



Graphene Manufacturing Group

**GRAPHENE MANUFACTURING GROUP LTD**  
**Management's Discussion and Analysis**  
**For the three and nine month periods ended**  
**March 31, 2022**  
**(in Australian dollars)**

**(Unless specified otherwise, all amounts are expressed in Australian dollars)**

This Management's discussion and analysis ("MD&A") provides a review of Graphene Manufacturing Group Ltd's ("GMG" or the "Company") operations, performance and financial position for the three and nine month periods ended March 31, 2022. This MD&A should be read in conjunction with the unaudited condensed consolidated financial statements for the three and nine month periods ended March 31, 2022 and with the audited consolidated financial statements for the year ended June 30, 2021. The purpose of this document is to provide information on GMG's activities. The information contained herein is dated as of May 17, 2022. You will find more information about us on GMG's website and on SEDAR (the official site of the Canadian Securities Administrators, which is publicly available), including all news releases.

The period from January 1, 2022 to March 31, 2022 has been referred to as Q3FY22 and the period from January 1, 2021 to March 31, 2021 has been referred to as Q3FY21. The period from July 1, 2021 to March 31, 2022 has been referred to as 9MFY22 and the period from July 1, 2020 to March 31, 2021 has been referred to as 9MFY21. The financial year ending 30 June 2022 has been referred to as FY22 and the financial year ended 30 June 2021 has been referred to as FY21.

The financial statements of GMG and extracts of those financial statements provided in this MD&A have been prepared in accordance with International Financial Reporting Standards ("IFRS"). The Company has consistently applied the accounting policies used in the preparation of its IFRS financial statements, including the comparative figures. References to the symbol AUD or \$ or A\$ means the Australian dollar, the official currency of Australia. References to the symbol CAD or C\$ mean the Canadian dollar. References to "K" indicate thousands. Except as otherwise set out herein, all amounts expressed herein are in Australian dollars, the functional currency of the Company. As a result of the rounding of dollar differences, certain total dollar amounts in this MD&A may not add exactly to their constituent amounts. Throughout this MD&A, percentage changes are calculated using numbers rounded as they appear. Readers are cautioned that this MD&A contains certain forward-looking information. Please see the "Forward Looking Statements" section which follows.

**CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION**

This MD&A contains "forward looking statements" that reflect the Company's expectations and projections about its future results. When used in this MD&A, forward looking statements can be identified using words such as "may", or by such words as "will", "intend", "believe", "estimate", "consider", "expect", "anticipate", and "objective" and similar expressions or variations of such words. Forward looking statements are, by their nature, not guarantees of the Company's future operational or financial performance and are subject to risks and uncertainties and other factors that could cause the Company's actual results, performance, prospects or opportunities to differ materially from those expressed in, or implied by, these forward-looking statements. No representation or warranty is intended with respect to anticipated future results, or that estimates, or projections will be sustained.

In developing the forward-looking statements in the MD&A, the Company has applied several material assumptions, including the availability of financing on reasonable terms, the Company's ability and general business and economic conditions. Many risks, uncertainties and other factors could cause the actual results of GMG to differ materially from the results, performance, achievements or developments expressed or implied by such forward-looking statements. These risks, uncertainties and

other factors include, but are not limited to the following: overall economic conditions, technical de-risking and market acceptance for GMG's products and solutions, the introduction of competing technologies/products, environmental and regulation requirements, competitive pressures, change in market conditions and other factors that may cause the actual results, performance or achievements to differ materially from those expressed or implied in these forward-looking statements.

Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of the MD&A or as of the date otherwise specifically indicated herein. Due to risks and uncertainties, including the risks and uncertainties elsewhere in this MD&A, actual events may differ materially from current expectations. The Company disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. All forward-looking statements contained in the MD&A are expressly qualified in their entirety by this cautionary statement.

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## BUSINESS OVERVIEW

### Company Overview

GMG is a clean-technology company which seeks to offer energy saving and energy storage solutions, enabled by graphene, including that manufactured in-house via a proprietary production process.

GMG has developed a proprietary production process to decompose natural gas (i.e. methane) into its elements, carbon (as graphene), hydrogen and some residual hydrocarbon gases. This process produces high quality, low cost, scalable, 'tuneable' and low/no contaminant graphene suitable for use in clean-technology and other applications. The Company's present focus is to de-risk and develop commercial scale-up capabilities, and secure market applications.

GMG is listed on the TSX Venture Exchange ("TSXV") under the ticker "GMG" and is also quoted on Tradegate in Germany under "OGF". GMG understands that its shares may have traded on OTCQB under "GMGMF". This quotation was initiated by third party market participants, not GMG. To date, GMG has not offered or sold any securities to investors in the United States. GMG share warrants trade on TSXV under the ticker "GMG.WT".

GMG's strategy has evolved over time. While GMG graphene may be suitable for a wide range of industries, GMG has narrowed its focus to target select applications and industries. GMG's management team ("Management") believes that focusing on downstream applications will provide a higher return on in-house graphene production. Also, the vertically integrated approach will enable it to build a long-term competitive advantage. In line with this approach, GMG's initial focus has been developing applications for energy savings and energy storage.

In the energy savings segment, GMG has focused on graphene enhanced heating, ventilation and air conditioning ("HVAC-R") coating (or energy-saving paint), lubricants and fluids. In the energy storage segment, GMG and the University of Queensland are working collaboratively with financial support from the Australian Government to progress further R&D and commercialization of graphene aluminium-ion batteries ("G+AI Batteries").

GMG and its potential customers have successfully demonstrated a number of HVAC coating projects, offering improved heat transfer in space cooling (air-conditioning) and coolant units. Also, GMG is developing lubricants which reduce friction in engines. Both of these offerings have the potential to enable lower energy consumption, reducing both cost and emissions.

Near-term revenue generation will depend largely on the ability of the company to generate sales of HVAC coating projects ("*THERMAL-XR*<sup>®</sup> powered by GMG Graphene" or "TXR"). Medium term, GMG remains focused on R&D and will continue to invest in new product development and commercialisation including G+AI Batteries and graphene enhanced lubricants.

As at 31 March, 2022, GMG had a cash position of \$14.2 million and no debt, which included cash proceeds of \$984K from the exercise of warrants and \$73K from the exercise of options during Q3FY22. Q3FY22 EBITDA was a loss of \$1,771K with the net profit for the quarter being \$1,877K primarily after

adjusting for the accounting for warrants. As outlined in more detail below, the quarterly adjustments included in net profit required by IFRS to account for certain warrants on issue are a non-cash item and largely result from movements in GMG's share price during the period.

### Business highlights

GMG continues to be focused on 4 key areas of activity:

1. Customer and industry partner engagement for potential battery development
2. G+AI Battery pilot plant development, optimisation and testing of batteries
3. Securing revenue from *THERMAL-XR® powered by GMG Graphene* sales
4. Improving and scaling G+AI Battery grade graphene production

#### *Key activity 1: Customer and industry partner engagement for potential battery development*

Identifying the best possible customer and industry partners to de-risk, optimise and position GMG's G+AI Battery technology for successful scale up and commercialisation is a key priority. Set out below are some of the areas of the battery value chain that the Company either has identified, or is in discussions with, important partners to position GMG's battery division for future growth.

<b>G+AI Battery development</b>	<b>Key input materials</b>	<b>Scaling and automating graphene manufacturing process</b>	<b>G+AI Battery manufacturing at scale</b>	<b>Product development and global sales</b>
	<p>Discussions ongoing with major global partners</p>			<p>Discussions and prototype testing and collaboration ongoing with major global brands</p>

During Q3FY22, GMG and Wood agreed to a non-binding Letter of Intent, with the aim to agree on the terms of binding agreements for Wood to design and deliver major graphene manufacturing expansion projects. Graphene is one of the main components enabling the GMG and University of Queensland G+AI Battery technology. In 2017 and 2018, GMG developed and proved its proprietary graphene production process to produce graphene from natural gas (i.e. methane). This process produces high quality and scalable graphene, suitable for use in clean-technology applications, including G+AI Batteries. GMG's arrangement with Wood is intended to support scaling and automation of the graphene production process once target consistent qualities are achieved to meet graphene supply requirements for GMG's targeted G+AI Battery division.



## wood.

Wood is a global leader in consulting and engineering across energy and the built environment, helping to unlock solutions to some of the world's most critical challenges. Wood provides consulting, projects and operations solutions in more than 60 countries, employing around 40,000 people.

Wood will support GMG in scaling up and automating its proprietary natural gas to graphene manufacturing process. The parties' intent is for Wood to become GMG's engineering, design and construction contractor for GMG's near and long-term graphene manufacturing facility needs in Australia and overseas.

Since signing of the Letter of Intent, a Technical Services Agreement was signed with Wood Australia Pty Ltd on 21 April, 2022, providing for terms and conditions between GMG and Wood for services to be provided by Wood.

A Letter of Intent was earlier signed with Bosch (news release 25 October 2021) for the design and delivery of targeted G+AI Battery manufacturing plants. GMG and Wood will work in collaboration with Bosch to create an aligned production process from graphene manufacturing through to final G+AI Battery products across the Company's facilities.

### *Key activity 2: G+AI Battery pilot plant development, optimisation and testing of batteries*

During Q2FY22, GMG's pilot production and testing plant ("Battery Pilot Plant") for its G+AI Batteries became operational and the first G+AI Batteries in coin cell format were manufactured, and GMG stated an intention to invest further using current cash resources in the near term in upgrades to the pilot plant and in operational capabilities necessary to progress battery technology development.

Preliminary feedback from potential customers who received the limited number of G+AI Battery prototypes sent out for early testing was the following:

- The rate of charge and discharge (power density) was considerably faster than lithium-ion batteries.
- The charge capacity of the batteries per square centimetre of cathode is at or above the required performance level to provide a suitable replacement for some lithium-ion batteries especially when projected to be used in a pouch pack battery format.
- Further interest in discussing how to work with GMG and test more G+AI Batteries when they become available – especially in a pouch pack format.

Following this helpful and encouraging feedback GMG continues to work with selected customers to further evolve its battery development plans. GMG will continue to work on various scientific and engineering methods of optimising the charge capacity and design of the coin cell products.

During Q3FY22, substantial progress was made in upgrades to the Battery Pilot Plant. The Battery Pilot Plant is now a fully climate-controlled facility providing optimum temperature, moisture and dust conditions to manufacture batteries in a spacious, fully integrated work environment, incorporating all equipment required to assemble and test batteries. The Company has also successfully increased its organisational capability by attracting new staff experienced in coin cell and pouch pack manufacturing, thereby enabling the acceleration of its battery performance optimisation programme.



Figure 1: GMG Battery Pilot Plant

Additional equipment to enable the manufacture of G+AI Batteries in pouch pack cell format has arrived. Once this is fully commissioned, the Battery Pilot Plant will then have the capability to produce batteries in coin cell and pouch pack cell format. It will allow GMG to develop, manufacture and test its own G+AI Battery coin cell and subsequently pouch packs in-house, and enable the Company to accelerate the commercial development of G+AI Batteries, work with future customers and further build on GMG's internal expertise. Pouch pack cells are typically used in personal electronics such as cell phones, laptops and grid storage batteries and can also be used in electric vehicles.

*Key activity 3: Securing revenue from THERMAL-XR® powered by GMG Graphene sales*

GMG and its potential customers continued to successfully demonstrate *THERMAL-XR® powered by GMG Graphene's* performance (see GMG's website for successful projects). Results verified by GMG management and external parties demonstrate improved heat transfer in space cooling (air-conditioning) and cooling units thereby delivering energy and emission reductions and cost savings. Learnings regarding specific location climatic conditions, HVAC equipment, and economic parameters continue to be derived and are being used for prioritising subsequent efforts.

A key priority for GMG is material product and service solution sales of TXR.

GMG has live demonstration projects in progress in a number of locations and engagement continues with numerous HVAC-R service contractors and providers in Australia, and internationally, to establish commercial arrangements.

In addition to demonstrations on established air-conditioning units, GMG achieved encouraging results on new equipment during the quarter. Such results open the potential for route to market via major Original Equipment Manufacturer ("OEM") brands.

An experienced, senior North American representative has been engaged during the quarter, and GMG is encouraged by early traction in multiple routes to market in the important USA market. This adds to our existing sales representation in South East Asia, and Middle East and North Africa.

*Key activity 4: Improving and scaling G+AI Battery grade graphene production*

GMG's graphene manufacturing technology R&D is focussed on developing the process further to improve the manufacture of commercial quantities of a grade of graphene required to commercialise G+AI Batteries.

Results from trials during the quarter show progress towards this objective. Further planned trials focussed on different production parameters and systems designs are expected to show further improvements.

## FINANCIAL HIGHLIGHTS

### Income Statement

\$'000 unless otherwise stated	3 month period ended March 31		9 month period ended March 31		Variation	
	2022	2021	2022	2021	\$'000	%
Revenue from operations	9	114	37	208	(171)	(82%)
Other income including subsidies, grants and incentives	6	1	49	215	(166)	(77%)
<b>Total revenue</b>	<b>15</b>	<b>115</b>	<b>86</b>	<b>423</b>	<b>(337)</b>	<b>(80%)</b>
Employee expenses	(1,152)	(670)	(3,320)	(1,859)	(1,461)	79%
Plant expenses	(86)	(46)	(199)	(122)	(77)	63%
Occupancy expenses	(59)	(38)	(141)	(100)	(41)	41%
Overheads expenses	(489)	(426)	(1,699)	(895)	(804)	90%
<b>Total operating expenses</b>	<b>(1,786)</b>	<b>(1,180)</b>	<b>(5,359)</b>	<b>(2,976)</b>	<b>(2,383)</b>	<b>80%</b>
EBITDA	(1,771)	(1,065)	(5,273)	(2,553)	(2,720)	107%
Change in fair value of warrants	3,777	-	(8,011)	-	(8,011)	-
Finance costs	(20)	(4)	(34)	(9)	(25)	278%
Depreciation	(109)	(65)	(216)	(164)	(52)	32%
<b>Profit / (loss) before income tax</b>	<b>1,877</b>	<b>(1,134)</b>	<b>(13,534)</b>	<b>(2,726)</b>	<b>(10,808)</b>	<b>396%</b>
Income tax expense	-	-	-	-	-	-
<b>Profit / (loss) for the period</b>	<b>1,877</b>	<b>(1,134)</b>	<b>(13,534)</b>	<b>(2,726)</b>	<b>(10,808)</b>	<b>396%</b>
<b>Non-IFRS financial measures <sup>(1)</sup></b>						
Adjusted loss before income tax	(1,900)	(1,134)	(5,523)	(2,726)	(2,797)	103%
Basic and diluted earnings / (loss) per share (cents)	2.42	(1.91)	(17.98)	(4.70)	(13)	283%
Adjusted basic and diluted loss per share (cents)	(2.45)	(1.91)	(7.34)	(4.70)	(3)	56%

(1) Refer to Non-IFRS Measures for further information.

## Balance Sheet

\$'000	As at 31 March, 2022	As at 30 June, 2021
Cash and cash equivalents	14,169	3,359
Trade and other receivables	292	56
Research and development grants receivable	-	736
Inventories	355	336
Other current assets	289	184
Property, plant and equipment	1,851	224
Intangible assets	45	49
<b>Total assets</b>	<b>17,001</b>	<b>4,944</b>
Trade and other payables	316	539
Lease liabilities	130	-
Financial liabilities	8,253	2,189
Employee benefit liabilities	177	162
Provisions	20	20
Long term liabilities	1,022	-
<b>Total liabilities</b>	<b>9,918</b>	<b>2,910</b>
<b>Total equity</b>	<b>7,083</b>	<b>2,034</b>

## Summary of Cash Flows

\$'000	9 month period ended March 31		Variation	
	2022	2021	\$'000	%
Cash flows from operating activities	(4,308)	(1,716)	(2,592)	(151%)
Cash flows from investing activities	(631)	(254)	(377)	(148%)
Cash flows from financing activities	15,749	1,914	13,835	723%
<b>Total cash flows</b>	<b>10,810</b>	<b>(56)</b>	<b>10,866</b>	<b>*</b>

\* Percentage removed for presentation purposes only

## Selected Quarterly Information

The following table contains selected unaudited consolidated quarterly financial information for the last eight quarters through to March 31, 2022:

\$'000 unless otherwise stated	Total revenue	Profit / (loss)	Basic and diluted profit / (loss) per share (cents)	Note
Q3-2022 March 31, 2022	15	1,877	2.42	1
Q2-2022 December 31, 2021	54	(16,252)	(21.22)	2
Q1-2022 September 30, 2021	17	841	1.18	3
Q4-2021 June 30, 2021	836	(5,384)	(7.91)	4
Q3-2021 March 31, 2021	114	(1,134)	(1.91)	5
Q2-2021 December 31, 2020	93	(926)	(1.57)	6
Q1-2021 September 30, 2020	216	(666)	(1.19)	7
Q4-2020 June 30, 2020	1,202	438	0.80	8

**Notes:**

1. Higher profit in Q3FY22 was driven by a reduction in the fair value of financial liabilities due mainly to changes in GMG's share price compared to the prior reporting date at December 31, 2021. Lower revenues are considered a normal fluctuation given GMG's various products being at an early stage of commercialisation.
2. The increase in Q2FY22 losses was mainly due to fair value adjustments required to reflect the higher value of financial liabilities (warrants), due to share price increases during the quarter.
3. Higher profit in Q1FY22 was driven by a reduction in the fair value of financial liabilities due to a lower share price than the prior reporting period at the end of FY21. Lower revenues were due mainly to the refundable R&D tax offset of \$736K and the \$84K Export Market Development Grant in the prior quarter and conclusion of a quarterly take or pay customer contract at 30 June 2021.
4. Higher revenue in Q4FY21 was mainly due to the refundable R&D tax offset of \$736K and the \$84K Export Market Development Grant. The higher loss was due mainly to \$2,226K listing expenses related to the Cuspis transaction (due to the premium paid to acquire the listing vehicle Cuspis Capital Ltd.), \$1,832K change in fair value of warrants issued and other legal, investor relations, compliance and consultancy costs associated with the Company's listing on the TSXV.
5. Revenue during the quarter included \$80K of sales of graphene powder to GMG's TXR Supplier, for the production of TXR. The higher loss in the quarter was due to \$275K of legal expenses incurred in preparing for listing, as well as for advisory services related to commercial and research collaboration agreements.
6. Revenue primarily consists of sales of graphene powder, as well as approximately \$48K in COVID-19 related government subsidies.
7. Revenue primarily consists of sales of graphene powder, as well as \$165K in COVID-19 related government subsidies.
8. Higher revenue in Q4FY20 is due mainly to the refundable R&D tax offset of \$934K, as well as \$242K associated with grants and COVID-19 related government subsidies.

## OPERATIONS

### Non-IFRS financial measures

This MD&A refers to adjusted profit and loss for the period and adjusted basic and diluted loss per share that are measures with no standardised meaning under IFRS. They are non-IFRS measures and may not be comparable to similar measures presented by other companies. Their measurement and presentation is consistently prepared and is intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS.

#### *Adjusted loss for the period and adjusted loss per share*

Adjusted loss for the period and adjusted loss per share are used by management and investors to measure the underlying operating performance of the Company. Adjusted loss for the period, excludes specific items that are significant but not reflective of the underlying operating performance of the Company, such as the impact of changes in the fair value of warrants. Adjusted loss per share amounts are calculated using the weighted average number of shares outstanding on a basic and diluted basis as determined by IFRS.

The following table provides the calculation of the adjusted loss for the period and adjusted basic and diluted loss per share, as adjusted and calculated by the Company:

\$'000 unless otherwise stated	3 month period ended March 31		9 month period ended March 31	
	2022	2021	2022	2021
Profit / (loss) for the period	1,877	(1,134)	(13,534)	(2,726)
Less:				
Change in fair value of warrants	(3,777)	-	8,011	-
Total adjustment items	(3,777)	-	8,011	-
<b>Adjusted loss for the period</b>	<b>(1,900)</b>	<b>(1,134)</b>	<b>(5,523)</b>	<b>(2,726)</b>
<b>Earnings / (loss) per share <sup>(1)</sup></b>				
Basic and diluted (cents) <sup>(2)</sup>	2.42	(1.91)	(17.98)	(4.70)
Adjusted basic and diluted (cents) <sup>(3)</sup>	(2.45)	(1.91)	(7.34)	(4.70)
Weighted average number of ordinary shares - basic and diluted	77,703,832	59,550,766	75,257,198	58,039,234

- (1) Due to the loss recognised for the years, all outstanding stock options, warrants and broker warrants were excluded from the calculation of diluted loss per share due to their anti-dilutive effect.
- (2) Calculated using loss for the period over the weighted average number of ordinary shares as per IFRS.
- (3) Calculated using adjusted loss for the period over the weighted average number of ordinary shares (non-IFRS measure).

## Revenue

\$'000	3 month period ended March 31		9 month period ended March 31		Variation	
	2022	2021	2022	2021	\$'000	%
Revenue from operations	9	114	37	208	(171)	(82%)
Grants, subsidies and tax incentives	6	-	31	214	(183)	(86%)
Interest, sundry and forex gains	-	1	18	1	17	1700%
<b>Total revenue</b>	<b>15</b>	<b>115</b>	<b>86</b>	<b>423</b>	<b>(337)</b>	<b>(80%)</b>

Revenue from operations was \$9K in Q3FY22 compared to \$114K in Q3FY21. Q3FY22 revenue included sales of smaller volume size TXR kits, as well as graphene mixed coolants and lubricants being trialled with new customers. In comparison, Q3FY21 revenue included \$80K of sales of graphene powder to for the production of TXR, and \$20K of sales of graphene powder, of which \$20K included a 'take or pay' style customer agreement for graphene powder sold for a research project for a fixed quarterly fee. This research project ended on 30 June 2021.

## Other income

Other income of \$6K in Q3FY22 was for an Export Market Development Grant received. The 9MFY22 result is lower than 9MFY21 primarily due to the prior comparative period including \$213K of government subsidies received relating to COVID-19.

## Operating costs

Shown in the table below are total operating expenses, which exclude finance costs and depreciation and amortization.

\$'000	3 month period ended March 31		9 month period ended March 31		Variation	
	2022	2021	2022	2021	\$'000	%
Employee expenses	1,152	670	3,320	1,859	1,461	79%
Plant expenses	86	46	199	122	77	63%
Occupancy expenses	59	38	141	100	41	41%
Overheads expenses	489	426	1,699	895	804	90%
<b>Total operating expenses</b>	<b>1,786</b>	<b>1,180</b>	<b>5,359</b>	<b>2,976</b>	<b>2,383</b>	<b>80%</b>

Following is a description of, and commentary on the high-level expense categories of GMG:

### *Employee expenses*

Employee expenses consist of salaries, on-costs (e.g. superannuation), and share based payments for all employees, directors and certain contractors. The total amount to be expensed as share based payments is determined by reference to the fair value of any options granted under the employee share option plan, and share units granted under the Share Incentive Plan:

- including any market performance conditions (e.g. the entity's share price); and
- excluding the impact of any service-based vesting conditions (for example, remaining an employee of the entity for a period of time).

The total expense is recognised over the vesting period, which is the period over which all of the specified vesting conditions are to be satisfied. Total salary costs have increased with increases in the number of employees and any adjustments to salaries of existing employees during the relevant period.

### *Plant expenses*

This includes raw materials and production inputs, general warehouse expenses, Health, safety and environment ("HSE"), machinery parts and consumables, repairs and maintenance ("R&M") and other costs. While expenses on items such as consumables can be estimated, there are various expenses relating to R&M, machinery spares and components for battery prototype development that are variable and cannot be estimated with a high degree of certainty.

Plant expenses, excluding raw materials and production inputs, were \$81K in Q3FY22 and \$40K in Q3FY21. The \$41K increase was primarily \$25K in battery and machinery consumables, in addition to \$15K in health and safety assessment costs and equipment. Minor increases in general warehouse expenses and equipment rental were offset by reductions in repairs and maintenance costs.

### *Occupancy*

Occupancy expenses relate primarily to lease costs for the production facilities located at Sumner, Queensland held under short-term leases. These are short-term leases to which the IFRS 16 *Leases* exemption has been applied, and as such, lease costs are recognised on a straight-line basis as an expense.

The Company's Richlands Headquarters lease meets the recognition criteria as a right-of-use ("ROU") asset under IFRS 16. The ROU asset and corresponding lease liability are recognised on the balance sheet with lease payments split between lease liability principal repayments and interest expense and therefore do not appear under occupancy expenses. Depreciation of the leased asset is recorded on a straight-line basis.

Overall occupancy expenses increased from \$38K to \$59K from Q3FY21 to Q3FY22, primarily due to \$18K higher rental outgoings costs associated with the Company's Richlands headquarters lease and \$8K higher electricity costs. This was offset by a lower lease rental expense, which results from the different lease accounting treatment between the previous and new headquarter premises, as described above.

### *Overheads*

Insurance, IT, legal, travel, sponsorships, other R&D related expenses, and various other expenses have been classified as 'Overheads'. While expenses such as IT related expenses, travel and marketing are expected to increase as the business grows, others such as licensing and registration, website, other R&D, and filing fees will be uncorrelated to the number of employees, product offerings or number of customers. Following are various sub-items that constitute 'Overheads', for which the change from Q3FY21 to Q3FY22 has been greater than \$10,000:

- Consultants and contracting expenses increased from \$46K in Q3FY21 to \$170K in Q3FY22, mainly due to higher costs associated with regulatory compliance, commencement of director fees, and specialist technical consultants engaged to accelerate product development and sales, including expansion of GMG sales representation in North America.
- Investor relations expenses of \$130K were incurred in Q3FY22 associated with the Company's ongoing communication management with current and prospective investors which was not required in the Q3FY21 quarter, prior to listing on TSXV;
- Legal expenses of \$19K in Q3FY22 were lower than the \$275K incurred during Q3FY21, due to Q3FY21 including advisory costs incurred in preparation for listing, and on commercial and research collaboration agreements;
- Insurance increased from \$6K in Q3FY21 to \$38K in Q3FY22, mainly due to increases in policy coverage and limits required with becoming a listed company, ongoing business growth, and expansion of business premises since Q3FY21;
- Filing fees of \$15K in Q3FY22 included the expense associated with annual TSXV fees prepaid; and
- Research and development expenses of \$47K in Q3FY22 mainly included the UQ collaboration project for 'Enabling Next-generation Rechargeable Aluminium-ion Batteries', and other minor

projects that were included in the \$58K expense incurred in Q3FY21 were not repeated in Q3FY22.

### Fair value of warrants

The favourable change in fair value of warrants of \$3,777K in Q3FY22 was mainly driven by the reduction in GMG's share price from Q2FY22 to Q3FY22, which resulted in a significant decrease in the fair value of the warrant liability at the end of the quarter.

The share purchase warrants impacted by this adjustment are certain warrants that are recognised by the Company as a derivative liability due to their Canadian dollar denominated, fixed exercise price being different to the Company's functional currency which is Australian dollars. IFRS requires such instruments to be treated as a derivative liability and not equity, until the warrants are exercised or expire. The fair value of the warrants is determined using the Black Scholes option pricing model at the period-end date, or the market trading price in respect of GMG's traded warrants.

There are no cash obligations for the Company relating to this liability. Changes in fair value will continue to be reported in subsequent periods until the warrants are exercised or expire at which time the derivative liability ceases.

A number of factors influence the warrant liability valuation including share price, interest rates and a volatility assumption. For example, share price increases may result in an expense recorded in the profit and loss in conjunction with any increase in the fair value of the warrant liability, while share price decreases, warrant exercises or a reduced time to expiry with the passage of time would result in a gain and decrease in the fair value of the warrant liability.

For warrants exercised, the cumulative difference between the fair value of the warrant liability recognised at grant date, and the fair value based on the GMG share price at exercise date, which is applied to profit or loss, is then extinguished as a liability, with the offsetting entry applied to equity.

### Projects

The Company has not generated significant revenue to date. Graphene powder is a commercialized product that has generated revenue, but sale of graphene powder is not the Company's core strategy. Recent progress and status of the G+AI Battery Project has been described in detail above. TXR is a product in early commercial production stage (produced by TXR Supplier), and the business is focusing on developing the market for TXR. The Company is also undertaking significant product development activities to commercialize various other products. This section provides a summary of projects (each project corresponds to a product under development). These are not capital-intensive projects with well-defined project plans, but are ongoing initiatives driven by certain employees, with the cost of the employees being the key expense associated with the projects.

### *G™ LUBRICANT*

This product is under development and testing internally and with prospective customers. Results achieved so far are encouraging. The research and development for this product is being undertaken in-house. Research is ongoing and there is no fixed end date. Customer engagement is taking place simultaneously, and hence timing of commercial production will be based on customer accepted scientific results, energy savings calculations and receipt of substantial orders. In a business-to-business environment with large corporate counterparties, the timeline for product validation and acceptance is uncertain. There is no significant operating cost for development, other than part of the salary costs of the Head Product Scientist and Marketing Manager. Necessary capital equipment has already been acquired for current activities.

Several large lubricant blending and marketing companies and original equipment manufacturers are either testing or have expressed interest in testing G™ LUBRICANT concentrates for their performance characteristics for potential adoption as an additive for their products. Some smaller lubricant blending and marketing companies have purchased GMG's graphene for initial trials and/or early-stage small scale commercial production. The Company intends to pursue these opportunities for commercialization of G™ LUBRICANT. The Company's staff undertake multiple projects simultaneously and a project cost tracking system has not been required to date. Expenditures made to date on each project are not separately identified.

### *G™ COOLANTS and G™ FLUIDS*

These products are currently under development and testing. The research and development for this product is being undertaken in-house. Research is ongoing, but with lesser focus than on G™ LUBRICANTS, and there is no fixed end date. Customer engagement is taking place simultaneously, and therefore timing of commercial production will be based on customer accepted scientific results, energy savings calculations and receipt of substantial orders. There is no significant operating cost for development, other than part of the salary costs of the Chief Scientific Officer responsible for development. Necessary capital equipment has already been acquired for current activities.

The Company intends to continue to develop these products with a view to commercialization in the future. The Company's staff undertake multiple projects simultaneously and a project cost tracking system has not been required to date. Expenditures made to date on each project are not separately identified.

### *G™ DIESEL and bio-Diesel*

This application is still in the early stages of development and testing, which has not been prioritized in the near term. The potential for this product has been identified from third party research studies conducted using graphene in diesel and bio-diesel. Research will likely require use of local university facilities to enable performance testing in a controlled environment. As of now, the Company remains interested in this product and is engaged with potential collaboration partners towards the progression of this project, but at this time does not plan to spend significant resources on this project in the next 12 months. There is no timeline or end date for development of this product. The Company's staff undertake multiple projects simultaneously and a project cost tracking system has not been required to date. Expenditures made to date on each project are not separately identified.

## FINANCIAL POSITION, LIQUIDITY AND CAPITAL RESOURCES

Cash and cash equivalents have increased by \$10,810K in 9MFY22, with cash outflows being offset primarily by the Offering and Private Placement in September 2021, raising gross proceeds of C\$11.55 million and C\$909K respectively, and proceeds from the exercise of warrants and options. Further information regarding the share capital movements, as well as warrants and options exercised during Q3FY22, is disclosed in the condensed consolidated interim financial statements for the three and nine month periods ended March 31, 2022.

Trade and other receivables of \$292K is primarily a \$218K Computershare receivable for proceeds from warrants exercised, which were pending an international wire transfer to GMG, and \$69K of GST receivables at the end of the quarter. The warrant proceeds were received by GMG on April 5, 2022.

Inventories increased by \$19K to \$355K as at 31 March 2022, due to purchase of TXR also linked to expanded distribution rights in Singapore and Malaysia, offset by sales of TXR kits.

Other current assets of \$289K is largely \$253K of prepayments, primarily \$128K for insurance and \$56K for consultancy costs and health and safety projects, \$45K filing fees and \$22K for lease payments made in advance including related outgoings.

The trade and other payables relate to expenses in the ordinary course of business, including accounts payable, wages payable, PAYG withholding tax payable, superannuation payable, and other accrued expenses. The balance of \$316K as at 31 March 2022, was lower than 30 June 2021 mainly due to payments released for the invoices which were billed and the services completed by the end of the quarter.

The financial liability relates to certain share purchase warrants issued with an exercise price denominated in Canadian dollars (as described in detail in a previous section).

### Liquidity and capital resources

GMG has generated limited revenue to date. Cash expenses mainly relate to R&D activities and other operational expenses. Capital raised has been mainly used to fund the development of the Company's proprietary graphene powder production technology, graphene enhanced products and solutions, and plant and equipment and expenses for developing, testing, manufacturing and marketing these products. Development of G+AI Battery technology, production and commercialisation planning has been an increasing focus area for GMG's employees and intended use of current cash resources.

Timing for commercialisation of G+AI Batteries will depend on the successful development of a commercial G+AI Battery prototype including the process technology required to produce the necessary grade graphene powder or sources to acquire it from third parties, timing for completion of front end design and construction of a battery manufacturing facility (subject to a final investment decision).

Revenue in the near term is targeted to be generated from TXR. Growth in customer demand for this and other product offerings, and timing for commercialisation of G+AI Batteries, will influence the future funding requirements for GMG. The go-to-market strategy for TXR will evolve as GMG receives more feedback from customers, has more referenceable energy savings data from its energy savings products and solutions and more customer success stories. Based on these parameters, GMG will determine how much to invest to achieve rapid market penetration of TXR in different geographies. A rapid penetration strategy may require additional capital, but deployment of capital for marketing purposes would be controllable by Management.

As at March 31, 2022, cash and cash equivalents were \$14,169K with the increase in funds since FY21 due mainly to the Offering and Private Placement in September 2021, raising gross proceeds of C\$11.55 million and C\$909K respectively and proceeds from exercises of warrants and options.

Management believes GMG has sufficient cash to meet its objectives for at least 12 months. To date, the Company has relied on funding from equity investors and also grants, subsidies and R&D incentives. There is no guarantee that revenue generated by the business will be sufficient to fund the business for a longer period of time. There can be no assurance that adequate funding will be available in the future, or on terms that are favourable to the Company.

Although the operating and investing cash flow for FY21 and 9MFY22 were negative, it is assumed that the Company has neither the intention nor the need to liquidate any of its assets to discharge its liabilities and commitments in the normal course of business. Though not guaranteed, Management believes that investors will continue to support the business to fund its expansion and development of products and solutions until the business becomes profitable.

### **Financial instruments and risk management**

Financial assets and financial liabilities are recognised in the balance sheet when the Company becomes party to the contractual provisions of the financial instrument. GMG's financial instruments are its cash and cash equivalents, trade and other receivables, trade and other payables. The Company is exposed to a variety of financial risks, which result from its financing, operating and investing activities. The objective of financial risk management is to contain, where appropriate, exposures in these financial risks to limit any negative impact on the Company's financial performance and position.

The risks arising from the Company's financial instruments are mainly credit risk and foreign currency risk. The risk management policies employed by the Company to manage these risks are discussed below:

#### *Credit risk*

Credit risk arises when a failure by counterparties to discharge their obligations could reduce the amount of future cash inflows from financial assets on hand at the balance sheet date. The maximum exposure to credit risk at balance date in relation to each class of recognised financial assets is the gross carrying amount of those assets.

As the company expands and increases sales, this will become a larger consideration. Management closely monitors, the activities of its counterparties and potential counterparties.

#### *Liquidity risk*

Liquidity risk is the risk that arises when the maturity of assets and the maturity of liabilities do not match. Some financial assets may not be able to be monetised in a timely manner. Based on current cash resources, Management considers liquidity risk to be low for at least 12 months. While the company does not have any credit facilities from banks, GMG ensures it maintains enough cash, to fulfil its near-term liabilities.

#### *Currency risk*

Currency risk is the risk that the value of financial instruments will fluctuate due to changes in foreign exchange rates. Currency risk arises when future commercial transactions and recognized assets and liabilities are denominated in a currency that is not the Company's functional currency. The Company is exposed to foreign exchange risk, however, at present, this risk is relatively low as revenue is limited and most expenses are denominated in Australian dollars. However, in the past, the Company has sourced funding from investors and will increasingly source capital equipment from overseas. Because of the short term nature of these foreign currency exposures to date and low level of associated risk, the Company has not considered it necessary to enter into any currency hedging transactions. More recently the Company has become exposed to currency risk relating to the financial liability required by IFRS to be recognised in relation to certain warrants with exercise prices denominated in Canadian dollars. As there is no cash obligation associated with this liability, the Company considers the associated currency risk to be low.

#### **Off-balance sheet arrangements**

As of the date of this MD&A, the Company did not have any off-balance sheet arrangements, except for the non-cancellable operating leases for the Sumner warehouse and portable office units. The Company has elected not to recognise right-of-use assets and lease liabilities for leases of low-value assets, as well as short-term leases, including for leased premises and portable office units, and recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

The Company recognises a contingent liability as at March 31, 2022, of approximately C\$102,195 relating to the repatriation of cash acquired in the Cuspis transaction at the time of listing, prior to the dissolution of Cuspis Capital Ltd on August 12, 2021. The contingent liability relates to a potential withholding tax obligation in Canada at the rate of 5% of the amount of cash distributed. The transaction is being treated as a return of capital for Australian tax purposes. At the date of this report, GMG is consulting with the Canadian tax authorities in relation to this amount.

## Outstanding shares

As at May 16, 2022, the Company has:

- 78,362,196 ordinary shares issued and outstanding;
- 4,827,464 options outstanding with expiry dates ranging between March 12, 2024 and March 11, 2028, with exercise prices between A\$0.36 and C\$1.00. If all the options were exercised, 4,827,464 shares would be issued for proceeds of A\$2,556,986<sup>5</sup>;
- 3,134,416 warrants outstanding with expiry dates ranging between October 12, 2022 and September 2, 2024, with exercise prices between C\$0.65 and C\$2.60. If all the warrants were exercised, 3,143,776 shares would be issued for proceeds of A\$7,533,934<sup>5</sup>; and
- 197,622 restricted share units and 77,359 performance share units outstanding with a nil exercise price and expiry dates ranging between October 20, 2026 and December 5, 2026.

For further details on recent issues of shares and other securities, please refer to the final short form prospectus of the Company dated August 27, 2021 (the "Prospectus") available on the Company's SEDAR profile.

## RISKS AND UNCERTAINTIES

The Company's business is subject to numerous risks and uncertainties, including those described elsewhere in this MD&A, as well as general economic and market risks. These risk factors could materially affect the Company's future operating results and could cause actual events to differ materially from those described in forward-looking information relating to the Company. For a detailed description of risks and uncertainties, please refer to the Prospectus available on the Company's SEDAR profile.

## CRITICAL ACCOUNTING JUDGEMENTS AND ESTIMATES

The key reported numbers requiring the use of estimates and critical judgments that may potentially have a significant impact on the Company's earnings and financial position are the useful life of property and equipment and the recognition and amortization of intangible assets.

Intangible assets and property and equipment are amortized or depreciated over their useful lives. Useful lives are based on Management's estimates of the period that the assets will generate revenue, which are periodically reviewed for continued appropriateness. Changes to estimates can result in significant variations in the amounts charged to the statement of comprehensive income in specific periods.

Intangible assets that have an indefinite useful life are not subject to amortisation and are tested annually for impairment, or more frequently if events or changes in circumstances indicate that they might be impaired. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount.

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<sup>5</sup> Assuming a C\$/A\$ exchange rate of 1.12.