

*The information contained within this announcement is deemed by the Group to constitute inside information as stipulated under the Market Abuse Regulations (EU) No. 596/2014 ("MAR"). Upon the publication of this announcement via a Regulatory Information Service ("RIS"), this inside information is now considered to be in the public domain.*

**For immediate release**

**10 October 2017**



**Haydale Graphene Industries plc**

(‘Haydale’ or the ‘Group’ or the ‘Company’)

**Full Year Results**

Haydale (AIM: HAYD), the global advanced materials group, is pleased to announce its full year results for the year ended 30 June 2017.

**Operational Highlights**

- Successful acquisition of USA based Advance Composites Materials (“ACM”) for US\$5.2 million offering a strategic base in the USA and sales revenues of advanced materials products
- Acquisition of Thai based Innophene and set up of R&D facility and sales support for Far East customers
- Successful commissioning of plasma reactors at strategic supply chain partner AMG Mining for future production of volume masterbatch into the composite market
- ACM signs a four-year agreement to supply silicon carbide micro-fiber (“SiC”) to a global industrial manufacturer of tooling and wear-resistant solutions with a potential sales value of over US\$2.6 million
- Successful project completion with GKN and Cobham to produce an Airbus Aileron with over 600% increase in electrical conductivity to combat lightning strike; and
- Development of three graphene pre-impregnated carbon fibre composite panels demonstrating significant uplifts in thermal conductivity (management of heat), electrical conductivity and mechanical properties.

**Financial Highlights**

- Strategic investment in Haydale of £3.26 million by Everpower International Holdings Co Ltd, which acquired a 9.9 per cent. shareholding
- Total income increased over 100% year-on-year to £3.9 million (2016: £1.92 million)
- Loss after tax of £4.75 million (2016: £3.64 million)
- Investment in R&D increased to £1.15 million (2016 £0.94 million)

- Cash at the year-end £2.09 million (2016: £2.86 million)

**Post Period End Highlights:**

- New Non-Executive Chairman, David Banks, appointed in July 2017
- Creation of two Strategic Business Units (SBU) focussing on sales growth in Resins, Polymers and Composites (RPC) plus Advanced Materials including recruitment of experienced MD, Keith Broadbent to head up the RPC SBU
- Formation of Taiwan operation focussed on supply of speciality inks for the high growth screen-printed bio medical test strip market with immediate sales visibility following a dozen sales orders for test products
- Extended SiC contract with major Japanese customer Tateho increasing group sales orders to £6.0 million
- Positive test results on graphene nano platelets loaded Flowtite Technology AS glass fibre reinforced plastic (“GRP”) pipes leading to second corroborative tests set for early 2018. The programme is set to develop the next generation GRP pipe systems for water and sewerage applications; and
- Testing of GNP coated cookware by leading Korean manufacturer aiming at product launch in spring 2018.

**Commenting on the results Ray Gibbs, CEO of Haydale, said:**

*“This has been a year of considerable developments at Haydale as the Group has moved from being R&D focused to a commercial entity with focus on repeatable revenues of our advanced materials in both Graphenes and our specialist Silicon Carbide micro fibre product. We are at the inflexion point in our evolution having built a global presence serving locally the key markets of the Far East and USA. We have grown total income by 100% and with the recent overseas investments and emphasis on increasing sales, we look at the current financial year with much optimism having built the foundations for the Group to achieve its long term strategic objectives.”*

**- Ends -**

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**Notes to Editors**

Haydale is a global technologies and materials group that facilitates the integration of nanomaterials into the next generation of commercial technologies and industrial materials. With expertise in graphene, silicon carbide and other nanomaterials, Haydale is able to deliver improvements in electrical, thermal and mechanical properties, as well as toughness. Haydale has granted patents for its technologies in Europe, USA and China and operates from six facilities in the UK, USA and the Far East.

For more information please visit:

[www.haydale.com](http://www.haydale.com)

Twitter: @haydalegraphene

***A copy of this preliminary statement will be available to download on the Group's website [www.haydale.com](http://www.haydale.com). Copies of the Annual Report and Accounts, together with the notice convening the annual general meeting, will be posted to shareholders in due course at which time the Annual Report and Accounts will be made available to download on the Group's website, [www.haydale.com](http://www.haydale.com), in accordance with AIM Rule 26.***

## **CHAIRMAN'S STATEMENT**

I am delighted to present the Company's full year results to 30 June 2017 as your new Chairman, having taken over from John Knowles, who retired in July of this year. The Group thanks John for his major contribution to the Company, which he joined prior to the IPO in April 2014. My task is to build on his foundations and to move the business on from our early commercial wins to taking the current products we have developed, and together with the new ones in the pipeline, grow the business into being a significant global advanced materials group.

Haydale has been working for over 18 months on developing products in the Far East, a market which we see as ready adopters of graphene, and our other advanced materials, and a market that offers significant potential growth. I am therefore encouraged to see our strategic focus in the Far East is starting to pay off, with a dozen sales orders received across our three sites in the Far East since the beginning of August, where we have been particularly active in supplying our tailored graphene-based inks for screen printing sensors for the self-monitoring blood glucose ("SMBG") market. Whilst initially modest, it is the beginning of long-term repeat orders that we are looking to secure in this rapidly growing £11.54 billion market (US\$15 billion). Furthermore, as previously announced, a number of our graphene-based inks have received FDA regulatory approval to test in the SMBG sector where we believe the applications can be aimed at the US market. The longevity of these products is the crucial factor in our investment into this sector which, once established, are expected to deliver regular recurring sales orders to the Group.

In addition, Haydale's graphene has been designed into a new product range for a leading Far East cookware manufacturer who sell almost 400,000 units per month. We are in the final stages of independent testing of the product range which, if successful, is expected to be launched in the new year. The functionalised graphene material incorporated into the product was processed by our new Thai facility and has been shown to enhance the thermal response in a range of pots and pans. Once launched, our expectation is that the manufacturer will extend the graphene coating across a wider range of its cookware products. It is our firm intention to then seek other cookware manufacturers in other geographic territories to adopt this new product offering.

On the corporate front, the year under review was a very busy one, with two strategic acquisitions completed, one in the USA and one in Thailand. We now believe that we have a global presence in the world markets serving customers wanting our performance enhancing advanced materials to improve their own products. Post year end, we began operating out of Taiwan to meet demand for biomedical screen-printed sensors for the SMBG market. It is early stages but the customer engagements are looking very encouraging. We are now operating from six sites globally (two in the UK and one in each of the US, Thailand, South Korea and Taiwan), the sales from which are managed

through two newly established strategic business units which began operating in July 2017 dealing with (i) resins, polymers and composites; and (ii) advanced materials, including functional inks, coatings and silicon carbide (SiC). Going forward, we will concentrate on growing our sales order book, which at the year end stood at £5.40 million and was increased post year end to approximately £6.00 million, bolstered by the new US\$4.48 (£3.45) million three-year-contract announced in early September with one of our existing SiC customers, Tateho Chemical Industry Co., Limited.

As part of Haydale's sales strategy we will continue to look to engage in focussed partnerships, collaborations, and other commercial arrangements with "best in class" companies across the globe in our chosen strategic market of composites, ceramics and functional inks/coatings, in order to introduce our products using these advanced materials.

I would like to thank the staff, our advisors and my fellow Board members for their hard work and dedication in positioning the Group for the next stage of its growth. I would also like to thank our shareholders for their continued support.

**David Banks**

**Chairman**

10 October 2017

## CEO'S REVIEW

### Financial Highlights

Total income for the year ended 30 June 2017 increased more than 100 per cent. year on year to £3.91 million (2016: £1.92 million), being generated from a mixture of silicon carbide sales (8½ month's contribution from ACM, acquired in mid-October 2016), advanced composite consulting contracts, reactor sales and grant income. The EBITDA (adjusted for share-based payment charges and profit/loss on disposal of property, plant and equipment) was a loss of £4.35 million (2016: £3.36 million). We continued to invest in increasing our know-how, knowledge and understanding of mixing and dispersion techniques alongside our industry leading collaboration partners as we expensed £0.91 million of R&D spend during the year (2016: £0.51 million) and capitalised £0.24 million (2016: £0.43 million). We ended the year with cash of £2.10 million (2016: £2.86 million).

### Strategy

This year has seen the continued implementation of our strategy to promote Haydale as a pre-eminent solutions provider in the commercialisation of graphene and other advanced materials. We have increased Group income in this year by more than 100 per cent. to £3.91 million and are operational across six sites in the US, UK and the Far East. Critically, in our drive to grow sales further, we now have market ready products, principally in silicon carbide micro fibres ("SiC") from our US operation and screen printable graphene and speciality inks from our Far East businesses. Since we acquired the SiC business in October 2016, we have successfully secured additional long term orders of US\$2.6 (£2.0 million) million from a new customer as announced in April this year, and recently a new contract from our key SiC customer, Tateho Chemical Company Co., Limited, worth US\$4.48 million (£3.45 million) over three years that extended the previous order value by US\$1.40 million (£1.08 million). These contracts, together with others across the Group, take the Group's total order book to £6.00 million today, which will be delivered over the next three and a half years.

As previously announced, Haydale has experienced unforeseen delays with our commercial collaboration partners, Flowtite Technology AS (owned Amiantit Company) and Huntsman Advanced Materials, albeit we remain confident of future revenues from both of these next generation product developments. In particular, the results from extensive testing with Flowtite on their glass reinforced plastic ("GRP") pipes produced in April this year incorporating our GNP material to improve impact resistance have been very encouraging and Flowtite has requested a repeat trial, set for early 2018, to corroborate these positive findings. During the course of our work with Huntsman, we have gained critical know-how and understanding of dispersion, mixing and processing of advanced nanomaterials which has assisted us in a number of related areas and significantly improved our commercial offering. Our ability to use advanced materials in way that does not affect the downstream production process

of customers has been a significant factor in gaining customer acceptance of our product offering. A key example here is Haydale's involvement in the recently announced Airbus aileron where our technology was independently verified to achieve over a 600 per cent. increase in electrical conductivity capable of defeating lightning strike impact on aircraft. Although a longer-term revenue opportunity, our work in this area, in collaboration with GKN and Cobham, has generated a product capable of immediate sales in the pre-impregnated carbon fibre composite field and opens up a range of near-term opportunities such as electro-magnetic shielding, leading-edge de-icing and anti-static applications.

Haydale's business model utilises the expertise of best in class industrial partners to process significant volumes of graphene under licence. The carrier material (e.g. resin, polymer or ink systems) which is impregnated with a concentrated tailored advanced material (such as graphene) is known as a masterbatch. We previously reported our important agreement with the Advanced Metallurgical Group N.V. ("AMG") culminating in the commissioning at its Hauzenburg site in Germany of two of our plasma reactors in November 2016. AMG's facility being established will be able to satisfy the requirements of our customers and joint development partners for graphene loaded masterbatch, principally in the thermoset composite market where volumes can be substantial. As part of our agreement with AMG, we now have access to their world-wide sales force to promote our other products, principally our functional inks. Ensuring we have strategically located, dedicated processing centres, close to customer bases with a secure, sustainable, consistent, quality material supply is at the heart of our commercialisation strategy.

### **Acquisitions**

We continue to pursue a strategy to consider suitable acquisitions if they provide Haydale access to sales of complementary products in our primary target markets. In the year under review we have been particularly active and have acquired operations in the USA and Thailand, both key geographies that we consider prime markets for our products and technical skills.

In the USA, our SiC operation acquired in October 2016 is performing to plan and growing its order book. Having established its sales growth potential, in May 2017, we acquired the minority 13.5 per cent. of our US holding company subsidiary, Haydale Technologies Inc ("HTI"), that the Group did not previously own for approximately US\$0.5 million (£0.41 million), satisfied out of internal cash resources.

In Thailand, shortly after the acquisition in September 2016, we built out a high-class facility to house our patented plasma reactor technology and establish a graphene R&D centre in the prestigious Thailand Science Park capable of servicing our Far East sales effort. This facility officially was opened

on 29 March 2017 by HRH Princess Maha Chakri Sirindhorn. Since then our Thai facility has supplied the functionalised graphene for our push into bio medical sensors and cookware and has secured its own funded research projects with leading Thai petrochemical processor, IRPC, and the Thailand Ministry of Energy. We have expectations that these projects will lead to follow on product sales in region. Further details of the two acquisitions are dealt with in the Strategic Report.

A major part of our sales expansion will be in China, one of the largest markets in the world for advanced composites applications. In February 2017, we secured a strategic financial partner in Everpower Holdings (a New York financial investment family office with direct access to China), to assist us in opening up this high growth market for us. We are encouraged by their commercial approach and business drive which we expect to translate into revenues to Haydale in the current financial year.

### **Strategic Business Units**

From 1 July 2017, we created two strategic business units (SBU's) within the Group to focus on and deliver our anticipated sales growth:

1. Resins, Polymers and Composites; and
2. Advanced Materials (including SiC and inks)

Both SBU's have dedicated management teams with a focus on delivering sales growth and, in turn, operating profits. Each unit has a Managing Director, with Trevor Rudderham heading up Advanced Materials and Keith Broadbent running the Resins, Polymers and Composites SBU. Keith, who is based in the UK, joined Haydale in July 2017 having worked at Ultra Electronics and was previously head of production at luxury boat builders Sunseeker and Princess. Trevor, who is based in the US, has been with the Group since mid-2016 shortly before our acquisition of ACM in the Autumn of 2016.

The SBU teams are challenged with growing sales of our SiC and inks products and on the conversion of our extensive research and product development in areas such as pre-preg composites into a sales pipeline and commercial revenues of graphene enhanced products. Haydale has ambitious plans for growth in the Far East following intensive customer evaluations, especially in Korea, and our new facilities in Taiwan and Thailand.

In North America, we have successfully relaunched and rebranded ACM, and our strategy is to take advantage of a fragmented and largely untapped graphene and advanced materials market. This operation has quality technical and now commercial management to deliver ambitious growth plans.



In addition, we will seek to establish our plasma reactors in the USA to enhance the full technical delivery of our materials and products to a large market.

## **Outlook**

The Group has income visibility from its long-term grant awards, the ongoing advanced composite consulting services from the highly skilled team at Loughborough, and SiC sales orders from the US which, in aggregate, provided the Group with a record order book of £5.4 million at the year-end, that has since grown to approximately approx. £6.0 million as at the date of this report.

We see the rapidly growing self-diagnostic biomedical sensor market for diabetes monitoring as a major part of the inks sales in the current financial year through our newly opened Taiwan operation. The long-term repeatability of this market should add to our increasing sales visibility and provide a pathway for us to progress our other speciality functional ink products under development. We expect to enter into long-term supply agreements with the print houses with which we have had our conductive graphene-based ink product accepted and designed into the future sale of test strips for the SMBG market.

Haydale has evolved from an R&D focused business to a commercial entity with a real geographic presence. This past year, having grown total income by more than 100 per cent., and with the recent overseas investments and management actions highlighted in this statement and in the Strategic Report, we are expecting significant increases in product sales in the current financial year, which will build the foundations for Haydale to achieve our near and long-term growth objectives.

**Ray Gibbs**

**Chief Executive Officer**

10 October 2017

## STRATEGIC REPORT

The directors present their Strategic Report for the year ended 30 June 2017.

### PRINCIPAL ACTIVITIES

Haydale Graphene Industries Plc (“HGI”, “Haydale” or the “Group”) is the AIM listed group that uses tailored advanced materials, including graphene and silicon carbide (SiC), to enhance the quality and performance of its customers’ products. In the USA, Haydale manufactures proprietary silicon carbide fibres and whiskers that strengthen ceramics and enable highly scratch and wear resistant coatings. Applications for SiC include scratch resistant cookware, corrosion barriers for oil and gas pipelines and cutting tools that fashion, for example, jet engine turbine blades from solid billets. The Group has developed regulatory approved proprietary graphene-based inks and coatings for the print and biomedical sensor markets, as well as enhanced resins for the pre-preg carbon fibre market. The Group has operational activities in its six chosen geographies worldwide. In summary, these are:

<i>Haydale subsidiary</i>	<i>Location</i>	<i>Principal activities</i>
Haydale Limited	Ammanford, Wales	R&D operation, supporting the resins, polymers and composites strategic business unit
Haydale Composite Solutions Limited (“HCS”)	Loughborough, England	Advanced composites design, R&D and testing specialist, covering the full product development lifecycle
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	Provides low-cost and high-value R&D, servicing the APAC region and supporting the Far East sales teams. Acquired in September 2016
Haydale Technologies, Inc. (“HTI”)	South Carolina, USA	ACM is HTI’s wholly owned operating subsidiary acquired in October 2016 which produces and sells novel silicon carbide micro fibres and whiskers
Haydale Technologies Taiwan Ltd (“HTW”)	Kaohsiung, Taiwan	Newly established in July 2017 as the production facility and technical centre for sales of bio medical

During the year the Group made two acquisitions, in Thailand and in the USA, and secured a strategic investor as part of a desire for geographic coverage and product diversification in the key overseas markets of the USA and Far East, details of which are set out below.

## **USA**

In October 2016, we completed the strategic acquisition of ACMC Holding, Inc., and its wholly owned trading subsidiary, Advanced Composites Materials, LLC. (together “ACM”), a profitable, high quality USA based silicon carbide micro-fibre producer. We acquired the share capital of ACM for of US\$1.6 million (£1.31 million) and we assumed debts held by ACM of approximately US\$3.61 million (£2.96 million). US\$1.00 million (£0.82 million) of the consideration was settled via the issue of 415,618 new ordinary shares in Haydale and there remains approximately £0.46 million of consideration which is expected to be settled by the end of December 2017. There is also an agreed earn out formula that runs to mid-2020 that provides for further payments of up to US\$1.80 million (£1.39 million) to the vendors of ACM, based upon ACM achieving certain sales targets that are expected to be self-funded.

The acquisition of ACM was financed out of existing resources, new-long term banking facilities secured in the US and an oversubscribed placing and open offer that raised £2.59 million before expenses. We spent a considerable amount of time evaluating the North American market before deciding to acquire ACM and we concluded that the business offered us a strategic foothold in a substantial geographic territory offering significant growth potential and synergistic products, whilst also allowing for substantial cross-selling opportunities within the Group. In advance of its purchase, we recruited Trevor Rudderham as CEO of Haydale Technologies Inc (“HTI”), our US subsidiary that acquired ACM, to run the Group’s North American operations. In May 2017, we acquired the minority 13.5 per cent. interest in HTI that the Group didn’t previously own for US\$0.51 million (£0.41 million), paid out of existing cash resources.

We are pleased with ACM’s performance under the Group’s ownership and we have subsequently invested heavily in sales and marketing activities. Pleasingly, in March 2017 we secured a four-year sales contract to supply our SiC micro fibre to a new customer for tooling and wear resistant applications, principally in the manufacture of hard edged cutting tools used in the production of land based turbines and jet engine fan blades. The contract, worth US\$2.60 million (£2.0 million) over its four-year term, is expected to deliver approximately US\$0.65 million (£0.50 million) of annual revenues. Post year end, we secured a new replacement long-term contract for the supply of our SiC

whiskers to our major Japanese customer, Tateho Chemical Industries Co., Limited (“Tateho”). This contract, worth US\$4.58 million (£3.52 million) over its three-year term, replaces the existing contract with Tateho which had less than two years to run and increased the Group’s order book and income visibility by a further US\$1.40 million (£1.08 million). The USA is a significant market for us which we estimate accounts for around 40 per cent. of the world’s demand for our advanced materials and further investment into the region is likely to continue, particularly with regards to our patented plasma treatment process of advanced materials, such as graphene. HTI is reviewing a number of initiatives to add revenue and new products to its SiC portfolio. This will involve adding processes and equipment into the available space at our South Carolina facility. If successful, these new products are not expected to add any significant cost to direct labour or overheads.

### **Far East**

Having opened a sales office in Seoul, South Korea in 2015, and established a collaboration in Taiwan for our inks in early 2016, we found that the pace of enquiries for functional materials and ink products challenging to our UK operations. It became apparent that we needed a local facility to service our Far East customers who constantly required rapid turnaround and ink reformulation services. In September 2016, we completed the acquisition of Bangkok-based Innophene Co. Ltd for £0.31 million, consideration for which was settled through the issue of 176,952 new ordinary shares in Haydale, representing approximately 1 per cent. of the Company’s then issued share capital.

Innophene was subsequently renamed Haydale Technologies (Thailand) Limited, (“HTT”) and now has a portfolio of ink products that we are starting to commercialise. These include a software driven anti-counterfeiting device that “reads” our unique ink when printed onto a product label, proving the authenticity (or otherwise) of the goods. We are exploring areas of interest from governments and producers seeking to protect brands and reduce the growing incidence of counterfeit goods. The specialist ink uses materials from our collaboration partner, Talga Resources, and has been developed over the last nine months.

HTT has quickly established itself as a technical and sales support service for our Korean and Taiwan activities. The first step was to set up a high-class facility in the prestigious Thailand Science Park in Bangkok to house one of our patented plasma HT60 reactors and establish the first graphene R&D centre in Thailand. This was achieved when HRH Princess Maha Chakri Sirindhorn officially opened the facility on 29 March 2017. Since then the operation has secured funded research projects with leading Thai petrochemical processor, IRPC, for functionalisation of some of its by-products, and the Thailand Ministry of Energy on graphene enabled super capacitors. All trial and product sales requiring functionalised graphene in the region have been processed and shipped from our Thai facility.

As further evidence of our focus on the Far East market, in February 2017, we announced that we had secured a £3.3 million strategic investment from USA-based, Everpower International Holdings Co Ltd (“Everpower”), to be made through one of its Chinese subsidiaries. The investment was concluded in April 2017 and resulted in Everpower owning 9.9 per cent. of the Group and an agreement to exploit Haydale’s current and future products in China. Everpower has purchased \$0.20 million (£0.15 million) worth of products from us for delivery in the new year and we are currently working together to industrialise a number of our products, including our SiC, conductive inks and the advanced thermoset composite designs created by the Group.

## **The EU**

In the UK, we have two operational facilities in Ammanford and Loughborough. Ammanford is primarily a R&D operation which also sources, handles, functionalises and processes nanomaterials using a suite of prototyping and analytical equipment, as well as its own patented plasma reactors. Ammanford is responsible for installing, commissioning and maintaining the plasma reactors used internally and for third parties. The aim is to provide the Group with sustainable commercially available graphene and other nanomaterials for both internal product development and third-party customers.

In Loughborough, we are focused on producing applications engineering solutions in traditional thermoset composites and have been delivering masterbatch for the Huntsman research project where we have added graphene into Huntsman’s high-end epoxy resin where their focus has now been to enhance the thermal conductivity (heat dissipation) of composite carbon fibre pre-preg. A second major research project was undertaken with leading water and sewerage pipe manufacturer, Flowtite, which incorporated graphene into Flowtite’s next generation pipes with the aim of increasing their impact resistance and improving the pipe’s impermeability. Our work with Huntsman and Flowtite has been mainly funded by the Group and, although there have been some delays in their commercial progress, we remain confident of significant revenue opportunities in the future. Although it is too early to be definitive as tests are ongoing, we have seen encouraging results in key metrics such as fracture toughness (impact resistance) in the glass reinforced plastic (“GRP”) pipes.

In May 2016, we entered into a collaboration agreement with Graphit Kropfmuhl GmbH (“GK”), part of AMG Advanced Metallurgical Group N.V. (“AMG”), to develop new valued-added nanomaterial products using Haydale’s HDPlas® functionalisation process. As part of the agreement, we supplied an HT60 R&D reactor and a larger capacity HT200 reactor to GK’s purpose built facility in Germany. Commissioning of the reactors was completed in November 2016. It is expected that this facility will produce, under licence from Haydale, the graphene-based masterbatch expected to be purchased by likes of Flowtite, once commercial quantities begin to be required.

## **Strategic Business Units**

On 1 July 2017, the Group, which consisted of eight worldwide limited liability operating entities, undertook an internal reorganisation and created two Strategic Business Units (“SBU”) in order to streamline its operations and instil a focus on sales and profits. The intention is to ensure that the Group is best positioned to realise its potential as a profitable commercial entity having evolved from being an R&D oriented business.

One SBU is focused on Resins, Polymers, and Composites (“RPC”) and will concentrate on marketing and selling the newly developed graphene infused carbon fibre pre-impregnated materials (pre-preg). The second SBU is focused on selling our Advanced Materials (“AMAT”), including our silicon carbide (“SiC”) whiskers and fibres and our newly developed functional inks and pastes initially targeting the US\$15 billion (£11.54 billion) self-monitoring blood glucose device market.

Each SBU has its own managing director with full profit and loss responsibility and a principal focus on driving product delivery and sales. Supporting each managing director will be dedicated sales teams with technical support. Trevor Rudderham, our USA CEO, is heading up the AMAT SBU and has a dedicated sales team in the USA and Far East. Keith Broadbent has been appointed as the MD of the RPC SBU, which incorporates both of our UK facilities. Keith joined us July 2017 after many years at an operational director level with related businesses such as prestigious boat manufacturers, Sunseeker International and Princess Yachts. Going forward, the Group intends to reporting the trading results of each SBU.

## **OPERATING REVIEW**

The Group’s key objective now is to accelerate the transition of the business from an R&D focused operation into a sales and marketing organisation. We now have the strategic business units in place with quality management and the supply chain and collaboration partners with sales reach to commence commercial sales of products. One of the fundamental items of this strategy is to have a sustainable supply chain (with a second back-up source) secured for anticipated demand and multiple sites that answer the customers’ requirements for a disaster recovery plan.

## **Funded and Private Venture projects**

During the year under review, the Group has been busy progressing R&D programmes with important commercial partners where development of a commercially viable end products is a pre-requisite of securing each projects’ funding. Examples of such projects include:

- Graphene composites evaluated in lightning strike

This Innovate UK project was designed to develop electrically conductive adhesives for aerospace applications and we were able to deliver independently verified increases in electrical conductivity on a carbon fibre Airbus Aileron. We are now investigating other ways of imparting lightning protection and electrical conductivity for electromagnetic interference (EMI) shielding and anti-static composite structures. The adhesives developed during the project are expected to have applications in other sectors, including large offshore wind turbines and marine, as well as applications in the oil and gas industry for static electricity dissipation in pipelines.

- Graphene additives on carbon/carbon composite materials.

In conjunction with Meggitt Aircraft Braking Systems, a division of Meggitt plc, we are investigating the potential of graphene additives and SiC to develop carbon/carbon composites for friction and thermal management applications for a range of global end users, including aerospace, space and power generation.

- Hydrogen storage pressure vessels

We are designing and developing a thermoplastic composite vessel and pipe for hydrogen storage and transfer applications at pressures of up to 700 bar. Such products will be fully recyclable, impact resistant and durable. The sectors we are targeting this product include automotive and energy.

- De-icing

We have successfully demonstrated the feasibility of forming multi-functional graphene-based surfaces capable of Joule heating for de-icing applications with additional functionality of ice sensing to form a 'smart surface'. Applications include de-icing for drones and other leading-edge structures such as wind turbine blades.

### **Operations and technical**

Crucially, during the year under review we have invested in reducing the processing time of our advanced materials and hence increased our capacity. This has been successfully done for certain materials and consequently we now have an established processing and treatment facilities in the UK, Germany and Thailand capable of treating (known as “doping”) tonnes of nanomaterials per year into an intermediate product to the customers’ specification. The processing capacity depends on a range of factors, in particular the nature of the nanomaterial being processed and the graphene loading required. Our granted patent on processing nanomaterials with plasma offers not only the opportunity to exploit the graphene market but other non-carbon based 2D materials. We are aware that the

Centre of Process and Innovation (“CPI”) in the UK, who purchased one of our HT60 reactors last year, has successfully functionalised Boron Nitride, an insulating 2D material known as the “white graphite” with their HT60. During the year, the importance of mixing, processing and dispersing nanomaterials has become an area of equal importance to graphene for the future growth of Haydale. During the year, the plasma patent was also granted in Japan and has been allowed for grant in the USA.

In the year under review, the Group’s headcount increased significantly from 46 to 70 at the year end as we delivered on internally and externally funded projects and begin to build up a sales force capable of capitalising on our existing and future products. We acknowledge that we have some way to go perfect the sales cycle and we are still in need of more sales specialists, particularly in the pre-preg sector where we think there is considerable opportunity, especially in China. We lease all or our facilities and some, such as our facilities in Loughborough, are at or nearing capacity where we will be carefully evaluating their growth requirements during the current financial year. ACM in the US has substantial spare space in its 70,000 sq. ft. factory and offices and we have plans to utilise the space in the foreseeable future.

### **Patents, IP and Licensing**

Our patents are process patents in key selected strategic territories where, as a blocking prior art tool, they are very useful. We are aware of one patent application where the examiner has thrown out their claims citing Haydale’s patents as prior art. Our critical IP however, is our processing, mixing and dispersion knowledge and know-how derived from the many months work we have carried out in conjunction with Huntsman, together with the FDA approved ink formulations that have been developed in the Far East. We are in the process of documenting our knowledge and know-how IP, including ink recipes and masterbatching techniques.

In the USA, ACM has filed a patent for the production of its silicon carbide micro-fibre but our preference is to keep secret the production process of the even smaller “SiC whisker” material.

### **Key Performance Indicators (“KPIs”)**

The Board consider there are a number of important KPIs which are non-financial, such as: the nature and size of development projects; the speed of response to inbound enquiries; product performance improvements of the host material once enhanced with our functionalised materials vs the control; the ability to convert non-disclosure agreements and letters of intent for collaborations to development project discussions and binding commercial contracts. Performance against these non-financial KPIs is in line with the Board’s expectations for the year under review.



The important financial KPIs are the income, cash position, the operating cash flows and the adjusted EBITDA (adjusted for share-based payment charges and profit/loss on disposal of property, plant and equipment). of the Group. Going forward, in addition, as revenues increase, an important KPI is the quantum of the order book and we have commenced reporting on this metric in the current year. The visibility on future sales gives some comfort on likely income streams, although predicting unit volumes of sales by a third party of their next generation product which incorporates our advanced material sometimes in new territories is not easy to do accurately. That said, the focus on functional inks in the Far East and the future potential for our FDA approved inks for the disposable self-diagnostic blood glucose sensor market is expected to provide us with repeatable monthly sales visibility, especially as the print houses to whom we supply will want long-term agreements. For the year ended 30 June 2017, the Group's income of £3.91 million was in line with management's expectation with cash and deposit balances amounting to £2.10 million at 30 June 2017 (2016: £2.06 million) is also in line with budgets. The net cash outflow from operating activities for the year ended 30 June 2017 of £4.29 million (2016: £3.36 million loss) which was also in line with the budgeted cashflows for the year. The Group's adjusted EBITDA for the year ended 30 June 2017 amounted to £4.20 million (2016: £3.29 million).

## **FINANCIAL REVIEW**

### **Statement of Comprehensive Income**

In the year under review, the Group's three principal areas of income were: (i) advanced composite consulting engineering services; (ii) sale of silicon carbide whiskers and fibres; and (iii) long-term grant funded projects.

During the year, our team in Loughborough built on the work of the previous financial year, specifically in improving the thermal, electrical and mechanical performance of certain thermoset epoxy resins in conjunction with collaboration partners, Huntsman and Flowtite. Significant investment was made to ensure that the Group retained all of the key IP, knowledge and know-how surrounding the development of these higher performing resins. This work has been crucial in the team being able to develop three new pre-preg carbon fibre products which are just now becoming available to be demonstrate their performance improvements. As well as developing products for the longer term significant sales opportunity, the team at Loughborough has been delivering on long-term composite consulting contracts, recording revenues of £0.62 million in the year under review (2016: £0.54 million).

The team at Ammanford continues to deliver incremental improvements in reducing processing cycle times and increase load capacities in both plasma reactor models, the HT60 and HT200. In the year,

revenues of £0.25 million were recorded in connection with the commissioning of the two plasma reactors sold to GK in the previous financial year.

The team at ACM delivered revenues of £2.05 million since it was acquired in mid-October 2016, in line with expectations. ACM has predominately long-term contracts with its customers, some of which are at highly attractive gross margins, providing us with excellent future revenue visibility.

Revenues from the Far East totaled £0.09 million, principally derived from R&D services provided by our Thailand operation acquired in September 2016.

£0.92 million of new grant funded projects were secured during the year, building upon awards obtained in prior years meaning that we recorded grant income of £0.90 million in the year under review (2016: £0.75 million). Grant funded projects are extremely important to the Group in that they are typically longer term (12-24 months) contributors to our fixed overhead base. They allow us work alongside world renowned businesses in their particular field of expertise and they are expected to lead to the development of a commercial product at the end of each project.

The Group's total income for the year more than doubled year on year to £3.91 million (2016: £1.92 million). Pleasingly, at the year end, the Group's contracted order book stood at £5.40 million and since the year end, additional long term orders have been secured resulting in a current order book of £6.0 million to be delivered over the next 3.5 years.

Overall R&D spend for the year increased to £1.15 million (2016: £0.94 million), of which £0.9 million was expensed during the year (2016: £0.51 million), with the balance of £0.24 million being capitalized, (2016: £0.43 million). This internal funded development expenditure is expected to lead to sales of new products in future financial years. The Group's other administrative costs for the year totaled £8.14 million (2016: £5.09 million) including almost a full year of costs from Innophene, acquired in September 2016, and ACM, acquired in October 2016. Overall, the loss from operations for the year was £5.34 million (2016: £4.01 million loss), and included non-cash items of £1.14 million (2016: £0.76 million). The loss per share for the year increased marginally £0.28 (2016: £0.26 loss).

### **Statement of Financial Position and Cashflows**

As at 30 June 2017, net assets amounted to £8.91 million (2016: £6.60 million), including cash balances of £2.10 million (2016: £2.86 million). Other current assets increased to £2.89 million at the year end (2016: £1.44 million), and current liabilities increased to £2.98 million as at 30 June 2017 (2016: £1.00 million). Current liabilities include £0.47 million of consideration payable for the acquisition of ACM which is expected to be settled in the current financial year. Net cash outflow from operating activities

for the year was £4.29 million (2016: £3.28 million), the principal contributing factor being the loss from operations activities of £5.34 million (2016: £4.01 million). Expenditure on capital equipment again utilised a significant portion of cash during the year at £0.42 million (2016: £0.47 million). Additionally, in May 2017, the Company acquired the 13.5 per cent. minority interest in HTI, its US subsidiary, that it did not already own for £0.41 million.

### **Capital Structure and Funding**

As at 30 June 2017, the Company had 19,597,713 ordinary shares in issue (2016: 15,236,946). During the year, the Company issued 4,360,767 new ordinary shares, 176,952 of which were for the acquisition of Innophene in September 2016, 2,035,305 of which were issued in connection with the Company's acquisition of ACM in October 2016 (1,619,687 in relation to the £2.6 million oversubscribed placing and open offer and 415,618 issued as consideration to the vendors of ACM). A further 2,109,010 ordinary shares were issued in connection with the £3.6 million strategic subscription, of which £3.3 million was subscribed for by Everpower, which completed in April 2017 and the balance of 39,500 shares were issued in respect of option exercises.

The Group'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.

## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For the year ended 30 June 2017

	Note	Year ended 30 June 2017 £'000	Year ended 30 June 2016 £'000
<b>REVENUE</b>	5	3,004	1,169
Cost of sales		(894)	(899)
<b>Gross profit</b>		2,110	270
Other income		901	754
Administrative expenses			
Research and development expenditure		(908)	(514)
Share based payment expense		(351)	(326)
Other administrative expenses		(7,090)	(4,193)
		(8,349)	(5,033)
<b>LOSS FROM OPERATIONS</b>		(5,338)	(4,009)
Finance costs		(297)	(14)
<b>LOSS BEFORE TAXATION</b>	7	(5,635)	(4,023)
Taxation	8	883	386
<b>LOSS FOR THE YEAR FROM CONTINUING OPERATIONS</b>		(4,752)	(3,637)
<b>Other comprehensive income:</b>			
<i>Items that may be reclassified to profit or loss:</i>			
Exchange differences on translation of foreign operations		(74)	(44)
Remeasurements of defined benefit pension schemes		(36)	-
<b>TOTAL COMPREHENSIVE LOSS FOR THE YEAR FROM CONTINUING OPERATIONS</b>		(4,862)	(3,681)
<b>Loss for the year attributable to:</b>			
Owners of the parent		(4,862)	(3,598)
Non-controlling interest		-	(39)
		(4,862)	(3,637)
<b>Total comprehensive loss attributable to:</b>			
Owners of the parent		(4,862)	(3,637)
Non-controlling interest		-	(44)
		(4,862)	(3,681)
Loss per share attributable to owners of the Parent			
Basic (£)	9	(0.28)	(0.26)
Diluted (£)	9	(0.28)	(0.26)

## CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 30 June 2017

Company Registration No. 07228939	Note	30 June 2017 £'000	30 June 2016 £'000
<b>ASSETS</b>			
<b>Non-current assets</b>			
Goodwill	10	2,115	685
Intangible assets	10	2,152	1,141
Property, plant and equipment	11	5,074	1,576
Deferred tax asset		679	-
		<u>10,020</u>	<u>3,402</u>
<b>Current assets</b>			
Inventories	12	1,212	398
Trade receivables		798	49
Other receivables		535	613
Corporation tax		345	379
Cash and bank balances		2,091	2,862
		<u>4,981</u>	<u>4,301</u>
<b>TOTAL ASSETS</b>		<u><u>15,001</u></u>	<u><u>7,703</u></u>
<b>LIABILITIES</b>			
<b>Non-current liabilities</b>			
Bank loans	15	911	104
Deferred tax		1,234	-
Pension Obligation	18	969	-
		<u>3,114</u>	<u>104</u>
<b>Current liabilities</b>			
Bank loans	15	359	166
Trade and other payables	14	2,305	656
Deferred income		253	176
Corporation tax		65	-
		<u>2,982</u>	<u>998</u>
<b>TOTAL LIABILITIES</b>		<u><u>6,096</u></u>	<u><u>1,102</u></u>
<b>TOTAL NET ASSETS</b>		<u><u>8,905</u></u>	<u><u>6,601</u></u>
<b>EQUITY</b>			
<b>Capital and reserves attributable to equity holders of the parent</b>			
Share capital	13	392	305
Share premium account	13	18,936	11,840
Share-based payment reserve		1,007	656
Foreign exchange reserve		(113)	(39)
Retained earnings		(11,317)	(6,117)
Non-Controlling Interest		-	(44)
		<u>8,905</u>	<u>6,601</u>
<b>TOTAL EQUITY</b>		<u><u>8,905</u></u>	<u><u>6,601</u></u>

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 30 June 2017

	Share capital	Share premium	Share- based payment reserve	Foreign Exchange Reserve	Retained profits	Total Attributable to equity holders of parent	Non- Controlling Interest	Total equity
	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000
<b>At 1 July 2015</b>	229	6,254	329	-	(2,519)	4,293	-	4,293
Total comprehensive loss for the year	-	-	-	(39)	(3,598)	(3,637)	(44)	(3,681)
Recognition of share- based payments	-	-	327	-	-	327	-	327
Issue of ordinary share capital	76	5,586	-	-	-	5,662	-	5,662
<b>At 30 June 2016</b>	305	11,840	656	(39)	(6,116)	6,646	(44)	6,601
Comprehensive loss for the year	-	-	-	-	(4,752)	(4,752)	-	(4,752)
Other Comprehensive (loss)/Income	-	-	-	(74)	-	(74)	-	(74)
Retirement Benefit Obligations	-	-	-	-	(36)	(36)	-	(36)
Total Comprehensive loss for the year	-	-	-	(74)	(4,788)	(4,862)	-	(4,862)
Recognition of share- based payments	-	-	351	-	-	351	-	351
Issue of ordinary share capital	87	7,096	-	-	-	7,183	-	7,183
Repurchase of NCI	-	-	-	-	(413)	(413)	44	(369)
<b>At 30 June 2017</b>	392	18,936	1,007	(113)	(11,317)	8,905	-	8,905

**CONSOLIDATED STATEMENT OF CASH FLOWS**

For the year ended 30 June 2017

		Year ended 30 June 2017 £'000	Year ended 30 June 2016 £'000
	Note		
<b>Cash flow from operating activities</b>			
Loss before taxation		(5,635)	(4,023)
<i>Adjustments for:-</i>			
Amortisation of intangible assets	10	157	63
Capitalised loan costs written off		77	-
Depreciation of property, plant and equipment	11	560	370
Impairment on available for sale asset		-	117
Reduction in deferred consideration		-	(117)
(Profit)/Loss on disposal of property, plant and equipment		-	(107)
Share-based payment charge		351	327
Finance costs		297	14
		<hr/>	<hr/>
<b>Operating cash flow before working capital changes</b>		(4,193)	(3,356)
		<hr/>	<hr/>
Increase in inventories		(12)	(115)
Increase in trade and other receivables		(596)	(128)
Decrease in payables and deferred income		260	187
		<hr/>	<hr/>
<b>Cash used in operations</b>		(348)	(56)
		<hr/>	<hr/>
Income tax received		412	128
		<hr/>	<hr/>
<b>Net cash flow from operating activities</b>		(4,129)	(3,284)
		<hr/>	<hr/>
<b>Cash flow used in investing activities</b>			
Purchase of property, plant and equipment		(415)	(470)
Purchase of Intangible Assets		(245)	(429)
Proceeds from disposal of property, plant and equipment		-	207
Acquisition of subsidiary net of cash acquired	17	4	-
Settlement of deferred consideration		-	(350)
Purchase of non-controlling shareholding		(413)	-
		<hr/>	<hr/>
<b>Net cash flow in investing activities</b>		(1,069)	(1,042)
		<hr/>	<hr/>
<b>Cash flow used in financing activities</b>			
Finance costs		(297)	(14)
Proceeds from issue of share capital (net of share issue costs)		6,058	5,359
New bank loans raised		1,408	-
Repayments of borrowings		(2,817)	(162)
		<hr/>	<hr/>
<b>Net cash flow from financing activities</b>		4,352	5,183
		<hr/>	<hr/>
Effects of exchange rates changes		(75)	(44)
		<hr/>	<hr/>
<b>Net (decrease) / increase in cash and cash equivalents</b>		(771)	813
		<hr/>	<hr/>
Cash and cash equivalents at beginning of the financial year		2,862	2,049
		<hr/>	<hr/>
<b>Cash and cash equivalents at end of the financial year</b>		2,091	2,862
		<hr/> <hr/>	<hr/> <hr/>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 June 2017

### 1. General information

Haydale Graphene Industries Plc (the “Company”) and its subsidiaries (together the “Group”) are focussed on enabling technology for the commercialisation of graphene and other nanomaterials.

The Company is a public limited company which is listed on the AIM Market of the London Stock Exchange plc and is incorporated and registered in England and Wales. The Company’s registered office is Clos Fferws, Parc Hendre, Capel Hendre, Ammanford, Carmarthenshire, SA18 3BL.

### 2. Group Annual Report and Statutory Accounts

The financial information of the Group set out above does not constitute “statutory accounts” for the purposes of Section 435 of the Companies Act 2006. The financial information for the year ended 30 June 2017 has been extracted from the Group’s audited financial statements which were approved by the Board of directors on 10 October 2017 and will be delivered to the Registrar of Companies for England and Wales in due course. The report of the auditor on these financial statements is unqualified, did not include any references to any matters to which the auditors drew attention by way of emphasis without qualifying their report and did not contain a statement under Section 498 (2) or Section 498 (3) of the Companies Act 2006.

### 3. Basis of preparation

Whilst the financial information included in this preliminary announcement has been prepared in accordance with the recognition and measurement criteria of International Financial Reporting Standards (‘IFRSs’) as adopted by the European Union, this announcement does not itself contain sufficient information to comply with those IFRSs. This financial information has been prepared in accordance with the accounting policies set out in the 30 June 2017 report and financial statements.

### 4. Going concern

The Group consolidated financial statements were 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 2017, amounts to £2.091 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, which take into account the net proceeds of the fundraising approved today and scheduled to be received by the Company on or around 26 October 2017 and current cash resources, the Directors believe that the Group will be able to continue to trade for the foreseeable future.

### 5. Revenue and interest income

#### (i) Goods

Revenue represents sales to external customers at invoiced amounts less value added tax or local taxes on sales. Revenue is recognised generally on delivery, or customer acceptance for where customer acknowledges the transfer of risk and reward of ownership and are liable for insuring the goods.

#### (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.

(iii) *Interest income*

Interest income is recognised as finance income on an accruals basis using the effective interest rate method.

## 6. 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.

The directors of the Group consider the principal activity of the Group to be the sale and distribution of specialist research and development materials in the field of nano-technology, and therefore consider this currently to be the sole operating and reportable segment. Overseas sales relate to the fulfilment of sales generated outside the UK but actioned within the UK. Since the acquisition of ACM, the sale of silicon carbide based materials have been included within the provision of goods category.

### 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.

	2017 £'000	2016 £'000
<b>By destination</b>		
United Kingdom	265	397
Europe	952	743
North America	131	3
Rest of the World	1,656	26
	<u>3,004</u>	<u>1,169</u>

During 2017, 51% (2016: 35%) of the Group's revenue depended on a single customer. During 2017, 12% (2016: 27%) of the Group's revenue depended on a second single customer.

Revenue within Europe was predominantly split between Germany (19%) and Ireland (10%) (2016: Germany 57%, and Ireland 41%).

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 £2,087,777 or 70% (2016: £626,000 or 54%) and revenue from services was £691,274 or 23% (2016: £543,000 or 46%).

	<b>2017</b>	<b>2016</b>
	<b>£'000</b>	<b>£'000</b>
Services	691	543
Reactors	225	591
Goods	2,088	35
	<u>3,004</u>	<u>1,169</u>

From 1 July 2017, the Group changed its internal reporting system to set up two profit-centric strategic business units (“SBUs”) known as “RPC” and “AMAT”. For the current financial year and beyond, the Group intends to report sales and profits under these two SBUs.

## 7. Loss before taxation

Loss before taxation is arrived at after charging:

	<b>2017</b>	<b>2016</b>
	<b>£'000</b>	<b>£'000</b>
Research and development:		
- current period’s expenditure	908	480
- amortisation of capitalised expenditure	77	34
- amortisation of other intangibles	157	29
Depreciation of property, plant and equipment	560	370
Loss on disposal of property, plant and equipment	-	(107)
Foreign Exchange	(20)	(118)
Inventories recognised as an expense	252	-
Operating lease rentals:		
- land and buildings	447	98
- plant and machinery	7	23
	<u>3,004</u>	<u>1,169</u>

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

	<b>2017</b>	<b>2016</b>
	<b>£'000</b>	<b>£'000</b>
Fees payable to the Company’s auditor for the audit of the Group’s financial statements	49	42
Fees payable to the Company’s auditor for other services:		
- Taxation related compliance services	14	14
- Other non-audit services	-	5
	<u>63</u>	<u>61</u>

## 8. Income tax

<b>Current tax credit</b>	<b>2017</b>	<b>2016</b>
	<b>£'000</b>	<b>£'000</b>
Total income tax credits:		
- for the financial year	280	318
- under provision in the previous financial year	33	68
<b>Total Current Tax</b>	<u>313</u>	<u>386</u>
<b>Deferred tax credit</b>		
Original and reversal of temporary differences	204	-
Recognition of previously unrecognised deferred tax assets	366	-
	<u>570</u>	<u>-</u>
	<u>883</u>	<u>386</u>

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:

	<b>2017</b>	<b>2016</b>
	<b>£'000</b>	<b>£'000</b>
Loss for the year	(4,752)	(3,637)
Income tax credit	(883)	(386)
Loss before income taxes	<u>(5,635)</u>	<u>(4,023)</u>
Tax using the Group's domestic tax rates of 19.75% (2016 – 20%)	1,113	805
Expenses not deductible for tax purposes	(251)	(158)
Different tax rates applied in overseas jurisdictions	53	-
R&D enhancement	285	331
Surrender for R&D tax credit	(94)	(201)
Unrecognised deferred tax assets	(622)	(459)
Adjustment for under/(over) provision in previous periods	33	68
Recognition of previously unrecognised deferred tax assets	336	-
Total tax credit	<u>883</u>	<u>386</u>

### *Changes in tax rates and factors affecting the future tax charge*

The main rate of corporation tax for UK companies reduced from 20% to 19% from 1 April 2017. The Finance Bill 2016, which was substantively enacted in September 2016, announced a further reduction to the main rate of corporation tax. The rate will reduce to 17% from 1 April 2020

The Group has tax losses that are available indefinitely for offset against future taxable profits of the companies approximately amounting to £12,629,000 (2016: £8,228,000) and £4,946,000 (2016: £1,030,000) 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 accordingly.

The main tax rate of corporation tax for UK companies reduced from 20% to 19% from 1 April 2017. The Finance Bill 2016, which was substantially enacted on 6 September 2016, announced a further reduction to the main rate of corporation tax. The rate will reduce to 17% from 1 April 2020. Deferred tax will therefore be calculated at a rate of 17%.

## 9. Loss per share

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

	<b>2017</b> <b>£'000</b>	<b>2016</b> <b>£'000</b>
Loss after tax attributable to owners of Haydale Graphene Industries Plc	(4,862)	(3,598)
Weighted average number of shares:		
- Basic and Diluted	17,232,137	13,713,757
Loss per share:		
Basic (£) and Diluted (£)	(0.28)	(0.26)

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 2017, there were 1,634,856 (2016: 1,458,775) options and warrants outstanding.

## 10. Intangible assets

	Customer Relationships £'000	Development expenditure £'000	Goodwill £'000	Total £'000
<b>Cost</b>				
At 1 July 2015	285	700	685	1,670
Additions	-	429	-	429
At 1 July 2016	285	1,129	685	2,099
Additions	-	244	-	244
Additions from acquisitions	869	55	1,429	2,353
At 30 June 2017	1,154	1,428	2,114	4,696
<b>Accumulated amortisation</b>				
At 1 July 2015	29	181	-	210
Charge for the period	29	34	-	63
At 1 July 2016	58	215	-	273
Charge for the year	115	42	-	157
At 30 June 2017	173	257	-	430
<b>Net book value</b>				
At 30 June 2017	981	1,171	2,114	4,266
At 30 June 2016	227	914	685	1,826
At 30 June 2015	256	519	685	1,460

## 11. Property, plant and equipment

	Leasehold improvements £'000	Plant and machinery £'000	Fixtures and fittings £'000	Motor vehicles £'000	Total £'000
<b>Cost</b>					
At 1 July 2015	259	1,830	91	2	2,182
Additions	188	273	8	-	469
Disposals	-	(99)	-	-	(99)
At 1 July 2016	447	2,004	99	2	2,552
Additions	17	364	34	-	415
Additions from acquisitions	11	3,544	283	32	3,870
FX on additions from acq'ns	(1)	(210)	(16)	-	(227)
Disposals	-	-	-	-	-
At 30 June 2017	474	5,702	400	34	6,610
<b>Accumulated depreciation</b>					

At 1 July 2015	63	486	55	2	606
Charge for the year	28	323	19	-	370
At 1 July 2015	91	809	74	2	976
Charge for the year	47	467	41	5	560
Disposals	-	-	-	-	-
At 30 June 2017	138	1,276	115	7	1,536
<b>Net book value</b>					
At 30 June 2017	336	4,426	285	27	5,074
At 30 June 2016	356	1,195	25	-	1,576
At 30 June 2015	196	1,344	36	-	1,576

Included within plant and machinery are assets under construction totalling £50,609 (2016: £15,000).  
Included within fixtures and fittings are assets under construction totalling £22,615 (2016: £0).

## 12. Inventories

	2017 £'000	2016 £'000
Raw materials	274	72
Work in progress	296	300
Finished goods	642	26
	1,212	398

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

## 13. Share capital and share premium

	Number of shares No.	Share capital £'000	Share premium £'000	Total £'000
At 1 July 2015	11,446,446	229	6,254	6,483
Issue of £0.02 ordinary shares	3,790,500	76	5,586	5,662
At 30 June 2016	15,236,946	305	11,840	12,145
Issue of £0.02 ordinary shares	4,360,767	87	7,096	7,183
At 30 June 2017	19,597,713	392	18,936	19,328

During the year, the Company issued 4,360,767 new ordinary shares of 2p each as follows:

- In September 2016, 176,952 £0.02 ordinary shares were issued following the acquisition of Innophene Co Ltd;
- In October 2016, 1,619,687 shares were issued in connection with the Company's £2.59 million placing and open offer;

- In December 2016, 415,618 shares were issued following the acquisition of ACMC Holding;
- In April 2017 the Company received a strategic investment of £3.6 million (£3.3 million of which was from a subsidiary of Everpower Holdings) resulting in the issue of 2,109,010 shares; and
- 39,500 ordinary shares were issued were in respect of the exercise of options.

Issue costs amounting to £157,360 (2016: £376,372) have been charged to the share premium account in the year.

#### 14. Trade and other payables

	<b>2017</b>	<b>2016</b>
	<b>£'000</b>	<b>£'000</b>
Trade payables	380	260
Tax and social security	80	67
Accruals and other creditors	1,845	329
	<u>2,305</u>	<u>656</u>

#### 15. Bank loans

	<b>2017</b>	<b>2016</b>
	<b>£'000</b>	<b>£'000</b>
Bank loans	1,270	270
The borrowings are repayable as follows:-		
- within one year	359	166
- in the second year	261	104
- in the third to fifth years inclusive	650	-
	<u>1,270</u>	<u>270</u>

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

	<b>2017</b>	<b>2016</b>
	<b>%</b>	<b>%</b>
Average interest rates paid	<u>4</u>	<u>2</u>

In December 2014 a three year bank loan of £500,000 was drawn by the Company and securitised by cash deposits. The loan accrues interest at 1.5% above the Bank of England base rate and is repayable in equal monthly instalments until February 2018.

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.

## 16. Operating lease arrangements

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

	2017 Land and buildings £'000	2017 Plant and machinery £'000	2016 Land and buildings £'000	2016 Plant and machinery £'000
Operating leases which expire:				
- within one year	547	7	40	1
- within two to five years	1,423	3	-	-
	<u>1,970</u>	<u>10</u>	<u>40</u>	<u>1</u>
Aggregate amounts payable	<u>1,970</u>	<u>10</u>	<u>40</u>	<u>1</u>

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

	2017 Land and buildings £'000	2017 Plant and machinery £'000	2016 Land and buildings £'000	2016 Plant and machinery £'000
Operating lease expense	<u>447</u>	<u>7</u>	<u>98</u>	<u>23</u>

Significant lease arrangements have been established during the year for the lease of the premises from which ACM and HIT operate in South Carolina, USA totalling £1.56 million (2016: nil). The lease expires on 31 December 2020. Other leases pertain to the office and unit contracts for the two UK facilities of in aggregate £0.3 million (2016: £0.04 million). Of the £0.3 million, certain leases are cancellable with three months' notice and others have break clauses 18 months after the date of these accounts.

The facility Thailand is leased and, at the date of these results, will expire in 12 months. The cost is £0.09 million (2016: nil), within the minimum lease payments for plant and machinery is the cost relating to the general office equipment.

## 17. Acquisitions

In September 2016, the Company agreed to acquire the entire issued voting share capital of Innophene Co Ltd (renamed Haydale Technologies (Thailand) Co Ltd ("HTT")) for a maximum consideration of £311,665, settled through the issue of 176,972 new ordinary shares in Haydale to the vendors. It was acquired as an R&D and production facility for the Group's Far East operations.

The fair values of Innophene Co Ltd as at 9 September 2016 were as follows:-

	£'000
<b>ASSETS</b>	
Intangible assets	55
Property, plant and equipment	4
Other receivables	63
Trade receivables	9
Cash and bank balances	1
	<u>132</u>
<b>TOTAL ASSETS</b>	<u>132</u>
<b>LIABILITIES</b>	



Trade and other payables	147
<b>TOTAL LIABILITIES</b>	<u>147</u>
<b>NET LIABILITIES ACQUIRED</b>	<u>(15)</u>
<b>Consideration</b>	
Consideration (176,792 new ordinary shares in the Company)	312
	<u>312</u>
<b>Goodwill on acquisition</b>	327
Effects within consolidated statement of cashflows	1

Since the acquisition date to 30 June 2017, HTT contributed £0.07 million to the Group's total income and generated a loss of £0.28 million.

In October 2016, the Company acquired the entire issued voting share capital of ACMC Holding, Inc ("ACM") for £1.31 million together with the repayment of borrowings of ACM of approximately £2.86 million. It was acquired to become the Group's US base from which it could expand its operations into the US market.

The fair values of ACMC Holdings as at 13 October 2016 were as follows:-

	<b>£'000</b>
<b>ASSETS</b>	
Intangible assets	869
Property, plant and equipment	3,867
Inventories	802
Other receivables	67
Trade receivables	1
Cash and bank balances	3
<b>TOTAL ASSETS</b>	<u>5,609</u>
<b>LIABILITIES</b>	
Trade and other payables	3,068
Pension Obligation	1,117
Deferred tax	1,217
<b>TOTAL LIABILITIES</b>	<u>5,402</u>
<b>NET ASSETS ACQUIRED</b>	<u>207</u>
<b>Consideration</b>	
Consideration – 415,618 ordinary shares in Haydale (\$1.0 million)	819
Deferred cash of \$600,000	491
	<u>1,310</u>
<b>Goodwill on acquisition</b>	1,103

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**Effect within consolidated statement of cashflows:-**

Less: cash and bank balances acquired	(3)
	<hr/>
	(3)
	<hr/> <hr/>

Since the acquisition date to 30 June 2017, ACM contributed £2.05 million to the Group's total income and generated a profit of £0.27 million. The terms of the acquisition include an agreed earn out formula that runs to mid-2020 that provides for payments of conditional consideration of up to \$1.8 million to the vendors of ACM, based upon ACM achieving certain sales targets that are expected to be self-funded ("Earn Out"). The Earn Out amount does not form part of the consideration for the acquisition of ACM as the Earn Out is conditional upon the former owners remaining within the employment of ACM up to the point that any Earn Out is due. No amounts of contingent consideration have been recognised in the accounts during the year under review.

**18. Defined Benefit Pension Scheme**

ACM operated a defined benefit pension scheme, which is now closed for any new participants. The net periodic benefit cost is determined at the beginning of the year based on applicable assumptions at that time.

No contributions are expected to be made to the year ended 30 June 2018, the next payment of approximately £41,000 is expected to be paid in December 2018.

Included in the loss before tax since acquisition to the year ended 30 June 2017:

	(£'000)
Interest payable	<hr/> 156

Included in other comprehensive income since acquisition to the year ended 30 June 2017:

	(£'000)
Actuarial Movement	57
Deferred Tax	(21)
	<hr/> 36

The following table sets forth the pension plan's funded status as of 30 June 2017:

	(£'000)
Accumulated benefit obligation	<hr/> (3,939)
Projected Benefit obligation	(3,939)
Plan assets at fair value	2,970
Funded Status	<hr/> (969)
Accrued Pension Cost	<b>(969)</b>

Net amount recognised in the consolidated balance sheet as of 30 June 2017, consisted of the following:

	(£'000)
Non-current Assets	<u>2,970</u>
Current Liabilities	(351)
Non-current liabilities	(3,558)
	<u>(969)</u>

The discount rate is based on the yield curve of government bonds in the applicable region adjusted with a credit spread of one of the two highest ratings given by a recognized ratings agency. Future cash outflows of the plans are then related with the yield curve. The average is the discount rate. The weighted average assumptions used to develop the actuarial present value of benefit obligations and net periodic benefit costs for the pension plan are as follows for the year ended 30 June 2017:

Discount rate for periodic benefit costs	4.00%
Discount rate for benefit obligations	4.00%
Rate of increase in compensation levels	0.00%
Investment return rate	8.00%

Mortality Assumptions are as follows:

Pre-Retirement valuation assumptions - Investment Earnings	2015 430(h)(3)(A)-Optional Combined
Retirement valuation assumptions- Investment Earnings	2015 430(h)(3)(A)-Optional Combined
IRC417 (e) (3) Interest Assumption	Funding yield curve segmented rates
IRC417 (e) (3) Pre-retirement mortality	2015 417(e)(3) – Applicable Mortality Table
IRC417 (e) (3) Retirement mortality	2015 417(e)(3) – Applicable Mortality Table

#### Plan Assets

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

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

The fair value of the Company's pension plan assets which were acquired on 13<sup>th</sup> October through acquisition, valued at 30 June 2017, by asset category were as follows:

<b>Fair Value Measurements at 30 June 2017 using</b>					
<b>Description</b>	<b>Total Carrying Amount (£)</b>	<b>Assets/Liabilities Measured at Fair Value (£)</b>	<b>Level 1 Inputs (£)</b>	<b>Level 2 Inputs (£)</b>	<b>Level 3 Inputs (£)</b>
Cash	246,884	246,884	246,884		
Corporate Equities	1,565,441	1,565,441	1,565,441		
<i>Fixed Income:</i>					
US Government	270,629	270,629		270,629	
Municipal	12,334	12,334		12,334	
Corporate debt	393,965	393,965		393,965	
Mutual Funds	423,256	423,256	423,256		
Negotiable CD	57,636	57,636	57,636		
	<b>2,970,145</b>	<b>2,970,145</b>	<b>2,293,217</b>	<b>676,928</b>	

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 2017, were as follows:

	£
Beginning balance	2,913,631
Contributions	124,412
Distributions	(167,991)
Earnings	49,625
Net realised gain	11,424
Other income	103,912
Administrative expenses	(64,867)
Ending balance	<b>2,970,146</b>

#### **Cash Flows**

For current financial year, the Company expects contributions to be approximately £40,784. The Company expects benefits paid for the next five fiscal years and the five years thereafter as follows:

	£
2018	259,404
2019	261,961
2020	254,728
2021	251,831
2022	247,459
Thereafter	1,169,304
	<b>2,444,687</b>

The company's pension plan asset allocations by asset category were as follows as of 30 June 2017:

<u>Asset Category</u>	
Cash	8%
Equities	53%
Fixed Income	39%

#### Plan Obligations

	(£'000)
<b>Benefit Obligation at acquisition</b>	4,217
Foreign Exchange on translation	(254)
Interest Cost	156
Actuarial loss	(12)
Benefits paid	(168)
	<hr/>
<b>Benefit Obligation at acquisition</b>	<b>3,939</b>
<b>Fair Value of Plan Assets at acquisition</b>	3,100
Foreign Exchange on translation	(186)
Actual Return on plan assets	100
Employer Contributions	124
Benefits paid	(168)
	<hr/>
<b>Fair Value of Plan Assets at the end of the year</b>	<b>2,970</b>
<b>Funded Status at the end of the year</b>	<hr/> <b>969</b>

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:

<u>Actuarial Assumption</u>	<u>Reasonably Possible Change</u>	<u>Defined Benefit Obligation (£'000)</u>	
		<u>Increase</u>	<u>Decrease</u>
Discount Rate	(+/- 0.25%)	(94)	97

The Company also has a retirement savings 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 2017, were £29,245.

## **19. Post Balance Sheet Events**

From 1 July 2017, the Group changed its internal reporting system to set up two profit-centric strategic business units (“SBUs”) known as “RPC” and “AMAT”. For the current financial year and beyond, the Group intends to report sales and profits under these two SBUs.

On 9 August 2017, the Group announced the launch of its Taiwan operations, Haydale Technologies (Taiwan) Co Ltd (“HTW”). HTW is located in Kaoshing, South Taiwan. HTW will operate as a producer and sales outlet of graphene-based and other conductive inks and pastes.

The Group today intends to raise at least £6.0 million of new funds before costs via a placing of new ordinary shares in the Company with existing and new investors.

**- ENDS -**