

28 April 2021

## March Quarterly Activities Review

Advanced materials company First Graphene Limited (ASX: FGR, "First Graphene" or "the Company") is pleased to provide this update on its financial and operational performance for the quarter ended 31 March 2021.

### HIGHLIGHTS

- Commencement of new Chief Executive Officer Michael Bell
- Memorandum of Understanding with Gerdau S.A. to open up American markets
- Extension of commercial relationship with planarTECH
- Product range extended with the introduction of PureGRAPH® AQUA
- Successful results received in bucket liner project

#### Commencement of New Chief Executive Officer

Michael Bell commenced as CEO in early January 2021. On commencing, he commented: *"The Company has completed significant research to prove the benefits of adding PureGRAPH® to a broad range of industrial applications and now we are in a position to focus on strong commercial growth."*

Mr Bell immediately set about establishing dedicated commercial teams to cater for markets in the composites, plastics and adhesives, rubber, and cement and concrete sectors, areas in which the Company is focussing its revenue growth.

The first member of the team is First Graphene Process Engineer Neil Armstrong, who was promoted to the role of Commercial Manager – Composites, Plastics and Adhesives. Neil was closely involvement with R&D to develop PureGRAPH® applications, making him the ideal candidate for the role. Neil will continue to focus on educating the market while pursuing new opportunities with manufacturers of composites, plastics and adhesives.

#### Memorandum of Understanding with Gerdau SA

In March, the Company entered into a Memorandum of Understanding (MOU) with Gerdau S.A. for Gerdau to sell First Graphene's products and develop applications with these products in mutually agreed economic sectors and business areas.

The MoU allows the two companies to negotiate terms towards a binding agreement which will establish:

- (i) an initial Commercial Agreement for distribution and collaboration, and
- (ii) rules for a potential investment and share acquisition from Gerdau into First Graphene if predetermined sales and investment targets are achieved by Gerdau.

The Commercial Agreement will comprise an exclusivity arrangement for Gerdau to sell the Company's graphene products and develop applications with these products in mutually agreed economic sectors and business areas.

The two companies agreed to collaborate on the introduction of graphene materials and graphene applications into the Americas market. First Graphene will support Gerdau with its extensive application knowledge and technology focused on graphene dispersion in different matrixes and materials. In turn, Gerdau will invest and develop end-use application in the regions to which it is awarded distribution.

### **Extension of Commercial Relationship with planarTECH**

During the quarter, the Company and planarTECH agreed to extend their existing commercial relationship. First Graphene has been providing PureGRAPH® products to planarTECH since May 2020.

The extended commercial relationship includes planarTECH working to sell PureGRAPH® graphene to manufacturers in South East Asia, China, Taiwan, Korea and Japan.

planarTECH had previously established potential markets with manufacturers throughout the region but was unable to access consistent quality graphene in commercial quantities from other suppliers.

However, having verified PureGRAPH® for the enhancement of its own products, planarTECH has confidence in working with First Graphene in this extended arrangement.

### **Product Range Extended with PureGRAPH® AQUA**

In March the Company extended its product offerings with the introduction of the new PureGRAPH® AQUA range of graphene additives.

These ground-breaking products are pre-dispersed in water and supplied as pastes for easy formulation into water and polar solvent based formulations. PureGRAPH® AQUA is available in lateral sizes ranging from 5 microns to 50 microns, providing flexible solutions for customer formulations.

PureGRAPH® AQUA is particularly suitable for use with products such as paints, latex and cement composites.

The larger platelet sizes in the PureGRAPH® AQUA range are particularly suited to the cement and rubber industries, providing increased mechanical properties.

The pre-dispersed graphene also provides materials handling benefits to the cement and rubber industries.

### Bucket Wear Liner Trial Results

Performance results from the PureGRAPH® 20 enhanced wear liners greatly exceeded expectations. The trial was conducted over a 62-week period and demonstrated a six times longer life as a result of reduced wear abrasion rates.

The bucket liner was installed at a major iron ore producer’s load-out facility in the Western Australian Pilbara region in mid-2019. A standard wear liner and a graphene enhanced ArmourGRAPH™ wear liner ran simultaneously in the same location for the 62-week period.

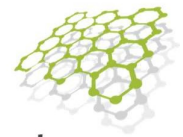
The ArmourGRAPH™ liner, manufactured by newGen Group, was prepared using 1 per cent PureGRAPH® 20 in the hot cast polyurethane (PU). The PureGRAPH® enhanced liners were used side by side with standard PU liners throughout the 62-week trial before being returned to newGen Group for assessment.

The wear rates are summarised below

	PureGRAPH® 20 liner	Standard PU liner
Average abrasion loss - mm	1.16	7.17
Maximum abrasion loss - mm	2.20	8.90
Average wear rate on rear sliding face mm/week	0.019	0.12
Maximum wear rate on rear sliding face - mm/week	0.035	0.14

**Table 1: Comparison of Average Wear Rate between a PureGRAPH® enhanced liner and a standard PU liner.**

The detailed abrasion analysis is reported in Table 1 and confirms the abrasion loss is significantly reduced in the PureGRAPH® enhanced ArmourGRAPH™ liner, with an approximate six times reduction in average abrasion loss. As abrasion loss is the primary mechanism of failure, a significant six times increase in lifespan of the wear liner is anticipated.



## ASX ANNOUNCEMENT



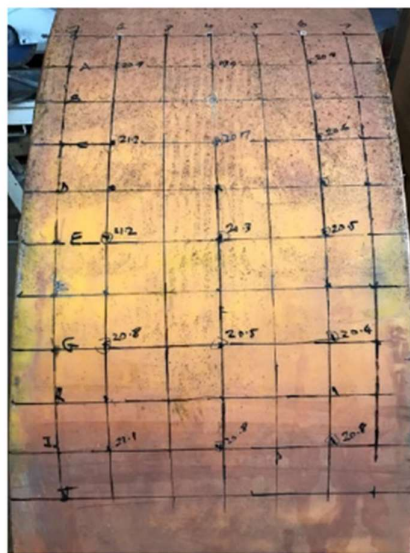
**Fig.1: a) ArmourGRAPH™ Liner containing PureGRAPH® 20**



**Fig.1: b) Standard PU Liner**



**Fig.2a): Control PU Liner**



**Fig.2b): Standard PU Liner After 62 Weeks**



**Fig.2c): ArmourGRAPH™ Liner After 62 weeks.**

### **Board and Leadership Changes**

On 1 March 2021, Michael Quinert was appointed to the board as a Non-Executive Director.

Mr Quinert, who is based in Melbourne, is a founding partner of Quinert Rodda Lawyers, practicing commercial and corporate law with a focus on capital raising and listing rule compliance. Mr Quinert spent three years as an internal solicitor at the ASX Melbourne Companies Department where he was closely involved in all aspects of company listings and compliance.

Over the past 20 years, Mr Quinert has been successfully involved with a number of ASX-listed companies, in the capacity as legal counsel and as a director, in the mining and technology sectors. His knowledge and experience will provide First Graphene's Board with an additional skill base as it enters what is promising to be a transformative year in the growth of the Company.

Mr Quinert is the Non-Executive Chairman of West Wits Mining Ltd.

On 23 March 2021, Aditya Asthana commenced as the Company's new Chief Financial Officer and Company Secretary.

With more than 14 years' experience in finance and business management, Mr Asthana also has significant international experience. He comes to First Graphene from Orica Ltd, where he served as Regional Head of Finance APAC in WA.

While with Orica, he also held roles as Interim Vice President Finance Australia Asia in Victoria, CFO / Finance Director – Indonesia and Finance Manager SEA, based in Singapore.

# ASX ANNOUNCEMENT



Significant March Quarter Announcements		
Date	Subject Matter	URL Link
12 Feb 2021	New CEO Sets Sites on Commercial Opportunities	<a href="https://asx.api.markitdigital.com/asx-research/1.0/file/2924-02340893-6A1020144?access_token=83ff96335c2d45a094df02a206a39ff4">https://asx.api.markitdigital.com/asx-research/1.0/file/2924-02340893-6A1020144?access_token=83ff96335c2d45a094df02a206a39ff4</a>
26 Feb 2021	FGR Extends Commercial Relationship with planarTECH	<a href="https://asx.api.markitdigital.com/asx-research/1.0/file/2924-02347077-6A1022171?access_token=83ff96335c2d45a094df02a206a39ff4">https://asx.api.markitdigital.com/asx-research/1.0/file/2924-02347077-6A1022171?access_token=83ff96335c2d45a094df02a206a39ff4</a>
4 Mar 2021	Bucket Wear Liner Trial Results Point to a 6x Improvement	<a href="https://asx.api.markitdigital.com/asx-research/1.0/file/2924-02349619-6A1023060?access_token=83ff96335c2d45a094df02a206a39ff4">https://asx.api.markitdigital.com/asx-research/1.0/file/2924-02349619-6A1023060?access_token=83ff96335c2d45a094df02a206a39ff4</a>
9 Mar 2021	MoU with Gerdau S.A. to Open American Markets for PureGRAPH®	<a href="https://asx.api.markitdigital.com/asx-research/1.0/file/2924-02351419-6A1023715?access_token=83ff96335c2d45a094df02a206a39ff4">https://asx.api.markitdigital.com/asx-research/1.0/file/2924-02351419-6A1023715?access_token=83ff96335c2d45a094df02a206a39ff4</a>
10 Mar 2021	PureGRAPH® Product Line to Include Water Dispersed Additive	<a href="https://asx.api.markitdigital.com/asx-research/1.0/file/2924-02352054-6A1023940?access_token=83ff96335c2d45a094df02a206a39ff4">https://asx.api.markitdigital.com/asx-research/1.0/file/2924-02352054-6A1023940?access_token=83ff96335c2d45a094df02a206a39ff4</a>

## Investors

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## About First Graphene Ltd (ASX: FGR)

*First Graphene Ltd. is the leading supplier of high-performing, graphene products. The company has a robust manufacturing platform based upon captive supply of high-purity raw materials and an established 100 tonne/year graphene production capacity. Commercial applications are now being progressed in composites, elastomers, fire retardancy, construction and energy storage.*

*First Graphene Ltd. is publicly listed in Australia (ASX:FGR) and has a primary manufacturing base in Henderson, near Perth, WA. The company is incorporated in the UK as First Graphene (UK) Ltd. and is a Tier 1 partner at the Graphene Engineering and Innovation Centre (GEIC), Manchester, UK.*

## PureGRAPH® Range of Products

*PureGRAPH® graphene powders are available in tonnage volumes with lateral platelet sizes of 50µm, 20µm, 10µm and 5µm. The products are high performing additives, characterised by their high quality and ease of use.*

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## Directors:

Warwick Grigor

Dr Andy Goodwin

Michael Quinert

## Trading Symbols

**Australia:** FGR  
FGROC

**Frankfurt:** FSE:M11

**USA OTC:** FGPHF

*With authority of the board, this announcement has been authorised for release, Aditya Asthana, Chief Financial Officer and Company Secretary.*