

**Haydale Graphene Industries plc**  
**(“Haydale”, the “Group” or the “Company”)**

**Preliminary Results for the Year Ended 30 June 2015**

Haydale Graphene Industries plc (AIM: HAYD), the Company focused on enabling technology for the commercialisation of graphene and other nano materials, is pleased to announce its preliminary results for the year ended 30 June 2015.

Operational Highlights (pre and post year-end):

- Acquisition of EPL Composite Solutions Ltd (renamed Haydale Composite Solutions Ltd) to provide the Group with an immediate route to market in the key composite markets;
- Scale up of functionalisation process confirmed with design, manufacture and commissioning of our HT200 which, at 8 times the capacity of our HT60 R&D reactor, can deliver commercial volumes;
- Agreements signed with world leading resin companies, Huntsman Advanced Materials and Scott Bader, to jointly develop graphene enhanced resins in their respective markets;
- Sale of HT60 R&D reactor to UK based, Centre of Process and Innovation (“CPI”), following lengthy public tender process;
- Key processing patent granted in China and agreed to be granted in Europe on 4 November 2015;
- Roll out of Haydale Centres of Excellence commenced with set up of Haydale Technologies Inc. in Buffalo, USA and Haydale Technologies (Korea) Ltd in Seoul, South Korea; and
- Regular repeat sales of conductive ink to key Korean and Taiwanese customers.

Financial Highlights:

- Group income up more than 10 fold to £1.48 million (2014: £0.13 million);
- Doubling of like-for-like income (Group income excluding HCS) of £0.30 million (2014: £0.13 million);
- Haydale Composite Solutions traded ahead of expectations at income and profit levels;
- Group adjusted\* EBITDA loss of £2.38 million (2014: £1.96 million loss);
- Significant capital expenditure of £1.18 million (2014: £0.15 million);
- Cash at period end of £2.05 million (2014: £5.68 million);

\* adjusted for share based payment charges and loss on disposal of property, plant and equipment

Ray Gibbs, CEO at Haydale, commented:

“I am extremely pleased with these results that demonstrate positive movement in income and setting up the building blocks for continued commercialisation of graphene and other nano materials into our core markets of composites and conductive inks. Crucially we have delivered on a number of the strategic aims we set ourselves last year when we listed on AIM. The completed tasks are fundamental to our future growth such as securing a first class supply chain, establishing representation in the 3 key markets of Europe, USA and the Far East, conditioning the market and positioning ourselves strategically as using the enabling technology to provide industrial solutions. Pleasingly a number of key strategic collaboration agreements and customer engagement are already generating sales in our target markets.

By far the most significant event in the year was the acquisition of EPL Composite Solutions as it was fundamental in opening the composites market where the specialist expertise of Gerry Boyce and his team could be brought to bear. The composites business is fully integrated into the Group, performing ahead of our expectations and has a number of exciting opportunities in the pipeline.

The fundraising announced today gives us the financial backing to invest in staff and infrastructure to exploit the tremendous opportunity that firstly graphene and then other nano materials presents. We can now rapidly develop Haydale into a global business. That we have achieved so much in a relatively short period of time is down to the

dedication and hard work of all our staff across the group and I would like to take this opportunity to thank everyone of them.

My aim is to be the leader in functionalised graphenes and other nano particles, leveraged through IP and best in class commercial relationships in our defined markets of composites and inks. We have independent verification that our patented technology works; we have sales channels and satisfied customers placing repeat orders and now we have the funds to accelerate our commercialisation strategy. Haydale is in a very fortunate position and I am excited with the opportunities we have to deliver value for our shareholders.”

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### **About Haydale**

Haydale has developed a patented scalable plasma process to functionalise graphene and other nanomaterials. This enabling technology can provide Haydale with a rapid and highly cost-efficient method of supplying tailored solutions to enhance applications for both raw material suppliers and product manufacturers.

Functionalisation is carried out through a low-pressure plasma process that treats both mined, organic fine powder and other synthetically produced nanomaterial powders, producing high-quality few layered graphenes and graphene nanoplatelets. The process can functionalise with a range of chemical groups, with the level of functionalisation tailored to the customer’s needs. Good dispersion improves the properties and performance of the host material and ensures the final product performs as specified.

The Haydale plasma process does not use wet chemistry, nor does it damage the material being processed; rather, it can clean up any impurities inherent in the raw material. The technology is a low energy user and most importantly environmentally friendly. The Haydale process is an enabling technology, allowing the Company to work with a raw material producer who seeks to add value to the base product and tailor the outputs to meet the target applications of the end user.

Haydale, based in South Wales and housed in a purpose-built facility for processing and handling nanomaterials, is facilitating the application of graphenes and other nanomaterials in fields such as inks, sensors, energy storage, photovoltaics, composites, paints and coatings.

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

### **CHAIRMAN’S STATEMENT**

I am very pleased to present the Company’s first full year results to 30 June 2015 as a public company. I am also pleased to report that we have had a very successful year in implementing the strategy outlined in the 2014 Annual Report and Accounts. The Haydale team continues to work tirelessly towards making the Group an acknowledged leader with both producers and end users who require product enhancements through using graphene and other advanced nanomaterials. Our commercialisation strategy of engaging in partnerships and collaborations with world renowned and strategically important companies is starting to pay off in gaining early sales particularly of our

graphene inks in the Far East and resin and composite products in Europe. The focus will be to establish Haydale as a leader in the emerging graphene market and is already creating opportunities to both license or sell our plasma technology to functionalise graphene and other nanomaterials for producers. Added to this we have also made our first successful acquisition which has given us early access to more customers in our target resin and composite markets.

### **Fundraising**

The financial year ended 30 June 2015 was an exciting development phase that has set us on course for significant growth. We have started generating sales and by investing in dedicated centres of excellence we are opening export growth potential. Your Board therefore is mindful of the need for continued discrete and focussed investment to accelerate our progress. This is why we have announced today a conditional placing for £5.6 million, £1.0 million of which has been conditionally placed subject to clawback to satisfy subscriptions under an open offer for £1.0 million (“fundraising”). The open offer will allow all existing shareholders to participate. These funds will be used to continue to grow the composites and ink operations and increase our plasma reactor numbers to allow us to swiftly move into overseas locations and serve our international customers.

I reported last year that a key part of our strategy was to consider suitable acquisitions where these provide access to sales, with complementary products in our target markets of inks/coatings, composites and energy harvesting. This year saw the first acquisition when on 1 November 2014 we acquired EPL Composite Solutions Limited, a specialist design, development and commercialisation house in advanced composite polymer materials. The consideration comprised a mixture of cash and shares and has been a great success, with full integration into the Group. Two business managers have been elevated to directors of the newly named Haydale Composite Solutions Limited (“HCS”), while the Managing Director, Gerry Boyce has joined the senior Haydale team as part of the operating board of Haydale Limited. All of the post-acquisition income reported in this fiscal year is from traditional composite work and in this current year we expect to see sales inroads into graphene and other nanomaterial filled resins and composites. As the business has performed above the level set under the earn-out we have agreed a discounted early full and final settlement with the former shareholders. I’m delighted to report that Mr Boyce intends to reinvest £300,000 of his sale proceeds into new shares in Haydale in addition and separate to the fundraising announced today.

There still remains today a lack of market understanding over the performance of and use of graphene and other new developing 2D nanomaterials, such as Boron Nitride. Having received positive verification of the functionalisation process in February 2014 from the National Physical Laboratory we have particularly sought third party verification of our claims in the performance improvements we can make to, for example, epoxy and polyester resins and carbon fibre structures. Our aim is to use our unique and patented technology to create understanding and acceptance of graphene and other nanomaterials by commercialising them as quickly and effectively as possible.

Our assessment is that the market is eagerly awaiting for the first substantive application that capitalises on the outstanding properties of graphene. Our patent has now been approved for grant which is set for 4 November 2015 at the European Patent Office. Other territories are expected to follow. Crucially the patent is for the plasma functionalisation treatment of carbon and other nanomaterials using our specially fitted plasma reactors. They provide the enabling technology which delivers those improvements required for commercialisation. We are well placed in the market where we have access to a multitude of materials, coupled with a large variety of chemical functionalisations. This enables us to deliver the required solution to the end users, and is the Haydale speciality.

As is normal with a new technology, gaining market acceptance is often a long and difficult task and there are many challenges to overcome. We have now set ourselves to meet these barriers to entry that every new materials replacement offering has. We have increased our technical team, brought on scaled production capability, obtained a quality, consistent supply chain and invested in overseas sales representation to open markets in the Far East and North America. This progress is further outlined in the Strategic Report.

### **Financial results**

Income for the year ended 30 June 2015 amounted to £1.48 million (2014: £0.13 million) of which £1.18 million was from HCS. Adjusted EBITDA (EBITDA adjusted for share-based payment charges of £0.26 million (2014: £0.07 million) and loss on disposal of property, plant and equipment £0.02 million (2014: Nil)) was a loss of £2.38

million (2014: £1.97 million). Our cash outflow from operating activities was £2.73 million (2014: £2.11 million) and we invested heavily in our reactor capacity and ink manufacturing capabilities during the year, which totalled £1.18 million (2014: £0.15 million). We ended the year with cash of £2.05 million (2014: £5.68 million).

### **Operational highlights**

During the year under review, the operational highlights for the Group can be summarised as follows:

- A collaboration agreement with Swansea University and its centre for printing and coating was announced in July 2014, capitalising on the growing technical and commercial ties of the parties. This was further strengthened in February 2015 with an announcement of a 5 year exclusive pipeline agreement for the commercialisation of research projects. The first being a diagnostic pressure sensor;
- In July 2014 we announced two overseas marketing agreements with focussed agents in the USA with InVentures and the Far East with planarTECH. Since then we have announced the opening of a USA operation in New York State and a sales office in Seoul, South Korea;
- A long term supply agreement was signed with Danish based plasma specialists, Tantec A/S. To date they have supplied six HT60 reactors (for supply of R&D quantities) and in March 2015 an HT200 which, at 8 times the capacity of the HT60, can now deliver commercial quantities. Accordingly, we have delivered on our target of scaling up our process;
- Our ink manufacturing capability was established at the end of December 2014 and with a capability to make over 75kgs per week we are starting to seed the market and receive repeat orders;
- The collaboration with extreme sailing team, Alex Thomson Racing, in February 2015, brings together our composite, energy and ink/coatings capabilities in one project to use the “graphenes” in reducing weight, increasing boat strength, creating barrier films and managing thermal heat issues;
- On marketing and promotion we now have a dedicated and focussed aerospace unit to generate sales and funded research, with immediate success in the recently announced National Aerospace Technology Exploitation Programme “lightning strike” grant award;
- Being selected in February as a FIREstarter 2015 company was proof that globally we are being recognised as a future technology with potential. The 13<sup>th</sup> Annual event took place between 6-9 October in Park City, Utah, USA where we showcased and presented to a very influential global audience;
- Significantly we won the extensive tender process to supply an HT60 reactor to UK based, Centre of Process and Innovation (“CPI”), in June 2015. Delivery is expected in November 2015. The reactor will be a key enabler for CPI customers in the electronics and engineering industries and is expected to complement their state of the art capability for characterisation and formulation of graphene products;
- We have made significant progress with our intellectual property portfolio, announcing in June 2015 the successful application for grant of a patent in China. Crucially we have now received the irreversible decision to grant one of our key process patents through the European Patent Office. This patent is not only for carbon but critically other nanomaterials. Other countries are processing the grant applications; and
- Aside from our collaboration with AMG Mining we have added to the supply chain capability by announcing collaborations with Talga Resources (who have a graphite mine in Sweden) and UK based Versarien plc who, through their subsidiary 2D-Tech, are a producer of graphene nanoplatelets.

### **Outlook**

The year’s results are consistent with our projections and with market expectations where a significant portion of income has been derived from the HCS acquisition. We expect revenues to grow significantly in the current financial year in our global markets. We have good visibility on HCS orders and the current order book underpins

HCS's projections for the year to 30 June 2016 and is in excess of the income declared for the 2015 financial year. Additionally, after over a year of sales and marketing effort we now have 10 key accounts in South Korea many of which are significant corporations with, individually, annual sales of many hundreds of millions of US\$. Most are now paying for repeat samples in assessing product substitution and, with positive initial results on known programmes, we anticipate the commencement of strong sales growth from this region.

The Far East is also producing additional strong leads in other countries, notably Taiwan, where one specific ink manufacturer is keen to use our product in key applications such as screen printing our ink in producing a series of bio-medical sensors for customers with known demand.

We have also now established ourselves in North America. The aim is to create at least one centre of excellence on the East Coast and take advantage of a fragmented and largely untapped market. At least two of our plasma reactors are under consideration in strategic US locations. Having an R&D reactor will allow us to promote our technological solution to a significant and expectant market as a cost effective way to functionalise graphene and other 2D materials in a controlled and reproducible way. We now have a supply chain and a scalable process to cope with initial demand. These initiatives, together with other development opportunities under consideration, lead the Board to believe that the Group is in a strong position to grow its operations, both at home and overseas, and to deliver its business plan for the benefit of all shareholders. In support of these strategic aims we have, since the year end:

- Announced the opening of a USA presence, with a subsidiary company, Haydale Technologies, Inc. and the intention to introduce initially an R&D reactor into the North American market, based in New York State;
- Agreed strategic collaborations with raw material producers Talga Resources and Versarien plc;
- Agreed to collaborate with two major resins companies, Scott Bader and Huntsman, who will supply respectively dedicated polyester and epoxy resins for HCS to run a series of programs for enhancement of their thermoset products;
- Received the first grant award from NATEP in the aerospace unit, to produce a graphene coating for lightning strike protection. Key consortium members are Airbus, BAE, GKN and Cobham; and
- Received confirmation from the EPO of their decision to grant key functionalisation process patent number EP2649136B relating to carbon and other nanomaterials, which will be formally granted on 4 November 2015.

I would like to thank the staff, the Board, and the Group's external advisers for their hard work over the last year in positioning the Group for significant growth over the coming years.

This will be a very important year for Haydale in our drive for significant sales following the investments made last year in overseas markets, equipment, and personnel. With the financial strength provided by our public listing, coupled with support of a strong Board providing a wealth of experience across a wide skill spectrum, the Group is confident of having a successful year. I look forward to positively reporting on the outcomes of our focus.

John Knowles  
Chairman  
30 October 2015

## **STRATEGIC REPORT**

The directors present their Strategic Report for the year ended 30 June 2015.

## ***PRINCIPAL ACTIVITIES***

Haydale Graphene Industries Plc is the AIM listed company with a number of subsidiaries, the principal ones being Haydale Limited (“Haydale”) and Haydale Composite Solutions Limited (“HCS”) formerly EPL Composite Solutions Limited). Haydale is the main R&D operation which also sources, handles and processes nanomaterials with a suite of prototyping and analytical equipment, to facilitate the commercial application of, initially, graphene and other carbon materials for customers worldwide.

HCS is a recognised composite R&D and testing house, that spans the whole development cycle. Based in Loughborough, customers include significant corporations such as National Grid, SSE, Eirgrid, Chevron, Anglian Water, Severn Trent Water, Yorkshire Water and 3M.

HCS has developed a reputation for delivering innovative solutions in the commercial applications of advanced polymer composite materials working with global companies over more than 20 years. Its business is focused on a range of market sectors including pipe lining for the oil, gas and water industries, infrastructure for electricity and energy sectors plus the marine and transportation markets. HCS also works with OEMs and end-users to develop and provide composite solutions with demonstrable clear technical, economic and environmental benefits over existing structures currently manufactured in traditional materials such as steel, aluminium, wood or concrete.

### **Commercialising Graphene**

Since 2013, the Group’s management has been working hard on positioning Haydale as a provider of solution based enabling technology to commercialise graphene and other nanomaterials. Now strategically well positioned, Haydale can source the most appropriate graphene and other nanomaterials feedstock from suppliers that, in conjunction with its unique proprietary plasma treatment (known as functionalisation), produces a tailored customer focussed solution. This enables the nanoparticles (e.g. graphene) to disperse uniformly in the target material and, most importantly, uniform dispersion is essential in enabling the significant properties of graphene and other nanomaterials to be realised.

Followers of the graphene story will know that it has many vaunted properties (e.g. increasing strength and stiffness, highly conductive, impermeable to gases, to name but a few) but as an inert substance it does not mix readily with other materials. Furthermore, producing a consistent, commercially available single layer of graphene (where 3 million sheets stacked together are only 1 millimetre thick) is proving a significant technical challenge and general observers perceive as not commercially viable currently. Yet almost every day, new possible applications are announced as potential new uses. There has been an amazing amount of hype generated by this material, often arising from passionate researchers excited by its properties. The challenge is how to translate these properties measured in the laboratory into commercial applications, especially as graphene is almost inert. This is where Haydale comes in with its unique plasma functionalisation technology.

Haydale is focussed not on the technically challenging single sheet graphene but stacks of graphene sheets in the range of 5 to 100, generally acknowledged, depending on the stacks of sheets, as few layered graphene (“FLGs”) or graphene nanoplatelets (“GNPs”). Both FLGs and GNPs are generally produced by a number of manufacturers from organic mined graphite. These materials can be produced by a ‘top down’ production method, involving the exfoliation of mined graphite to produce flakes. Alternatively, they can be produced by a ‘bottom up’ method, such as chemical vapour deposition from a carbon source such as methane. The bottom up (synthetic) process generally uses an energy consumptive hot reactor (900 degrees Celsius or more) and with a cost structure that means the material cannot compete on price with the GNPs from mined graphite. Hence the need for the synthetically produced material to find applications that are not competing with the mined organic GNPs.

### **Price Performance Conundrum**

With many different “graphenes” available in the market place today, we believe the buyer can easily get confused where prices can range from \$50 to over \$2,000 per kg. The temptation is to plump for the cheapest available, but more often than not, this is not the best option. Haydale has built up years of experience in evaluating the market place and we know that all materials are different and will vary in performance as well as price. Understanding the price/performance matrix is critical in evaluating the material that suits the application and is economically viable. Moreover we know which supplier can produce scalable, consistent quality product; the key to commercialising this material.

Consequently, realising the full benefits of nanomaterials and especially graphene is rarely easy. They need to be optimised for incorporation into the intermediate material or end use application. When you get it right, the results can be spectacular. Our strategy is to get third party verification of the positive effects on existing materials arising from adding our treated graphene and other nanomaterials. We have also started to present these findings at a series of graphene conferences on a world-wide basis as part of the Haydale marketing strategy and now have a regular series of speaking engagements arising from invitations to present.

### **Grant and Project Funding**

With the advent of the Graphene Flagship in Europe making available €100 million a year for 10 years into graphene research, the level of R&D projects has escalated in Europe and now the Far East has reacted with significant research monies being invested in this area. Haydale is not a manufacturer of raw graphene, rather we are a solutions provider focussed on the early adoption and commercialisation of graphene. We have an enabling technology utilising a unique functionalisation process on nanomaterials, specifically graphene, as a means of delivering improved product performance. We have the capability now to source and use, both organic and synthetically produced flake graphene, and to modify the surface of the graphene with specific chemical functional groups tailored to the requirements of the end user's application. This process is known as functionalisation. Applying the correct functionalisation has two immediate benefits, namely, the promotion of:

- homogeneous dispersion in a solution (i.e. avoiding agglomeration); and
- chemical interaction or bonding with a substrate or matrix.

Functionalisation is carried out through a low temperature plasma process of under 100 degrees Celsius that treats both organic mined fine powder and other synthetically produced nanomaterial powders producing high quality FLGs and GNPs. The process can functionalise with a wide range of chemical groups, where the concentration of chemicals can be tailored to the customer needs. Good dispersion improves the properties and performance of the host material and ensures it delivers to the desired specification.

There continues to be significant government and institutional funding aimed at applications for graphene. We are working and are in discussions with several large multi-national corporations and universities to create "intermediate products" such as conductive inks, epoxy composites and coatings.

The general use of nanoparticles is well accepted in the pharmaceutical, cosmetic and chemical industries. Adopting a new material such as graphene however takes time, requiring sampling, testing and evaluation. Often this is done in conjunction with collaboration partners, primarily end users who are willing to consider new innovative materials in seeking a competitive advantage. Our approach has been to work with the material suppliers and/or the end user to develop intermediate products that the manufacturer can use to improve a product offering. Our market focus is targeted on sectors where we consider early adoption of new innovative materials is commonplace. Often, take up of a new material is hampered by conservatism coupled with the perceived need to invest significant sums in new plant and equipment and discard the existing machinery. We consider that the markets that we have focussed on, namely, composites, inks/coatings and speciality energy harvesting have less inbuilt inertia to change and are early adopters of such new materials. Their processing does not normally require capital equipment change.

Critically our focus is to develop every day applications in non-regulated markets as adoption generally does not need long term testing certification. This approach should enable HCS especially to quickly get GNP-loaded intermediate products into the market.

### **OPERATING REVIEW**

In the year under review, and in the four months post year-end, the Company has made significant progress in building its human resources, production and sales capability. The objective has been to underpin the strategic markets we are focussed on to deliver the growth required to move to an operating profit and, as highlighted in the Chairman's Statement, within the past year, Haydale has signed a series of distribution and partnership agreements to help achieve this goal.

### **R&D Materials and the Supply Chain**

Access to the right nanomaterials is crucial to being able to offer the ultimate customer focussed solution. We have an exclusive distribution arrangement and a supply contract with AMG Mining AG (“AMG”) for certain of their graphite materials and they have formed the base of our material offering. However we have evaluated and qualified many different suppliers to provide us with a broad range of materials to choose from which will best suit the end users’ application. These include Australian based Talga Resources and in the UK, 2D Tech - a subsidiary of UK based Versarien plc. Others are under evaluation to provide the broadest materials base to draw from. All have to be able to demonstrate continuity of supply and consistency of product which are critical components in the supply chain.

### **Inks and Coatings**

Having tested the market for some time with a conductive “graphene” based ink, the agreement with the Welsh Centre for Printing and Coating (WCPC), signed in July 2014, has enabled us to now market a commercially available conductive ink currently produced at our Ammanford facility. At our current single shift capacity and pricing we can generate income of over £10,000 per week. In particular the Far East market is receptive to our screen based printable ink. We have now repeat sampled a range of distributors and printers, where the application appears to be specifically suitable for the bio-medical sensor market. WCPC are investigating the exploitation of functionalised graphene, and other carbon nanomaterials developed by Haydale, in areas such as wearable technology, sports apparel, barrier coatings and 3D printing.

### **Composites**

The composite market, at over \$90bn p.a., is significant and represents one of our most immediate sales opportunities. Through our newly formed collaborations with Huntsman and Scott Bader, two of the world’s leading resin manufacturers, we anticipate that their ready formed distribution networks will be the sales channel for the expected resulting next generation of performance resins enhanced with our GNPs. An advanced composite typically consists of 50% long fibre reinforcement and 50% polymer resin. The role of the long fibres is to provide the strength, stiffness and impact resistance in the structure while the polymer resin is to provide environmental resistance and to transfer external loads into the fibres. Traditionally, the polymer resin is usually discounted when determining the strength and stiffness of a composite material, being largely seen as the glue that binds the fibres together and gives the material its shape.

We believe that, for the first time, with the advent of Haydale’s functionalised GNPs, HCS has the ability to radically change and influence the polymer resin properties by the addition of functionalised graphene. It has been demonstrated that by adding functionalised graphene and other nanofillers, HCS can dramatically improve the resin properties of mechanical, thermal conductivity, electrical conductivity and physical properties. This offers improved polymer resins and hence the composite.

Adding functionalised graphene will particularly enhance the mechanical properties of the resin including, strength, stiffness, fatigue and impact. This will enable designers to design lighter weight composite structures across a wide range of industries including marine, rail and wind energy. Lighter weight structures means removing some of the reinforcement layers which not only reduces the materials cost but significantly reduces the cost of production as composite production techniques are largely manual. Assuming that HCS can, for example, treble the stiffness of the resin from 3 GPa (gigapascals) to 10 GPa then we could potentially reduce the weight of a glass fibre reinforced resin structure by as much as 15% with a similar saving in cost. All through the addition of some functionalised nanomaterials at loadings of often 2% or lower. HCS is also involved in adding functionalised graphene into the epoxy adhesive. This will enable designers to design lighter weight structures requiring less adhesives and smaller bonding areas. If adhesives can be improved in one or more of these areas then joints can be designed with thinner adhesive glue lines or smaller bonded areas thereby reducing weight and cost.

We are focussed on further developing our composite offerings and seeking more industrial partners, who can design, develop and commercialise advanced polymer composite materials on a global basis. In a number of instances we have commenced confidential commercial discussions. With the right partners, we believe that the Haydale nanomaterials will show demonstrable clear technical, economic and environmental benefits over existing structures currently manufactured in traditional materials such as steel, aluminium, wood or concrete.

### **Energy Harvesting**



We are working on several potential strategic alliances in this complex market. Our team of energy experts have identified a number of specialist sectors for exploitation, where our novel materials and functionalisation can make a difference. One area showing promise is in the super capacitor sector, which requires a rapid delivery of concentrated energy. In the laboratory, we have demonstrated that by adding FLG loaded pastes, we have improved the performance of a super capacitor. We would expect to make significant progress in this sector over the coming year, which is likely to include the work done by target partners in the energy market, including key university knowledge and testing facilities.

### **Sales strategy**

Korea has become a key market for us as, over the last 18 months, we have developed at least 10 key customers who are supplying the two dominant electronics giants in South Korea. A number of sales opportunities are therefore being discussed in providing materials that improve thermal and electrical properties of thermoplastic and thermoset based composites. The recent opening of our dedicated sales and marketing office in Seoul is critical in demonstrating commitment to the market and in responding swiftly to customers' requests; for Korea generally moves quickly in bringing products to market.

The North American market is generally untapped and of equal importance to both Europe and the Far East. The imminent despatch of one of our HT60 R&D reactors to our subsidiary, Haydale Technologies Inc. in Buffalo will start to open sales and collaboration opportunities in what we perceive as a fragmented market offering significant sales opportunities. We intend to add reactors into other areas of strategic importance in the USA that opens up more collaboration possibilities.

Europe - The announcement of the European Patent Office's decision to grant us one of our key functionalisation process patents on 4 November 2015 in Europe strengthens our offering in a sizeable market. AMG, our GNP supply partner, is a key channel for European sales and processing of volume related sales from their site in Hauenberg, Bavaria. Our intention is to establish a Haydale centre of excellence in that region to service mainland Europe's demand for functionalised nano materials. We are looking for AMG to help establish key accounts across Europe especially as they have significant customer reach through sales of their existing graphitic materials.

The sale of one of our HT60 reactors, through a competitive tender process, to the CPI in Sedgefield was achieved before the grant of a patent and was an important step for us in establishing a second UK processing base. The CPI has acknowledged that our reactor has bridged a technology gap in their offering which we consider to be a significant endorsement of our process. The CPI is expected to be ready to receive the reactor in November and we will immediately commission it on site. The aim is to work closely with the CPI and, although they are not a commercial producer, they are targeting customers requiring specific speciality coatings. The expectation is to produce for customers a product ready for commercialisation, and one which will incorporate the use of our technology.

We continue to invest in personnel to capitalise on the increasing momentum achieved over the last year and to exploit our growing technical reputation. Aiming to vigorously pursue our commercialisation strategy, over the next few months we expect to recruit an experienced Commercial Director to drive forward the Group's sales efforts. This is now a real and urgent need for the Group and we have opened discussions with potential candidates.

Our ink expertise is increasing over time and has been enhanced by the grant funded work carried out on bio medical sensors with prestigious partners such as the Fraunhofer Group. We are making significant inroads into the market with an offering aimed at replacing carbon inks and (where possible) metal-based products. Sales traction, especially in the Far East, is looking very promising as our graphene ink is environmentally friendly, recyclable and proven to consistently print to a high standard. Nevertheless, we are mindful that our standard ink offering requires reformulation to meet specific customer needs and our in-house manufacturing capability, backed up by the formulation expertise of the WCPC, enables a rapid response to our customer needs.

### **Funded and Private Venture Projects**

Sampling of the functionalised materials continues as a means to engage with industrial corporations and manufacturers and to enter collaborations and consortia on dedicated projects. Some of these are grant funded projects while others are important in their own right and hence financed through our own resources. During the

year under review, we have secured focussed and important grant funded work from which our future income will be over £450,000. We will continue to seek this important source of funded work especially as the outcome is always to demonstrate a commercial product application.

In parallel with the above we are taking a collaborative research approach to developing added value applications in regulated markets such as aerospace and defence. This is because we are developing products that require a significant long term testing and approvals - typically 10 years for primary aircraft structures approval before they would be specified on an aircraft. Therefore, the proposal is to seek shared funding from the OEMs and grant funding where appropriate to help de-risk the project both technically and financially. An example of this approach has been the announcement by the UK government providing grant aided support to Haydale, Airbus, BAE systems, GKN aerospace, Cobham and SHD to develop graphene enhanced carbon fibre composite materials for lightning strike protection on aircraft. A second example is a discrete internally funded feasibility project on the improvements for lubrication systems in adding HDPlas® GNPs and other carbon particles.

In addition, although relatively small, we have been included in a UK defence contract feasibility study to develop a prototype coating for a novel hydrophone under water system. A positive outcome in this project, which is scheduled for completion in the current financial year, could lead to significant additional work. The defence sector is an area that we consider has important potential for the range of products we are starting to develop.

### **Operations and Technical**

We now have an established processing and treatment facility in Ammanford capable of processing tonnes of graphene per year exactly to the customers' specification. Haydale has developed a proprietary scalable plasma process on which the European Patent Office will be granting a patent on 4 November 2015. Importantly, this patent offers not only the opportunity to exploit the "graphene" market but other non-carbon based 2D materials. We see this as an area of equal importance to graphene for the future growth of Haydale.

In the year under review, headcount increased from 15 to 32 principally due to the acquisition of EPL. As at the end of October 2015, the staff numbers have increased further to 47 and we anticipate that this will increase to over 60 by the end of 2016. We still rely on consultants for discrete projects, utilising their specialist experience in specific areas and in some cases opening sales avenues.

Space to house the growth in personnel in Ammanford is now being actively considered as a priority. Local rented space is available and we anticipate refurbishing and updating it over the coming months in order to house the new recruits and new functionalisation equipment. In addition, last year, as part of our expansion plans, we rented new space on the same site as our main facility to house our ink manufacturing capabilities

We now require a property of the same size again to relocate staff and increase the production floor area. There will be cost implications for fit out and infrastructure costs which have been factored into the current year's budget.

One of our key operational challenges is being able to exploit the high numbers of enquiries we receive and focusing our resources on our key target markets of composites, inks and coatings. We are actively looking at adding to our technical, research and development personnel to ensure we convert the high levels of interest into sales potential. Our efforts in this regard are not constrained to only the UK and include lower cost, but highly technical regions such as the Far East.

### **Licensing**

While there are no licensing agreements currently in place, licensing remains a key part of our sales strategy for those partners with whom we want to work. In order to exploit our granted process patent there is a need for us to create a number of centres of excellence across our key geographic markets that we control and run. These centres will service and supply the local market with intermediate products (such as inks and resins) and it is anticipated that each centre will operate an HT60 and an HT200 to allow the full suite of R&D and commercial supply to be achieved. Other third party licences are under consideration and, whilst there can be no guarantee at this stage that agreements will be completed, we anticipate that the terms of licensing agreements will be in line with the Board's expectations.

### **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 ability to convert non-disclosure agreements to development project discussions and commercial contracts. Performance against these non-financial KPIs is in line with the Board's expectations for the year under review.

Important financial KPIs are the cash position and the operating loss of the Group. At 30 June 2015, cash and deposit balances amounted to £2.05 million (2014: £5.68 million) and were in line with budgets. The adjusted EBITDA loss for the year ended 30 June 2015 of £2.38 million (2014: £1.96 million loss) was also in line with the budgeted loss for the year.

The Group has also continued to put in place additional infrastructure to capitalise on the momentum that the business has achieved and to enable the longer term potential of the business to be realised.

### **Acquisitions**

In November 2014, the Company acquired the entire issued share capital of EPL Composite Solutions Ltd (subsequently renamed as Haydale Composite Solutions Limited ("HCS")), specialists in the design, development and commercialisation of advanced composite polymer materials both in the UK and overseas ("Acquisition"). Maximum consideration for the Acquisition was £1.19 million, comprising £0.4 million initial in cash payment, with the balance of £0.79 million payable conditional upon the performance of HCS in the period from acquisition to 30 June 2016 ("Contingent Consideration"). Haydale also assumed £0.19 million of HCS directors' loans.

HCS's trading in the 8 month period under review was ahead of expectations at both the income and profit levels and, pleasingly, all of HCS's income in the period was non-graphene related - being primarily delivery against an historical order book of advanced composite projects. Most encouraging, HCS's current order book, which will be delivered in the current and next financial years, does include exciting graphene-related composite projects and is in excess of HCS's income for the period ended 30 June 2015.

It is against this strong trading and the benefits anticipated of having Gerry Boyce and his team at HCS integrated fully into the Haydale Group at the earliest opportunity that has led to the Board's decision to enter into an early settlement agreement with the vendors of HCS, of which Gerry Boyce represented 90% ("Vendors"). Accordingly, Haydale has agreed to reduce the Contingent Consideration payable to a maximum of £0.77 million, of which £0.65 million will be payable in cash to the Vendors, (which is expected to be paid following the General Meeting), with the balance due on receipt by HCS of certain of its outstanding debtors.

We are delighted that Gerry Boyce intends to reinvest £0.30 million of his consideration due to him in new ordinary shares in the Company. We believe this is the strongest possible endorsement of the Group's potential.

### **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. The financial statements of the Company continue to be prepared in accordance with UK Generally Accepted Accounting Practice.

### **Statement of Comprehensive Income**

In the year under review, the Group primarily focussed on scaling up its functionalisation capacity and enhancing its processes, conditioning the market and its potential customer base on the Group's functionalisation capabilities, developing its routes to market, particularly in the composite and inks markets, enhancing its IP portfolio and identifying and entering collaboration agreements with intermediate customers, all with a view to commencing a sales and marketing push following the Group's admission to AIM in April 2014. Accordingly, income for the year increased more than 10 fold to £1.48 million (2014: £0.13 million), £1.18 million of which was the eight month contribution from HCS. As described elsewhere in this report, the Group's income is derived from both grant funded projects and third party sales. In the year to 30 June 2015, the Group's income generated from grant funded projects totalled £0.83 million (2014: £0.11 million) and arose where a consortium of, often world renowned and strategically important international companies collaborate to develop new products with viable market needs. Both Haydale and HCS are running grant programmes which typically last for 12 to 24 months and the Group secured a further £0.45 million of new projects in the year under review.

R&D expenditure for the year increased to £0.56 million (2014: £0.42 million), with salaries for technicians, lab assistants and scientific personnel, as in 2014, accounting for the majority of the spend. The Group's other administrative costs for the year totalled £3.66 million (2014: £1.42 million), £0.91 million of which related to HCS's administration costs (2014: £nil). The loss from operations of £3.01 million (2014: £2.20 million loss), included non-cash items of £0.63 million (2014: £0.24 million). The loss per share improved marginally to £0.25 (2014: £0.28).

#### Statement of Financial Position and Cashflows

As at 30 June 2015, net assets amounted to £4.29 million (2014: £6.80 million), including cash balances of £2.05 million (2014: £5.68 million). As part of the funding structure for the Acquisition, the Company secured a three year, £0.50 million repayment loan from its bankers. As at the year end, the Group had repaid £0.07 million of the loan.

Net cash outflow from operating activities for the year was £2.73 million (2014: £2.11 million), the principal contributing factor being the operating loss of £3.01 million.

#### Capital Structure and Funding

As at 30 June 2015, the Company had 11,446,446 ordinary shares in issue (2014: 11,247,823), which number is unchanged at the date of this report. In November 2014, pursuant to the Acquisition, Gerry Boyce acquired 198,623 new ordinary shares in the Company. No further shares were issued during the year under review.

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 2015

	Year ended 30 June 2015 £'000	Year ended 30 June 2014 £'000
<b>REVENUE</b>	644	19
Other income	831	110
	<hr/>	<hr/>
<b>TOTAL INCOME</b>	1,475	129
Administrative expenses		
Costs of admission to AIM	-	(424)
Research and development expenditure	(559)	(416)
Share based payment expense	(258)	(67)
Other administrative expenses	(3,663)	(1,424)
	<hr/>	<hr/>
	(4,480)	(2,331)
<b>LOSS FROM OPERATIONS</b>	(3,005)	(2,202)
Finance costs	(24)	(14)
	<hr/>	<hr/>
<b>LOSS BEFORE TAXATION</b>	(3,029)	(2,216)
Taxation	140	71
	<hr/>	<hr/>
<b>LOSS FOR THE YEAR / TOTAL COMPREHENSIVE LOSS ATTRIBUTABLE TO OWNERS OF THE PARENT</b>	(2,889)	(2,145)

Loss per share attributable to owners of the Parent

Basic (£)	(0.25)	(0.28)
Diluted (£)	(0.25)	(0.28)

## CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 30 June 2015

Company Registration No. 07228939

	30 June 2015 £'000	30 June 2014 £'000
<b>ASSETS</b>		
<b>Non-current assets</b>		
Goodwill	685	51
Intangible assets	775	554
Property, plant and equipment	1,576	527
Investments	117	-
	3,153	1,132
<b>Current assets</b>		
Inventories	283	22
Trade receivables	257	8
Other receivables	277	244
Corporation tax	129	63
Cash and bank balances	2,049	5,677
	2,995	6,014
<b>TOTAL ASSETS</b>	6,148	7,146
<b>LIABILITIES</b>		
<b>Non-current liabilities</b>		
Provision for contingent consideration	260	-
Bank loans	270	-
	530	-
<b>Current liabilities</b>		
Provision for contingent consideration	510	-
Bank loans	162	-
Trade and other payables	619	300
Deferred income	26	46
Corporation tax	8	-
	1,325	346
<b>TOTAL LIABILITIES</b>	1,855	346
<b>TOTAL NET ASSETS</b>	4,293	6,800
<b>EQUITY</b>		
<b>Capital and reserves attributable to equity holders of the parent</b>		
Share capital	229	225
Share premium account	6,254	6,134
Share-based payment reserve	329	71
Retained (deficit) / profits	(2,519)	370
<b>TOTAL EQUITY</b>	4,293	6,800

**CONSOLIDATED STATEMENT OF CHANGES IN EQUITY**  
**For the year ended 30 June 2015**

	Share capital £'000	Share premium £'000	Share- based payment reserve £'000	Retained profits £'000	Total £'000
<b>At 1 July 2013</b>	1	3,214	4	(2,227)	992
Total comprehensive loss for the year	-	-	-	(2,145)	(2,145)
Recognition of share-based payments	-	-	67	-	67
Issue of ordinary share capital	66	8,443	-	-	8,509
Transaction costs in respect of share issues	-	(623)	-	-	(623)
Bonus issue of £0.02 ordinary shares	158	(158)	-	-	-
Reduction in share premium	-	(4,742)	-	4,742	-
<b>At 30 June 2014</b>	225	6,134	71	370	6,800
Total comprehensive loss for the year	-	-	-	(2,889)	(2,889)
Recognition of share-based payments	-	-	258	-	258
Issue of ordinary share capital	4	120	-	-	124
<b>At 30 June 2015</b>	229	6,254	329	(2,519)	4,293

**CONSOLIDATED STATEMENT OF CASH FLOWS**

**For the year ended 30 June 2015**

	Year ended 30 June 2015 £'000	Year ended 30 June 2014 £'000
<b>Cash flow from operating activities</b>		
Loss before taxation	(3,029)	(2,216)
<i>Adjustments for:-</i>		
Amortisation of intangible assets	64	36
Depreciation of property, plant and equipment	288	137
Loss on disposal of property, plant and equipment	19	-
Share-based payment charge	258	67
Finance costs	24	14
<b>Operating cash flow before working capital changes</b>	(2,376)	(1,962)
Increase in inventories	(98)	(2)
Increase in trade and other receivables	(126)	(165)
Decrease in payables and deferred income	(210)	(51)
<b>Cash used in operations</b>	(434)	(218)
Income tax received	76	72
<b>Net cash flow from operating activities</b>	(2,734)	(2,108)
<b>Cash flow used in investing activities</b>		

Purchase of property, plant and equipment	(1,182)	(147)
Proceeds from disposal of property, plant and equipment	-	2
Finance costs	(24)	(5)
Acquisition of subsidiary	(244)	-
<b>Net cash flow in investing activities</b>	<b>(1,450)</b>	<b>(150)</b>
<b>Cash flow used in financing activities</b>		
Proceeds from issue of share capital	124	8,425
Share issue costs	-	(623)
New bank loans raised	500	-
Repayments of borrowings	(68)	-
Issue of convertible debt	-	79
<b>Net cash flow from financing activities</b>	<b>556</b>	<b>7,881</b>
<b>Net (decrease) / increase in cash and cash equivalents</b>	<b>(3,628)</b>	<b>5,623</b>
Cash and cash equivalents at beginning of the financial year	5,677	54
<b>Cash and cash equivalents at end of the financial year</b>	<b>2,049</b>	<b>5,677</b>

### 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.

The Company is a public limited company which is listed on AIM on 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 2015 has been extracted from the Group’s audited financial statements which were approved by the Board of directors on 30 October 2015 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 and consolidation

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 2015 report and financial statements.

The results of Haydale Composite Solutions Limited since 1 November 2014, the date of acquisition, have been included within the Consolidated Statement of Comprehensive Income. This eight month period forms part of an extended fifteen month accounting period for that entity, whose accounting reference date was extended to 30 June 2015 to align with the rest of the Group.

### 4. Recognition of revenue and other income

#### (i) Goods

Revenue represents sales to external customers at invoiced amounts less value added tax or local taxes on sales. Revenue is recognised when the risks and rewards of owning the goods has passed to the customer which is generally on delivery.

(ii) *Services*

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.

(iv) *Government grants*

Government grants are not recognised until there is a reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received. Government grants are treated as deferred income and released to the income statement on the later of the achievement of the relevant performance criteria, or their receipt. 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.

## 5. Segment analysis

All revenues of the Group are derived from its principal activity, the sale and distribution of nano-technology products or the delivery of research projects into those same materials. All assets are located within the United Kingdom and all losses are generated in that territory. The Group's revenue from external customers by geographical location are detailed below.

	2015 £'000	2014 £'000
<b>By destination</b>		
United Kingdom	409	8
Europe	222	2
North America	11	7
Rest of the World	2	2
	<u>644</u>	<u>19</u>

During 2015, 32% of the Group's revenue depended on a single customer. During 2014, 25% of the Group's revenue depended on a second single customer.

Revenue within Europe was predominantly in Ireland (93%).

All amounts shown as other income within the Statement of Comprehensive Income are generated within and from the United Kingdom.

Revenue from goods was £56,000 or 9% and revenue from services was £588,000 or 91%.

## 6. Loss before taxation

Loss before taxation is arrived at after charging:

	2015 £'000	2014 £'000
Research and development:		
- current period's expenditure	524	380
- amortisation of capitalised expenditure	35	36



Depreciation of property, plant and equipment	288	137
Loss on disposal of property, plant and equipment	19	-
Operating lease rentals:		
- land and buildings	93	34
- plant and machinery	17	1

## 7. Loss per share

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

	<b>2015</b>	<b>2014</b>
	<b>£'000</b>	<b>£'000</b>
Loss after tax attributable to owners of the Haydale Graphene Industries PLC Group	(2,889)	(2,145)
Weighted average number of shares:		
- Basic and Diluted	11,376,248	7,755,175
Loss per share:		
- Basic (£) and Diluted (£)	(0.25)	(0.28)

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 2015, there were 1,321,655 (2014: 961,215) options and warrants outstanding.

## 8. Employees

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

	<b>2015</b>	<b>2014</b>
	<b>No.</b>	<b>No.</b>
Administration	8	4
Research, development and production	18	6
	26	10

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

	<b>2015</b>	<b>2014</b>
	<b>£'000</b>	<b>£'000</b>
Wages and salaries	985	667
Social security costs	104	74
Pension costs	18	-
Share based payment expense	258	67
	1,365	808

The total amount payable to the highest paid director in respect of emoluments was £126,000 (2014: £218,000), including pension costs of £3,000 (2014: £nil).

## 9. Income tax

	<b>2015</b> <b>£'000</b>	<b>2014</b> <b>£'000</b>
Total income tax credits:		
- for the financial year	128	66
- under provision in the previous financial year	12	5
	<u>140</u>	<u>71</u>

A reconciliation of income tax expense applicable to the loss before taxation at the statutory tax rate to the income tax release at the effective tax rate of the Group is as follows:

	<b>2015</b> <b>£'000</b>	<b>2014</b> <b>£'000</b>
Loss before taxation	<u>(3,029)</u>	<u>(2,216)</u>
Tax at the applicable statutory tax rates of 20% (2014 – 20%)	606	443
Tax effects of:		
- non-deductible expenses	(70)	(114)
- capital allowances and other short term differences not recognised for tax purposes	61	7
- R&D enhancement	107	59
- Surrender for R&D tax credit	(49)	(40)
- Unrealised tax losses carried forward	(527)	(289)
- Adjustment to tax credit in respect of previous years	12	5
Income tax release for the financial year	<u>140</u>	<u>71</u>

The Group has tax losses that are available indefinitely for offset against future taxable profits of the companies amounting to £6,214,000 and £838,000 of fixed asset timing differences. The full utilisation of these losses in the foreseeable future is uncertain as they are liabilities offset by the asset and therefore no deferred tax asset has been recognised.

The deferred tax not recognised in the Group statement of financial position is as follows:

	<b>2015</b> <b>£'000</b>	<b>2014</b> <b>£'000</b>
Unrecognised deferred tax asset at the start of the year	631	346
Tax losses unrecognised in the year	527	285
Unrecognised deferred tax asset at the end of the year	<u>1,158</u>	<u>631</u>

## 10. Intangible assets

	<b>Customer Relationships</b> £'000	<b>Development expenditure</b> £'000	<b>Goodwill</b> £'000	<b>Total</b> £'000
<b>Cost</b>				
At 1 July 2013	-	700	51	751
Additions	-	-	-	-
	-----	-----	-----	-----
At 1 July 2014	-	700	51	751
Additions	285	-	634	919
	-----	-----	-----	-----
At 30 June 2015	285	700	685	1,670
	=====	=====	=====	=====
<b>Accumulated amortisation</b>				
At 1 July 2013	-	110	-	110
Charge for the period	-	36	-	36
	-----	-----	-----	-----
At 1 July 2014	-	146	-	146
Charge for the year	29	35	-	64
	-----	-----	-----	-----
At 30 June 2015	29	181	-	210
	=====	=====	=====	=====
<b>Net book value</b>				
At 30 June 2015	256	519	685	1,460
	-----	-----	-----	-----
At 30 June 2014	-	554	51	605
	-----	-----	-----	-----
At 30 June 2013	-	590	51	641
	-----	-----	-----	-----
	-----	-----	-----	-----
	=====	=====	=====	=====

### **Goodwill**

Goodwill arose on the acquisition of EPL Composite Solutions Ltd (now Haydale Composite Solutions Limited "HCS") on 1 November 2014 (£634,000), Haydale Ltd on 21 May 2010 (£24,000) and of the trade and assets of Intelligent Nano Technology Ltd (£27,000) on 12 May 2010.

### **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.

### **Development costs**

Development costs arose on 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.

### **Amortisation**

Capitalised development costs are amortised over the estimated useful life of 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.

## **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 2013	173	500	43	2	718
Additions	25	107	15	-	147
Disposals	-	(2)	(2)	-	(4)
At 1 July 2014	198	605	56	2	861
Acquired on acquisition of subsidiary	-	174	-	-	174
Additions	61	1,086	35	-	1,182
Disposals	-	(35)	-	-	(35)
At 30 June 2015	259	1,830	91	2	2,182
<b>Accumulated depreciation</b>					
At 1 July 2013	20	158	21	-	199
Charge for the year	19	104	13	1	137
Disposals	-	(1)	(1)	-	(2)
At 1 July 2014	39	261	33	1	334
Charge for the year	24	241	22	1	288
Disposals	-	(16)	-	-	(16)
At 30 June 2015	63	486	55	2	606
<b>Net book value</b>					
At 30 June 2015	196	1,344	36	-	1,576
At 30 June 2014	159	344	23	1	527
At 30 June 2013	153	342	22	2	519

Included within plant and machinery are assets under construction totalling £192,000 (2014: £nil).

## 12. Investments

	2015 £'000	2014 £'000
Available-for-sale investments	117	-

The Group holds 117,263 non-voting £1 preference shares in Arago Technology Limited. This company is not accounted for on an equity basis as the Group does not have the power to participate in the company's operating and financial policies, evidenced by the lack of any direct or indirect involvement at board level and the non-voting nature of the investment held.

## 13. Inventories

	2015 £'000	2014 £'000
Raw materials	42	5
Work in progress	229	-
Finished goods	12	17
	283	22

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

## 14. Trade receivables

	<b>2015</b> <b>£'000</b>	<b>2014</b> <b>£'000</b>
Trade receivables	257	9
Allowance for impairment losses	-	(1)
	<u>257</u>	<u>8</u>

#### **15. Other receivables**

	<b>2015</b> <b>£'000</b>	<b>2014</b> <b>£'000</b>
Other receivables	166	167
Prepayments and accrued income	111	77
	<u>277</u>	<u>244</u>

#### **16. Trade and other payables**

	<b>2015</b> <b>£'000</b>	<b>2014</b> <b>£'000</b>
Trade payables	273	175
Tax and social security	81	36
Accruals and other creditors	265	89
	<u>619</u>	<u>300</u>

#### **17. Bank loans**

	<b>2015</b> <b>£'000</b>	<b>2014</b> <b>£'000</b>
Bank loans	432	-
The borrowings are repayable as follows:-		
- within one year	162	-
- in the second year	162	-
- in the third to fifth years inclusive	108	-
	<u>432</u>	<u>-</u>

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

	<b>2015</b> <b>%</b>	<b>2014</b> <b>%</b>
Average interest rates paid	<u>2</u>	<u>-</u>

The bank loan of £500,000 was drawn during the year and securitised by cash deposits. The loan accrues interest at 1.5% above the Bank of England base rate and is repayable in equal instalments over four years.

#### **18. 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.

	<b>2015</b> <b>£'000</b>	<b>2014</b> <b>£'000</b>
Grants	26	46

In the year ended 30 June 2015, Haydale Limited received a business innovation grant totalling £33,000, which is being credited to the statement of comprehensive income in line with the depreciation of the associated acquired machinery.

In 2014, the deferred income balance of £46,000 related to a development grant received in 2013 totalling £114,480. The revised criterion for this grant was the creation of seven (originally fifteen) new full-time equivalent employment positions, the achievement of which was completed during the year ended 30 June 2015.

## 19. Capital commitments

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

	<b>2015</b> <b>£'000</b>	<b>2014</b> <b>£'000</b>
Contracted but not provided for	125	9

## 20. Acquisition

On 1 November 2014, the Company reached agreement to acquire the entire issued share capital of EPL Composites Solutions Ltd (now Haydale Composite Solutions Ltd) for a maximum consideration of £1,193,000 comprising £400,000 cash with up to £793,000 payable in either cash and/or shares in the Company based on earnings targets to 30 June 2016. In addition, immediately following the acquisition, the Company reimbursed director's loans of EPL totalling £188,000. Direct acquisition costs amounting to £143,000 have been written off to the consolidated statement of comprehensive income.

The fair values of EPL are detailed below:-

	<b>£'000</b>
<b>ASSETS</b>	
Intangible assets	285
Property, plant and equipment	174
Inventories	163
Trade and other receivables	274
Cash and bank balances	163
<b>TOTAL ASSETS</b>	<b>1,059</b>
<b>LIABILITIES</b>	
Trade and other payables	509
Corporation tax	7
<b>TOTAL LIABILITIES</b>	<b>516</b>
<b>NET ASSETS ACQUIRED</b>	<b>543</b>
<b>Consideration</b>	
Cash consideration	407
Contingent consideration discounted to present value	770
	<b>1,177</b>
<b>Goodwill on acquisition</b>	<b>634</b>

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

Cash consideration	407
Less: cash and bank balances acquired	(163)
	<hr/>
	244
	<hr/>

Other than the intangible assets, there were no differences between book values and fair values on acquisition. The carrying value of Goodwill is based on the highly skilled assembled workforce of HCS.

Since the acquisition date, Haydale Composite Solutions Limited has contributed £1,181,000 to group total income and £133,000 to group profit. If the acquisition had occurred on 1 July 2014, total group income for the year would have been £1,889,000 and group loss for the year would have been £2,935,000.

**21. Going Concern**

The directors have prepared and reviewed financial forecasts. After due consideration of these forecasts, current cash resources and the net proceeds of the conditional fundraising announced by the Company on 2 November 2015, 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.

**22. Further information**

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.