

**Haydale Graphene Industries plc**

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

**Interim Results**

Haydale (AIM: HAYD), the global advanced materials group, announces its unaudited interim results for the six months ended 31 December 2021 (the ‘Period’ or ‘H1 FY2022’).

**Financial Highlights**

- Successful fund raise of £5.1 million (Gross) in September 2021;
- Group Revenues of £1.19 million (H1 FY2021 £1.28 million) impacted by £0.64 million of accelerated purchases from our largest SIC customer in the prior Period;
- UK and APAC sales increased by 19% (H1 FY2022 £0.49 million vs H1 FY2021 £0.41 million) on a like-for-like basis;
- Investment in operational capacity and lower than anticipated overhead absorption at the US facility led to an increase in Adjusted administrative expenses of 14%;
- Adjusted operating loss for the Period of £1.75 million (H1 FY2021 £1.08 million); and
- Cash at Period end of £3.84 million (31 December 2021: £1.88 million).

**Operational Highlights**

- Viritech - Memorandum of Understanding signed in September to assist in the development of hydrogen powertrain technologies, encompassing Haydale’s experience in composite design and technology.
- Promake - Continuing to support and develop the next generation of smart medical diagnostic devices using graphene enhanced components.
- Airbus - Joint patent application announcement in August 2021. Haydale now working to further enhance its electrically conductive pre-preg material for lightning strike protection and other applications.
- Heater Ink Garments – now working with commercial parties to bring our heater ink technology used in garments worn by medal winning athletes in Tokyo to a wider market.
- Using Haydale’s functionalised GNP’s, iCraft have developed a next generation anti-bacterial coated fabric, THERMiT™, which was supplied to South Korean sports apparel brand, Pro-Specs, for use in a new graphene-enhanced jacket.

**Post period Operational Highlights**

- Agreement with High Tech Systems Ltd to supply functionalised Boron Nitride into a thermally conductive fluid for domestic and industrial heating systems.
- PATit™ and CeramycGuard™ shortlisted for British Engineering Excellence Awards in the Materials Application of the Year category.
- A biomedical ink that is being developed for the rapid diagnosis market has been shortlisted for an innovative Kidney MedTech Competition for transformational technologies organised by Kidney Research UK.
- Award of a Smart Cymru grant of £169,000 by the Welsh Government to support the further development of the PATit™ Anti-counterfeiting solution.

**Commenting on the interim results, Keith Broadbent, Chief Executive Officer of Haydale, said:**

“Our progress on many of the functionalisation based nano projects continues to develop well, and our planned delivery of the new HT1400 will not only give us additional capacity, but will also allow cost-effective material processing on a large scale that is critical for our ongoing commercial development in the major growth side of our business. We are also pleased to see the early signs of recovery in the aerospace market and wider cutting tools market and believe this augers well for the medium and longer term outlook for our US facility”.

**For further information:**

**Haydale Graphene Industries plc**

Keith Broadbent, CEO

Tel: +44 (0) 1269 842 946

Mark Chapman, CFO

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

**finnCap (Nominated Adviser & Broker)**

Julian Blunt/Edward Whiley, Corporate Finance

Tel: +44 (0) 20 7220 0500

Andrew Burdis, ECM

**Notes to Editors**

Haydale is a global technologies group and service provider that facilitates the integration of graphene and other nanomaterials into the next generation of industrial materials and commercial technologies. With expertise in graphene, other nanomaterials and Silicon Carbide, Haydale is able to deliver improvements in electrical, thermal and mechanical properties, Haydale has been granted patents for its technologies in Europe, USA, Australia, Japan and China and operates from five sites in the UK, USA and the Far East. For more information please visit: [www.haydale.com](http://www.haydale.com) or Twitter: @haydalegraphene

*Caution regarding forward looking statements*

*Certain statements in this announcement, are, or may be deemed to be, forward looking statements. Forward looking statements are identified by their use of terms and phrases such as "believe", "could", "should" "envisage", "estimate", "intend", "may", "plan", "potentially", "will" or the negative of those, variations or comparable expressions, including references to assumptions. These forward-looking statements are not based on historical facts but rather on the Directors' current expectations and assumptions regarding the Company's future growth, results of operations, performance, future capital and other expenditures (including the amount, nature and sources of funding thereof), competitive advantages, business prospects and opportunities. Such forward looking statements reflect the Directors' current beliefs and assumptions and are based on information currently available to the Directors.*

*A number of factors could cause actual results to differ materially from the results discussed in the forward-looking statements including risks associated with vulnerability to general economic and business conditions, competition, environmental and other regulatory changes, actions by governmental authorities, the availability of capital markets, reliance on key personnel, uninsured and underinsured losses and other factors, many of which are beyond the control of the Company. Although any forward looking statements contained in this announcement are based upon what the Directors believe to be reasonable assumptions, the Company cannot assure investors that actual results will be consistent with such forward looking statements. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Subject to any continuing obligations under applicable law or any relevant AIM Rule requirements, in providing this information the Company does not undertake any obligation to publicly update or revise any of the forward looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.*

## Chief Executive's Report

### Overview

The Group has continued to make solid progress in its core graphene and nano particle operations in the UK and APAC, but the slower than anticipated recovery of the aerospace industry and consequently the Group's US operation has dampened the overall financial performance in the Period.

Within the graphene and nano materials side of our operations, we have seen increasing market pull as the benefits that Haydale's HDPlas<sup>®</sup> plasma process can bring to customers' finished products is more clearly understood across a variety of sectors. Further development of our core functionalisation technology has been a specific and continuing focus resulting in a number of new patent applications being submitted and enhancements to some of the main product offerings of ink, elastomers and composites have resulted

Revenue from the UK and APAC regions, increased by 19% compared with the prior Period but this has been offset by a reduction in the larger and more mature silicon carbide operations based at our US facility. As previously noted, our largest customer for silicon carbide whiskers ("SiC") increased its order pattern in the prior Period in order to support Haydale when the aerospace industry was at its lowest point last year and as anticipated, we have seen no orders from this customer in H1 FY2022 (H1 FY2021 £0.64 million). This reduction has been partially offset by a rebound in demand from our US coatings customer. We have seen some early signs of recovery in the aerospace and wider cutting tools market, and this bodes well for the medium and longer future of the US facility. Reduced US business unit revenues have acted as a brake on overall sales with Group revenues of £1.19 million (H1 FY2021 £1.28 million).

The focus on improving operational capacity in line with the anticipated increase in production capacity at the Ammanford facility has seen further investment in upskilling our sales force and, to support customer acquisition more fully we brought marketing in house during the Period, recruiting an experienced Group Marketing Manager. We have also further strengthened the US operations and sales team in order to take full advantage of the anticipated recovery in demand in North America and to support our potential for sales growth in the APAC region and in particular China. This investment in conjunction with the lower cost absorption at the US facility, has led to a 14% increase in Adjusted Administrative expenses in the Period. The Group's adjusted operating loss was £1.75 million (H1 FY2021 £1.08 million).

### Commercial Operations

#### UK

The UK has made consistent progress towards commercialising its proprietary technology in the Period. In September the Group signed a Memorandum of Understanding with Viritech Limited ("Viritech") whereby Haydale is utilising its expertise in engineering solutions for hydrogen to work with Viritech on the testing and development of Type IV structural composite pressure vessels for hydrogen storage. Haydale anticipates follow on project development work with Viritech both in respect of Type IV tanks but also into next generation Type V 'liner less' pressure vessels to commence in early H2 FY2022. This is a well-known growth area and the potential to develop and use functionalised graphene which helps prevent hydrogen permeation through tanks' walls is a key next step for this industry.

Haydale's collaboration with Promake is on-going and the parties continue to cooperate on a number of work streams including the SynerG 3D printing filament and on conductive and piezo resistant inks. Work on Lot 2 and Lot 4 of the Public Health England National Microbiology Framework is progressing with a 'proof of concept' for the clinical trial protocol produced and under review with two Universities and an NHS trust. Whilst we do not expect impactful revenues in H2 FY2022 we anticipate that this collaboration will bring significant medium-term benefits to the Group.

Subsequent to the successful NATEP development programs with Airbus and other parties, Haydale filed a joint patent with Airbus for its leading electrically conductive pre-preg product which will potentially address the need to replace copper in certain composite areas of aircraft structure and consequently reduce weight with associated carbon reduction benefits. Haydale is now working to further develop this technology.

Haydale previously announced that it had developed advanced nano enhanced SynerG Super Tough 3D printing filament and SynerG Conductive PLA 3D printing filament both of which demonstrated enhanced properties over

existing products on the market. We are now in discussions with a number of parties within the additive printing sector and anticipate sales of these products developing later this calendar year

We announced in August 2021 that in conjunction with the English Institute of Sport and the Welsh Centre for Printing and Coatings that we had developed a range of advanced wearable technology sport apparel that was worn by medal winning athletes in Tokyo. We are pleased to announce that the graphene enabled muscle warming clothing has been shortlisted in the Equipment and Wearable of the Year and the Best Technology for Injury Prevention or Rehabilitation categories in the 2022 Sports Technology Awards, which will be judged later this year. Haydale is now working with commercial parties to bring this ground-breaking technology to a wider market

Haydale has been working with High Tech Systems Ltd (“High Tech”) on the optimisation of its nano enhanced thermal fluid Hi-Therm™ during the Period. Subsequent to the Period end, we announced an exclusive supply contract that will see Haydale use its plasma functionalisation technology to enhance the thermal conductivity and dispersion of boron nitride in thermal fluid applications. By enhancing the thermodynamic properties of water, Hi-Therm™ can significantly reduce the energy required to heat buildings and is potentially a significant step forward in the commercialisation of thermally efficient nanomaterials in the energy sector. Hi-Therm™ will be formally launched by High Tech at the FutureBuild 2022 conference and exhibition at Excel, London in early March 2022. This is the first commercial application for Boron Nitride, “white graphene”, that we have announced but we anticipate further releases as our capacity to improve the dispersibility of Boron Nitride has many real-world applications.

The commercialisation of our biomedical ink offering continues both in the APAC region but especially within the European market where we have established momentum with a significant bio medical inks manufacturer. Our biomedical ink product was originally created for the diabetes market but has now been developed to potentially non-invasively detect other medical conditions through the testing of uric acid. Haydale has been shortlisted to present at a Kidney MedTech competition organised by Kidney Research UK in March 2022. The competition aims to accelerate the development and availability of transformational technologies to improve the lives of kidney patients including the development of testing devices to help patients to self-monitor and self-manage their health in a way that is safe and reliable.

The Group continues to progress several feasibility projects within the leisure footwear and industrial workwear market. These projects are investigating the performance enhancement that our functionalised masterbatches can deliver with initial outcomes demonstrating increased grip and wear performance. One customer is to manufacture 1,600 pairs of shoes to test market demand and we remain optimistic that a number of other customers will move to second stage testing during the calendar year. Through our work in this area, we have also identified that our functionalised elastomers can enhance the performance of tyres in the cycle sector and also, potentially, the automotive sector and we are actively working on commercialising our findings in this space.

#### *Asia Pacific “APAC”*

The three-year exclusive agreement with iCraft is continuing and they have extended the use of Haydale’s functionalised GNPs to the outdoor leisure market with the development of a graphene-coated nylon fabric, THERMiT™. The next generation fabric has been used by South Korean sports apparel brand, Pro-Specs, in a new thermally enhanced jacket which saw the initial production run of 8,000 items sold out within weeks of being released. We understand that interest has also been shown by a major golfing brand in the development of graphene coated golf attire.

In order to take advantage of the commercial opportunities in the APAC region we appointed our first Director Sales in Thailand in May last year. We have subsequently promoted her to be Managing Director of our Thailand facility and to further support the commercial drive in this region have appointed a new Business Development Manager. We are pleased with the progress made to date and believe the medium-term outlook to be positive.

#### *North America*

Revenue at our US SiC and blanks manufacturing facility continues to be adversely affected by the lingering impact of Covid-19 on the US aerospace sector and whilst increased civilian aviation traffic has been reported in the US internal market during the Period, this had yet to filter down the aerospace supply chain in any meaningful way.

However, and as previously announced, the Group has sought to extend the geographical footprint of its US operation to Europe and the Far East. Product testing by a significant European blanks user has shown positive

results versus the competition and the Group is undergoing further verification testing at this potential customer. Whilst these tests have taken longer than anticipated, the Directors remain hopeful that Haydale will be adopted as a second supply source during 2022.

In January 2021 Haydale announced an Agreement which allows ENO<sup>1</sup> to act as a sales representative for Haydale's ceramic and SiC products in China (including Hong Kong) and Taiwan for an initial period of two years. Whilst sales under this agreement have been slower than the parties initially expected, progress is being made by ENO in penetrating its local market and the prognosis going forward is positive. Outside of this agreement, Haydale continues to actively engage with several other SiC and blanks customers in the region and is also working on other potential projects in China. We anticipate that sales of SiC and blanks to the Far East will increase in H2 FY2022.

Contract negotiations with a number of UK water utility and wider infrastructure parties for the application of CeramycGuard™ have continued during the Period. CeramycGuard™ is an advanced ceramic surface treatment technology that uses Haydale's SiC microfibre as part of its reinforcement and is currently being assessed for use in dirty water and chemical related applications in the UK. We are currently working towards achieving DW31 (Clean Water) Accreditation in order to significantly increase the scope of application and we hope to achieve this during H2 FY2022. Post Period end, CeramycGuard™ has been applied at a further test site for a major UK Water Facility Company and we are currently monitoring performance at this site.

We have previously reported that a contract dispute with our second largest whisker customer was scheduled for arbitration in April 2022 and this remains the case.

#### Grant Funded Projects

In April 2021 we announced a substantial award from the Advanced Propulsion Centre's ("APC") Automotive Transformation Fund for Haydale's research into materials that may enhance the storage of hydrogen. This work is progressing well and will look to provide a foundation for the advanced hydrogen storage solutions required by Viritech. The APC has mapped demand for on-board hydrogen tanks required for light duty vehicles in the UK up to 2035 and estimates that 400,000 high pressure tanks will be required.

In January 2022, after a detailed review process conducted by the Welsh Government, the Company was awarded SMARTCymru funding that will allow Haydale to progress with the development of PATit™, its anti-counterfeiting technology. PATit™ uses graphene-enhanced, high-performance conductive inks and proprietary software codes for brand and security protection that is non-copiable and does not require electronic chips (NFC or RFID). The award will focus on the development of the mobile app software and secure server system required to store and read the PATit™ codes and will provide a major boost as Haydale moves to commercialise what it believes is ground-breaking technology. We are pleased that the significant benefits of PATit™ are being more widely understood and this is supported by it being shortlisted for the 2022 British Engineering Excellence Awards in the Materials Application of the Year category with the winners announced in March 2022.

As previously set out, the Company only seeks to focus on grant projects that have a clear commercial pathway or add significantly to the Group's knowledge bank. The projects detailed are practical examples of this ethos as are the other grants and awards received in the Period.

We anticipate that full year 'Other Operating Income' will decline marginally year on year as we do not expect any support from the US Paycheck Protection Program in the current financial year (FY2022 £0.14 million).

#### Technical and Patent Update

The HDPlas™ process to date has predominantly used gases as the main method of introducing particles into the barrel to allow the plasma functionalisation. Haydale has recently extended this technology to allow for liquid dosing which enables many other elements to be added to the surface chemistry of the nano particles. The extension of the plasma bonding process for graphene and other nano particles expands the potential market for our products significantly in what is a leading-edge development. This progression is patent pending and demonstrates the huge scope of our HDPlas™ technology.

#### Capital Expenditure

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<sup>1</sup> Qinhuangdao ENO High Tech Material Development Co, Ltd

The HDPlas™ functionalisation process is the cornerstone of the Company's graphene and other nano particle offering and the process is now proven and scalable. The HT1400 plasma reactor, which will increase Haydale's functionalisation capacity eight-fold, is expected at our Ammanford facility in the coming weeks, and from the factory gate testing already completed no major issues are anticipated with the on-site optimisation process. The Directors believe that Haydale will shortly be one of the few operators in the nano particle space that will be able to provide consistent plasma functionalised graphene that can be incorporated into and enhance our customers' products on an industrial scale.

#### Unaudited Financial Results

The Group's recognised commercial income in the Period was £1.19 million (FY H1 2021 £1.28 million). US revenue derived from the sales of SiC and blanks reduced by £0.16 million (19%) to £0.70 million (H1 FY2021 £0.86 million). Revenue within the regions that focus on functionalised graphene and other nano particles increased by £0.07 million (17%) to £0.49 million (H1 FY2021: £0.42 million).

During the past year, the Directors have sought to increase the operational capacity of the business to ensure it has appropriate resource to achieve its strategic objectives. As a result, Total Adjusted Administrative Expenses increased in the Period to £2.55 million (H1 FY2021 £2.24 million) to reflect both this investment and a lower level of cost absorption within the US operation.

The Group's adjusted operating loss was £1.75 million (H1 FY2021 £1.08 million) and the Loss before taxation was £2.46 million (H1 FY2021 £1.93 million). Capital expenditure in H1 FY2022 was £0.02million (H1 FY21: £0.02 million) however deposits paid for the new HT1400 plasma reactor and other ancillary equipment required for the production scale up totalling £0.21 million have been included within Other Receivables as the equipment will be delivered post Period end.

The Group's net assets at 31 December 2021 were £9.30 million (31 December 2020: £8.25 million). The Group's borrowings reduced by £0.41 million during the Period to £1.32 million at the Period end (30 June 2021: £1.73 million). Cash at the Period end was £3.84 million (30 June 2020: £1.64 million). Negative operating cash flow before working capital changes was £1.71 million (H1 FY2021 £1.06 million). A positive working capital movement of £0.14 million (H1 FY2021 £0.11 million) meant that Cash Used in Operations was £(1.58) million (H1 FY2021 £(0.96) million).

The Company raised £4.80 million (net) via the issue of 85,055,893 new ordinary shares in September 2021 at an issue price of £0.06 each (the "Fund Raise"), representing a discount of approximately 22% to the closing mid-market price of the Company's shares immediately before the Fund Raise. As at 31 December 2021, and at the date of this announcement, the Company had 510,335,691, ordinary shares in issue.

#### Outlook

Haydale's proprietary technology now has the potential to deliver material change across many sectors and customers are turning to Haydale in their search for cheaper, more environmentally friendly and functionally effective materials. As a result, Haydale is expanding the Group's capacity to functionalise nano and other materials and continues to invest across the business in those critical success factors that will ensure the business can capitalize on market demand.

The Directors believe their actions to mitigate the gap caused by our major customers order hiatus in the US Aerospace market in terms of expanding customer territory and targeting new markets for SiC outside Aerospace will benefit the Group in the medium and longer term, which look more promising. Importantly, the core plasma functionalisation technology which is central to our plans continues to move forward positively and reinforces confidence in the medium term and the significant potential for the Group.

Keith Broadbent  
Chief Executive Officer  
23<sup>rd</sup> February 2022

**CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (UNAUDITED)**

For the six months ended 31 December 2021

	Note	Unaudited Six months ended 31 Dec 2021 £'000	Unaudited Six months ended 31 Dec 2020 £'000	Audited Year ended 30 Jun 2021 £'000
<b>REVENUE</b>		1,191	1,277	2,903
Cost of sales		(583)	(338)	(924)
<b>Gross Profit</b>		608	939	1,979
Other operating income		194	212	575
Adjusted Administrative expenses		(2,549)	(2,235)	(4,724)
<b>Adjusted operating loss</b>		(1,747)	(1,084)	(2,170)
Adjusting administrative items:				
Share based payments income/(expenses)		25	(75)	(119)
Depreciation and amortisation		(618)	(627)	(1,271)
		(593)	(702)	(1,390)
Total trading administrative expenses		(3,142)	(2,937)	(6,114)
<b>LOSS FROM TRADING</b>		(2,340)	(1,786)	(3,560)
Total administrative expenses		(3,142)	(2,937)	(6,114)
<b>LOSS FROM OPERATIONS</b>		(2,340)	(1,786)	(3,560)
Finance costs		(118)	(147)	(211)
<b>LOSS BEFORE TAXATION</b>		(2,458)	(1,933)	(3,771)
Taxation		182	182	363
<b>LOSS FOR THE YEAR FROM CONTINUING OPERATIONS</b>		(2,276)	(1,751)	(3,408)
<b>Other comprehensive income:</b>				
<i>Items that may be reclassified to profit or loss:</i>				
Exchange differences on translation of foreign operations		13	(301)	(368)
Remeasurements of defined benefit pension scheme		30	14	208
<b>TOTAL COMPREHENSIVE LOSS FOR THE YEAR FROM CONTINUING OPERATIONS</b>		(2,233)	(2,038)	(3,568)
Loss per share attributable to owners of the Parent				
Basic (£) and Diluted (£)	2	(0.01)	(0.01)	(0.01)

## CONSOLIDATED STATEMENT OF FINANCIAL POSITION (UNAUDITED)

As at 31 December 2021

	Unaudited 31 Dec 2021 £'000	Unaudited 31 Dec 2020 £'000	Audited 30 Jun 2021 £'000
<b>ASSETS</b>			
<b>Non-current assets</b>			
Goodwill	1,341	1,454	1,341
Intangible assets	1,209	1,184	1,174
Property, plant and equipment	6,564	6,979	6,622
	<u>9,114</u>	<u>9,617</u>	<u>9,137</u>
<b>Current assets</b>			
Inventories	1,343	1,562	1,328
Trade receivables	347	580	715
Other receivables	629	483	595
Corporation tax	546	567	364
Cash and bank balances	3,840	1,875	1,644
	<u>6,705</u>	<u>5,067</u>	<u>4,646</u>
<b>TOTAL ASSETS</b>	<u><u>15,819</u></u>	<u><u>14,684</u></u>	<u><u>13,783</u></u>
<b>LIABILITIES</b>			
<b>Non-current liabilities</b>			
Bank loans	1,311	44	844
Pension obligation	1,035	1,280	1,026
Other payable	2,463	2,564	2,370
	<u>4,809</u>	<u>3,888</u>	<u>4,240</u>
<b>Current liabilities</b>			
Bank loans	8	1,024	885
Trade and other payables	1,622	1,391	1,719
Deferred income	76	136	180
	<u>1,706</u>	<u>2,551</u>	<u>2,784</u>
<b>TOTAL LIABILITIES</b>	<u>6,515</u>	<u>6,439</u>	<u>7,024</u>
<b>TOTAL NET ASSETS</b>	<u><u>9,304</u></u>	<u><u>8,245</u></u>	<u><u>6,759</u></u>
<b>EQUITY</b>			
<b>Capital and reserves attributable to equity holders of the parent</b>			
Share capital	10,206	8,505	8,505
Share premium account	31,922	28,820	28,820
Share-based payment reserve	180	206	250
Retained (deficits)	(32,631)	(28,967)	(30,430)
Foreign exchange reserve	(373)	(319)	(386)
<b>TOTAL EQUITY</b>	<u><u>9,304</u></u>	<u><u>8,245</u></u>	<u><u>6,759</u></u>



**CONSOLIDATED STATEMENT OF CASH FLOWS (UNAUDITED)**

**For the six months ended 31 December 2021**

	<b>Unaudited Six months ended 31 Dec 2021 £'000</b>	<b>Unaudited Six months ended 31 Dec 2020 £'000</b>	<b>Audited Year ended 30 Jun 2021 £'000</b>
<b>Cash flow from operating activities</b>			
Loss for the year from continuing operations	(2,276)	(1,751)	(3,408)
<i>Adjustments for:-</i>			
Amortisation of intangible assets	116	88	176
Depreciation of property, plant and equipment	502	537	1,096
Share-based payment (income)/charge	(25)	75	119
Profit on disposal of plant and equipment	-	3	78
Finance costs	118	147	211
Pension plan contributions	29	-	-
Pension - net interest expense	4	22	47
Taxation	(182)	(182)	(363)
	<b>(1,714)</b>	<b>(1,061)</b>	<b>(2,044)</b>
(Increase)/decrease/ in inventories	(15)	150	384
Decrease / (increase) in trade and other receivables	333	157	(90)
(Decrease)/increase in payables and deferred income	(179)	(201)	174
<b>Cash used in operations</b>	<b>(1,575)</b>	<b>(955)</b>	<b>(1,576)</b>
Income tax received	-	-	383
<b>Net cash used in operating activities</b>	<b>-</b>	<b>-</b>	<b>(1,193)</b>
<b>Cash flow used in investing activities</b>			
Purchase of property, plant and equipment	(22)	(21)	(220)
Capitalisation of intangible assets	(151)	(129)	(260)
<b>Net cash used in investing activities</b>	<b>(173)</b>	<b>(150)</b>	<b>(480)</b>
<b>Cash flow used in financing activities</b>			
Finance costs	(59)	(91)	(95)
Finance cost – right of use asset	(60)	(56)	(116)
Payment of lease liability	(241)	(310)	(591)
Proceeds from issue of share capital (net of share issue costs)	4,803	2,757	2,757
New bank loans raised	451	-	800
Repayments of borrowings	(887)	(77)	(219)
<b>Net cash flow from financing activities</b>	<b>4,007</b>	<b>2,223</b>	<b>2,536</b>
Effects of exchange rate changes	(63)	(66)	(42)
<b>Net increase in cash and cash equivalents</b>	<b>2,196</b>	<b>1,052</b>	<b>821</b>
Cash and cash equivalents at beginning of the financial period	1,644	823	823
<b>Cash and cash equivalents at end of the financial period</b>	<b>3,840</b>	<b>1,875</b>	<b>1,644</b>

**CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (UNAUDITED)**

	<b>Share Capital</b>	<b>Share premium</b>	<b>Share- based payment reserve</b>	<b>Foreign exchange reserve</b>	<b>Retained profits</b>	<b>Total</b>
	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>
<b>At 1 July 2020</b>	<b>6,804</b>	<b>27,764</b>	<b>131</b>	<b>(18)</b>	<b>(27,230)</b>	<b>7,451</b>
Total comprehensive loss for the period	-	-	-		(1,751)	(1,751)
Other comprehensive loss				(301)	14	(287)
Recognition of share-based payments	-	-	75	-	-	75
Issue of ordinary share capital	1,701	1,056	-	-	-	2,757
Transaction costs in respect of share issue	-	-	-	-	-	-
<b>At 31 December 2020</b>	<b>8,505</b>	<b>28,820</b>	<b>206</b>	<b>(319)</b>	<b>(28,967)</b>	<b>8,245</b>
Total comprehensive loss for the period	-	-	-	-	(1,657)	(1,657)
Other comprehensive profit				(67)	194	127
Recognition of share-based payments	-	-	44	-	-	44
Issue	-	-	-	-	-	-
<b>At 30 June 2021</b>	<b>8,505</b>	<b>28,820</b>	<b>250</b>	<b>(386)</b>	<b>(30,430)</b>	<b>6,759</b>
Total comprehensive loss for the period	-	-	-	-	(2,276)	(2,276)
Other comprehensive loss	-	-	-	13	30	43
Recognition of share-based payments	-	-	(25)	-	-	(25)
Share based payment charges – Lapsed options	-	-	(45)	-	45	-
Issue of ordinary share capital	1,701	3,102	-	-	-	4,803
<b>At 31 December 2021</b>	<b>10,206</b>	<b>31,922</b>	<b>180</b>	<b>(373)</b>	<b>(32,631)</b>	<b>9,304</b>

**Equity share capital and share premium**

The balance classified as share capital and share premium includes the total net proceeds on issue of the Company's equity share capital, comprising £0.02 ordinary shares. The share premium account can only be used for bonus issues, to provide for the premium payable on redemption of debentures or to write off preliminary expenses, or expenses of, or commissions paid on, or discounts allowed on, any issues of shares or debentures of the company.

**Share premium account**

The share premium account represents the amount received on the issue of ordinary shares in excess of their nominal value and is non-distributable.

**Share-based payment reserve**

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

**Retained profits**

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

## NOTES TO THE CONSOLIDATED INTERIM FINANCIAL STATEMENTS

For the six months ended 31 December 2021

### 1. Accounting policies

#### Basis of preparation

The interim financial statements, which are unaudited, have been prepared on the basis of the accounting policies expected to apply for the financial year to 30 June 2022 and in accordance with recognition and measurement principles of International Financial Reporting Standards (IFRSs) as endorsed by the European Union. The accounting policies applied in the preparation of these interim financial statements are consistent with those used in the financial statements for the year ended 30 June 2021.

The interim financial statements do not include all of the information required for full annual financial statements and do not comply with all of the disclosures in IAS34 'Interim Financial Reporting'. Accordingly, while the interim financial statements have been prepared in accordance with IFRS they cannot be construed as being in full compliance with IFRS.

The financial information for the year ended 30 June 2021 does not constitute the full statutory accounts for that period. The Annual Report and Accounts for 30 June 2021 have been filed with the Registrar of Companies. The Independent Auditors' Report on the Annual Report and Accounts for 2021 was unqualified and did not include references to any matters which the auditors drew attention to by way of emphasis without qualifying their report and did not contain statements under Section 498(2) or 498(3) of the Companies Act 2006.

#### Going concern

The Directors have prepared and reviewed detailed financial forecasts of the Group and, in particular, considered the cash flow requirements for the period from the date of approval of these interim results to the end of February 2023. These forecasts sit within the Group's latest estimate and within the longer-term financial plan, both of which are updated on a regular basis. The Directors remain mindful of the impact that the risks and uncertainties set out on page 11 of the Annual Report and Accounts for the year ended 30 June 2021 may have on these estimates.

After due consideration of the forecasts prepared, the Group's current cash resources, the repayment profile of its debt facilities, and its ability to potentially access additional capital funds to further develop the business, 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.

### 2. Loss per share

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

	Unaudited Six months ended 31 Dec 2021 £'000	Unaudited Six months ended 31 Dec 2020 £'000	Audited Year ended 30 Jun 2021 £'000
Loss after tax attributable to owners of the Haydale Graphene Industries Group	(2,276)	(1,751)	(3,408)
Weighted average number of shares:			
- Basic and Diluted	472,892,608	392,921,556	408,967,698
Loss per share:			
- Basic (£) and Diluted (£)	(0.01)	(0.01)	(0.01)

The loss attributable to ordinary shareholders and weighted average number of ordinary shares for the purpose of calculating the diluted earnings per ordinary share are identical to those used for basic earnings per share. This is because the exercise of share options would have the effect of reducing the loss per ordinary share and is therefore not dilutive under the terms of IAS 33.

### 3. Approval

The 31 December 2021 interim financial statements were approved by a duly appointed and authorised committee of the Board of Directors on 22 February 2022.