

## ASX RELEASE

31 October 2022

### About Globe

Globe Metals & Mining Limited is a Perth based company listed on the Australian Securities Exchange (ASX Code: GBE)

### Investment Summary

100% interest held in Kanyika Niobium Project in Malawi (Africa)

### Directors and Management

**Ms Alice Wong** – Non-executive Chairperson

**Mr Bo Tan** – Non-executive Director

**Mr Ricky Lau** – Non-executive Director

**Mr Michael Barrett** – Non-executive Director

**Mr Michael Choi** – Non-executive Director

**Mr Grant Hudson** – CEO

**Mr Rex Zietsman** – CTO

**Mr Paul Hardie** – Company Secretary

**Mr Michael Fry** – CFO

### Capital Structure

**Shares on Issue:** 482,320,039

### Substantial Shareholders

**Apollo Metals:** 51.00%

**Ao-Zhong International Minerals:** 24.49%

### Director Holdings

**Ms Alice Wong (Apollo Metals):** 245,983,611 (51.00%)

**Mr Bo Tan:** 16,397,666 (3.49%)

### Contact

Paul Hardie or Michael Fry  
Company Secretary or CFO

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## Quarter ended 30 September 2022 Review of Operations

### HIGHLIGHTS

#### Kanyika Niobium Project

##### Technical

- Globe has continued its refinement of the processing technical studies. Globe has identified benefits in gas-phase chlorination as the refinery process. Gas-phase chlorination is a recognised technology that has demonstrated benefits in terms of significantly lower operating costs, higher purities, and greater metal separation leading to an increased spectrum of saleable products.
- The Phase One Feasibility Study will be updated to reflect the application of the new process.

##### Mining Development Agreement

- During the quarter, Globe continued to work closely with the Malawi Government and local communities to progress the finalisation of the Mining Development Agreement (**MDA**). As announced on 22 July 2022, Globe has been advised that the Ministry of Justice is vetting the final draft of the MDA, in readiness for submission to the Ministers of Mining and Finance for approval and signing.
- Globe, together with representatives of the Malawi Government, met with the Kanyika community and advised that it could not progress with plans to relocate them from site because the MDA has not yet been executed. The Malawi Government representatives acknowledged that the delay lay with the Government.
- Globe remains cautiously optimistic that despite the process not yet being complete, the MDA will be formalised soon.

#### Corporate & Finance

- Cash at bank and term deposits as at 30 September 2022 was \$0.146 million (30 June 2022: \$0.431 million).
- During the quarter, Director Bo Tan provided an additional short-term loan facility of \$500,000, which was undrawn at the end of the quarter.
- The Company has initiated steps to raise further cash to fund its operations. The Company regularly evaluates market appetite for equity investment and manages its capital and operations accordingly. The Company anticipates it will be able to continue to access funding as required and, to this end, it is considering further fund raising from internal and external parties. It will update the market of any steps it decides to take.

Globe Metals & Mining Limited (ASX Code: GBE) (“Globe” or “Company”) provides its activities report for the quarter ended 30 September 2022.

## **1. Kanyika Niobium Project**

### **1.1 Mining Development Agreement – Update**

During the quarter Globe, together with representatives of the Malawi Government, met with the Kanyika community and advised that it could not progress with plans to relocate them from site because the MDA has not yet been executed. The Malawi Government representatives acknowledged that the delay lay with the Government.

Globe’s CEO Grant Hudson commented as follows:

“The conclusion of the MDA is a critical step forward towards production as it provides Globe and its potential partners, financiers and customers with clarity and surety around tenure, developmental timelines and the fiscal regime pertaining to the Kanyika Niobium Project.”

This follows Globe having received in June 2022 formal communication from the Malawi Ministry of Mining advising that the negotiations and attendant review of the draft MDA have been consummated, following a recommendation for approval made by the Government’s MDA Steering Committee. The letter further states that the Ministry of Justice is vetting the final draft of the MDA, in readiness for submission to the Ministers of Mining and Finance for approval and signing which may take place in due course.

Shortly after Globe received the above formal communication, a media report appeared online at The Times Group quoting the Malawi Ministry of Mining spokesperson Andrew Mkonda Banda as having stated that “The Ministry of Mining has concluded its negotiations with Globe Metals and Mining for the Kanyika Niobium Mining project in Mzimba District” and “The Ministry of Justice is now vetting the MDA between the two parties”.

Subsequently, Globe has taken all necessary steps and continues its best efforts to solicit support from, amongst others, the Australian Government to persuade the Malawi Government to quickly conclude this critical final step with the signatures of the Ministers.

The final signing of the MDA is an important aspect of the Project as it outlines the fiscal regime under which the Project will operate and sets out the terms upon which the Company is able to develop the minerals contained in the Project, including terms not otherwise required through existing regulations.

Globe remains cautiously optimistic that despite the process not yet being complete, with approval and execution of the MDA subject to Ministers of Mining and Finance discretion, that the MDA will be formalised soon.

The Company cautions that the process is not yet complete, and that approval and signing is subject to the discretion of the Ministers of Mining and Finance.

### **1.2 Phase One Study**

Since the beginning of the 2022 calendar year, the Company has been investigating a phased approach to construction and commencement of operations. During Q4 2022 Globe will present an option for a quicker pathway to production with reduced up-front capital costs as a Phase One study. This would allow Globe to de-risk the operations and build the market for its products in line with the anticipated

upsurge in demand for niobium oxides. Globe then expects to move towards full-scale operations in Phase Two.

### Kanyika Mine Operations – Phase One

The Kanyika mine operations (both mining and concentration plant) remain largely unchanged in execution but will start at a considerably lower tonnage than that envisaged in the original Feasibility Study viz. 90,000 tpa rather than 1,500,000 tpa. This level of production will lower the initial capital costs significantly and is also consistent with the local availability of medium voltage (33kV) power to run the milling process at the site.

### Namibia Refinery – Phase One

As part of Globe's optimisation studies, Globe's technical team identified that the conventional hydrofluoric acid digestion of tantalum and niobium ores indicated a high cost of production, the significant single-use consumption of costly hydrofluoric acid and a high cost of radionuclide residue disposal, with attendant ESG concerns. The Globe technical team therefore embarked on the investigation of alternative refining routes that were lower cost and more environmentally friendly.

The team highlighted gas-phase chlorination as the most suitable alternate approach to hydrofluoric acid refining. This route reacts chlorine gas with the Kanyika concentrate generating metal chlorides which are then separated by selective cooling and purified by distillation. The metal chlorides are subsequently oxidised which regenerates chlorine that is recycled to the front of the process. A small electrolyser uses sea salt to produce chlorine to make up for metal chloride sales – for example: iron chloride is sold as a water treatment chemical.

There are major benefits to using the chlorination route. Regeneration results in major reductions in reagent consumption; multiple products can be generated either for sale or for safe storage as an oxide; 99% of the uranium is recovered and sold into the uranium industry; residue quantities are an order of magnitude less than the hydrofluoric acid route; the heat generated by the exothermic chlorination reaction can be harvested to produce electricity and finally, this route can be economically scaled down to the Phase One volumes. All these benefits allow Globe to enter production earlier while achieving an overall improved economic and environmental outcome.

It should be noted that the chlorination process is the industry standard process for the production of titanium oxides (for use in paint) and has been used for Rare Earths refining for over fifty years and for niobium and tantalum refining for over twenty years. As mentioned above, it has significant environmental and economic benefits over the use of hydrofluoric acid. A preliminary comparison with the hydrofluoric acid route predicts that, while the initial capital costs will be higher, the operating costs will be significantly lower. Furthermore, while the hydrofluoric acid route only produces niobium and tantalum oxide, the chlorination route additionally separates and purifies uranium, zirconium, and iron into saleable products.

### Phase One Refinery Location

The current optimisation Phase One studies have identified the Heavy Industrial Zone in Walvis Bay in Namibia as the preferred refinery location.

There are many reasons why this is an excellent choice for Globe. Locating the gas chlorination refinery in Namibia results in a lower transport cost and resolves issues around the transport of material classified as Class 7 (due to the uranium content). In addition, there are several world class uranium mines in Namibia – Langer Heinrich, Husab and Rossing and as such, both the Namibian Government and the Namibian uranium industry are well-versed in the protocols of dealing with radioactive

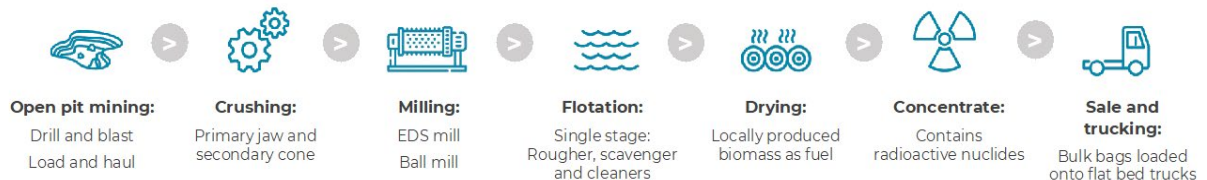
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materials and the safe storage of residues. Namibia, and Walvis Bay in particular, also have an active engineering contractor community and labour force experienced in the construction of sophisticated plant and with working with processes similar to the proposed chlorination process. Finally, Walvis Bay produces and exports the electrolyser grade salt required for the chlorination process.

## Phase One: Low-cost start-up operations



### Kanyika mine site: Phase One Pilot



### Namibia refinery: Phase One Pilot



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### Phase One Timetable

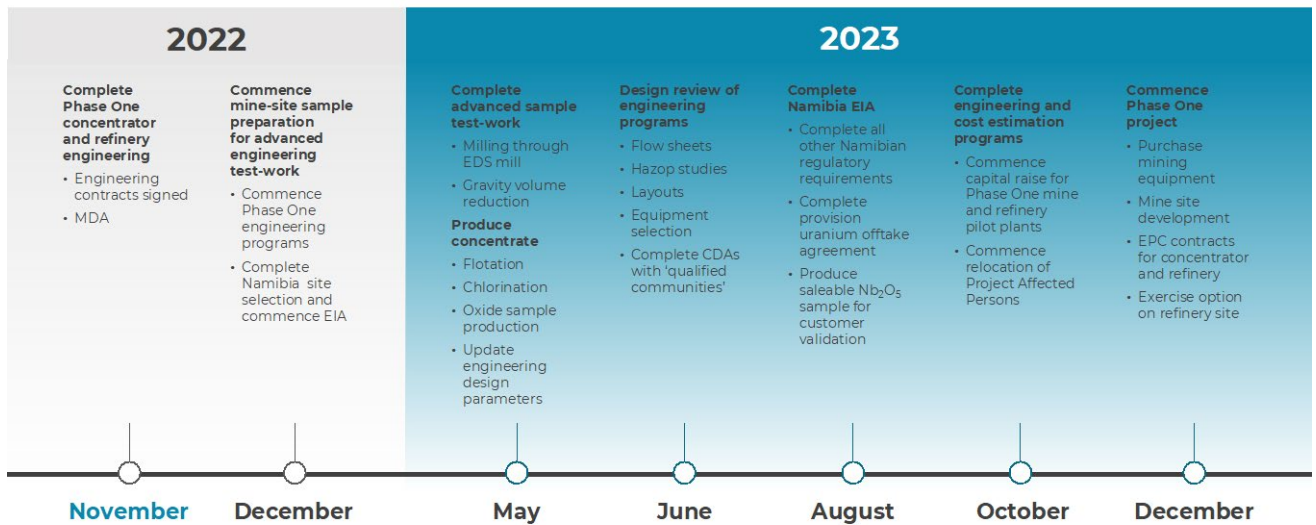
In the short-term the Company will:

1. Engage with the technology suppliers and the engineering companies to produce the requisite engineering and metallurgical reports such that the Feasibility Study can be updated to reflect the new refining technology.
2. Finalise the Namibian site location and commence the Environmental Impact Assessment.
3. Produce an Nb<sub>2</sub>O<sub>5</sub> (niobium oxide) test sample for initial evaluation by potential customers.
4. Continue to engage with all Malawian stakeholders to ensure that the MDA is finalised and that the Project Affected Persons can be relocated.
5. Produce a complete cost estimate to support a capital raise for the Phase One mine and refinery construction commencing Q4 2023.

It is anticipated that these endeavours will take until Q3 2023, whereafter the Company will need to raise further funding for work to commence on both the mine and refinery sites, with a view to being in production by Q3 2024.

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## Near-term value drivers



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### 1.3 Offtake and Distribution

In addition to ongoing early-stage discussions with potential customers in the electric vehicle industry, Globe is also in early-stage discussions with various parties who are experienced in acting as agents for niobium and tantalum products. These parties are located in Asia, Europe, and the Americas.

### 1.4 Relocation of Project Affected Persons

In September 2022, Globe held a meeting with all persons who will be required to relocate in order for the Project to proceed (**Project Affected Persons**) and other community members to inform them of the status of the Malawi Government's authorisation process for the MDA, and consequent changes to the proposed relocation timetable and compensation schedule.

Due to the delay in signing the MDA, the relocation of Project Affected Persons and associated compensation payments is now not expected to be completed before the last quarter of calendar 2023, with a Decision to Mine now expected no sooner than the second half of 2023.

### 1.5 Project Financing Update

Progress in relation to project financing remained paused during the quarter whilst Globe waits for the MDA to be executed. In the meantime, the Company has secured an additional loan facility of up to \$500,000 from Director Bo Tan to assist the Company with its short-term working capital requirements.

## 2 Niobium Market

### 2.1 Use of Niobium in EV Batteries

The Company recently released a comprehensive presentation on the use of niobium in EV batteries – refer ASX announcement of 21 October 2022 titled “Niobium – Critical EV Battery Metal”.

The key takeaways were:

- ✓ Niobium solves many of the issues facing the current generation of EV batteries.
- ✓ Increasingly, niobium is being added to EV batteries to allow for faster charging times, diminish the heat generated in the charging process, and allow for a significant increase in the number of charging cycles.
- ✓ Major global companies such as Volkswagen (buses) and Horwin (electric motorcycles) are some of the first automotive companies to take up niobium.

### 2.2 Recent Developments and Press

#### Lightning Motorcycles and CBMM bet on niobium technology to break land speed record

7 February 2022

Source: <https://niobium.tech/Pages/Content-Pages/Lightningmotorcycle>

“Boost performance and speed. This is the goal that led Lightning Motorcycles, known for being pioneers in the e-mobility industry and electric motorcycles innovators, to team up with the Brazilian company CBMM, world's leading supplier of niobium products and technology.

Signed in January, the partnership with the Silicon Valley-based company aims to leverage the applications of niobium in the mobility sector and to create an electric two-wheeler to break the current commercial motorcycle Land Speed Record (LSR). The initiative intends to innovate and test the metal in various components of the vehicle, in order to improve its performance and, eventually, exceed the 250 mph (around 403 km/h) mark.

According to CBMM's Market Development Manager, Mariana Perez de Oliveira, the partnership with Lightning Motorcycles is especially strategic, as it will serve as a platform for experimenting and testing niobium technologies in high-performance vehicles.

The CBMM manager complements that “in addition to the technologies already being used by Lightning in the battery charging module, niobium offers advantages when applied to other materials that go beyond weight reduction, allowing a true revolution in mobility”. In the steel industry, for example, the application of niobium is already a reality in the manufacture of high-strength steel, widely used in the automotive industry, as it allows the development of more resistant components, playing a crucial role in increasing vehicle safety.”



Niobium powers Landspeed Record candidate Lightning Tachyon Nb©  
Provided by India Today

### Niobium could be key to supercapacitors

29 September 2022



Battery. (Reference image by Karolina Grabowska, [Pixabay](#).)

New research from Umeå University proposes the idea of using niobium molecules as building blocks to design electrochemical energy storage materials.

In detail, researcher Mark Rambaran says solid materials can be produced from aqueous solutions containing nano-sized niobium molecules. The molecules are called polyoxoniobates.

“These polyoxoniobates are water-soluble and can be synthesized in large volumes. They act as molecular building blocks, in the same way as when a child stacks Lego bricks,” Rambaran said in a media statement. “They can be used to make a wide range of materials, including supercapacitors that facilitate lithium-ion storage.”

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According to the scientist, the synthesis of polyoxoniobates can be done with microwave irradiation because it is a rapid and efficient alternative to conventional hydrothermal methods. “They can be made in 15 minutes using microwave irradiation, which is much shorter than the 18 hours needed in previous hydrothermal methods,” Rambaran said.

He explained that the nanometer-sized molecules can be dissolved in water and spin-coated to deposit thin films of niobium pentoxide. When these films are heated to temperatures ranging from 200 to 1200°C, surfaces with varying corrosion resistance and electrochemical properties are obtained.

At higher temperatures, the films become crystalline and resistant to very basic conditions—and they are always resistant to acids. This approach facilitates the deposition of alkali-free, metal oxide thin films with varying crystallinity, thickness, and roughness.

“This ability to create niobium pentoxide thin films allows for an ease in testing pseudocapacitive properties, for example, which helps in developing electrochemical energy storage devices, such as supercapacitors,” the researcher pointed out.

Due to the arrangement of the atoms in the crystalline niobium pentoxide, it creates channels that can easily accommodate the storage and release of lithium ions for more than a hundred thousand cycles. This is what makes it a supercapacitor, and it offers electrochemical energy storage that can potentially replace a typical lithium-ion battery.

#### Charging in 10 seconds

Lithium-ion batteries tend to have limited charge storage capabilities and long charge or discharge times of 10 minutes or more, while supercapacitors exhibit charging times as low as 10 seconds. The ability to quickly charge and discharge allows supercapacitors to provide energy very quickly and efficiently.

In addition, the use of water-soluble polyoxoniobates offers an easy and benign method for creating metal oxide thin films, which prevents the use of harmful starting materials like niobium pentachloride or niobium pentafluoride.

“The interest in developing new materials for energy storage is guided by the necessity of mitigating climate change—the biggest and most urgent threat to humanity and the biosphere. To do this, improvement in the manufacturing of solar/fuel cells and batteries is necessary to enhance their electrochemical energy storage capabilities, while remaining environmentally friendly,” Rambaran said.

He believes that research focused on developing electrochemical energy storage devices or materials that exceed the current capabilities of lithium-ion batteries is therefore crucial.

Supercapacitors are considered suitable candidates to rival, if not replace, lithium-ion batteries in terms of electrochemical energy storage. Current applications of supercapacitors include uses in electric vehicles, hybrid electric vehicles, trams, trains, and consumer electronics.

Source: <https://www.mining.com/niobium-could-be-key-to-supercapacitors/>

### **3 Corporate**

#### **3.1 Cash at Bank**

Cash at bank for the Company at 30 September 2022 was \$0.146m (30 June 2022 was \$0.431 M).



In addition, the Company has an undrawn short-term loan facility of \$500,000 with a term of 6 months from the first drawdown date.

Research & Development Claim

The Company has lodged a claim for eligible research and development expenditure undertaken during the year ended 30 June 2022 totalling ~\$750,000, for which a rebate of approximately \$320,000 is expected.

Notwithstanding that the Company has cash and facilities available to it of ~\$0.95M inclusive of the R&D rebate, the Company has initiated steps to raise further cash to fund its operations. The Company regularly evaluates market appetite for equity investment and manages its capital and operations accordingly. The Company anticipates it will be able to continue to access funding as required and, to this end, it is considering further fund raising from internal and external parties. It will update the market of any steps it decides to take.

**3.2 Payments to Related Parties of the Entity**

In accordance with ASX Listing Rule 5.3.5, the Company advises that during the quarter the following payments were made to directors of the Company in respect of directors’ fees (inclusive of superannuation):

	<b>A\$’000</b>
Non-executive directors’ fees	74
<b>TOTAL</b>	<b>74</b>

**3.3 Exploration and Evaluation Costs for the Quarter**

In accordance with ASX Listing Rule 5.3.1, the Company advises that it conducted no substantive exploration activities during the quarter. Work was confined to evaluation. The Company expended \$226,000 on evaluation activities (refer section 2.1(d) of Appendix 5B). The major cost areas were salaries: \$30,000; consultants: \$173,000; metallurgical test-work and analysis: \$5,000; and miscellaneous items: \$18,000.

No production and development activities were conducted during the quarter.

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#### 4 ASX Announcements During the Quarter

The following announcements were made to the Australian Securities Exchange (**ASX**) during the quarter:

Date	Description
5-Jul-22	Company Secretary Appointment/Resignation
21-Jul-22	Pause in Trading
21-Jul-22	Trading Halt
22-Jul-22	Kanyika Project – Mining Development Agreement Update
25-Jul-22	Kanyika Niobium Project Brief Update
25-Jul-22	Pause in Trading
25-Jul-22	Trading Halt
27-Jul-22	Voluntary Suspension
1-Aug-22	Kanyika Niobium Project Brief Update – Clarification
1-Aug-22	Reinstatement to Official Quotation
1-Aug-22	Quarterly Activities/Appendix 5B Cash Flow Report
5-Aug-22	\$500,000 Loan Commitment Received
8-Aug-22	Proposed issue of securities – GBE
12-Aug-22	Notice of General Meeting/Proxy Form
12-Aug-22	Letter to Shareholders – Notice of General Meeting
15-Sep-22	Results of Meeting
21-Sep-22	Update on Status of Community Payments
21-Sep-22	Application for quotation of securities – GBE
21-Sep-22	Cleansing Notice Under Section 708A of the Corporations Act
21-Sep-22	Change of Director’s Interest Notice – Bo Tan
27-Sep-22	Additional \$500,000 Loan Commitment Received
28-Sep-22	Proposed issue of securities – GBE
28-Sep-22	Notification regarding unquoted securities – GBE
30-Sep-22	Full Year Statutory Accounts

Copies of all ASX announcements are accessible on the Company’s website and on ASX at: <https://www2.asx.com.au/markets/trade-our-cash-market/historical-announcements>

#### 5. Shareholding Information

As at 30 September 2022, shares on issue totalled: 482,320,039.

##### *Number and Distribution of Holders:*

Units	Number	Total Units	%
1 – 1,000	64	3,433	0.00%
1,001 – 5,000	51	180,510	0.04%
5,001 – 10,000	76	613,863	0.13%
10,001 – 100,000	315	14,420,437	2.99%
100,001 and above	131	467,101,796	96.73%
	<b>637</b>	<b>482,320,039</b>	<b>100%</b>

Top 20 Holders as at 30 September 2022:

Position	Holder Name	Holding	% IC
1	APOLLO METALS INVESTMENT COMPANY LIM	245,983,611	51.00%
2	AO-ZHONG INTERNATIONAL MINERALRE SOU	118,143,062	24.49%
3	TRIPLE TALENT ENTERPRISES LTD	16,397,666	3.40%
4	BNP PARIBAS NOMINEES PTY LTD ACF CLEA	13,159,756	2.73%
5	CITICORP NOMINEES PTY LIMITED	8,996,680	1.87%
6	MR COLIN ROBERT SEARL & MRS CYNDA SEARL	5,403,771	1.12%
7	BNP PARIBAS NOMS PTY LTD <DRP>	4,544,816	0.94%
8	MR RICHARD ULRICK & MRS WENDY ULRICK <ULRICK SUPER FUND A/C>	2,801,000	0.58%
9	HSBC CUSTODY NOMINEES (AUSTRALIA) LIM	2,527,891	0.52%
10	MR ANDREW CHARLES BALLARD	2,492,234	0.52%
11	GOENG INVESTMENTS PTY LTD <GOENG PENSION FUND A/C>	2,358,697	0.49%
12	MR MARK ANDREW THOMSON	1,819,495	0.38%
13	MR MARK LEONARD SWANSON	1,725,000	0.36%
14	MR KELLY PETER BODMAN	1,645,618	0.34%
15	C & CR SUPERCO PTY LTD <C & CR SEARL SUPERFUND A/C>	1,430,078	0.30%
16	TEBIL PTY LTD <BODMAN SUPER FUND A/C>	1,310,414	0.27%
17	MR GRAEME ROSS ELLERY	1,300,000	0.27%
18	MR MICHAEL SCHULTZ	1,200,000	0.25%
19	MR NOEL MALCOLM SCAMMELL	1,176,743	0.24%
20	MR PAUL BURTON <THE BURTON FAMILY A/C>	1,176,470	0.24%
	<b>Total</b>	<b>435,593,002</b>	<b>90.31%</b>
	<b>Total issued capital - selected security class(</b>	<b>482,320,039</b>	<b>100.00%</b>

## 6. Schedule of Mineral Tenements as at 30 September 2022

In accordance with ASX Listing Rule 5.3.3, the Company provides the following information:

Country	Project	Type	Status	Tenement	Interest held by Globe	
					30-Sep-22	30-Jun-22
Malawi	Kanyika	Mining Licence	Granted	LML0216/21*	100%	100%

There were no tenements acquired during the quarter ended 30 September 2022.

\* Pursuant to the Mines and Minerals Act, the Malawi Government is entitled to a 10% free equity interest in LML0216/21 subject to formally notifying GMMA of its desire to take up its entitlement. As at the date of this report, neither Globe nor GMMA has received any such notice.

## 7. Authorisation for Release

This report has been authorised for release by the Company's Chief Executive Officer, Grant Hudson.

For further information, please contact:

Grant Hudson  
Chief Executive Officer  
[gh@globemm.com](mailto:gh@globemm.com)

## Qualifying Statements

### Mineral Resource Estimates

The information in this report that relates to Mineral Resources is extracted from the report titled “Kanyika Niobium Project – Updated JORC Resource Estimate” released to the Australian Securities Exchange (**ASX**) on 11 July 2018 and available to view at [www.globemm.com](http://www.globemm.com) and for which Competent Persons’ consents were obtained. Each Competent Person’s consent remains in place for subsequent releases by the Company of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent.

The Company confirms that is not aware of any new information or data that materially affects the information included in the original ASX announcement released on 11 July 2018 and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the original ASX announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons’ findings are presented have not been materially modified from the original ASX announcement.

Full details are contained in the ASX announcement released on 11 July 2018 titled “Kanyika Niobium Project – Updated JORC Resource Estimate” available to view at [www.globemm.com](http://www.globemm.com)

The information in this report that relates to Ore Reserves is extracted from the report titled “Kanyika Niobium Project – Project Feasibility and Economics” released to ASX on 19 August 2021 and available to view at [www.globemm.com](http://www.globemm.com) and for which Competent Persons’ consents were obtained. Each Competent Person’s consent remains in place for subsequent releases by the Company of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent.

The Company confirms that is not aware of any new information or data that materially affects the information included in the original ASX announcement released on 19 August 2021 and, in the case of estimates of Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the original ASX announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons’ findings are presented have not been materially modified from the original ASX announcement.

Full details are contained in the ASX announcement released on 19 August 2021 titled “Kanyika Niobium Project – Project Feasibility and Economics” available to view at [www.globemm.com](http://www.globemm.com)

### Disclaimer

This report has been prepared by Globe Metals & Mining Limited (**Company**). The material contained in this report is for information purposes only. This release is not an offer or invitation for subscription or purchase of, or a recommendation in relation to, securities in the Company and nether this release nor anything contained in it shall form the basis of any contract or commitment.

This report may contain forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning the Company’s business plans, intentions, opportunities, expectations, capabilities, and other statements that are not historical facts. Forward-looking statements include those containing such words as could-plan-target-estimate-forecast-anticipate-indicate-expect-intend-may-potential-should or similar expressions. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions, and other important factors, many of which are beyond the control of the Company, and which could cause actual results to differ from those expressed in this report. Because actual results might differ materially to the information in this report, the Company does not make, and this report should not be relied upon as, any representation or warranty as to the accuracy, or reasonableness, of the underlying assumptions and uncertainties. Investors are cautioned to view all forward-looking statements with caution and to not place undue reliance on such statements.

The report has been prepared by the Company based on information available to it, including information from third parties, and has not independently verified. No representation or warranty, express or implied, is made to the fairness, accuracy or completeness of the information or opinions contained in this report.

The Company estimates its reserves and resources in accordance with the Australasian Code for Reporting of Identified Mineral resources and Ore Reserves 2012 Edition (**JORC Code**), which governs such disclosures by companies listed on ASX.

## Appendix A: About the Kanyika Niobium Project

The Kanyika Niobium Project is located in central Malawi, approximately 55 kilometres northeast of the regional centre of Kasangu and secured by Mining Licence LML0216/21 .

Drilling programs totalling 33.8 kilometres of percussion and core drilling have confirmed the extent of mineralisation. Structured and progressive engineering studies have resulted in the current (JORC 2012) resource statement (refer below) and given rise to significant improvements and simplifications in the process flowsheet from that first imagined.

In addition, Globe has undertaken substantial metallurgical optimisation work and commissioned a pilot plant to demonstrate and further optimise metallurgical processes. Metallurgical optimisations studies have improved recoveries from 62% in 2012 to 75% today, through simple novel patented metallurgical processes.

The Kanyika operations will produce a pyrochlore mineral concentrate that contains both niobium and tantalum in commercially valuable volumes to be shipped to a refinery for advanced processing into high purity materials.

A Mineral Resource Estimate for the Kanyika Niobium Project under the 2012 JORC guidelines was reported to ASX on 11 July 2018 as follows:

**Table 1: MRE for KNP using a 1,500 ppm Nb<sub>2</sub>O<sub>5</sub> lower cut**

Category	Million Tonnes	Nb <sub>2</sub> O <sub>5</sub> ppm	Ta <sub>2</sub> O <sub>5</sub> ppm
Measured	5.3	3,790	180
Indicated	47.0	2,860	135
Inferred	16.0	2,430	120
<b>Total</b>	<b>68.3</b>	<b>2,830</b>	<b>135</b>

**Table 2: MRE for KNP using a 3,000 Nb<sub>2</sub>O<sub>5</sub> lower cut**

Category	Million Tonnes	Nb <sub>2</sub> O <sub>5</sub> ppm	Ta <sub>2</sub> O <sub>5</sub> ppm
Measured	3.4	4,790	220
Indicated	16.6	4,120	190
Inferred	2.8	4,110	190
<b>Total</b>	<b>22.8</b>	<b>4,220</b>	<b>190</b>

## Appendix 5B

### Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

Globe Metals &amp; Mining Limited

ABN

33 114 400 609

Quarter ended ("current quarter")

30 September 2022

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers		
1.2 Payments for		
(a) exploration & evaluation		
(b) development		
(c) production		
(d) staff costs		
(e) administration and corporate costs	(560)	(560)
1.3 Dividends received (see note 3)		
1.4 Interest received	-	-
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Government grants and tax incentives	-	-
1.8 Other (provide details if material)		
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(560)</b>	<b>(560)</b>
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire or for:		
(a) entities		
(b) tenements		
(c) property, plant and equipment	(7)	(7)
(d) exploration & evaluation	(226)	(226)
(e) investments		
(f) other non-current assets		

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities		
	(b) tenements		
	(c) property, plant and equipment		
	(d) investments		
	(e) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other (provide details if material)		
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(233)</b>	<b>(233)</b>
<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)		
3.2	Proceeds from issue of convertible debt securities		
3.3	Proceeds from exercise of options		
3.4	Transaction costs related to issues of equity securities or convertible debt securities		
3.5	Proceeds from borrowings	500	500
3.6	Repayment of borrowings		
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (provide details if material)		
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>500</b>	<b>500</b>
<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	431	431
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(560)	(560)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(233)	(233)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	500	500

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	8	8
4.6	<b>Cash and cash equivalents at end of period</b>	<b>146</b>	<b>146</b>

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	146	431
5.2	Call deposits		
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>146</b>	<b>431</b>

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	74
6.2	Aggregate amount of payments to related parties and their associates included in item 2	

*Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.*

The payments made to directors of the entity and their associates reported at 6.1 were comprised as follows:

	A\$'000
Non-executive directors' fees	74
<b>TOTAL</b>	<b>74</b>



## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7. <b>Financing facilities</b>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities	500	-
7.2 Credit standby arrangements		
7.3 Other (please specify)		
7.4 <b>Total financing facilities</b>	500	-
7.5 <b>Unused financing facilities available at quarter end</b>		500
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		
<p>Director Bo Tan has provided a short-term loan facility of \$500,000 (refer ASX announcement of 27 September 2022) of which nil was drawn down at 30 September 2022.</p> <p>The key terms of the short-term loan facility are as follows:</p> <p>Facility Limit: A\$500,000</p> <p>Drawdowns: Limit of A\$100,000 per drawdown</p> <p>Interest Rate: 8% per annum</p> <p>Default Interest Rate: 20% per annum</p> <p>Term: 6 months from first drawdown date</p> <p>Repayment: Repayable in cash or by the issue of fully paid ordinary shares at a price of 6.35 cents per share, subject to shareholder approval</p>		

8. <b>Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1 Net cash from / (used in) operating activities (item 1.9)	(560)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(233)
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(793)
8.4 Cash and cash equivalents at quarter end (item 4.6)	146
8.5 Unused finance facilities available at quarter end (item 7.5)	500
8.6 Total available funding (item 8.4 + item 8.5)	646
8.7 <b>Estimated quarters of funding available (item 8.6 divided by item 8.3)</b>	0.81
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
<p>Answer: <i>The Company expects that its cashflows for the upcoming quarter will be approximately 30% lower in comparison to the current quarter due to changes in its resource requirements.</i></p>	

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

*Answer: Yes. The Board regularly evaluates market appetite for equity investment and manages its capital and operations accordingly. The Board anticipates it will be able to continue to access funding as required and, to this end, it is considering further fund raising from internal and external parties. It will update the market of any steps it decides to take at the appropriate time.*

8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

*Answer: Yes, on the basis of 8.8.2 above. In addition, it should be noted that the Company has filed its R&D return for the year ended 30 June 2022 and anticipates a refund of approximately \$320,000 during the upcoming quarter.*

*Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.*

### Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

31 OCTOBER 2022

Date: .....

GRANT HUDSON – CHIEF EXECUTIVE OFFICER

Authorised by: .....  
(Name of body or officer authorising release – see note 4)

### Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.

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