight Limited and Blue Earth Diagnostics Limited amongst others. Roger is chairman of Haydale's audit & risk committee and a member of the remuneration committee.

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 KolbenschmidtPierburg AG). Graham is a non-executive director of AB Dynamics Plc. He was on the AIM advisory committee of the London Stock Exchange for 6 years and has a Master of Arts degree in Modern and Medieval Languages from the University of Cambridge.

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 2019.

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 following are covered in the Strategic Report:

- Principal Activities;
- Review of the Business and Future Developments; and
- Key Performance Indicators:

Research and development

During the year ended 30 June 2019, the Group invested £0.49 million (2018: £0.88 million) in research and development activities which were expensed during the year, together with a further £0.27 million (2018: £0.18 million) of development expenditure which has been capitalised. A review of this expenditure is included in the Strategic Report.

Dividends

The directors do not propose the payment of a dividend (2018: nil).

Substantial Shareholdings

As at 30 June 2019, the Company had been advised by the following shareholders, other than the directors, that they held interests of 3% or more in the Company's ordinary share capital:

Name of Shareholder	*Number of Ordinary Shares*	*% of Share Capital*
Quilter Plc	42,451,675	13.36
Anthony Best	26,254,762	8.26
Nicholas Money-Kyrle	16,236,302	5.11
David & Monique Newlands	12,950,000	4.08

In addition to those shareholders set out in the table above who had informed the Company of their holding of Ordinary Shares, as they are required to due pursuant to the Companies Act and under the AIM Rules for Companies, as at 30 June 2019, the Company's registered shareholders with interests of 3% or more in the Company's ordinary share capital was as follows:

Name of Shareholder	*Number of Ordinary Shares*	*% of Share Capital*
Rock (Nominees) Limited	28,817,548	9.07
Cheviot Capital (Nominees) Ltd	25,300,282	7.96
Hargreaves Lansdown (Nominees) Limited	19,038,901	5.99
Barclays Direct Investing Nominees Limited	16,424,332	5.17
Hargreaves Lansdown (Nominees) Limited	15,680,689	4.94
Hargreaves Lansdown (Nominees) Limited	15,477,163	4.87
Interactive Investor Services Nominees Limited	10,868,637	3.42
Nicholas Money-Kyrle	10,000,000	3.15
HSBC Global Custody Nominee (UK) Limited	10,000,000	3.15

Directors

The following directors have held office since 1 July 2018 and up to the date of signing the financial statements:

David Banks
Graham Eves
Roger Humm
Laura Redman-Thomas (appointed 20 December 2018)
Roger Smith (resigned 31 January 2019)
Matthew Wood (resigned 21 December 2018)
Keith Broadbent (appointed 5 September 2018)
Raymond Gibbs (resigned 21 December 2018)

Directors' Interests in Ordinary Shares

The directors, who held office at 30 June 2019, had the following interests in ordinary shares of the Company:

Director	*Number of Shares at 30 June 2019*	*% of Share Capital*
David Banks	541,667	0.002
Roger Humm[1]	890,208	0.003
Laura Redman-Thomas	375,000	0.001
Keith Broadbent	500,000	0.002

1. Includes 340,208 ordinary shares held by his wife, Wendy Humm.

Between 30 June 2019 and the date of this report there has been no change in the beneficial interests of directors in shares or share options as disclosed in this report.

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

Since 30 June 2019, there has been no changes to the Board of directors of the Company.

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.

Disclosure of information to auditors

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

Independent auditors

The auditors, BDO LLP 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
14 October 2019

Chairman's Corporate Governance Statement

Overview

As Non-executive Chairman of the Board of Directors of Haydale Graphene Industries Plc (Haydale or the Company/Group as the context requires), 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 management information flow. We have introduced effective Board evaluation practices and will carry out a regular review of our governance processes to ensure we are constantly improving. The Board members have extensive experience of managing AIM Companies, including detailed knowledge of the AIM Rules and the Market Abuse Regulations. In September 2018, Haydale adopted the Quoted Companies Alliance Corporate Governance (QCA Code) and Haydale updated its compliance with the QCA Code over the subsequent year. This report updates the Group's adoption of the QCA Code and explains how we have applied the guidance and what measures that we intended to implement have been implemented. The Board considers that the Group complies with the QCA Code in all respects. A full overview of the Company's compliance with the QCA Code is provided below.

The Board believes that corporate governance is more than just a set of guidelines; rather it is a framework which underpins the core values for running the business in which we all believe, including a commitment to open and transparent communications with stakeholders. We believe that good corporate governance improves long-term success and performance, whilst reducing or mitigating risks. Changes have been made to the Board's composition since 17 September 2018, the date of adoption by the Group of the QCA Code, that have an impact on our corporate governance framework are as follows:

- The appointment on 20 December 2018 of Laura Redman-Thomas as full-time Chief Financial Officer, replacing Matt Wood who had been part-time FD, who stepped down from the Board on the same date, but remains as Company Secretary;
- The resignation of Ray Gibbs as a director of the Company on 20 December 2018;
- The resignation of Roger Smith as a director of the Company on 31 January 2019;
- The appointment of Keith Broadbent as Chief Executive Officer on 12 March 2019 following the Company's general meeting to approve the £5.7 million equity fundraising – Keith having been the Group's COO since 5 September 2018; and
- David Banks reverting to the role of Non-executive Chairman on 12 March 2019, having been appointed Interim Executive Chairman on 5 September 2018.

Where possible, Board changes are discussed with the Company's major shareholders in advance.

The Company's Nominations Committee was formed in June 2018, with the following members, which remains the case today. Its members are: Graham Eves (NED), as Chair, myself (David Banks), and Roger Humm (Senior Independent NED).

At the time of the Group's adoption of the QCA Code in September 2018, we were in the planning stages of adopting a Group-wide employee evaluation process, including the Board, and an employee engagement survey. This is now expected to commence in early 2020.

Below are the Company's explanations of how it complies with the 10 principles of the QCA.

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 strategy 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 vision, 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 synergies in the high growth advanced materials industry. Haydale's business model is set out with the Strategic Report of its 2019 Report and Accounts.

The Company intends to deliver shareholder returns initially through capital appreciation and eventually through distributions via dividends. Challenges to the execution of the Company's strategy are set out within the Strategic Report contained in the Company's 2019 Annual Report and its principal risks are set out within that report.

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 by providing effective communications through our Interim and Annual Reports along with Regulatory News Service announcements. We also use the Company's website, www.haydale.com for both financial and general news relevant to shareholders.

The Directors meet shareholders and other investors or potential investors at regular intervals during the year, especially during the Annual and Interim Results cycles. 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 respond to all shareholder requests for meetings and listen to shareholders' views. Roger Humm, the Senior Independent Non-Executive Director (SID), will carry out shareholder liaison if the Chairman is not available or as an alternative.

The Board keeps in mind the proportions of direct, nominee and institutional shareholders, and distributes communications accordingly. The whole Board attends the AGM. The AGM is regarded as an opportunity to meet, listen and present to shareholders and shareholders are encouraged to attend. In addition, the Company seeks feedback from key stakeholders, taking action where appropriate.

The Company's broker and NOMAD, Arden Partners (www.arden-partners.com), is briefed regularly and updates the Board during the year on shareholders' expectations.

In addition, the Company has engaged the services of Hardman & Co (www.hardmanandco.com) to publish research on the Company that can be distributed to both private and institutional existing and potential shareholders.

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

The Board recognises that the long-term success of the Company is reliant upon the efforts of the employees of the Company and its collaboration partners, suppliers, regulators and other stakeholders. The Board has put in place a range of processes and systems to ensure that there is close oversight and contact with its key resources and relationships. The Company prepares a detailed budget annually, commencing in April and signed off by the Board in early July, which takes into account the Group's long-term strategy and its available key resources including staffing, working capital, production capacity and functionalisation capabilities.

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 Group is in the process of implementing a Company-wide policy to conduct employee engagement surveys, expected to commence in early 2020, which will seek to understand any issues within the Group's workforce.

In depth analysis and reviews of each business units' budgeted business plans 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 goals, targets and aspirations of the Company and its related parties. 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 industries' participants, such as customers, graphene producers, R&D facilities, including universities and academic institutions, which broadens communication and the opportunity for feedback whilst simultaneously embracing influential movers within the advanced materials industry, and determining Company perception. Feedback received from stakeholders is reviewed, considered and, if changes are required, actioned appropriately.

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.

Chairman's Corporate Governance Statement continued

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

The Board recognises the need for an effective and well-defined risk management process and, whilst it oversees and regularly reviews the current risk management and internal control mechanisms, has delegated this responsibility primarily to the Audit Committee and senior management. The Company has adopted a risk register, which will be reviewed regularly by senior management and the Audit Committee. The 2019 Annual Report also outlines the key risks to the business, set out within the Strategic Report, which are added to or amended during the year. The status of the key risks to the Company will be shared regularly with the Board, and the Board intends to thoroughly review the Company's risk register every six months.

The review process involves the 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 manage them effectively. Risk management is integral to the ability of the Group to deliver on its strategic objectives.

The system of internal control is structured around an assessment of the various risks to the business 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. The Board has established appropriate reporting and control mechanisms to ensure the effectiveness of its control systems.

The risk assessment matrix below sets out these risks, categorises said risks, and outlines the controls that are in place. This matrix is updated as changes arise in the nature of risks or the controls that are implemented to mitigate them. The Audit Committee reviews the risk matrix and the effectiveness of scenario testing on a regular basis. The following principal risks and controls to mitigate them have been identified as at the date of this updated Corporate Governance Statement:

Activity	*Risk*	*Impact*	*Mitigating Control*
Internal Risk	Slower adoption by customers than expected of the Group's newly developed advanced materials	Lower than expected cash inflows and consequently lower revenues and profits	A newly formed global sales team with both regional and product group expertise has been established. The Group regularly reviews the order book and sales pipeline by Strategic Business Unit, against clear objectives and management accountability. Considerable customer facing and operational experience exists at Board level
Internal Risk	Contractual Liabilities risk	Uncapped liability or consequential losses (unquantifiable) exist	The Group delegated authority matrix ensures senior executives review all contracts, and any high-risk contracts are approved at Board level
Internal Risk	Inadequate insurance cover	P&L Exposure	There is an annual review of insurance policies and risks. The insurance risk is also assessed when there is any material change in the business and its operations
Competition Risk	Dependence on Key Personnel	The loss of services of any existing key executives could adversely impact on the business, development, financial condition, and results of operations	The Group provides well-structured and competitive reward and benefit packages that ensure our ability to attract and retain key employees. A critical talent pool has been identified and succession planning is underway

Activity	*Risk*	*Impact*	*Mitigating Control*
Internal Risk	Health and Safety risk	The Company's products could theoretically 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 through regular staff training, risk assessments and restricting activities to only certain qualified individuals
External Risk	Client concentration risk	The Company's top two clients accounted for 48% of the Group's revenue in FY2018 (FY2017: 63%) and any breakdown in these relationships could damage the business	The Company has in place long term contracts with its key customers. Furthermore, it has significantly increased the number of its active customers and its expansion continues to reduce its exposure to any single large client
External Risk	Unforeseen delays in forecasting the commencement of sales, possibly due to regulatory hurdles	Cessation of product development	Improved customer relationships, understanding customer requirements, quarterly review of development projects (Technical Readiness Levels) to ensure commercial feasibility, time to market and market potential. Monthly review of key risks and opportunities to forecast and review longer-term sales pipeline with key milestones, tasks and responsibilities identified to close the sale
Financial Risk	Adequate financial and operational controls	Error or fraud, leading to a loss in reputation, business partners and customers	The Company has invested and continues to invest in its financial reporting functions to facilitate strong reporting and management control as it grows
Government Regulation	Up to date with government regulation for nanoparticles and potential restrictions in use	Fines, penalties, inability to sell product	The Group maintains a vigilant watch on the market and regulatory changes or debates in all territories of trade and manufacture
IT/Data Risk	Cyber Risk	Loss of data, resulting in a reduced confidence from our customers and suppliers. Fines, penalties	The Company maintains a GDPR policy, a third party manages the IT security, regular system backups and disaster recovery
Financial Risk	Company runs out of funds prior to full turnaround into profitability	Closure of business due to lack of funds to continue in operation	Regular review of management accounts, P&L forecasts and cashflow forecast. Information provided to the Board to ensure accurate knowledge with key sensitivities and various options available to ensure a going concern

Chairman's Corporate Governance Statement continued

Activity	*Risk*	*Impact*	*Mitigating Control*
Intellectual Property Risk	Ability to maintain adequate protection of the Company's IP portfolio	Risk that any of the Group's patents will not be held valid if challenged	The Company conducts regular international IP searches as well as monitoring activities and regulations for developments in copyright/intellectual property law and enforcement
External Risk	Brexit	Brexit is likely to bring uncertainty in areas such imports and exports, regulations and grant income	The Group continues to review imports and exports from and to Europe, and monitors legislation/regulations accordingly

The Board does not currently deem it necessary for an internal audit function, having financial controllers in each of its key operational entities and jurisdictions. The Company went through an extensive Group audit tender process in the spring of 2018, which provided insight into areas where the Group could improve its financial reporting framework. Consequently, the Board believes that it now has in place effective governance and risk management processes, however, it will continue to monitor closely and regularly, assessing its effectiveness and will implement any changes that it deems appropriate.

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

As from 30 September 2019, the Board comprises two executive directors and three non-executive directors as follows:

Executives

- Chief Executive Officer: Keith Broadbent; and
- Chief Financial Officer: Laura Redman-Thomas.

Non-executives

- Non-executive Chairman: David Banks;
- Senior Independent Non-executive: Roger Humm; and
- Independent Non-executive: Graham Eves.

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 Keith Broadbent and Ms Laura Redman-Thomas are expected to dedicate 227 days per annum to the Company. One third of Board are subject to re-election at each AGM.

Meetings are open and constructive, with every Director participating fully. Senior management can also be invited to meetings, providing the Board with a thorough overview of the Company.

The full Board meets at least 8 times in the year according to the schedule of future meetings intended to be agreed at the beginning of each year, and also as and when required. In order to be efficient, the Directors meet formally and informally both in person and by telephone. Board and Committee document authors are made aware of proposed monthly deadlines through the schedule of meetings agreed at the beginning of the year. Board papers are prepared by the relevant personal (Chair, CEO, CFO) and circulated to the Board at least 48 hours before meetings, allowing time for consideration and necessary clarifications before the meetings.

During the year ended 30 June 2019, the Company held 27 board meetings (FY18: 12), with each member's attendance as follows:

	Number of board meetings attended	
Director	*FY19*	*FY18*
David Banks	27	12
Keith Broadbent (appointed 5 September 2018)	24	–
Laura Redman-Thomas (appointed 20 December 2018)	13	–
Graham Eves	21	11
Roger Humm	22	12
Raymond Gibbs (resigned 20 December 2018)	12	12
Matthew Wood (resigned 20 December 2018)	14	12
Roger Smith (resigned 31 January 2019)	13	12

Attendance at the Company's audit, remuneration and nomination committee meetings during FY19 and FY18 were as follows:

	Number of committee meetings attended					
Committee member	*Audit*		*Remuneration*		*Nominations*	
	FY19	FY18	FY19	FY18	FY19	FY18
David Banks	1	3	8	2	3	1
Graham Eves	1	3	6	2	3	1
Roger Humm	1	4	8	2	3	1

The Company has Audit, Remuneration and Nominations (from 12 June 2018) Committees. Terms of reference for the each of the Company's Committees are published on the Group's website, see www.haydale.com. 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 Non-executive Directors have both a breadth and depth of skills and experience to fulfil their roles. The Company believes that the current balance of skills in the Board as a whole, reflects a very broad range of personal, commercial and professional skills across geographies and industries and the Board has experience of public markets. Details of the Directors' experience and areas of expertise are outlined on the Company's website at http://www.haydale-ir.com/content/investors/board. The Non-executive Directors meet without the presence of the Executive Directors during the year, and also maintain ongoing communications with Executives between formal Board meetings.

In addition to their general board responsibilities, Non-executive Directors are encouraged to be involved in specific workshops or meetings, in line with their individual areas of expertise. The Board shall review annually the appropriateness and opportunity for continuing professional development whether formal or informal. 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.

The Company utilises the services of ONE Advisory Limited, company secretarial and corporate governance specialists, to provide assistance to the Company in its company secretarial and MAR compliance needs. Matt Wood, a former director of the Company and its Company Secretary, is a director of ONE Advisory Limited.

Chairman's Corporate Governance Statement continued

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

Every other year the Board expects to carry out an internal Board and Committee evaluation exercise, including that of the Chairman. The exercise will be led by Roger Humm, the SID. The areas of evaluation covered include Board structure and knowledge, operating effectiveness, operating efficiency, quality of information and ongoing professional development. Individual reviews of Non-executive Director performance will also be carried out by the SID, and the Chairman will undertake a review of the performance of the SID. The Chairman will usually chair meetings of the non-executive directors, where necessary.

Responses will be received and recorded and circulated in a timely fashion, identifying positive areas and areas for improvement to ensure that it is functioning at its full potential. The results and recommendations that come out of the appraisals for the Directors shall identify the key corporate and financial targets that are relevant to each Director and their personal targets in terms of career development and training. Targets will be addressed during the FY20 financial year and will be used to assess the progress the Board in future evaluation exercises.

The Nominations Committee comprises the three Non-executive Directors, and regularly 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. The Nominations Committee also keeps key positions outside the main board and other personnel considered critical to the business under review; such positions include that of subsidiary directors. Going forward, findings from the Company's evaluation exercises will inform the Nominations Committee's succession planning discussions.

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

The Board recognises that its decisions regarding strategy and risk will impact the corporate culture of the Company as a whole and that this will impact the performance of the Company. The Board is very aware that the tone and culture set by the Board will greatly impact all aspects of the Company as a whole and the way that employees behave. The corporate governance arrangements that the Board has adopted are designed to ensure that the Company delivers long-term value to its shareholders, and that shareholders have the opportunity to express their views and expectations for the Company in a manner that encourages open dialogue with the Board.

Our culture acts as the glue that binds our staff around the world together – relaxed, 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 six operational/sales sites to be aligned with the Haydale culture is important in improving operations and ultimately our performance. We are in the process of developing a set of seven guidelines which sets out our culture.

- We communicate openly
- We focus on delivering on our projects
- We empower our people
- We are passionate about making material change
- We will make a difference for our customers
- We have a "can do" attitude
- We learn at every opportunity

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 Directors consider that at present the Company is moving towards its objective of having an open culture across each of our regions of operation facilitating comprehensive dialogue and feedback and enabling positive and constructive challenge.

Because the size of the Group's global workforce has changed considerably over the last few years, the Company intends to carry out an employee engagement survey every other year, to commence in early 2020, that will determine if ethical values and the Company's corporate culture are recognised and respected, and seek to understand any underlying issues with the workforce.

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 these to evolve over time, in line with the Company's growth. The Board delegates responsibilities to Committees and individuals as it sees fit, with the Chairman being responsible for the effectiveness of the Board and the primary contact with shareholders, and the Executive Directors being accountable for the management of the Company's business.

The Chairman 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 two executive directors, Keith Broadbent (Chief Executive Officer) and Laura Redman-Thomas (Chief Financial Officer) are responsible for the day-to-day running of the business, as well as developing corporate strategy while the Non-executive Directors are tasked with constructively challenging the decisions of executive management and satisfying themselves that the systems of business risk management and internal financial controls are robust.

The role of the SID is to serve as a sounding board for the Chairman and act as an intermediary for other Directors. The SID is also available to shareholders, if the Chairman is unavailable, if they have reason for concern that contact through the normal channels of the Executive Directors has failed to resolve. The SID is responsible for holding annual meetings with the executives and non-executives, without the Chairman present, to appraise the Chairman's performance.

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

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

The Board delegates authority to three 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, Roger Humm (Chair), Graham Eves and David Banks. The CFO, Group FC and external auditors 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 procedures. 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 met once during the year ended 30 June 2019 and intends to meet at least twice in the current financial year.

Remuneration Committee

The Directors' Remuneration Report and Directors' Remuneration Policy Report are set out in the 2019 Annual Report. The Remuneration Committee is made up of the three Non-executive Directors, with Graham Eves as its Chair. The committee's members are all Independent Non-executive Directors. Other members of the Board may attend the Committee's meetings at the request of the Committee Chairman.

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

Chairman's Corporate Governance Statement continued

performance of the Executive Directors and makes recommendations to the Board on 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 and as and when required.

Nominations Committee

The Nominations Committee was created in June 2018 and has three members, Graham Eves (Chair), Roger Humm and David Banks. The Nominations Committee reviews the structure, size and composition required of the Board compared to its current position and make recommendations to the Board, considers succession planning and nominates candidates to fill Board vacancies. The Nominations Committee shall meet at least once per year, and otherwise as necessary to consider proposals for Board appointments and other matters.

Terms of Reference for each of the Committees can be found here www.haydale.com.

In accordance with the Companies Act 2006, the Board complies with: a duty to act within their powers; a duty to promote the success of the Company; a duty to exercise independent judgement; a duty to exercise reasonable care, skill and diligence; a duty to avoid conflicts of interest; a duty not to accept benefits from third parties and a duty to declare any interest in a proposed transaction or arrangement.

As the Company expands it expects its corporate governance requirements to expand, for example see employee engagement evaluation/adoption of risk register.

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

The Board is committed to maintaining effective communication and having constructive dialogue with its shareholders. The Company intends to have close ongoing relationships with its 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 regular transfer reports from its corporate registrar and in-depth quarterly analysis from Argus Vickers. In addition, all shareholders are encouraged to attend the Company's Annual General Meeting. All 2018 AGM resolutions were passed comfortably, and the proxy votes received for each resolution put to the meeting was disclosed by the Company via RNS and on its website. The Board maintains that, if there is a resolution passed at a GM with 20% votes against, the Company will seek to understand the reason for the result and, where appropriate, take suitable action.

The latest Corporate Documents (including Annual Reports and Notices of AGMs) can be found here www.haydale.com.

Investors also will have access to current information on the Company though its website, www.haydale.com. The Company uses electronic communications with shareholders, where possible, in order to maximise efficiency.

Going forwards a summary of work carried out by board committees during the year will be included in the Company's Annual Report.

The Company intends to update its Corporate Governance Statement at least every six months or when there is a material change in the Company's personnel or its activities.

By order of the Board on 14 October 2019.

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 Corporate Governance Statement on page 17. The members of the Remuneration Committee during the year under review were Graham Eves (Chairman) and Roger Humm to 11TH March 2019, with David Banks re-joining the Committee following the general meeting on 12TH March 2019. 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. Furthermore, the requirements of the 2006 Companies Act in respect of the Directors' Remuneration Report have only been applied to the extent necessary as there is no requirement to prepare a Directors' Remuneration Report under the Companies Act.

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.

The terms of reference of the Committee do not encompass decisions to employ or dismiss Executives. The Committee does not have responsibilities for nominations to the Board, responsibility for which is with the recently formed Nomination Committee.

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 2019 is set out on page 25.

The Remuneration Committee terms of reference require it to establish remuneration policy on the basis of various outcomes including developing 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.

Having discussed with our advisers and key shareholders, it is the Board's intention over the coming weeks to adopt a new EMI and Group wide share option scheme in order to incentivise, retain and recruit our staff. The new scheme will replace the Group's existing share option schemes and all options granted under the previous schemes are expected to be surrendered. Further details of the new scheme and any grants of options made will be issued in due course.

The Company currently has three equity-based incentive schemes in place.

a) 2013 Share Option Scheme

In May 2013, the Company adopted an EMI share option plan ("2013 Share Option Scheme"). During 2013, the Company granted options to executive directors and senior management over a total of 121,500 ordinary shares under the 2013 Share Option Scheme. There were no outstanding options in respect of this scheme at the year-end (2018: nil) and no further grants have been made under this scheme or are anticipated to be made in the future.

b) 2014 Option Scheme

In April 2014, the Company adopted a new share option scheme pursuant to which it may grant both EMI approved options and unapproved options ("2014 Option Scheme"). EMI approved options are subject to individual and overall limits. Potential grantees are employees and officers of the Company and members of the Group.

During the year ended 30 June 2019, no new share options were granted under the 2014 Option Scheme (2018: 99,271 options granted).

During the year ended 30 June 2019, 289,659 share options had lapsed (2018: 408,009) and no share options were exercised (2018: nil). At 30 June 2019, there were 391,255 unexercised options outstanding (2018: 680,914).

Directors' Remuneration Report continued

The 2014 Share Option Scheme sets a limit of 10% of the issued share capital at the time of grant that can be used by the Company for share options. Options granted under this scheme may typically be exercised between the third and tenth anniversaries of grant provided the option holder remains an employee of a member of the Group. In certain circumstances, options may be exercised outside this window, for example in the event of death of the option holder or a change of control of the Company. Options can be granted under the scheme within 42 days of release of the annual and interim results and at other times in exceptional circumstances by resolution of the Board. No further options may be issued after the tenth anniversary of the date of adoption of the scheme. It is intended that options shall not be granted with an exercise price lower than the prevailing market value of an ordinary share at the time of grant. There are no individual or company performance targets to be met in order to be able to exercise the options. No further grants are anticipated to be made under this scheme.

c) Long Term Incentive Plan ("LTIP")

In December 2017, the Company adopted the LTIP to incentivise the Group's key management ("Key Management") to deliver long-term value creation for shareholders, to ensure alignment with shareholders' interests and to attract and retain high-quality individuals.

Awards under the LTIP are structured as nominal cost options (£0.02) with a three-year vesting period and a seven-year life after vesting ("Exercise Period"). A single conditional grant of a maximum number of LTIP Awards ("Award") can be made to the relevant member of the Key Management ("Award Holder") at the outset. The performance conditions that dictate the proportion, if any, of the Award that is capable of exercise by the Award Holder during the Exercise Period, are based upon the Company's sustainable share price performance during the period commencing on the first day of the 13th month following the date of grant and ending on the last day of the 120th month following the date of grant ("Performance Period").

Share price performance criteria

The LTIP has been structured to ensure that value is created for shareholders before any value is delivered to the Key Management. Accordingly, should the Company's closing mid-market share price not reach and remain at, or above, £2.20 for at least 15 consecutive trading days during the Performance Period ("Minimum Target"), then none of the Awards vest or is exercisable and the Awards will lapse in full.

Should the Company's closing mid-market share price reach and remain at or above £4.20 for at least 15 consecutive trading days during the Performance Period ("Maximum Target"), then 100% of the Awards vest and are exercisable. Between the Minimum Target and the Maximum Target, the % of the Awards that vest shall be pro-rata on a straight-line basis. The Awards may lapse in the event of cessation of employment save for certain circumstances, including inter alia, redundancy or retirement in which case, at the Company's sole discretion and subject to performance criteria being met, the Exercise Period may be accelerated.

Grant of LTIP Awards

During FY19 no new LTIP options were awarded and no further grants are anticipated to be made under this scheme. On 15 December 2017, grants of LTIP Awards were made to the following members of the Key Management:

Name and role	*Number of LTIP Awards granted ("Award")*	*Earliest exercise date*	*Latest exercise date*	*Minimum share price target before any Awards vest*	*Maximum share price target for 100% of Awards to vest*
Ray Gibbs**	819,863	14/12/20	14/12/27	£2.20	£4.20
Trevor Rudderham*	409,932	14/12/20	14/12/27	£2.20	£4.20
Keith Broadbent	409,932	14/12/20	14/12/27	£2.20	£4.20
Matt Wood**	341,610	14/12/20	14/12/27	£2.20	£4.20

* Trevor Rudderham left the Group during the comparative year for family reasons, accordingly Mr Rudderham's LTIP Award lapsed.

** Post year end LTIP awards lapsed

DIRECTORS' INTERESTS IN SHARE OPTIONS

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

2014 Share Option Scheme

Director	*Date of Grant*	*Number of LTIP Options*	*Number of EMI Options*	*Number of Unapproved Options*	*First Exercise Date*	*Exercise Price*	*Expiry Date*
David Banks	15 December 2017	–	100,000	100,000	15 December 2020	125.5p	15 December 2027
Graham Eves	3 April 2014	–	–	16,872	3 April 2017	210p	3 April 2024
Roger Humm	3 April 2014	–	–	16,872	3 April 2017	210p	3 April 2024

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

The mid-market price of the Company's ordinary shares at 30 June 2019 was 1.9p (2018: 70p). During the year to 30 June 2019, the mid-market price ranged from 1.81p to 70.58p (2018: 70p to 186p). The share price was impacted by an issue of 290,395,075 shares issued during the year. 289,395,075 shares were issued at 2p per share in March 2019.

DIRECTORS' REMUNERATION

The aggregate remuneration received by directors who served during the years ended 30 June 2019 and 30 June 2018 was as follows:

			Year ended 30 June 2019			*Year ended 30 June 2018*		
£'000	*Salary/Fee*	*Benefits*	*Total (excl. Pension)*	*Pension*	*Total (incl. pension)*	*Total (excl. pension)*	*Pension*	*Total (incl. pension)*
Executive Directors								
R Gibbs*	71	6	77	4	81	162	9	171
M Wood**	47	5	52	3	55	110	6	116
L Redman-Thomas***	68	6	74	1	75	–	–	–
K Broadbent****	171	10	181	8	189	–	–	–
R Smith*****	5	–	5	–	5	9	–	9
Non-Executive Directors								
D Banks******	56	–	56	–	56	49	–	49
G Eves	25	–	25	–	25	28	–	28
R Humm	25	–	25	–	25	28	–	28
J Knowles*******	–	–	–	–	–	12	–	12
	468	27	495	16	511	398	15	413

* Resigned 20 December 2018

** Part time Finance Director resigned 20 December 2018

*** Appointed 21 December 2018

**** Appointed 5 September 2018, formerly subsidiary director

***** Part-time executive director, resigned 31 January 2019

****** Appointed as Independent Executive Chairman on 5 September 2018 until 12 March 2019 when reverted back to non-executive chairman

******* Resigned 13 July 2017

Directors' Remuneration Report continued

In addition to the amounts shown above, the share-based payment charge for the period was:

	to 30 June 2019 £'000	to 30 June 2018 £'000
Raymond Gibbs	62	42
David Banks	26	14
Matthew Wood	26	18
Keith Broadbent	28	–
Graham Eves	–	5
Roger Humm	–	5
Roger Smith	–	5
	142	89

By order of the Board

David Banks
Chairman
14 October 2019

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 and prudent;
- State whether they have been prepared in accordance with IFRSs as adopted by the European Union, subject to any material departures disclosed and explained in the financial statements; and
- Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Company will continue in business.

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

Website Publication

The directors are responsible for ensuring that the 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.

Going Concern

The directors have prepared and reviewed detailed financial forecasts. After due consideration of these forecasts, the Group's current cash resources, borrowing facilities and the directors' belief that the Group will have access to additional equity or debt funding in the future, 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.

By order of the Board

Matt Wood
Company Secretary
14 October 2019

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

Opinion

We have audited the financial statements of Haydale Graphene Industries Plc (the 'Parent Company') and its subsidiaries (the 'Group') for the year ended 30 June 2019 which comprise the Consolidated Statement of Comprehensive Income, Consolidated Statement of Financial Position, Consolidated Statement of Changes in Equity, Consolidated Statement of Cash Flows, Parent Company's Balance Sheet and Parent Company Statement of Changes in Equity and notes to the 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 2019 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.

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 were:

- 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.

Key audit matters

Key audit matters are those matters that, in our professional judgment, 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) we identified, including those which had the greatest effect on: the overall audit strategy, the allocation of resources in the audit; and directing the efforts of the engagement team. 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.

Revenue recognition

The Group's revenue recognition policy is included within the accounting policies on page 39 and the components of revenue are set out in note 4.

Management exercises judgement in recognising revenue arising from the provision of services where contracts are ongoing at the year end. Revenues for such contracts are recorded on a percentage completion basis unless the contract outcome cannot be reliably determined, in which case, revenue is only recognised to the extent that incurred costs are recoverable.

In view of the judgements involved and estimation that could be susceptible to management bias, we considered that these matters gave rise to a significant risk of misstatement in the financial statements and therefore a key audit matter.

How We Addressed the Key Audit Matter in the Audit

We have assessed whether revenue recognition is in accordance with IFRS 15 and the Group's accounting policies and, in respect of service contracts ongoing at the year end, we considered the basis of estimation for accrued and deferred income. This was performed by gaining an understanding of the terms of a sample of underlying contracts and ensuring that the revenue, accrued and deferred income were recognised appropriately by testing management's assessment of the stage of completion with reference to evidence such as costs incurred and time recording records.

From the audit procedures performed, we did not identify any instances of revenue recognition not being in accordance with IFRS 15 or the Group's accounting policies.

Goodwill and intangible asset impairment risk

As detailed in the accounting policies and critical accounting estimates and judgements and key sources of uncertainty, goodwill and other intangible assets are tested for impairment at least annually through comparing the recoverable amount of the cash-generating unit ("CGU"), based on a value-in-use calculation, to the CGU carrying value.

Management's review concluded that, in the absence of contracts to support the forecast revenues, the HCS CGU should be fully impaired, resulting in an impairment charge of £1.8m. No evidence of impairment was identified by Management in respect of other CGUs.

The risk that inappropriate conclusions may be reached in respect of goodwill and intangible asset impairment reviews is considered significant due to the level of judgement involved in the impairment review and the opportunity for management bias within the impairment model assumptions.

How We Addressed the Key Audit Matter in the Audit

We reviewed impairment reviews prepared by management, specifically reviewing the integrity of management's value-in-use model and, with the assistance of our valuation experts, we challenged the key inputs, being forecast growth rates, operating cash flows and the discount rate.

Our audit procedures for the review of operating cash flows and forecast growth rates included, amongst others, comparing the forecast to recent financial performance. In addition, we used market data to independently calculate a discount rate for comparison and also performed our own sensitivity analysis upon the key valuation inputs, most significantly being the forecast revenue growth.

In respect of the HCS CGU, we reviewed the sales pipeline and considered the appropriateness of management's conclusion based on the evidence available and agreed the calculated impairment and allocation of the charge with reference to the carrying value of the assets and liabilities in the CGU.

We considered the discount rate to be within a reasonable range and the impairment of the HCS CGU appropriately applied.

Our application of materiality

Group materiality 30 June 2019	*Group materiality 30 June 2018*	*Basis for materiality*
£300,000	£300,000	5% of losses before tax (2018: 5% of losses before tax) as the group is primarily research and development focussed.

We apply the concept of materiality both in planning and performing our audit, and in evaluating the effect of misstatements. We consider materiality to be the magnitude by which misstatements, including omissions, could influence the economic decisions of reasonable users that are taken on the basis of the financial statements. In order to reduce to an appropriately low level the probability that any misstatements exceed materiality, we use a lower materiality level, performance materiality, to determine the extent of testing needed Importantly, misstatements below these levels will not necessarily be evaluated as immaterial as we also take account of the nature of identified misstatements, and the particular circumstances of their occurrence, when evaluating their effect on the financial statements as a whole.

Performance materiality was set at 70 per cent of the above materiality levels.

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

Where financial information from components was audited separately, component materiality levels were set for this purpose at lower levels varying from £30,000 to £150,000 (2018: £42,000 to £125,000).

Our determination of materiality remained consistent year on year. We consider losses before tax to be one of the principal considerations for members of the company in assessing the financial performance of the group.

We agreed with the audit committee that we would report to the committee all individual audit differences identified during the course of our audit in excess of £12,000 (2018: £10,000). We also agreed to report differences below these thresholds that, in our view, warranted reporting on qualitative grounds.

There were no misstatements identified during the course of our audit that were individually, or in aggregate, considered to be material in terms of their absolute monetary value or on qualitative grounds.

An overview of the scope of our audit

Our group audit scope focussed on the group's principal operating locations being Ammanford, Loughborough and South Carolina, each of which were subject to a full scope audit. Together with the parent company and its group consolidation, which was also subject to a full scope audit, these locations represent the principal business units of the group and account for 98% of the group's revenue, 93% of the group's loss before tax and 96% of the group's total assets. The remaining components of the group were considered non-significant and these components were principally subject to analytical review procedures.

Whilst materiality for the financial statements as a whole was £300,000, each component of the group was audited to a lower level of materiality.

Audits of the components were performed at a materiality level calculated by reference to a proportion of group materiality appropriate to the relative scale of the business concerned. These audits were all performed by BDO LLP with the exception of the South Carolina operations audited by BDO US.

The Group audit team was actively involved in directing the audit strategy of the component auditor in South Carolina and a key member of the Group audit team visited local management and the auditors of the operations in South Carolina during the audit fieldwork. The Group audit team reviewed in detail the findings of work performed and considered the impact of these upon the Group audit opinion.

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.

Opinions on other matters prescribed by the Companies Act 2006

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 by exception

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.

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

Responsibilities of Directors

As explained more fully in the Directors' responsibilities statement set out on page 30, 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 : 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 Parent 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 Parent 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 Parent Company and the Parent Company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Malcolm Thixton *(Senior Statutory Auditor)*
For and on behalf of BDO LLP, Statutory Auditor
Southampton
14 October 2019

BDO LLP is a limited liability partnership registered in England and Wales (with registered number OC305127).

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
For the year ended 30 June 2019

	Note	Year ended 30 June 2019 £'000	Year ended 30 June 2018 £'000
REVENUE	4	**3,467**	3,403
Cost of sales		**(1,567)**	(1,403)
Gross profit		**1,900**	2,000
Other operating income	5	**785**	831
Adjusted Administrative expenses		**(6,865)**	(7,711)
Adjusted operating loss		**(4,180)**	(4,880)
Adjusting administrative items:			
Share based payment expense		**(200)**	(291)
Restructuring costs	6	**(350)**	–
Depreciation and amortisation		**(1,118)**	(851)
		(1,668)	(1,142)
Total trading administrative expenses		**(8,533)**	(8,853)
LOSS FROM TRADING		**(5,848)**	(6,022)
Impairment	10	**(1,784)**	–
Total administrative expenses		**(10,317)**	(8,853)
LOSS FROM OPERATIONS		**(7,632)**	(6,022)
Finance costs		**(123)**	(95)
LOSS BEFORE TAXATION	6	**(7,755)**	(6,117)
Taxation	8	**570**	850
LOSS FOR THE YEAR FROM CONTINUING OPERATIONS		**(7,185)**	(5,267)
Other comprehensive income:			
Items that may be reclassified to profit or loss:			
Exchange differences on translation of foreign operations		**60**	(47)
Items that will not be reclassified to profit or loss:			
Remeasurements of defined benefit pension schemes		**2**	(99)
TOTAL COMPREHENSIVE LOSS FOR THE YEAR FROM CONTINUING OPERATIONS		**(7,123)**	(5,413)
Loss for the year attributable to:			
Owners of the parent		**(7,185)**	(5,267)
Total comprehensive loss attributable to:			
Owners of the parent		**(7,123)**	(5,413)
Loss per share attributable to owners of the Parent			
Basic (£)	9	**(0.06)**	(0.21)
Diluted (£)	9	**(0.06)**	(0.21)

The notes from pages 36 to 67 form part of these financial statements.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 30 June 2019

Company Registration No. 07228939

	Note	30 June 2019 £'000	Restated 30 June 2018 £'000
ASSETS			
Non-current assets			
Goodwill	10	**1,453**	2,087
Intangible assets	10	**1,024**	2,130
Property, plant and equipment	11	**5,556**	5,061
Deferred tax asset	27	**–**	–
		8,033	9,278
Current assets			
Inventories	12	**1,182**	781
Trade receivables	13	**637**	705
Other receivables	14	**472**	603
Corporation tax	14	**836**	473
Cash and bank balances		**4,688**	5,092
		7,815	7,654
TOTAL ASSETS		**15,848**	16,932
LIABILITIES			
Non-current liabilities			
Bank loans	20	**388**	640
Deferred tax	27	**–**	125
Pension Obligation	26	**1,085**	1,120
		1,473	1,885
Current liabilities			
Bank loans	20	**859**	256
Trade and other payables	19	**2,056**	2,172
Deferred income	15	**209**	78
		3,124	2,506
TOTAL LIABILITIES		**4,597**	4,391
TOTAL NET ASSETS		**11,251**	12,541
EQUITY			
Capital and reserves attributable to equity holders of the parent			
Share capital	16	**6,354**	547
Share premium account	16	**27,764**	27,539
Share-based payment reserve	17	**828**	1,298
Foreign exchange reserve		**(100)**	(160)
Retained earnings		**(23,595)**	(16,683)
TOTAL EQUITY		**11,251**	12,541

The financial statements on pages 36 to 67 were approved and authorised for issue by the Board of directors on 14 October 2019 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 2019

	Share capital £' 000	Share premium £' 000	Share-based payment reserve £' 000	Foreign exchange reserve £' 000	Retained profits £' 000	Total equity £' 000
At 1 July 2017	392	18,936	1,007	(113)	(11,317)	8,905
Comprehensive Loss for the year						
Loss for the year	–	–	–	–	(5,267)	(5,267)
Other comprehensive loss				(47)	(99)	(146)
Total Comprehensive loss	392	18,936	1,007	(160)	(16,683)	3,492
Contributions by and distributions to owners						
Recognition of share-based payments	–	–	291	–	–	291
Issue of ordinary share capital	155	9,123	–	–	–	9,278
Transaction costs in respect of share issues	–	(520)	–	–	–	(520)
At 30 June 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 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**

CONSOLIDATED STATEMENT OF CASH FLOWS
For the year ended 30 June 2019

	Note	Year ended 30 June 2019 £' 000	Year ended 30 June 2018 £' 000
Cash flow from operating activities			
Loss before taxation		**(7,755)**	(6,117)
Adjustments for:-			
Amortisation of intangible assets	10	**2,007**	149
Loss on disposal of intangible assets		**–**	75
Depreciation of property, plant and equipment	11	**895**	702
Loss/(Profit) on disposal of property, plant and equipment		**16**	(60)
Share-based payment charge	16	**200**	291
Pension plan contributions		**(118)**	–
Finance costs		**123**	95
Pension – net interest expense	26	**42**	37
Operating cash flow before working capital changes		**(4,590)**	(4,828)
(Increase)/Decrease in inventories		**(401)**	190
Decrease in trade and other receivables		**200**	266
Increase in payables and deferred income		**13**	159
Cash used in operations		**(4,778)**	(4,213)
Income tax received		**76**	269
Net cash used in operating activities		**(4,702)**	(3,944)
Cash flow used in investing activities			
Purchase of property, plant and equipment		**(1,205)**	(723)
Purchase of Intangible Assets		**(267)**	(175)
Proceeds from disposal of property, plant and equipment		**–**	83
Acquisition of subsidiary – deferred consideration		**–**	(444)
Net cash used in investing activities		**(1,472)**	(1,259)
Cash flow used in financing activities			
Finance costs	29	**(123)**	(95)
Proceeds from issue of share capital (net of share issue costs)		**5,634**	8,757
New bank loans raised	29	**750**	–
Repayments of borrowings	29	**(500)**	(446)
Net cash flow from financing activities		**5,761**	8,216
Effects of exchange rates changes		**9**	(12)
Net (decrease) / increase in cash and cash equivalents		**(404)**	3,001
Cash and cash equivalents at beginning of the financial year		**5,092**	2,091
Cash and cash equivalents at end of the financial year		**4,688**	5,092

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
For the year ended 30 June 2019

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.

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 intragroup 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 acquire, plus any costs directly attributable to the business combination. 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 Group meets its day-to-day working capital requirements through existing cash resources which at 30 June 2019, amounts to £4.69 million. The Directors have prepared cash flow projections for the period ending no less than 12 months from the date of their approval of these financial statements. On the basis of those projections, and current cash resources, the Directors believe that the Group will be able to continue to trade for the foreseeable future.

Changes in accounting policies
New standards impacting the Group that have been adopted in the annual financial statements during the year, and which have given rise to changes in the Group accounting policies are:

- IFRS 9 – Financial Instruments;
- IFRS 15 – Revenue from Contract with Customers

The Group adopted IFRS 9 and IFRS 15 with a transition date of 1 July 2018, through considering the cumulative impact at this date in assessing whether an adjustment to opening reserves was required. However, the application of the standards had no impact on the current or previous reporting periods.

IFRS 15 (Revenue from Contracts with Customers) – IFRS 15 became effective for annual periods beginning on or after 1 January 2018. The Group has performed an impact assessment, taking advantage of the practical expedient not to apply IFRS 15 to any contracts that were completed contracts at that date. Revenues in relation to the delivery of goods continue to be recognised at a point in time when control is deemed to have passed to the customer (typically on delivery or customer acceptance). In relation to service revenues, these revenues are recognised over time on the basis that the customer simultaneously receives and consumes the benefit and the Group has an enforceable right to payment as the service is delivered. Service revenues continue to be recognised over-time using the input method through assessing costs to date against total estimated costs or hours expended where there are agreed hourly rates.

IFRS 9 is effective for annual periods beginning on or after 1 January 2018. The standard introduced a new approach to how financial assets and liabilities are classified and an expected loss impairment model. As a result of adopting IFRS 9, the Group adopts a simplified approach using a provision matrix in the determination of lifetime expected credit losses. This approach takes into consideration both historic credit losses and future factors. However, as there is no history of material bad debt losses and past due receivables are typically immaterial, impairment losses on such balances are not expected and therefore the application of the standard had no impact on the current or previous reporting periods.

2. Future accounting developments

New standards and interpretations issued but not yet effective

As at 30 June 2019, the following new or amended standards and interpretations, which have not been applied in these financial statements, have been issued by the International Accounting Standards Board (IASB) but are yet to become effective.

IFRS 16 – Leases (effective for accounting periods commencing on or after 1 January 2019);

The adoption of IFRS 16 will replace IAS 17 and sets out the principles for the recognition, measurement, presentation and disclosure of leases.

The main effect on the Group is that IFRS 16 introduces a single lessee accounting model and requires a lessee to recognise assets and liabilities for almost all leases and will therefore result in an increase of total property, plant and equipment in respect of the right of use of the lease assets, and an increase in total financial liabilities. The operating lease charges currently reflected within operating expenses (and EBITDA) will be eliminated and instead depreciation and finance charges will be recognised in respect of the lease assets and liabilities.

Based on the operating leases in place and qualifying for recognition under IFRS 16 as at 30 June 2019 it is currently estimated that this would result in the recognition of additional lease assets within property, plant and equipment of approximately £1.2 million and additional lease liabilities of approximately £1.2 million in total for the Group. It is estimated that a reduction in operating expenses before depreciation of approximately £0.6 million resulting in an increase in EBITDA. However overall on profit before tax it is estimated to have a nil impact as depreciation would increase by approximately £0.6 million and finance charges of £0.6 million.

The group plans to adopt the modified retrospective approach and will take advantage of the following practical expedients:

- a single discount rate has been applied to portfolios of leases with reasonably similar characteristics;
- impairment losses on right-of-use assets as at 1 July 2018 have been measured by reference to the amount of any onerous lease provision recognised on 30 June 2019;
- initial direct costs have not been included in the measurement of the right-of-use asset as at the date of initial application; and
- for the purposes of measuring the right-of-use asset hindsight has been used. Therefore, it has been measured based on prevailing estimates at the date of initial application and not retrospectively by making estimates and judgements (such as the term of leases) based on circumstances on or after the lease commencement date.

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.

3. Summary of significant accounting policies (continued)

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 20 years when the products or services are ready for sale or use. The 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.

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 plus the cost directly attributable to business combination. 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

(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.

There has been no material impact to the recognition of revenue as a result of the changes made under IFRS15. The group continues to recognise revenue at a point in time when control is considered to have passed to the customer.

(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 stage of completion is determined based on the proportion of contract costs incurred compared to total estimated contract costs.

There has been no material impact to the recognition of revenue as a result of the changes made under IFRS 15. The group continues to recognise 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.

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 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.

3. Summary of significant accounting policies (continued)

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

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

(e) Property, plant and equipment

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

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

Leasehold improvements	10-20% per annum straight line
Plant and machinery	15-33% per annum straight line
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.

(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 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 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

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 benefits from the leased asset are consumed.

3. Summary of significant accounting policies (continued)

(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 Haydale Graphene Industries Plc Group (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 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 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 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 takes the form of the board of directors of Haydale Graphene Industries Plc) 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 and Composites (focussing on the composites market in Europe (known as RPC);
- 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)

The strategic business units RPC & AMAT were created on 1 July 2017, prior to this date management did not distinguish between different operating segments. The strategic business unit APAC was created on 1 July 2018. Comparative figures have been calculated on the basis that the operating segments existed in the previous financial year.

2019

	Resins, Polymers & Composites £'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 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)
Total administrative expenses	(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	8,659	613	5,293	16,742
Segment liabilities	(405)	(3,722)	(216)	(1,148)	(5,491)

Exceptional Items

Exceptional items	**2019 £'000**	2018 £'000
Amortisation of goodwill	**634**	–
Amortisation of customer relationships	**142**	–
Amortisation of development expenditure	**1,008**	–
	1,784	–

4. Segment analysis (continued)

During the year, the Group incurred exceptional amortisation costs in respect of Haydale Composite Solutions Limited. The new management team has reset expectations for the timing of significant growth in the composites business with resource focused on good growth targets and high TRL development projects; and have taken the decision to impair intangible assets by £1.78 million (2018: Nil).

2018

	Resins, Polymers & Composites £'000	Advanced Materials £'000	Asia-Pacific £'000	Adjustments, Central & Eliminations £'000	Consolidated £'000
REVENUE	1,018	2,122	263	–	3,403
Cost of sales	(566)	(576)	(261)	–	(1,403)
Gross profit	452	1,546	2	–	2,000
Other income	757	–	–	74	831
Administrative expenses					
Research & development expenditure	(475)	–	(59)	(344)	(878)
Share based payment expense	(58)	(29)	(14)	(190)	(291)
Depreciation & Amortisation	(109)	(230)	(104)	(408)	(851)
Other administrative expenses	(1,653)	(2,623)	(463)	(2,094)	(6,833)
	(2,295)	(2,882)	(640)	(3,036)	(8,853)
OPERATING LOSS	(1,086)	(1,336)	(638)	(2,962)	(6,022)
Finance costs					(95)
LOSS BEFORE TAXATION					(6,117)
Taxation					850
LOSS AFTER TAXATION					(5,267)

Additions to non-current assets	338	325	212	23	898
Segment assets	2,988	7,176	507	6,811	17,482
Segment liabilities	(147)	(4,061)	(161)	(572)	(4,941)

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.

	2019 £'000	2018 £'000
By destination		
United Kingdom	**328**	238
Europe	**657**	516
United States of America	**632**	532
China	**3**	448
Thailand	**239**	199
South Korea	**414**	93
Japan	**1,133**	1,299
Rest of the World	**61**	78
	3,467	3,403

During 2019, £1.13 million or 33% (2018: £1.29 million or 38%) of the Group's revenue depended on a single customer. During 2019 £0.58 million or 17% (2018: £0.34 million or 10%) of the Group's revenue depended on a second single customer.

Revenue within Europe was predominantly split between Germany £0.58 million or 17% and Netherlands £0.05 million or 1% (2018: Germany £0.34 million or 10%, and Ireland £0.17 million or 5%), as a proportion of total group turnover for the year.

All amounts shown as other income within the Statement of Comprehensive Income are generated within and from the United Kingdom. These amounts include income earned as part of a number of grant funded projects and a government grant which is being released over a period of 5 years. The residual amount is reflected in deferred income.

Revenue from goods was £2.98 million or 86% (2018: £2.48 million or 73%) and revenue from services was £0.34 million or 10% (2018: £0.80 million or 24%).

Dis-aggregation of revenues

The split of revenue by type:

	2019 £'000	2018 £'000
Services	**342**	836
Reactor sales	**77**	89
Reactor rental	**69**	–
Goods	**2,979**	2,478
	3,467	3,403

2019

	RPC £'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

2018

	RPC £'000	**AMAT £'000**	**APAC £'000**	**TOTAL £'000**
Services	682	–	141	836
Reactor sales	–	–	89	89
Reactor rental	–	–	–	–
Goods	336	2,122	33	2,478
	1,018	2,122	263	3,403

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

4. Segment analysis (continued)

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

Non-current asset additions

	2019 £'000	2018 £'000
By destination		
United Kingdom	**241**	360
United States of America	**885**	325
Thailand	**14**	76
South Korea	**–**	2
Taiwan	**65**	135
	1,205	898

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

	2019 £'000	2018 £'000
By destination		
United Kingdom	**3,387**	5,378
United States of America	**4,344**	3,640
Thailand	**148**	142
South Korea	**1**	1
Taiwan	**153**	117
	8,033	9,278

5. Other Operating Income

	2019 £'000	2018 £'000
Grant Income	**785**	831
	785	831

6. Loss before taxation

Loss before taxation is arrived at after charging:

	2019 £'000	2018 £'000
Research and development:		
– current period's expenditure	**493**	878
– impairment of intangibles – Note 10	**1,785**	–
– amortisation of other intangibles	**222**	149
Loss on disposal of intangibles – Note 10	**–**	75
Restructuring costs	**350**	–
Depreciation of property, plant and equipment	**867**	675
Loss/ (profit) on disposal of property, plant and equipment	**16**	(9)
Foreign Exchange	**(24)**	(33)
Operating lease rentals:		
– land and buildings	**614**	572
– plant and machinery	**6**	6

The fees of the Group's auditor, BDO LLP, for services provided are analysed below:

	2019 £'000	2018 £'000
Fees payable to the Company's auditor for the audit of the Group's financial statements	**27**	24
Fees payable to the Company's auditor and its associates for other services:		
– Audit of the company's subsidiaries	**50**	45
– Taxation related compliance services	**18**	18
– Other non-audit services	**7**	7
	102	94

7. Employees

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

	2019 No.	2018 No.
Administration	**25**	27
Research, development and production	**54**	49
	79	76

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

	2019 £'000	2018 £'000
Wages and salaries	**4,140**	3,514
Social security costs	**339**	314
Defined contribution pension costs	**120**	172
Defined benefit pension costs	**42**	37
Share-based payment expense	**200**	291
	4,841	4,328

An analysis of the remuneration of the directors is detailed within the Directors' Remuneration Report on pages 26 to 29. The total amount payable to the highest paid director in respect of emoluments was £189,000 (2018: £171,000), including pension costs of £10,000 (2018: £9,000).

8. Income tax

	2019 £'000	2018 £'000
Current tax credit		
Total income tax credits:		
– for the financial year	**442**	399
– under provision in the previous financial year	**–**	63
Total Current Tax	**442**	462
Deferred tax credit		
Origination and reversal of temporary differences	**128**	388
Recognition of previously unrecognised deferred tax assets	**–**	–
	128	388
	570	850

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:

	2019 £'000	2018 £'000
Loss for the year	**(7,185)**	(5,267)
Income tax credit	**(570)**	(850)
Loss before income taxes	**(7,755)**	(6,117)
Tax using the Group's domestic tax rates of 19% (2018 – 19%)	**1,474**	1,162
Expenses not deductible for tax purposes	**(409)**	(274)
Different tax rates applied in overseas jurisdictions	**17**	26
R&D enhancement	**275**	234
R&D costs capitalised	**43**	36
Surrender for R&D tax credit	**(44)**	(15)
Adjustment for under/(over) provision in previous periods	**–**	63
Movement in unrecognised losses carried forward	**(681)**	(747)
Movement in unrecognised fixed asset temporary differences	**(233)**	(23)
Deferred tax: Origination and reversal of temporary differences	**128**	388
Recognition of previously unrecognised deferred tax assets	**–**	–
Total tax credit	**570**	850

Changes in tax rates and factors affecting the future tax charge
The main rate of corporation tax for UK companies is currently 19%. The Finance Bill 2016, which was substantively enacted in September 2016, announced a reduction to the main rate of corporation tax. The rate will reduce to 17% from 1 April 2020.

The main rate of corporate tax in the U.S reduced from 34% to 21% effective from 1 January 2018 as part of the U.S tax reforms. This has reduced the deferred tax liability attributable to the group's subsidiaries based in South Carolina.

The Group has tax losses that are available indefinitely for offset against future taxable profits of the companies approximately amounting to £21.85 million (2018: £15.78 million) and £4.53 million (2018: £3.84 million) of fixed asset timing differences. 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:

	2019 £'000	Restated 2018 £'000
Loss after tax attributable to owners of Haydale Graphene Industries Plc	**(7,185)**	(5,267)
Weighted average number of shares: – Basic and Diluted	**115,060,850**	24,744,693
Loss per share: Basic (£) and Diluted (£)	**(0.06)**	(0.21)

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 2019, there were 2,632,199 (2018: 3,619,940) options and warrants outstanding as detailed in note 16.

The loss per share for the comparative period was incorrectly calculated as £0.22. The comparative figure has been recalculated and amended to show the correct loss per share.

10. Intangible assets

	Customer Relationships £'000	Development expenditure £'000	Goodwill £'000	Total £'000
Cost				
At 1 July 2017	1,154	1,428	2,114	4,696
Additions	–	175	–	175
Additions from acquisitions	–	(55)	(27)	(82)
At 1 July 2018	1,154	1,548	2,087	4,789
Additions	–	267	–	267
At 30 June 2019	**1,154**	**1,815**	**2,087**	**5,056**
Accumulated amortisation				
At 1 July 2017	173	257	–	430
Charge for the period	115	34	–	149
Disposals	–	(7)	–	(7)
At 1 July 2018	288	284	–	572
Charge for the year	115	107	–	222
Impairment	143	1,008	634	1,785
At 30 June 2019	**546**	**1,399**	**634**	**2,579**
Net book value				
At 30 June 2019	**608**	**416**	**1,453**	**2,477**
At 30 June 2018	866	1,264	2,087	4,217
At 30 June 2017	981	1,171	2,114	4,266

10. Intangible assets (continued)

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) and of the acquisition of the trade and assets of Intelligent Nano Technology Ltd (£27,000) on 12 May 2010. On the 9 September 2016, goodwill of £327,151 arose on the acquisition of Innophene Co. Ltd (now Haydale Technologies Thailand). Goodwill arose on the acquisition of HCT (formerly ACM) on the 13TH October 2016 of £1,102,620.

In the year, the decision was taken to impair the carrying value of intangible assets held by the UK composites business due to uncertainties in the timing of significant growth, which is anticipated to be delivered at a slightly slower pace than with the inks and SiC businesses. This resulted in an impairment of the Goodwill relating to Haydale Composite Solutions Limited of £634,000.

During the comparative year, Intelligent Nano Technology Limited was dissolved resulting in the disposal of £27,000 of goodwill.

Customer Relationships

The Customer relationships intangible asset arose on the fair value of assets on the acquisition of EPL Composite Solutions Ltd (now Haydale Composite Solutions Limited) 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.

Due to uncertainty relating to the timings of significant growth in Haydale Composite Solution the Customer Relationships relating to enhanced epoxy resin were impaired to nil during the year

Development costs

Development costs brought forward are made up of three areas. One of which 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 of which relates to capitalised patent costs of Innophene that were acquired a part of the acquisition of Innophene in the previous financial year. And lastly, the development of graphene enhanced epoxy resins within Haydale Limited.

Development expenditure of £267,000 was capitalised during the year in accordance with IAS 38 in connection with the Group's expenditure with the development of graphene enhanced epoxy resins, where the Directors believe that future economic benefit is probable (2018: £175,069). 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 Haydale Composite Solution the Development Expenditure relating to enhanced epoxy resin were impaired to nil during the 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 cash generating units ("CGUs") that are expected to benefit from that business combination. Following the acquisitions of HCS, HCT (formerly ACM) and Haydale Technologies (Thailand), 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 and HCS as separate CGU's. The remaining goodwill in the Group prior to the acquisitions is immaterial and has not been tested for impairment. The goodwill arising from the acquisition of Haydale Technologies (Thailand) is also immaterial and has not been tested for impairment.

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:

	2019	2018	**2019**	2018
	%	%	**£'000**	£'000
Haydale Composite Solutions	**10%**	10%	**–**	634
Haydale Graphene Industries	**n/a**	n/a	**23**	23
Haydale Ceramic Technologies LLC (HCT)	**12%**	10%	**1,103**	1,103
Haydale Technologies (Thailand)	**10%**	n/a	**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% (2018: 10%), and have been used to discount projected cash flows.

Despite a good pipeline of opportunities, and following extensive discussions with advisors and auditors, we have decided to impair the intangible assets of HCS due to the uncertainty of timing of income relating to the CGU.

The calculations for HCT have been derived from the Board's approved forecast figures for the next year. The HCT forecasts assume that its turnover will grow at 30% in the current financial year, the following year and thereafter with a reducing growth rate. The forecast assumes a 2% per annum growth beyond five years. The growth rates used are based on management's internally estimated growth forecasts for the market, together with the expected market share of HCT within those markets.

Following this review, the Directors have determined that apart from the impairment relating to HCS there is no impairment charge which should be recognised against the intangible assets of the Group, nor has any such impairment been required to be recognised in any of the periods covered by this report.

Sensitivity to changes in assumptions

If the revenue growth in HCT dropped to 15% p.a., assuming all other things being equal, it still would not result in an impairment within its financial model. No reasonable change in the discount rate would cause an impairment.

11. Property, plant and equipment

	Leasehold improvements £'000	Plant and machinery £'000	Fixtures and fittings £'000	Motor vehicles £'000	Assets under construction £,000	Total £'000
Cost						
At 1 July 2017	519	5,781	417	33	74	6,824
Additions	65	217	76	–	365	723
FX translation	(1)	(31)	21	(1)	–	(12)
Disposals	–	(124)	(3)	(2)	–	(129)
Transfers	–	97	–	–	(97)	–
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 30 June 2019	**635**	**7,575**	**522**	**30**	**31**	**8,793**
Accumulated depreciation						
At 1 July 2017	182	1,445	115	6	–	1,748
Charge for the year	58	562	50	6	–	676
FX translation	–	(1)	27	–		26
Disposals	–	(100)	(3)	(2)		(105)
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 30 June 2019	**309**	**2,662**	**251**	**15**	**–**	**3,237**
Net book value						
At 30 June 2019	**326**	**4,913**	**271**	**15**	**31**	**5,556**
At 30 June 2018	343	4,035	322	20	341	5,061
At 30 June 2017	337	4,336	302	27	74	5,076

12. Inventories

	2019 £'000	2018 £'000
Raw materials	**116**	291
Work in progress	**96**	30
Finished goods	**970**	460
	1,182	781

The total value of inventories recognised in cost of sales during the year was £725,986 (2018: £924,091)

Raw materials and finished goods comprise functionalised carbon, chemicals and associated raw materials. Work in progress comprises recoverable costs on long-term contracts.

13. Trade receivables

	2019 £'000	2018 £'000
Trade receivables	**637**	705
	637	705

14. Other receivables

	2019 £'000	2018 £'000
Other receivables	**158**	209
Prepayments and accrued income	**133**	165
Grants receivable	**181**	229
	472	603

	2019 £'000	2018 £'000
Corporation tax	**836**	473
	836	473

There is nil (2018: nil) within prepayments and accrued income in relation to ongoing consultancy services. This accrued income is invoiced in milestones as established in the contract and expected to be recovered within 12 months of the balance sheet date.

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.

	2019 £'000	2018 £'000
Grants	**178**	7
Commercial Deferred Income	**31**	71
	209	78

Commercial Deferred Income

As at 30 June 2019, deferred income of £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.

As at 30 June 2018, deferred income of £71,041 arose in relation to the sale of a reactor, which had been invoiced at the year end, however the full revenue could not be recognised until the reactor has been commissioned.

16. Share capital and share premium

	Number of shares No.	Share capital £'000	Share premium £'000	Total £'000
At 1 July 2017	19,597,713	392	18,936	19,328
Issue of £0.02 ordinary shares	7,731,060	155	8,603	8,758
At 30 June 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**

During the year, the Company issued 290,395,075 new ordinary shares of 2p each as follows:

- In January 2019, 1,250,000 shares were issued; and
- In March 2019, 289,145,075 shares were issued in connection with the Company's £5.8 million placing and open offer:

Issue costs amounting to £399,085 have been charged to the profit and loss account during the year (2018: £520,342 was charged to the share premium account).

17. Share-based payment transactions

Options

The Company operates both an approved EMI share option scheme and an unapproved share option scheme for the benefit of employees and directors of the Company. The exercise price of the options is equal to the mid-market price of the shares on the date of 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.	2019 Weighted average exercise price Pence	Number of options No.	2018 Weighted average exercise price Pence
Balance at beginning of year	**3,242,801**	63	1,257,717	166
Granted	**–**	–	2,438,576	25
Exercised	**–**	–	–	–
Lapsed	**(738,110)**	67	(453,492)	138
Balance at end of year	**2,504,691**	**62**	**3,242,801**	**63**

At 30 June 2019, there were options outstanding over 2,504,691 un-issued ordinary shares, equivalent to 0.79% of the issued share capital as follows:

	Number of shares	Exercise price	Earliest exercise date	Performance criteria	Latest exercise date
Approved EMI scheme					
03 April 2014	135,215	210.00p	03 April 2017	–	03 April 2024
1 November 2014	30,000	62.25p	1 November 2017	Share price > 160p	1 November 2024
18 March 2015	14,082	134.50p	18 March 2018	–	18 March 2025
3 November 2015	3,163	177.00p	3 November 2018	–	3 November 2025
19 May 2016	34,587	171.50p	19 May 2019	–	19 May 2026
14 October 2016	24,781	198.14p	14 October 2019	–	14 October 2026
26 June 2017	51,131	178.50p	27 June 2020	–	27 June 2027
15 December 2017	79,186	125.50p	15 December 2020	–	15 December 2027
Unapproved schemes					
03 April 2014	167,353	210.00p	03 April 2017	–	03 April 2024
18 March 2015	21,412	134.50p	18 March 2018	–	18 March 2025
19 May 2016	34,052	171.50p	19 May 2019	–	19 May 2026
14 October 2016	6,759	198.14p	14 October 2019	–	14 October 2026
26 June 2017	35,149	178.50p	27 June 2020	–	27 June 2027
15 December 2017	196,416	125.50p	15 December 2020	–	15 December 2027
15 December 2017	100,000	125.50p	15 December 2020	Share price > 220p	15 December 2027
Long Term Incentive Plan					
15 December 2017	1,571,405	0.02p	15 December 2020	Share price > 220p**	15 December 2027
	2,504,691				

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
03 April 2014	EMI	135,215	210	94	10	1.75	30	None
03 April 2014	Unapproved	167,353	210	94	10	1.75	30	None
1 November 2014	EMI	30,000	62	38	10	1.75	50	Share price > 160p*
18 March 2015	EMI	14,082	135	82	10	1.75	50	None
18 March 2015	Unapproved	21,412	135	82	10	1.75	50	None
3 November 2015	EMI	3,163	177	111	10	1.75	52	None
19 May 2016	Unapproved	34,052	172	101	10	0.62	51	None
19 May 2016	EMI	34,587	172	101	10	0.62	51	None
14 October 2016	Unapproved	6,759	198	113	10	0.50	49	None
14 October 2016	EMI	24,781	198	113	10	0.50	49	None
26 June 2017	EMI	51,131	179	179	10	0.50	34	None
26 June 2017	Unapproved	35,149	179	179	10	0.50	34	None
15 December 2017	EMI	79,186	126	55	10	0.50	51	None
15 December 2017	Unapproved	196,416	126	55	10	0.50	51	None
15 December 2017	Unapproved	100,000	126	47	10	0.50	51	Share price > 220p
15 December 2017	LTIP	1,571,405	126	124	10	0.50	51	Share price > 220p**
		2,504,691						

*Share price >160p. These performance conditions are for share options issued to Employees only; there are no performance conditions for share options issued to Directors.

** The LTIP has been structured to ensure that value is created for shareholders before any value is delivered to the Key Management. Accordingly, should the Company's closing mid-market share price not reach and remain at, or above, £2.20 for at least 15 consecutive trading days during the Performance Period ("**Minimum Target**"), then none of the Awards vest or is exercisable and the Awards will lapse in full.

Should the Company's closing mid-market share price reach and remain at or above £4.20 for at least 15 consecutive trading days during the Performance Period ("**Maximum Target**"), then 100% of the Awards vest and are exercisable. Between the Minimum Target and the Maximum Target, the % of the Awards that vest shall be pro-rata on a straight-line basis. The Awards may lapse in the event of cessation of employment save for certain circumstances, including *inter alia*, redundancy or retirement in which case, at the Company's sole discretion and subject to performance criteria being met, the Exercise Period may be accelerated.

The weighted average remaining contractual life of share options outstanding at 30 June 2019 is 8.1 years (2018: 8.8 years). The charge for the year for share-based payment amounted to £0.2 million (2018: £0.29 million).

Warrants

	Number of warrants No.	**2019 Weighted average exercise price Pence**	Number of warrants No.	2018 Weighted average exercise price Pence
Balance at beginning of year	**385,719**	**193**	385,719	193
Granted	**–**	**–**	–	–
Lapsed	**(278,321)**	**187**	–	–
Balance at end of year	**107,398**	**208**	385,719	193

17. Share-based payment transactions (continued)

No warrants were issued during the year under review. None of the warrants outstanding at 30 June 2019 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 2019 is 1.33 years (2018: 1.14 years). The charge for the year for share-based payment amounted to £48,254 (2018: £59,052).

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. Revaluing those subsidiaries from their functional currency into the group presentation currency.

19. Trade and other payables

	2019	2018
	£'000	£'000
Trade payables	**473**	687
Tax and social security	**57**	73
Accruals and other creditors	**1,526**	1,412
	2,056	2,172

20. Bank loans

	2019	2018
	£'000	£'000
Bank loans	**1,247**	896
The borrowings are repayable as follows:-		
– within one year	**859**	256
– in the second year	**267**	267
– in the third to fifth years inclusive	**121**	373
	1,247	896

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.

	2019	2018
	%	%
Average interest rates paid	**6.1**	4

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 subsidiary, secured on the fixed assets of HTI and its newly acquired operating subsidiary, Advanced Composite Materials. 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 is accruing interest at a rate of 11% per annum and is repayable in 12 equal monthly instalments which commenced in April 2019.

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'.

	2019 £'000	2018 £'000
Short-term employee benefits and fees	**495**	398
Social security costs	**55**	47
Share-based payments	**142**	74
Post-retirement benefits	**16**	15
	708	534

Fees totalling £18,519 (2018: £47,163) were paid to the ONE Advisory Ltd, a company of which Mr M Wood, who served as a director of the Company during the year until 20 December 2018 for financial, administration, compliance and support services. At 30 June 2019, the balance owed to ONE Advisory Ltd was £694 (2018: £3,405).

Fees totalling £49,323 (2018: £100,037) were paid to the ATL Consulting Ltd, a company of which Mr R Smith, who served as a director of the Company during the year until 31 January 2019, is a director, for business development consultancy. At 30 June 2019, the balance owed to ATL Consulting Ltd was Nil (2018: £9,081).

Fees totalling £14,233 (2018: Nil) were paid to the AVI Partners, a company based in Jersey of which Mr R Smith who served as a director of the company during the year until 31 January 2019 for business development consultancy. At 30 June 2019, the balance owed to AVI Partners was £6,164 (2018: £Nil).

During the year under review, legal services were provided to the Group by ONE Legal Advisory Ltd, a company of which Mr M Wood is a director amounting to Nil (2018: £143). The balance owed to ONE Legal Advisory Ltd at the end of the year was Nil (2018: Nil).

Other transactions

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

	2019 £'000	2018 £'000
Services Received		
T M Mather – admin support	**–**	14
PlanarTech	**99**	107
QM Holdings	**443**	416

During the previous year an amount of £13,885 was invoiced by Ms T M Mather to HCS during the year ended 30 June 2018 for the provision of administrative support, there were no services provide by Ms T M Mather during the current year. Ms T M Mather is the partner of Mr N Finney, who was a director of HCS during the year. As at 30 June 2019, a balance of Nil was due to Ms T M Mather by HCS (2018: Nil).

21. Related party disclosures (continued)

During the year an amount of £443,003 was paid to QM Holdings in respect of property rent (2018: £416,189). QM Holdings is owned by Tom Quantrille and Marvin Murrell who are officers of HCT (formerly ACM), a wholly owned subsidiary of the Group. During the previous year additional payments were made in respect of the deferred consideration due to the vendors of HCT, Tom Quantrille and Marvin Murrell. Payments to Tom Quantrille in the previous year amounted to £333,333 and £111,111 to Marvin Murrell. There were no payments made during the current year.

During the 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 £99,476 (2018: £106,765). The balance outstanding to PlanarTech at the year-end was Nil (2018: £10,439).

	2019	2018
	£'000	£'000
Services provided		
Everpower Sheng Tie (Xiemen) Graphene Technology Co Ltd	–	275
Everpower International Holdings Co. Ltd	–	52

During the previous year, Haydale Graphene Industries Plc made sales to Everpower Sheng Tie (Xiemen) Graphene Technology Co. Ltd for £275,000. Haydale Limited made sales to Everpower International Holdings Co. Ltd of £51,744 during the previous year. Everpower are part of the same group as Advanced Waste & Water Technology Environmental Ltd, who at the time the sales were made owned a 7.17% shareholding in Haydale Graphene Industries Plc. No transactions took place during the year ended 30 June 2019 with either company, with the exception of a bad debt that was written off with Everpower International Holdings Co. Ltd of £35,000.

The balances outstanding (due to) / from related parties at each year ended 30 June were as follows:-

	2019	2018
	£'000	£'000
PlanarTech	–	(10)
Everpower International Holdings Co. Ltd	–	35

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
2019			
Financial assets	**804**	**145**	**949**
Financial liabilities	**175**	**–**	**175**
2018			
Financial assets	498	43	541
Financial liabilities	266	–	266

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	**2019 Increase/ (decrease) £'000**	2018 Increase/ (decrease) £'000
United States Dollar:		
– strengthened by 10%	**54**	26
– weakened by 10%	**(44)**	(21)
Euro:		
– strengthened by 10%	**16**	5
– weakened by 10%	**(13)**	(4)

(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.

22. Financial instruments (continued)

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:

	2019	2018
	£'000	£'000
United Kingdom	**106**	149
Europe	**71**	37
North America	**119**	124
Rest of the world	**341**	395
	637	705

Maturity analysis

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

	2019	2018
	£'000	£'000
Not past due	**604**	470
Past due:		
– less than 3 months	**31**	200
– between 3 and 6 months	**2**	35
Gross amount	**637**	705

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 Haydale Graphene Industries 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.

Maturity analysis

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

	2019 £'000	2018 £'000
Due:		
– within one year	**3,271**	2,356
– within one to two years	**267**	267
– within two to five years	**106**	373
Gross amount	**3,644**	2,996

(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)

	2019 £'000	2018 £'000
Financial assets		
Trade receivables	**637**	705
Other receivables	**158**	209
Cash and bank balances	**4,688**	5,092
Financial Assets (at amortised cost)	**5,483**	6,006
Financial liabilities		
Bank loans	**1,247**	896
Trade payables	**473**	687
Accruals and other creditors	**1,526**	1,412
Financial Liabilities (at amortised cost)	**3,246**	2,995

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:

	2019 £'000	2018 £'000
Contracted but not provided for	**–**	999
Authorised by the directors but not contracted for	**17**	37
	17	1,036

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. Operating lease arrangements

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

	2019 Land and buildings £'000	**2019 Plant and machinery £'000**	2018 Land and buildings £'000	2018 Plant and machinery £'000
– within one year	**624**	**4**	573	7
– within two to five years	**473**	**4**	976	8
– later than 5 years	**139**	**–**	177	–
Aggregate amounts payable	**1,236**	**8**	1,726	15

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

	2019 Land and buildings £'000	**2019 Plant and machinery £'000**	2018 Land and buildings £'000	2018 Plant and machinery £'000
Operating lease expense	**614**	**6**	572	6

A significant proportion of the lease arrangements relate to the premises from which HTI and HCT operate in South Carolina, USA totalling £0.70 million (2018: £1.11 million). The lease expires on 31 December 2020. Other leases pertain to the office and unit contracts for the two UK facilities of in aggregate £0.16 million (2018: £0.22 million). Of the £0.16 million, certain leases are cancellable with three months' notice.

During the previous year a new lease agreement has been entered into, in respect of offices at Harwell, Oxfordshire. The lease expires in March 2028. The estimated committed costs are £0.33 million (2018: £0.36 million).

The facility in Thailand is leased and, at the date of these results, will expire in 4 months. The cost is £0.01 million (2018: £0.03 million).

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

26. Defined Benefit Pension Scheme

HCT (formerly ACM) operated a defined benefit pension scheme. The scheme was closed in November 2006 for any new participants. The net periodic benefit cost is determined at the beginning of the year based on applicable assumptions at that time.

Contributions of £118,220 were made to the scheme during the year ended 30 June 2019. No Contributions are expected to be made during the year ended 30 June 2020.

Included in the loss before tax during the year:

	2019 £'000	2018 £'000
Net Interest Expense	**42**	37

Included in other comprehensive income during the year:

	2019 £'000	2018 £'000
Actuarial loss / (gain) from demographic assumptions	(2)	125
Deferred Tax	–	(26)
	(2)	99

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

	2019 £'000	2018 £'000
Accumulated benefit obligation	**(3,960)**	(3,830)
Projected Benefit obligation	**(3,960)**	(3,380)
Plan assets at fair value	**2,875**	2,710
Funded Status	**(1,085)**	(1,120)
Accrued Pension Cost	**(1,085)**	(1,120)

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

	2019 £'000	2018 £'000
Non-current Assets	**–**	–
Current Liabilities	**–**	–
Non-current Liabilities	**(1,085)**	(1,120)
	(1,085)	(1,120)

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 recognised 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 2019:

Discount rate for periodic benefit costs	3.75%
Discount rate for benefit obligations	3.75%
Rate of increase in compensation levels	0.00%
Investment return rate	3.75%

Mortality Assumptions are as follows:

Longevity at retirement age (current & future pensioners)	**2019**	2018
– Males	**23.80 years**	21.08 years
– Females	**25.90 years**	23.00 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.

26. Defined Benefit Pension Scheme (continued)

The fair value of the Company's pension plan assets valued at 30 June 2019, by asset category were as follows:

Description	Total Carrying Amount £'000	Assets/ Liabilities Measured at Fair Value £'000	Fair Value Measurements at 30 June 2019 using Level 1 Inputs £'000	Level 2 Inputs £'000	Level 3 Inputs £'000
Cash	124	124	124	–	–
Corporate Equities	1,455	1,455	1,455	–	–
Fixed Income:					
US Government	183	183	–	183	–
Municipal	8	8	–	8	–
Corporate debt	721	721	–	721	–
Mutual Funds	207	207	207	–	–
Negotiable CD	177	177	177	–	–
	2,875	**2,875**	**1,963**	**912**	**–**

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 2019, were as follows:

	£'000
At 01 July 2018	2,710
Contributions	118
Distributions	(245)
Earnings	63
Net realised gain	189
Administrative expenses	(75)
Foreign exchange gain/(loss)	115
Balance at 30 June 2019	**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:

	£'000
2019	268
2020	277
2021	274
2022	276
2023	274
Thereafter	1,389
	2,758

The company's pension plan asset allocations by asset category were as follows as of 30 June 2019:

Asset Category	
Cash	4%
Equity Mutual Funds	55%
Fixed Income	37%
Other	4%

Plan Obligations

	£'000
Benefit Obligation at 01 July 2018	3,830
Foreign exchange movement	155
Interest cost	152
Actuarial loss	68
Benefits paid	(245)
Benefit Obligation at 30 June 2019	**3,960**
Fair Value of Plan Assets at 01 July 2018	2,710
Foreign Exchange movement	115
Actual Return on plan assets	69
Interest Income	108
Employer contributions	118
Benefits paid	(245)
Fair Value of Plan Assets at 30 June 2019	**2,875**
Funded Status at 30 June 2019	**(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%)	(94)	98
Inflation Rate	(+/-1.00%)	14	(16)
Mortality Rate	(+/-1.00%)	14	(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 2019, were £58,009 (2018: £57,725).

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:

	2019 £'000	2018 £'000
At 1 July 2018	**(125)**	(555)
Recognised in profit and loss:		
Tax expense	**128**	388
Recognised in other comprehensive income:		
Actuarial gain on defined benefit pension schemes	**–**	27
Movement due to changes in exchange rates	**(3)**	15
At 30 June 2019	**–**	(125)

27. Taxes (continued)

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.

The main rate of corporate tax in the U.S reduced from 34% to 21% effective from 1 January 2018 as part of the U.S tax reforms. This reduced the deferred tax liability attributable to the group's subsidiaries based in South Carolina in the prior year.

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

	Asset 2019 £'000	**Liability 2019 £'000**	**Net 2019 £'000**	**(Charged)/ credited to profit or loss 2019 £'000**	**(Charged)/ credited to equity 2019 £'000**
Employee pension liabilities	**228**	**–**	**228**	**(16)**	**9**
Available losses	**666**	**–**	**666**	**328**	**19**
Business combinations	**–**	**(894)**	**(894)**	**(184)**	**(31)**
Net tax assets/(liabilities)	**894**	**(894)**	**–**	**128**	**(3)**

	Asset 2018 £'000	Liability 2018 £'000	Net 2018 £'000	(Charged)/ credited to profit or loss 2018 £'000	(Charged)/ credited to equity 2018 £'000
Employee pension liabilities	235	–	235	(118)	27
Available losses	315	–	315	(32)	–
Business combinations	–	(675)	(675)	538	–
Net tax assets/(liabilities)	550	(675)	(125)	388	27

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

	2019 £'000	2018 £'000
Accelerated capital allowances	**(50)**	(103)
Deductible temporary differences	**–**	–
Unused tax losses	**3,182**	2,426
	3,132	2,323

The unused tax losses can be carried forward indefinitely.

28. Prior Period Reclassification

The below reclassifications have been made in respect of assets held at 30 June 2018. As there has been no impact on the results for the year, net assets or reserves, this presentational change is considered to be a reclassification rather than a prior year adjustment.

The accounts have been restated to reclassify the following transactions:

Revenue grants receivable have been reclassified as other debtors which had been previously recognised as inventories. The reclassification has no impact on the statement of comprehensive income.

Summary of the prior year accounting impact:	£
Reduction in inventories	(228,932)
Increase in other debtors	228,932

Property, plant & equipment (see note 11) has been restated to reclassify some items of Fixtures & Fittings that had been previously recognised as Plant & Machinery. The reclassification has no impact on the statement of comprehensive income.

Summary of the prior year accounting impact:	£
Reduction Plant & Machinery	(17,000)
Increase in Fixtures and Fittings	17,000

Deferred tax assets and liabilities have been offset as they relate to the same company and tax authority.

Summary of the prior year accounting impact:	£
Reduction in Non Current Assets – Deferred Tax	(550,000)
Reduction in Non Current Liabilities – Deferred Tax	550,000

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 2017	911	359	1,270
Interest accruing in period	68	27	95
Loan repayments in year	–	(446)	(446)
Effect of foreign exchange	(16)	(7)	(23)
Loans classified as non-current at 30 June 2017 becoming current during year.	(323)	323	–
At 30th June 2018	640	256	896
Interest accruing in period	**88**	**35**	**123**
New loan in year	**–**	**750**	**750**
Loan repayments in year	**–**	**(500)**	**(500)**
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**	**859**	**1,247**

PARENT COMPANY BALANCE SHEET

As at 30 June 2019

Company Registration No. 07228939

	Note	2019 £' 000	2018 £' 000
Fixed assets			
Property, plant and equipment		**14**	22
Investments	6	**1,953**	3,610
		1,967	3,632
Current assets			
Debtors – within one year	7	**6,800**	18,102
– after more than one year	7	**–**	–
Cash at bank and in hand		**4,106**	4,874
		10,906	22,976
Creditors: amounts falling due within one year	8	**(970)**	(286)
NET CURRENT ASSETS		**9,936**	22,690
TOTAL ASSETS LESS CURRENT LIABILITIES		**11,903**	26,322
Creditors: amounts falling due after more than one year		**–**	–
NET ASSETS		**11,903**	26,322
Capital and reserves			
Called up share capital	9	**6,354**	547
Share premium account	9	**27,764**	27,539
Profit and loss account		**(22,215)**	(1,764)
SHAREHOLDER'S FUNDS		**11,903**	26,322

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 2019 was £7,894,000 (2018: £1,075,000).

The financial statements on pages 81 to 87 were approved and authorised for issue by the Board of directors on 14 October 2019 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 2019

	Share capital £'000	Share Premium £'000	Retained profits £'000	Total Equity £'000
At 1 July 2017	392	18,936	(980)	18,348
Comprehensive Income for the year				
Loss for the year	–	–	(1,075)	(1,075)
Contributions by and distributions to owners				
Recognition of share-based payments	–	–	291	291
Issue of ordinary share capital, net of transaction costs	155	8,603	–	8,758
At 30 June 2018 and 1 July 2018	547	27,539	(1,764)	26,322
Change in accounting policy – IFRS 9	–	–	(12,358)	(12,358)
1 July 2018 as restated	547	27,539	(14,122)	13,964
Comprehensive Income for the year				
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	5,807	225	–	6,032
Share issue costs	–	–	(399)	(399)
At 30 June 2019	**6,354**	**27,764**	**(22,215)**	**11,903**

NOTES TO THE PARENT COMPANY BALANCE SHEET

For the year ended 30 June 2019

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 9 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.

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.

2. Accounting policies (continued)

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

New standards impacting the company that have been adopted in the annual financial statements during the year, and which have given rise to changes in the Group accounting policies are:

- IFRS 9 – Financial Instruments;
- IFRS 15 – Revenue from Contract with Customers

The Company adopted IFRS 9 and IFRS 15 through the cumulative adjustment method with a transition date of 1 July 2018. The transition has not led to a material impact on Revenue recognition for the company.

The adoption of IFRS 9 has led to a review of the intercompany loans under the expected credit loss model. As the intercompany loans are repayable on demand, the debtor subsidiary companies are considered to be in default at a given reporting date where they have insufficient resources to repay the loan balance if it were to be recalled. Consequently, to the extent that the loan balances could not be repaid if recalled at a reporting date, the balances are considered to be credit impaired and an expected credit loss provision recognised to the extent of the shortfall. The extent of the resultant expected credit loss provision was £12.36 million at the date of transition of 1 July 2018, reducing reserves and amounts due from group undertakings within debtors by this amount, and a further provision of £4.50 million in the current financial year, increasing administrative expenses and reducing amounts due from group undertakings within debtors by this amount . There was no impact on the prior year.

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:

	2019 No.	2018 No.
Administration	**12**	11

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

	2019	2018
	£	£
Wages and Salaries	**985,069**	683,669
Social Security Costs	**105,926**	80,239
Pension Costs	**30,671**	22,391
Share based payment expense	**202,514**	159,835
	1,324,180	946,134

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 section of the Directors' Remuneration Report on pages 26 to 29, 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 2018	2,983	627	3,610
Additions	–	96	96
Disposals	–	–	–
Impairment	(1,753)	–	(1,753)
At 30 June 2019	**1,230**	**723**	**1,953**

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 Technologies (Taiwan) Co Ltd	Taiwan	100%	R&D, 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
Haydale Technologies (Taiwan) Co Ltd	10 Fl., No 251 Minghua Road, Gushan District Kaohsiung City 804, Taiwan

7. Debtors

	2019 £' 000	2018 £' 000
Amounts owed by group companies	**6,477**	17,908
Corporation tax	**275**	115
Other debtors	**26**	37
Prepayments and accrued income	**22**	42
	6,800	18,102

8. Creditors: amounts falling due within one year

	2019 £'000	2018 £'000
Bank loan	**582**	–
Trade creditors	**41**	110
Amounts owed to group companies	**–**	37
Other creditors including tax and social security	**35**	29
Accruals and deferred income	**312**	110
	970	286

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 is repayable in 12 equal monthly instalments which commenced in April 2019.

9. 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**

During the year, the Company issued 290,395,075 new ordinary shares of 2p each as follows:

- In January 2019, 1,250,000 shares were issued; and
- In March 2019, 289,145,075 shares were issued in connection with the Company's £5.8 million placing and open offer:

Issue costs amounting to £399,085 have been charged to other comprehensive income during the year (2018: £520,342 was charged to the share premium account).

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 Laura Redman-Thomas Graham Dudley Eves Roger James Humm
Secretary	Matt Wood
Investor Relations Contact	Gemma Smith Gemma.smith@haydale.com
Head Office and Registered Office	Clos Fferws, Parc Hendre, Capel Hendre, Ammanford, Carmarthenshire, Wales, SA18 3BL
Website	www.haydale.com
E-mail	info@haydale.com
Telephone	+44 (0)1269 842946
Advisers	
Independent Auditor	BDO LLP Arcadia House, Maritime Walk, Ocean Village, Southampton, SO14 3TL
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
Solicitors	Field Fisher LLP Riverbank House, 2 Swan Lane, London EC4R 3TT
Intellectual Property Solicitors	Mewburn Ellis LLP 33 Gutter Lane, London, EC2V 8AS

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