



APPLIED GRAPHENE MATERIALS

Applied Graphene Materials plc

Interim Report for the six months ended 31 January 2021

THE MARKET LEADER IN GRAPHENE DISPERSION AND APPLICATION TECHNOLOGY

A large, stylized hexagon with a blue-to-green gradient border is the central focus. It is surrounded by four smaller, dark grey hexagons, each with a white outline, positioned at the top-left, top-right, bottom-left, and bottom-right corners relative to the central hexagon.

2010 – 2020

A DECADE OF
INNOVATION

ABOUT US

INNOVATIVE TECHNOLOGY

We work in partnership with our clients using our knowledge and expertise to provide standard and customised graphene dispersions and formats to deliver enhancements and benefits for a wide range of applications where we can deliver maximum value.

OPERATIONAL HIGHLIGHTS

Coatings

- Approval for use of a new graphene-enhanced primer with Blocksil, to complement use of its AGM graphene-enhanced Top Coat MT product launched to consumers in January 2020
- New customer product launches:
 - A new wax based car care product from EZ Car Care
 - A new wax based car care product from Infinity Wax
- Availability of technical data for sustainable water based epoxy technology
- Blocksil commercial relationship starting to build momentum with orders from RTE, Network Rail and construction industry for Blocksil graphene-enhanced products
- Repeat business from JBL for aerosol based primers
- Acceleration in customer engagements in the car care sector
- Growth in total pipeline engagements to 135 (2020: 92) including 10 completed developments (2020: nil) and resulting revenue potential to £3.7 million (2020: £2.9 million)



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appliedgraphenematerials.com

Composites and functional materials

- Positive continuing progress with core composites customer
- Potential for TP300 product for thermal adhesive and heat-dissipation applications and graphene nanoplatelets ("GNPs") for bearing applications

Distribution

- Further distributors added to enhance our regional presence in Turkey (Gobarr) and South Korea (ManHo Polymers) and growth of our customer-facing representation headcount to around 79 including AGM's direct sales team



STRATEGIC HIGHLIGHTS

- Fundraise of £5.5 million (net) announced in January 2021 and successfully completed in February 2021, extending the Group's cash runway well into 2023
- In partnership with the EU REACH Graphene Consortium, achieved ECHA accreditation for volume supply of graphene powder (up to 10 tonnes' volume), addressing a significant barrier to deployment at scale
- Branding refresh completed together with new website and improved communications platform
- Continuing IP development
- Cross-trading of shares in USA on OTCQB from August 2020
- Extended product platform to address the growing sustainability challenges facing the coatings industry through water based epoxy product technology for low VOC coatings – extending AGM's addressable opportunity. Launched customer products offering enhanced sustainable credentials through use of graphene

FINANCIAL OVERVIEW

- **Revenue** – £42,000 (2020: £35,000)
- **Operating expenses** reduced by £0.5 million to £1.7 million (2020: £2.2 million)
- **EBITDA*** – loss of £1.6 million (2020: loss of £1.9 million)
- **Loss before tax** – £1.8 million (2020: loss of £2.3 million)
- **Cash at bank** – £2.3 million (2020: £4.3 million) – a further £5.5 million new funding and £0.46 million R&D tax credit were received in February 2021
- **Basic EPS** – loss of 3.3 pence per share (2020: loss of 4.0 pence)

* EBITDA comprises loss on ordinary activities before interest, tax, exceptional costs, depreciation and amortisation.

COVID-19

Continued focus on maximising the safety of our team members and maintaining business continuity. Activity at our customers' sites is being monitored and we continue to work with them to maintain progress on our joint development projects. Existing customer sales momentum increasing as the impact of COVID-19 recedes.

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BUSINESS REVIEW

with Adrian Potts

FOCUSING ON ACCELERATING MOMENTUM



ADRIAN POTTS

Summary

Focused customer engagements and strong technology support to enable their product launches is creating visibility to repeat business and accelerating momentum.

Overview

Progressing customer engagements despite COVID-19

We made continued commercial progress during the six month period, despite the continuing challenge of COVID-19 both in the UK and abroad. A number of customers have reduced staff numbers which has impacted their development departments, a number of pipeline projects have been delayed or placed on hold indefinitely and some customers with already launched graphene-enhanced products have had difficulty accessing customer assets to be able to deploy their coatings. That said, we have continued to make good progress with engagements where possible and have also managed our own business well to ensure continuity of longer-range test programmes. As a result, we have seen three successful customer product launches in the period, namely:

- a new wax based car care product from EZ Car Care;
- a new wax based car care product from Infinity Wax; and

- approval for use of a new graphene-enhanced primer with Blocksil to complement its graphene-enhanced Top Coat MT product for a systemised coatings solution.

Focused on dispersed graphene formats for larger scale opportunity

We continue to emphasise that AGM's key differentiator is our knowledge base around the application of graphene and dispersion technology which makes it possible to transfer graphene's outstanding combination of properties into a host material. There is now growing awareness among our target consuming industries of the need for appropriate delivery mechanisms to efficiently deploy graphene in order to achieve an effective enhancement in the finished customer product. We believe AGM's focus on supplying graphenes in dispersed formats will meet this need and support a scale-up of revenue opportunities for AGM.

Customers gaining momentum with protective coatings products in the market

Good progress has been made in the protective coatings sector demonstrating the benefits of the addition of graphene nanoplatelets into exemplar and customer formulations. AGM's customers are starting to use their graphene-enhanced products for larger-scale commercial projects. Blocksil has been applying their Top Coat MT product with RTE for antennae, with Network Rail and with construction applications. Additionally, a new graphene-enhanced primer product has been integrated into Blocksil's product mix to enable a graphene-enhanced primer and top coat system solution. Alltimes Coatings has been contracted to use its Advantage Graphene coating on a Wickes commercial building application. It is pleasing to see James Briggs ("JBL") become a routine customer of AGM in support of its aerosol-based graphene-enhanced primer products.

Some delays in customer product launches have been inevitable and we have seen this with Teal & Mackrill in the development of its industrial epoxy primer. Our engagement pipeline continues to be heavily biased towards coatings technologies as the key area where we anticipate revenue growth. Successful outcomes of iterative development evaluations resulting in customer product launches are our conduit to sales growth on a by-customer basis.

It has been pleasing to see growth in activity in the car care sub-sector of protective coatings technology. With product formats being well aligned to AGM dispersion technologies, we are making good progress with a number of customers in this area.

Expanding distributor network

Distributor activity has increased in the period with the addition of two new distributors in Turkey and South Korea. These distributors have now been fully trained and are beginning to develop a number of business leads for our products and services. We now have around 79 customer-facing representatives across our distribution base and including our direct sales team.

Composites and functional products progress

Activity in the composites sector is customer led. Customer activity represents a broad spectrum of application from carbon fibre products for space applications to automotive opportunities. For the composite materials sector, we continue to see success with Infinite Composites Technologies with repeat materials requirements for mechanical property enhancements and barrier coatings application. Other composites customers are completing iterative testing of either our products or with their customers to prove the technology in the specific field of application. Some delays in testing have been apparent, specifically in the areas of composite tooling and mass transit interior applications.

Activity with functional materials products continues – we are making good progress with the testing of our thermal adhesive product at an undisclosed customer whilst we continue to work with Airbus to determine how to best utilise our materials in their application.

We are also seeing evaluations of our graphene dispersions for further applications for bearings and friction products.

Website

We completed a rebranding of the Company with a new website platform to enhance accessibility of information and to enable more effective communications with partners, customers and investors.

Technology progress

We continue to make strong progress technically and are developing an extended product platform to address the growing sustainability challenges facing the coatings industry. This includes technology for the dispersion of graphene in water based coatings as opposed to solvents. We also continue to develop long range test data to support the adoption of our products in the protective coatings sector. Our publication of water based epoxy technology data represents a milestone for us in the potential for using graphene for anti-corrosion in low VOC coatings. Another major milestone during the period was receipt of regulatory approval through the EU REACH Graphene Consortium. This addresses a major barrier to

large-scale adoption of graphene technology within the EU, with large volume supplies of graphene powder now permitted (up to 10 tonnes). In line with our global market reach through our distribution network, we continue to work with the various regulatory authorities to attain similar approval to that granted in the EU. ISO standards recently released support a robust approach to product integration and definition by the end user, which we further welcome. We are well-advanced in our operational planning for scaled, consistent production of dispersed products and we expect to procure a spraying capability in 2021 which will enable us to carry out high quality test panel preparation as part of our long range testing and customer support endeavours.

Successful fundraise

We announced a successful fundraising round at the end of January 2021, approved by shareholders in a general meeting in February 2021. Over the past two years we have made strong progress on developing our technology and maturing our dispersed graphene product platform. We have seen this principally in the area of development of scaled dispersions which are stable and user friendly and secondly in the production of exemplar data. Such data support our claims about graphene nanoplatelets as an enabling materials technology. Having established this reliable platform and having seen early customer product launches enabling modest revenues, further funding was necessary to support the growth of the revenue roadmap. We were pleased to have been able to raise £6 million gross from the capital market and this gives AGM a solid cash runway well into 2023. We also announced the changing of our listing in the OTC market in USA from pink sheets to OTCQB to enable greater access to investors and have spent significant time presenting to the USA-based investor community. We are deeply appreciative of existing and new investors who have put their confidence in AGM's leadership and provided us with the requisite financial resources to grow the business.

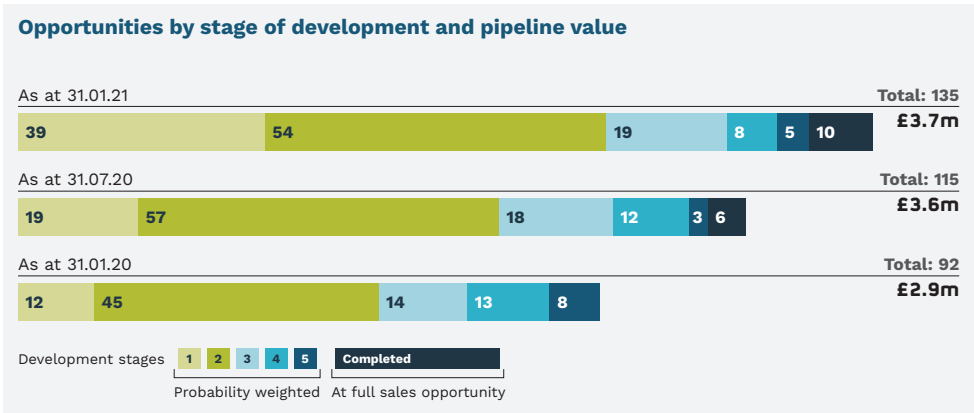
Commercial progress

Pipeline review

We have seen progressive growth in our pipeline of engagements over the past 12 months, with an increase from 92 to 135, including 10 completed products. It is also pleasing to see steady growth in the number of products being launched by our customers, which will drive our future sales of dispersed graphene materials. We believe steady, positive progress is being made in the evaluation of our graphene materials by customers interested in both graphene as a novel material and in the practical use of the material technology.

BUSINESS REVIEW CONTINUED

with Adrian Potts



Commercial progress continued

Pipeline review continued

The majority of our activity within the pipeline continues to be centred upon coatings technology. This represents the best opportunity for sales success in the near term, arising from our in-depth technical know-how which supports the sales of our dispersed graphene materials to the sector.

We have seen activity increase over the past period in the sub-sector of protective coatings for car care – an exciting adjacency which is both innovative and fast paced as regards customer adoption of our materials.

The value of our commercial pipeline has grown progressively, as has the number of our engagements with potential commercial partners. The figures presented in the chart represent a factoring of the total value of the pipeline based on potential for success based on commercial, technical and regulatory metrics. Completed projects are included at full expected sales opportunity.

One key metric used in the pipeline is the identification of potential customer product launches. We currently can identify six imminent products which we feel are likely to come to market soon.

Graphene nanoplatelet and dispersion technology

AGM's A-GNP35 graphene nanoplatelet materials continue to demonstrate excellent performance advantages in customer engagements. Our nanoplatelet materials, when correctly deployed into the customer's end formulation, prove to offer a highly efficient solution to the application of this novel materials technology.

Outside of the unique nature of our graphene materials manufacturing, AGM's continuing commitment to commercial realisation lies firmly in four key areas:

- developing a global understanding of the benefits of graphene for various materials technologies – where graphene materials will work and (importantly) where they are unlikely to be successful;
- developing practical know-how on how to use these complex materials in real applications;
- providing a dispersed graphene product range for easy deployment in suitable host materials; and
- providing test data and know-how in the form of technical guidance to support adoption and use.

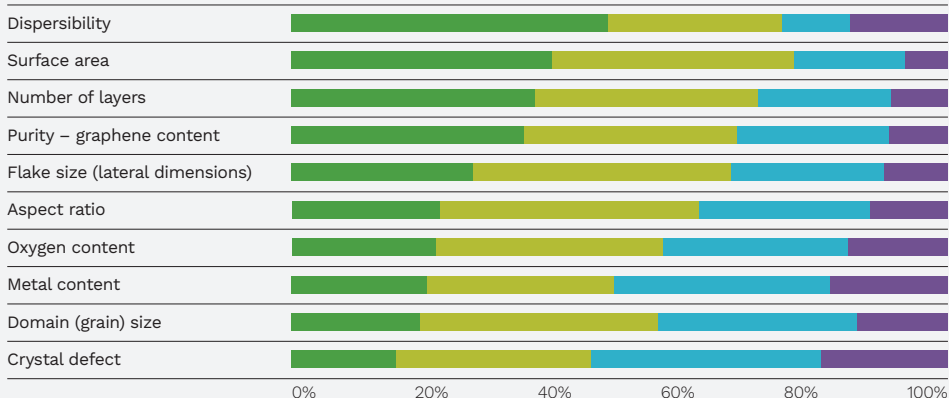
Our core commitment to demonstrating graphene performance continues to be principally focused on the coatings sector. This is where we have and continue to demonstrate strong performance advantage in the areas of barrier performance allied to a sustainability proposition.

Our knowledge on how to deploy graphene nanoplatelet materials is critical to the success of our business and, broader commercial realisation in the graphene space. In a survey of 800 respondents by The Graphene Council, one of the sector's leading associations, dispersibility was recognised as a key aspect required to be addressed for the successful use of graphene.

We believe AGM is addressing a fundamental user challenge in the graphene space. This is the ability to effectively incorporate graphene into customer materials in a way that transfers graphene's unique enhancement properties into the customer's end product. We are addressing this through the supply of technically appropriate dispersions. This will support the long term adoption of these materials in tandem with consistency of quality and attention to detail. Our knowledge of the complex chemistries involved ensures that the correct material form and attributes are present in a customer's formulation and can contribute

Deploying graphene nanoplatelets

● Essential ● Important ● Interesting ● Not needed



Courtesy The Graphene Council 4 January 2021 Survey on attribute importance.

effectively to a customer's success. Our technical team continues to push the boundaries of dispersion capability and application know-how and to work to expand the breadth of our product offering.

Having a robust dispersion product range is absolutely key to adoption of these materials and to enabling our expanded distributor network to be successful with its customer engagements.

AGM continues to provide a leading range of dispersed graphenes marketed under the brand name "Genable®", which provides the formulator with ease of use and integration. This in turn gives the user confidence to test our materials in their formulations and achieve our long-range goal of sales of dispersed materials to support a customer's newly launched product.

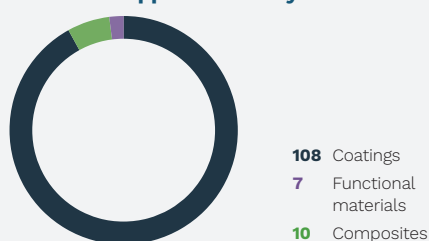
Protective coatings sector

Commercial activity in this sector has been impacted by COVID-19-related issues in two ways:

- firstly, a reduction in reported activity levels in the industrial coatings sector. This has been manifested in a number of ways at our level of engagement – from customer staff reductions, to delays to their customer programmes and access to assets to be repainted; and
- secondly and latterly, the overlay of customers needing to manage raw materials availability and pricing challenges in the general solvents and resins supply chain has led to a number of developing customers delaying product launches.

That said, within the protective coatings sector, our target has been to continue to develop a platform of demonstrable performance gains with our GNPs specific to anti-corrosion benefits in steel and aluminium coatings. We continue to make great strides forwards with this, as evidenced with the recent release of technical application data informing customers of the possibilities for use of water based technologies containing our graphene nanomaterials. Progress with specific customers is as follows:

Number of opportunities by sector



BUSINESS REVIEW CONTINUED

with Adrian Potts

Protective coatings sector continued

James Briggs

- We are now starting to see repeat sales develop for dispersions for the aerosol-based products sector with James Briggs Ltd. It is pleasing to see the products under the Hycote and Halfords retail brands start to gain commercial traction with increasing demand for our graphene dispersed materials. We further continue in development efforts with JBL for other products with the anticipation for a broader platform of product launches and an increased level of business with them.

Blocksil

- Avanti – Access to customer sites during COVID-19 has been challenging for fulfilment of this previously announced activity on antennae dish structure refurbishment. Blocksil anticipates activity on this project to increase as the effects of lockdown are reduced.
- RTE – A number of antennae towers have been successfully coated and Blocksil is now anticipating positive progress with a further 7 structures using its graphene-enhanced products.
- Network Rail – Blocksil has been working on a Network Rail project on the corrosion refurbishment of trackside enclosures. The performance of the graphene-enhanced products for such application is ideal. Blocksil reports good progress is being made with initial units and anticipates growth in this business and demand for graphene dispersions to feed coatings volumes. Some 200+ units are anticipated to require work.
- Primer – As indicated at our year end results, further product development with Blocksil has been ongoing and has resulted in its approval of a primer product to complement its high-performance Top Coat MT coating. We are pleased to report that the first such product formulation has been fully approved by Blocksil and is being rolled out for use in tandem with the top coat materials. This represents an important step forwards for AGM in the development of an integrated solution using graphene in both primer and top coat materials for further system performance enhancement. Further development of a yet higher performance epoxy version has also been approved by the customer and we look forward to deployment of this material for a growing range of applications in the near future.
- We anticipate an increase in commercial activity with Blocksil in the coming months as these projects develop and have been pleased to be able to supply initial quantities of dispersions to support these developments.



It's always satisfying to bring innovative products to the market, especially ones with a potential to add value to a sector, and see them well received by customers and end users alike. And that's just what has happened with the aerosol Graphene Primer products we have launched, giving us confidence to look at developing additional products and continuing to grow our sales in this high performance sector."

Jim Miller

Commercial Director of James Briggs



We recognised early on that working with the industry leader, AGM, was the way forward. They have been very positive in helping us realise our concept of adding graphene to enhance our already high performance corrosion resistant coatings."

Guy Williams

Managing Director of Blocksil

Alltimes Coatings

- Alltimes continues to promote its Advantage Graphene product, launched with AGM graphene through its CPD programme to end specifiers. They have recently achieved success with specification approval and application of its coatings system on a Wickes commercial building roof project, and they continue to pursue further contracted business with the product. Advantage Graphene offers a substantial improvement in sustainable performance with extended warranty and thinner application for an efficient materials technology solution.
- Alltimes Coatings has also been successful in securing business with The Wilton Centre for refurbishment of buildings within the complex. Initial work has commenced and this is anticipated to extend into other areas for a range of building applications.

Teal & Mackrill

- Product development efforts with Teal & Mackrill have reached a successful technical conclusion regarding performance attributes for a new general industrial epoxy primer. The anticipated release of this innovative primer has, however, been delayed due to COVID-19-related issues. We see this as a short term delay and look forward to a successful release of the product in the near future. In the meantime, a number of industrial anti-corrosion applications are being pursued with this product currently with a view to be it being specified for long term use.

The pipeline of opportunity is heavily weighted towards near term traction with the protective coatings sector, with 86% of engagements in the industrial coatings sector, and reflects the near term opportunities for successful revenue development as a result of the launch of customer products.

We continue to make positive technical and developmental progress with the pipeline of customer engagements in the protective coatings sector and are pleased with the progress towards AGM's end goal of successful customer product launches and a positive revenue stream for our graphene dispersions as a result. Customers evaluating our products currently represent a broad spectrum within the protective coatings applications sector including:

- marine applications;
- concrete flooring;
- construction industry;
- automotive;
- chemical resistance;
- aerospace grade aluminium;
- aluminium protection for power grids;
- industrial aluminium chemical resistance; and
- pressure and permeability applications.



The commercial success of our Advantage Graphene roof coating continues to develop well. Thanks to the close collaboration with the team at AGM and our certified CPD presentation we are gaining strong industry recognition. Our approved contractors have now successfully applied our graphene-enhanced coatings to a number of buildings including ones owned by local councils, Network Rail, Kubata and, most recently, the national DIY retailer, Wickes.”

Nigel Alltimes

Managing Director of Alltimes



Applied Graphene Materials *Genable*® dispersion has demonstrated noticeable improvements in several existing primer formulations; we are currently investigating ways of utilising these developments commercially.”

Geoff Mackrill

Managing Director, Teal and Mackrill

BUSINESS REVIEW CONTINUED

with Adrian Potts

Protective coatings sector continued Car care sub-sector

We classify the car detailing sector as a sub-group of protective coatings in that the products offer enhanced paint protection for vehicles including water damage through to UV protection. With a format which is typically either liquid or wax type, the products used in this sector lend themselves well to the addition of **Genable®** graphene nanoplatelet dispersions. The sector is also innovation hungry and relatively fast to market.

Opportunities centre on the potential to establish a next generation of product performance which is advanced from current nanomaterials technology through the inclusion of graphene. Barrier performance and longevity of coating are some of the key targets being aimed for. Having seen early success with product launches with Infinity Wax and EZ Car Care in the UK with both formats of product, we have seen a promising increase in activity in the sector with a number of opportunities with customers taking product for evaluation.



Post-period we were pleased to see Infinity Wax launch a second graphene-enhanced product to the market in the form of a graphene-loaded wax. Thanks to our close engagement with Infinity Wax on the development of this product, the company was able to deliver it to the market ahead of schedule. Michael Cipriani, Founder of Infinity Wax, noted:

Such successful outcomes embody our ambition for AGM – the supply of technically excellent products which work well for our customers in an easy-to-use format delivered on time and to expectation.



The new Infinity Wax Graphene wax is in production ahead of its launch on 1 February. Another exciting product with high graphene loading and consistent top tier verified performance using Applied Graphene Materials dispersions and CHT Group polymers. Big thanks to Applied Graphene Materials for ensuring our material was delivered ahead of schedule.”

◀ **Infinity Wax Graphene wax**

Another Graphene innovation made possible with **Genable®** dispersions from Applied Graphene Materials.

In the period, a second product from EZ Car Care/Halo Automotive was launched for alloy wheel applications. This microcrystalline wax based polish is the result of the continued partnership and a rigorous testing programme delivered by Halo. The product delivers extended performance claims, including improved thermal and chemical resistance to enhance coating durability further for demanding wheel and exhaust applications. The temperature resistance made possible through the new graphene nanoplatelet formulation helps with durability when alloy wheels heat up from consistent brake use. Combining these attributes with excellent barrier performance means that water spotting is also less likely to occur. Again, the positive outcome of a technical product meeting the needs of the customer has resulted in a successful product outcome.

We are also anticipating the imminent release of a new customer product with Constellation Chemicals Ltd. AGM Graphene nanoplatelet infused Snow Sealant product offers a combination of hydrophobicity, heat dissipation, gloss and durability.

We look forward to further success with the growing number of engagements for product developments in this sector.

Distributor update

Combining strong product performance with a standardised product portfolio of **Genable®** dispersions, we have been successful in attracting a high-quality group of distributors to represent our products to predominantly coatings and liquid resin applications customers. Having completed training for each of these valued partners, we are starting to see positive progress in terms of engagements through them, with dispersed products being supplied as a result. Initially, these are for customer evaluation, but we remain confident that the model for distribution of a well-supported product range is the correct one, and that this will bring revenue success for our distributors and for AGM. Our current distributors sit predominantly in the industrial coatings supply chain and have been carefully selected to enable strong technical service to their customers.

In seeking to develop the distribution conduit to market, we announced two further geographical engagements in the period – with Gobarr in Turkey and ManHo Polymers in South Korea. Training has been completed with these new additions and we are seeing good initial progress with these partners.



BUSINESS REVIEW CONTINUED

with Adrian Potts

Composites sector

Activity in this sector is largely customer led, given the unique nature of the type of applications and potential for graphene to help achieve further performance improvements to what are already high-performance products. We continue with our focus to supply high-quality, liquid based dispersions to the market, in a range of suitable media.

Activity continues with both long-established customers for prepreg for structural and composite tooling development, automotive applications, innovative materials engineering opportunities for space and specific industrial application in the mass transit sector.

In all cases, we have been able to supply a specific dispersion to suit the end-use application to our customers to enable ease of application and incorporation of the graphene into the proposed end-use formulation. It is the capability of AGM to consistently achieve this, whether by standard dispersions or custom offerings, that differentiates AGM.

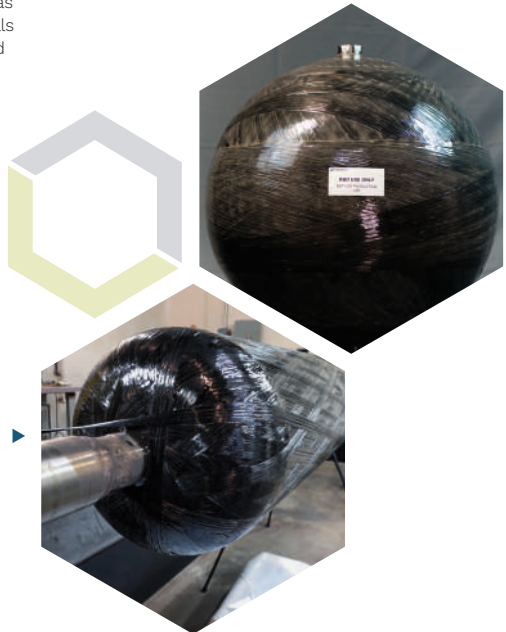
Successful outcomes in this sector, as with any other, will result from close collaboration with the customer to integrate novel graphene material into the end application to support the production environment. Such relationships as this are highly prized and are typified by the work AGM has undertaken with Infinite Composites Technology to demonstrate linerless carbon fibre pressure vessels for gas storage. The use of graphene as part of an overall materials engineered solution enables lighter weight, lower cost and speed of manufacture.

At the demonstrator stage so far, this customer has high ambition to grow significantly in the \$58 billion market from a low current participation for composites pressure vessels, but with growth at 25% per annum for composite solutions. Initially developed for the space sector as a superior lightweight solution, we see ourselves as well positioned with innovators such as ICT to achieve long range success with well-engineered composites solutions.

Some activity within the sector has been delayed due to COVID-19-related issues, mostly due to ongoing availability of resources to evaluate the technical solution offered by the projects. This is the case for participating companies from products developed with the CTES project and the NEAT project. We anticipate progress to begin again in the coming months as more staff are able to safely return to work post lockdown. This is expected to include the completion of third party testing on enhanced fire performance materials for interiors applications and the conclusion of customer evaluation of high-performance composite tooling solutions.

Infinite Composites pressure vessel for demanding aerospace applications

High quality graphene dispersion for ease-of-use in production environments.



Performance vs weight is critical for space applications – business leader Matt Villereal notes in a recent article:



Having previously focused only on storing high-pressure gases, Infinite Composites recently performed testing with NASA (at the same test site where the Apollo flight hardware was tested in the 1970s) to demonstrate that the technology can handle temperatures below negative 300 degrees Fahrenheit. This cryogenic capability means tanks can store liquid oxygen, liquid methane, and liquid nitrogen—unlike other composite materials, which typically become brittle at such low temperatures.”

Technical Application Notes

Illustrative technical data to support customer engagement is critical to successful outcomes.



With a range of application opportunities, we believe that our dispersion capabilities which offer an appropriate solution to integrate nanomaterials safely and consistently are key to success in the industrialisation of graphene-enhanced composite systems.

Further support to the sector describing the technical advantages that can be achieved with a well-formulated graphene product offering was completed with two presentations to The Society for the Advancement of Material and Process Engineering (“SAMPE”) and Composites NL. AGM’s enabling graphene technology was well received at these events.

We look forward to successful outcomes with the growing number of engagements in this sector.

Functional materials

We continue to work towards product approval for our TP300 heat-dissipative, low density adhesive products with two customers. Deployment of TP300 with an undisclosed customer is advancing well and we anticipate a positive outcome for use of the product in its application in due course. The end-use project is approaching customer approval and further material is anticipated to be required in the next few months for this project. The product is in a final round of testing specific to application.

We continue to work with Airbus to determine how to best utilise our materials in its application.

Customer activity in other areas outside of coatings and composites include the use of graphene for friction and permeability/barrier combination in bearings, low friction applications and lubricants. Each of these customer projects benefits from the use of Genable® dispersions customised to suit the end objectives.

Marketing

Our rebranding effort has been completed with a website redesign and enhancements to the searchability of our data. The new branding reflects AGM’s positioning at the forefront of harnessing the possibilities of graphene. Branding has been completed throughout the range including improvements in product labelling and marketing collateral. Over the past twelve months, we have made good use of virtual conference and exhibition opportunities which have led to positive marketing results. AGM has given presentations at conferences including the OTC Investor Conference, the SAMPE Graphene Leadership Summit and the Dutch Composites Association. The Company plans to present at NACE Corrosion 2021, the American Coatings Association Technical Conference and the European Coatings Show and Conference in the coming months.

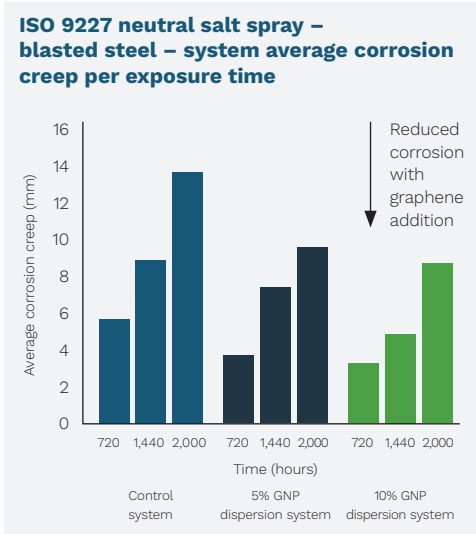
BUSINESS REVIEW CONTINUED

with Adrian Potts

Technology, regulatory and manufacturing status

Our technology roadmap continues to focus on dispersion know-how on a developing basis to satisfy a wider range of graphene applications. It is the capability to utilise graphene nanoplatelet materials in a dispersed format which we believe is critical to success. The separation of nanomaterials into a well-dispersed array in the finished product maximises the effectiveness of the materials for a wide range of performance objectives. This is the case whether considering tortuosity through coating layers for enhanced barrier performance, anti-corrosion and chemical resistance, conductivity aspects, or indeed mechanical performance gains.

We remain committed to delivering our current systems in growing volumes and to developing new methods for dispersing graphenes into different media to achieve these objectives as a means of creating a revenue stream through the ongoing sale of dispersed materials.



Regarding our application roadmap, c. 86% of all current activity is in support of a successful completion and demonstration of performance advantages in coatings technology. The output from this is:

- dispersed product formulations with the required attributes for successful deployment at scale; and
- exemplar data to demonstrate the potential of the technology.

The introduction of GNPs, latterly with the efficient Genable® 1250 water based system, offers a significant increase in corrosion performance as measured by average creep. The use of this innovation is expected to help meet corrosion performance requirements for hidden and visible steel work in medium risk environments with low VOC products. The generation of such enabling data is key to the successful deployment of graphene in the coatings space in order to demonstrate the possibilities. We look forward to ongoing engagements with current and new customers in the water based coatings technology space. The use of water based technology is also feeding our elastomer technology development programme.

Further technology platform work continues to wrap up the development of exemplar data for extreme environments with our CX-type formulation offering. We are further progressing maximising the opportunity for engagement with the coatings sector and beyond through the development of a range-extending platform using bio based solvents and resins and exempt solvents.

Data development is currently also addressing the area of chemical resistance with an extensive programme progressing well. This is anticipated to result in further exemplar data to support the use of graphene in areas such as pipeline applications through to chemical storage facilities (using both coatings and composites) and waste water treatment.

Longer range innovation includes partnerships with Northumbria and Durham Universities looking at broader opportunities for the effective processing and use of graphene.

Investigative battery technology using our graphene materials is also developing via a targeted approach using our coatings technology and detailed know-how in the application of graphene. A number of work streams are ongoing looking at next generation battery potential.

We continue our approach to IP protection through patent applications and trademark registration – particularly as we develop our distributor base. A number of patent applications are in process currently at various examination and review stages.

Pursuing regulatory approval for graphene as a novel materials technology is seen by the Board as a critical objective to overcome the barrier to entry for volume use of graphene dispersions. As such, the Company places significant emphasis upon addressing the developing regulatory requirements related to deployment of nanomaterials such as high-aspect ratio graphenes.

The most notable regulatory outcome in the period was the successful feedback from ECHA regarding approval for the supply of larger volumes of graphene for graphene

consortium members. This allows each consortium member to supply up to ten tonnes of powder in products within the EU. Further detailed review is anticipated over the coming couple of years with ECHA, but it was pleasing to be able to report this major milestone for AGM, for the Graphene Consortium and for the graphene industry at large.

Effort has continued apace in regulatory aspects to support the development of distributors in each of their territories to support the volume deployment of our graphene materials in those regions. This includes Turkish REACH, K-REACH for Korea, UK REACH and engagement with the USA regulatory bodies. A significant effort is ongoing with USA approval in order to support volume sales opportunities and Maroon Group as our distribution partner, and this has resulted in appointment of a specialist contractor to support our engagement with the Environmental Protection Agency (EPA). We continue to carry out safe use assessment and risk analysis for use of our materials in a range of settings. We are of the firm belief that supply of our materials in a dispersed format supports the safe deployment of 2D high-aspect ratio materials through encapsulation, and that, therefore, the provision of a broad ranging dispersion product offering is the best way forward to developing volume revenues in the longer term.

We welcome the issuing of further ISO standards recently which provide further guidance on the characterisation of materials in the graphene space and which will support a robust approach to product integration and definition by the end user.

Operational aspects

Following our recent successful fundraise, we now have the cash reserves to address a number of areas to enable further revenue growth, including:

- spray booth capability – the intent to move in house our technical spraying for coatings to ensure quality and consistency as well as cost management;
- headcount to service customer growth and product demand;
- further capacity enhancements – especially for dispersions; and
- we will continue to manage cash prudently.

We look forward to announcing further development of these projects in the coming months.

Sustainability

The sustainability dialogue surrounding AGM's products and services falls into two areas:

- operational excellence internally through policies and procedures; and

- sustainable solutions for our customers and their extended clients.

We are seeing increasing external interest in our products from a sustainability perspective – from the aforementioned release of our water based technology to the significantly increased durability and longevity that graphene-enhanced products can give. We see this in a number of areas:

- composite materials products which have enhanced fracture toughness in the matrix resin and thus higher performance and greater potential durability. The ability to engineer materials more effectively with graphene is being realised, as exemplified with our customer Infinite Composites Technologies; and
- coatings technologies which are more efficient and as a result offer good sustainability credentials. Through the extensive technology development with Alltimes Coatings, this is realised in a number of areas:
 - overall reduction in cost of ownership through the use of a graphene-enhanced coatings product. Corrosion in its many forms is estimated to cost the global economy substantially per annum due to damage to steel buildings and infrastructure;
 - extending the period of protection for a metal structure and cladding is a target to create a more sustainable future, especially for a finite resource such as metal, the ore for which has to be mined;
 - extended warranty for the Advantage Graphene product – with graphene forming a higher performance barrier between the metal and the outside elements that cause and speed up rust, Advantage Graphene has exceptionally longer life expectancy than traditional roof coatings. In this case, a 30 year product warranty is offered; and
 - due to its thin, 2D structure, graphene layers are significantly thinner than some single lamina flake materials found in a standard roof coating. Graphene is a highly efficient additive, enabling thinner coatings.

Coupling such benefits with the work we have ongoing with sustainable dispersion products such as bio based materials and water based technology, we see significant opportunity to engage with customers as they grapple with increasing environmental pressure and look to develop opportunity for sustainable options.

Internally, we continue to develop our operational excellence. We have a focus on quality and improvement in all aspect of the business.

BUSINESS REVIEW CONTINUED

with Adrian Potts

Staffing through COVID-19

The Board has consistently sought to employ the safest working practice through the COVID-19 pandemic and has considered carefully how best to balance the continuity of long range testing we typically perform with the safety and wellbeing of our employees. Throughout the pandemic, we have been able to maintain continuity through careful organisation and working from home as appropriate. As previously announced, we have not utilised the UK Government's furlough scheme. The Board believes that as the effects of the pandemic subside and vaccination becomes more widespread, AGM will emerge in a strong position as an organisation.



Board composition

Mike Townsend has indicated that he wishes to step down as a Non-Executive Director from the AGM Board with effect from 25 March 2021. This change is in line with the developed strategy for IP Group plc and IP Group will not be replacing Mike. In the meantime, I wish to record my thanks to Mike for his resolute guidance and input as part of the Board team to help steer AGM to the position of being the leading technology provider that it is today. It has been an absolute pleasure working together with Mike and I wish him well in the future.

Outlook

The Board is pleased with the continuing progress we have made to further develop AGM's dispersed GNP technology platform and the potential to extend this to adjacencies applicable to the coatings sector. Solid progress has been made with coatings customers, and it is positive that we are now starting to see repeat business with a number of these long range engagements. Progress with customer-led projects in composites and functional materials is continuing, although not without technical challenges.

AGM continues to make excellent progress in the development of a distributor based conduit to market for its products and services and is able to offer its distribution partners exceptional customer service in determining the optimum product to meet a customer's application challenge.

The Board is especially pleased with the approval by ECHA of an increased powder volume for EU supply. This has addressed a major barrier to adoption of this new technology in the region and we continue to support regulatory approval efforts in other regions globally to help our new distributors grow our sales.

New funding successfully secured in January 2021 gives the business a cash runway well into 2023, and gives us every opportunity to push forward in developing a solid platform of sales from AGM's unique product and technology offering.

Adrian Potts
Chief Executive Officer
24 March 2021

FINANCIAL REVIEW

with David Blain



DAVID BLAIN

Summary

- Revenues increased to £42,000 (2020: £35,000) despite the effect of COVID-19.
- Operating costs reduced reflecting the re-alignment of resources completed in 2019.
- EBITDA loss of £1.6 million (2020: £1.9 million loss), reflecting ongoing investment in working with commercial partners and research and development of new applications.
- Cash at bank of £2.3 million (2020: £4.3 million).
- EPS loss of 3.3 pence per share (2020: loss of 4.0 pence per share).
- Post period end fundraising of £5.5 million (net of costs) and receipt of R&D tax credit £461,000.

Revenue

Revenue for the period was £42,000 (2020: £35,000) arising from the supply of production orders of graphene and evaluation quantities of graphene to commercial partners. Revenues increased compared to the prior year despite the disruption to trading caused by COVID-19 throughout the period.

Operating costs

Operating costs for the period were £1,688,000 (2020: £2,196,000). The reduction in costs of £508,000 includes the reduction of staff costs of £281,000 following the re-alignment of operations completed in 2019 and the cost of implementing the re-alignment of £168,000, which was incurred in the previous period.

Loss on ordinary activities before tax

A loss on ordinary activities before tax of £1,794,000 (2020: loss of £2,278,000) was recognised.

Loss on ordinary activities before interest, tax, exceptional costs, depreciation and amortisation (EBITDA)

The EBITDA loss for the Group narrowed to a loss of £1,578,000 for the six month period ended 31 January 2021 (2020: loss of £1,900,000). The losses incurred in the period relate to the day to day costs of the business and include the ongoing costs associated with research and development of new applications of graphene together with the technical input provided to our commercial partners as they look to evaluate and incorporate graphene into their product lines. The EBITDA loss for the period under review was £322,000 less than the previous period, primarily due to staff costs falling by £281,000 following the re-alignment of resources completed towards the end of 2019.

Exceptional costs

Exceptional costs recognised in the period were £nil (2020: £168,000). The costs incurred in the prior year related to a re-alignment of the cost base during that period.

Net finance expense

Net finance expense for the period was £2,000 (2020: £18,000 income), reflecting the falling cash balances and low interest rates.

Tax

R&D tax credits for the current year are accrued on a monthly basis, resulting in a credit of £178,000 for the period (2020: £300,000).

Earnings per share

Basic earnings per share was a loss of 3.3 pence per share (2020: loss of 4.0 pence per share). Adjusted basic earnings per share (before exceptional costs) was a loss of 3.3 pence per share (2020: loss of 3.7 pence per share).

FINANCIAL REVIEW CONTINUED

with David Blain

Dividend

No dividend has been proposed for the period ended 31 January 2021 (2020: £nil).

Cash flow

Net cash used in operations was £1,294,000 (2020: £2,274,000).

Capital expenditure of £106,000 (2020: £157,000) was incurred in the period mainly relating to the development of intellectual property assets.

Balance sheet

Net assets reduced to £3,828,000 (2020: £6,661,000), principally reflecting the trading loss for the period.

Cash at bank at 31 January 2021 was £2,291,000 (2020: £4,329,000). Monies are on deposit with a small number of financial institutions for time periods ranging between instant access and up to 95 days in maturity. On 12 February 2021 the Group announced that its shareholders had approved an issue of new shares which generated cash of £5.5 million net of costs and this cash has subsequently been received. An R&D tax credit of £461,000 was also received during February 2021.

The property lease at Wilton was renewed during the period, resulting in the recognition of an additional Right of Use ("ROU") asset of £197,000 and a lease liability of £197,000.

Accounting policies

The Group's consolidated financial information has been prepared in accordance with International Accounting Standards in conformity with the requirements of the Companies Act 2006. The Group's significant accounting policies, which are consistent with those set out in the audited financial statements for the year ended 31 July 2020, have been applied consistently throughout the period.

Principal risks and uncertainties

Risk management forms an integral part of the business planning and review cycle. The risk associated with adequacy of funding has been significantly reduced following the fundraising in February 2021 as this provides funding well into 2023. The other principal risks and uncertainties remain unchanged from those set out on pages 28 to 31 of the Annual Report for the year ended 31 July 2020.

Forecasting the timing and quantum of revenues at this stage of development continues to be a key difficulty faced by the Group as this is heavily dependent upon the product development cycle of our customers and, therefore, is not under our control. However, we are encouraged by the growing number of products that our customers have launched, the expansion of our distribution through new appointments in 2020 and the strength of our sales pipeline.

Cautionary statement

The Business and Financial reviews have been prepared for the shareholders of the Company, as a body, and no other persons. Their purpose is to assist shareholders of the Company in assessing the strategies adopted by the Group and the potential for those strategies to succeed, and for no other purpose. The Business and Financial reviews contain forward-looking statements that are subject to risk factors associated with, amongst other things, the economic and business circumstances occurring from time to time in the sectors and markets in which the Group operates. It is believed that the expectations reflected in these statements are reasonable but they may be affected by a wide range of variables which could cause actual results to differ materially from those currently anticipated. No assurances can be given that the forward-looking statements in the Business and Financial reviews will be realised. The forward-looking statements reflect the knowledge and information available at the date of preparation.

David Blain
Chief Financial Officer
24 March 2021



The risk associated with adequacy of funding has been significantly reduced following the fundraising in February 2021 as this provides funding well into 2023."

CONSOLIDATED INCOME STATEMENT AND STATEMENT OF COMPREHENSIVE INCOME

for the six months ended 31 January 2021

	Note	Unaudited 6 months to 31 January 2021 £'000	Unaudited 6 months to 31 January 2020 £'000	Audited year ended 31 July 2020 £'000
Revenue	5	42	35	83
Cost of sales		(146)	(135)	(215)
Gross loss		(104)	(100)	(132)
Operating expenses		(1,688)	(2,196)	(3,566)
EBITDA		(1,578)	(1,900)	(3,084)
Exceptional costs		—	(168)	(168)
Depreciation of tangible fixed assets		(214)	(228)	(446)
Operating loss		(1,792)	(2,296)	(3,698)
Net finance (expense)/income		(2)	18	33
Loss on ordinary activities before tax	5	(1,794)	(2,278)	(3,665)
Tax on loss on ordinary activities	3	178	300	476
Loss for the period attributable to equity shareholders		(1,616)	(1,978)	(3,189)
Other comprehensive income		—	—	—
Total comprehensive loss		(1,616)	(1,978)	(3,189)
Earnings per share (pence per share)				
Basic	6	(3.3)	(4.0)	(6.4)
Adjusted	6	(3.3)	(3.7)	(6.1)

EBITDA comprises loss on ordinary activities before interest, tax, exceptional costs, depreciation and amortisation.

Financial information

CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

for the six months ended 31 January 2021

	Share capital £'000	Share premium £'000	Merger reserve £'000	Retained earnings £'000	Unaudited total £'000
As at 31 July 2019	989	27,473	1,231	(21,205)	8,488
Comprehensive loss	—	—	—	(1,978)	(1,978)
IFRS 2 share based payments	—	—	—	150	150
As at 31 January 2020	989	27,473	1,231	(23,033)	6,660
Comprehensive loss	—	—	—	(1,211)	(1,211)
IFRS 2 share based payments	—	—	—	(164)	(164)
As at 31 July 2020	989	27,473	1,231	(24,408)	5,285
Comprehensive loss	—	—	—	(1,616)	(1,616)
Issue of shares (net)	5	87	—	—	92
IFRS 2 share based payments	—	—	—	67	67
As at 31 January 2021	994	27,560	1,231	(25,957)	3,828

CONSOLIDATED BALANCE SHEET

as at 31 January 2021

	Note	Unaudited 31 January 2021 £'000	Unaudited 31 January 2020 £'000	Audited 31 July 2020 £'000
Assets				
Non-current assets				
Intangible assets		369	211	276
Right-of-use assets		148	99	24
Property, plant and equipment		1,268	1,518	1,396
		1,785	1,828	1,696
Current assets				
Inventories		77	69	74
Trade and other receivables		236	221	281
Corporation tax recoverable		662	1,000	482
Cash		2,291	4,329	3,685
		3,266	5,619	4,522
Liabilities				
Current liabilities				
Trade and other payables		(1,075)	(688)	(908)
Lease liabilities		(148)	(91)	(21)
		(1,223)	(789)	(929)
Net current assets		2,043	4,840	3,593
Non-current liabilities				
Lease liabilities		—	(8)	(4)
Net assets		3,828	6,660	5,285
Shareholders' equity				
Called up share capital	8	994	989	989
Share premium account		27,560	27,473	27,473
Merger reserve		1,231	1,231	1,231
Retained earnings		(25,957)	(23,033)	(24,408)
Equity shareholders' funds		3,828	6,660	5,285

Financial information

CONSOLIDATED CASH FLOW STATEMENT

for the six months ended 31 January 2021

	Note	Unaudited 6 months to 31 January 2021 £'000	Unaudited 6 months to 31 January 2020 £'000	Audited year ended 31 July 2020 £'000
Operating activities				
Net cash used in operations	7	(1,294)	(2,274)	(3,465)
Finance income		13	2	41
Tax received		—	623	1,316
Net cash used in operating activities		(1,281)	(1,649)	(2,108)
Investing activities				
Purchase of intangible assets		(93)	(56)	(121)
Purchase of property, plant and equipment		(13)	(101)	(221)
Net cash used in investing activities		(106)	(157)	(342)
Financing activities				
Issue of shares (net of costs)		71	—	—
Capital element of lease obligations		(74)	—	—
Interest element of lease obligations		(4)	—	—
Net cash generated from financing activities		(7)	—	—
Net decrease in net cash and cash deposits		(1,394)	(1,806)	(2,450)
Opening net cash and cash deposits		3,685	6,135	6,135
Net cash and cash deposits at end of period		2,291	4,329	3,685
Net cash and cash deposits include:				
Cash (maturity less than 95 days)		2,291	4,329	3,685
Net cash and cash deposits at end of period		2,291	4,329	3,685

NOTES TO THE INTERIM REPORT

for the six months ended 31 January 2021

1 General information

The principal activity of Applied Graphene Materials plc is the manufacture, dispersion and development of applications for graphene. The Group operates principally in the United Kingdom.

The Company is incorporated and domiciled in the United Kingdom and its registered number is 8708426. The address of the registered office is The Wilton Centre, Redcar, Cleveland TS10 4RF. The Company was incorporated on 27 September 2013.

The interim financial information was approved for issue on 24 March 2021.

2 Basis of accounting

The consolidated interim financial information for the period ended 31 January 2021 has been presented under the historical cost accounting convention, as modified by financial assets and liabilities at fair value through the income statement and share based payments at fair value, and in accordance with International Accounting Standards in conformity with the requirements of the Companies Act 2006 and IFRIC interpretations. The consolidated interim financial information has been prepared on a going concern basis.

The accounting policies used in the consolidated interim financial information are consistent with those set out in the audited financial statements for the year ended 31 July 2020. These accounting policies are drawn up in accordance with adopted International Accounting Standards (IAS) and International Financial Reporting Standards as issued by the International Accounting Standards Board and adopted by the EU.

AIM-quoted companies are not required to comply with IAS 34 Interim Financial Reporting and accordingly the Company has taken advantage of this exemption.

Further IFRS or interpretations may be issued that could apply to the Group's financial statements for the year ending 31 July 2021. If any such amendments, new standards or interpretations are issued, then these may require the consolidated financial information provided in this report to be changed. The Group will continue to review its accounting policies in light of emerging industry consensus on the practical application of IFRS.

The preparation of financial information in conformity with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Although these estimates are based on management's best knowledge of the amount, events or actions, actual events ultimately may differ from those estimates.

The consolidated interim financial information does not include all financial risk management information and disclosures required in the annual financial statements.

The consolidated interim financial information for the six months ended 31 January 2021 and for the six months ended 31 January 2020 contained within the Interim Report does not constitute statutory financial statements within the meaning of Section 434 of the Companies Act 2006 and is unaudited. The comparative figures for the year ended 31 July 2020 have been extracted from the audited financial statements.

New and amended standards adopted by the Group

No new or amended standards have been adopted by the Group in respect of the interim period ended 31 January 2021.

3 Taxation

The Group has not recognised any tax assets in respect of trading losses from previous financial years. Research and development tax credits for the period up to 31 January 2021 have been accrued after having taken into account the anticipated level of research and development work carried out in the period.

4 Dividends

No dividend has been proposed for the period ended 31 January 2021 (2020: £nil).

NOTES TO THE INTERIM REPORT CONTINUED

for the six months ended 31 January 2021

5 Segmental analysis

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the Chief Operating Decision Maker (CODM) in deciding how to allocate resources and in assessing performance. The Group's Chief Executive Officer has been identified as the CODM. The Group has one operating segment: the manufacture, dispersion and development of applications for graphene. Revenue and profits arising from that operating segment are the same as presented on the face of the consolidated income statement and statement of comprehensive income. As the business evolves this is an area that will be assessed on a regular basis and additional segmental reporting will be provided at the appropriate time.

6 Earnings per share

Basic earnings per share is calculated by dividing the earnings attributable to Ordinary shareholders by the weighted average number of shares in issue during each period. The weighted average number of shares in issue during the period used in the calculation of basic earnings per share was as follows:

	Unaudited 6 months to 31 January 2021 'm	Unaudited 6 months to 31 January 2020 'm	Audited year ended 31 July 2020 'm
Weighted average number of shares for basic earnings per share	49.6	49.4	49.4

Adjusted earnings per share has been calculated so as to exclude the effect of exceptional costs including related tax charges and credits. Adjusted earnings used in the calculation of basic earnings per share reconciles to basic earnings as follows:

	Unaudited 6 months to 31 January 2021 £'000	Unaudited 6 months to 31 January 2020 £'000	Audited year ended 31 July 2020 £'000
Basic earnings	(1,616)	(1,978)	(3,189)
Exceptional costs	—	168	168
Adjusted earnings	(1,616)	(1,825)	(3,021)
Earnings per share (pence per share)			
Basic	(3.3)	(4.0)	(6.4)
Adjusted earnings per share (pence per share)			
Basic	(3.3)	(3.7)	(6.1)

The Group was loss making for the periods ended 31 January 2021 and 31 January 2020 and also for the year ended 31 July 2020. Diluted loss per share has not been presented above as the effect of share options issued is anti-dilutive.

7 Notes to the cash flow statement

	Unaudited 6 months to 31 January 2021 £'000	Unaudited 6 months to 31 January 2020 £'000	Audited year ended 31 July 2020 £'000
Loss for the period attributable to equity shareholders	(1,616)	(1,978)	(3,189)
Tax on loss	(178)	(300)	(476)
Net finance income	2	(18)	(33)
Depreciation of property, plant and equipment	214	228	446
Exceptional costs	—	168	168
EBITDA	(1,578)	(1,900)	(3,084)
Depreciation of property, plant and equipment	(214)	(228)	(446)
Exceptional costs	—	(168)	(168)
Operating loss	(1,792)	(2,296)	(3,698)
Depreciation of tangible fixed assets	214	228	446
IFRS 2 share based payments charge	67	150	(14)
Decrease/(increase) in net working capital	217	(356)	(199)
Net cash used within operations	(1,294)	(2,274)	(3,465)

8 Share capital

	Unaudited number of Ordinary shares	Unaudited total £'000
Allotted, called up and fully paid		
At 31 July 2019 Ordinary shares of 2 pence each	49,429,380	989
At 31 July 2020 Ordinary shares of 2 pence each	49,429,380	989
New shares issued	274,912	5
At 31 January 2021 Ordinary shares of 2 pence each	49,704,292	994

NOTES TO THE INTERIM REPORT CONTINUED

for the six months ended 31 January 2021

9 Related party transactions

Transactions between Applied Graphene Materials plc and its subsidiaries, which are related parties, have been eliminated on consolidation and are not disclosed in this note.

Transactions with shareholders

The following transactions with shareholders of the Group were recorded, excluding VAT, during the period:

	Unaudited 6 months to 31 January 2021 £'000	Unaudited 6 months to 31 January 2020 £'000	Audited year ended 31 July 2020 £'000
University of Durham (shareholder)			
Staff secondment, consultancy and other fees	—	4	4
Top Technology Limited (controlled by shareholder)			
Non-Executive fees and expenses	8	8	15
Corporate finance fees	—	—	8
IP2IPO (shareholder)			
Non-Executive Director expenses	8	—	1

Remuneration of key management personnel

The remuneration of the Directors and the key management personnel of the Group is set out below in aggregate for each of the categories specified in IAS 24 Related Party Disclosures:

	Unaudited 6 months to 31 January 2021 £'000	Unaudited 6 months to 31 January 2020 £'000	Audited year ended 31 July 2020 £'000
Short term employee benefits (excluding bonuses)	407	373	772
Payments to third parties	8	15	15
IFRS 2 share based payments charge	67	150	(14)
	482	538	773

10 Seasonality

The Group experiences no material variations in performance arising due to seasonality.

11 Post balance sheet events

On 12 February 2021 the Group announced that its shareholders had approved an issue of 14,634,146 new Ordinary shares of 2 pence each which generated cash of £5.5 million net of costs and this cash has subsequently been received.

An R&D tax credit of £461,000 was received during February 2021.

12 Availability of Interim Report

It is anticipated that the Interim Report will be sent to all shareholders on 7 April 2021. Electronic copies of the report will also be available on Applied Graphene Materials' website at www.appliedgraphenematerials.com.

GLOSSARY OF TERMS

Term	Meaning
Anti-corrosion	A type of coating made with neutral or slightly alkaline pigments and a water resisting vehicle for use as a primer on steel and other metals to prevent or inhibit corrosion
Barrier system	A method of preventing corrosion by using barrier materials within the coating that restrict the movement of water and other chemicals towards the metal surface
Coat/coating	When used as a verb, "coat" means to cover or apply; as a noun, the word signifies the amount of finishing material applied to a surface during one or more applications without a drying period between applications
Composites	A material made up of resin and reinforcement
Conductive inks	An ink that results in a printed object which conducts electricity
Conductivity – electrical	The degree to which a specified material conducts electricity, calculated as the ratio of the current density in the material to the electric field which causes the flow of current
Conductivity – thermal	The rate at which heat passes through a specified material, expressed as the amount of heat that flows per unit time through a unit area with a temperature gradient of one degree per unit distance
Dispersion	A mixture in which very small pieces of one substance are scattered within another substance
Elasticity	The property of a film that allows it to stretch or otherwise change size or shape and return to its original condition without breaking or rupturing
Fracture toughness	Resistance to cracks, crazing or delamination resulting from physical damage
Functional fluids	Sustainable base oil products – enhanced with graphene nanoplatelets – offer exceptional performance, and friction and wear protection, especially for lubricants and machining fluids used in automotive and industrial applications
Mechanical	Strength, hardness, toughness, elasticity, plasticity, brittleness, ductility and malleability are mechanical properties used as measurements of how materials behave under a load
NATEP	National Aerospace Technology Programme
Polymer	A long-chain molecule, consisting of many repeat units
Prepreg	A factory-made combination of reactive resins and reinforcing fibres, plus other necessary additive chemicals, ready to be moulded
Primer	A substance used as a preparatory coat on wood, metal or canvas, especially to prevent the absorption of subsequent layers of paint or the development of rust
Resin system	A polymer with indefinite and often high molecular weight and a softening or melting range that exhibits a tendency to flow when subjected to stress
Substrate	A material which provides the surface on which something is deposited or inscribed
Thermal paste adhesive	A thermally conductive paste applied to mating surfaces to bond them together by surface attachment in order to transfer heat across the materials
Tie coat	Paint specifically formulated for situations and conditions to provide a transition from a primer or undercoat to a finish coat. Tie coats are used to seal the surface of a zinc-rich primer, to bond generically different types of coatings, or to improve the adhesion of a succeeding coating

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Applied Graphene Materials' commitment to environmental issues is reflected in this Interim Report, which is printed on Amadeus Silk, an FSC® certified material. Dry waste associated with this production is diverted from landfill and the Interim Report is produced in accordance with ISO 140001 and ISO 9001 compliance.



APPLIED GRAPHENE MATERIALS

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