

ASX : HVY



**Heavy  
Minerals**  
LIMITED

**Australasian Corrosion Association (ACA)  
Corrosion and Prevention Perth 2023**



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### Competent Person Statement

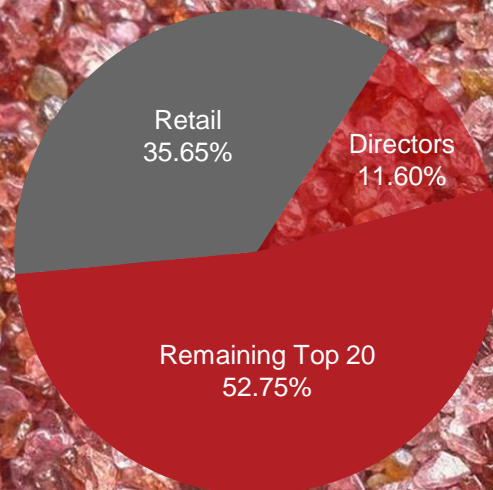
The information in this presentation that relates to Exploration Results, Exploration Targets and Mineral Resource estimates is based on and fairly represents information and supporting documentation prepared by Mr. Greg Jones (FAusIMM) who is a Non-Executive Director for Heavy Minerals Limited. Mr. Jones is a Fellow of the Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being reported on to qualify as a Competent Person as defined in the 2012 edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Mr. Jones has reviewed this report and consents to the inclusion in the report of the matters in the form and context with which it appears.

The information in this presentation that relates to the following: Production Targets, Processing, Infrastructure, Capital requirements and Operating Costs as announced 12 September 2022, Metallurgy as announced 15 August 2022, Mineral Resource Estimate (Port Gregory) as announced 10 July 2023, Exploration Results (Redhill) as announced 4 May 2023, Mineral Resource Estimate (Inhambane) as announced 6 December 2021 is available to view at [www.heavyminerals.com](http://www.heavyminerals.com).

The Company confirms that a) it is not aware of any new information or data that materially affects the information included in these announcements; b) all material assumptions included in these announcements continue to apply and have not materially changed; and c) the form and context in which the relevant Competent Persons’ findings are presented in this presentation have not been materially changed from the announcements.



# Capital Structure<sup>2</sup>



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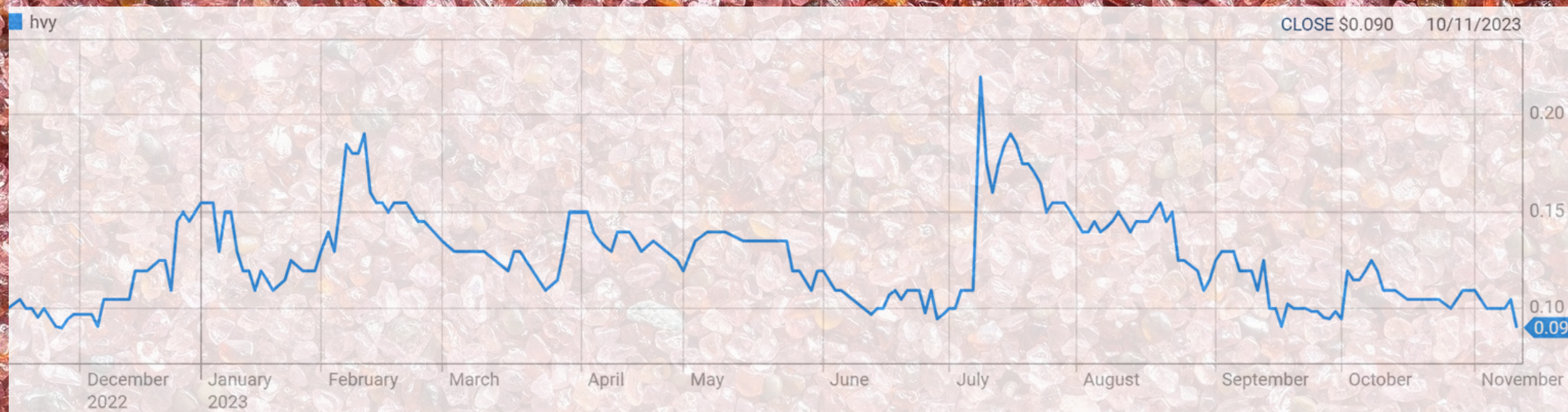
**SHARES ON ISSUE<sup>2</sup>**  
57.6M

**SHARE PRICE<sup>2</sup>**  
\$0.9

**MARKET CAP<sup>2</sup>**  
\$6.05M

**CASH<sup>1</sup>**  
\$0.253M

**DEBT<sup>2</sup>**  
nil





# The Board & Executive

## Adam Schofield

Dip (MechEng)  
**Chairman**

Mr. Schofield is a mining company executive with over 20 years' experience in the resources sector in Australia and Africa. He has significant experience in conducting feasibility studies and taking projects from feasibility stage into operations. He has extensive experience in Mineral Sands, Gold, Copper, and Iron Ore. (ASX:KFM).

## Aaron Williams

B Comm, MBA,  
AMPP Certified Coatings Inspector  
**Non-Executive Director**

Mr. Williams is an international expert in the garnet industry. From 2002 until 2011, he was Perth based senior executive of the GMA Garnet Group. During his tenure he was seconded to Houston to establish the group's American business unit. From 2012, Aaron has co-founded and managed Southeast Asian and Middle East manufacturer/ distributors of abrasive blasting equipment and blast media abrasives. Today Aaron is the CEO of Australian surface preparation equipment manufacturer, Abrasive Blasting Service and Supplies Pty Ltd (ABSS), based in Melbourne. Aaron is a Board Director (Global Centre) for the Association for Material Protection and Performance (AMPP).

## Greg Jones

B App Sc (Geol - Hons), FAusIMM  
**Non-Executive Director**

Mr. Jones has over 25 years' experience primarily as a mineral sands Geologist with Iluka Resources in senior resource estimation/management roles and in the capacity of Competent Person for the reporting and management of Mineral Resources and Ore Reserves. Greg has helped develop a number of new discoveries into reportable Mineral Resources including Jacinth-Ambrosia. He is a 20 year member of the AusIMM, holding the grade of Fellow, sitting on review committees and has co-published multiple technical and resource estimation mineral sands papers.

## Andrew Taplin

B Eng (Mech), MBA, GAICD  
**CEO**

Mr. Taplin has over 30 years resource sector experience developing projects and operating mine, rail, port and infrastructure assets globally, for majors, ASX juniors and an Australian based mining contractor. He has had significant experience in senior government stakeholder engagement in multiple geographies, regulatory and legislative approvals and a demonstrated track record of delivering social consensus to operate successfully. His experience includes operating and developing infrastructure across North & South America—USA, Canada and Peru, Africa, Europe and Australia.

# Heavy Minerals Limited (ASX:HVV)

**Heavy Minerals Limited (HVV) is an Industrial Minerals Developer and Explorer with Projects adjacent to world class deposits in pro-mining jurisdictions**



**Industrial Garnet**



**Zircon**



**Titanium Dioxide**

**Western Australia – Port Gregory Project:** JORC (2012) Mineral Resource of 166 million tonnes @ 4.0% Total Heavy Minerals. This comprises a Measured Mineral Resource of 126 Mt @ 3.8% THM; an Indicated Mineral Resource of 20 Mt @ 6.5% THM; and an Inferred Mineral Resource of 20 Mt @ 2.9% THM. This includes **5.9 Mt of contained Garnet** and 260 thousand tonnes of ilmenite <sup>1</sup>. Leases are contiguous with GMA mine which supplies approximately 35% of global Almandine Garnet <sup>2</sup> and adjacent to the recently developed RDG mine also producing Almandine Garnet

**Western Australia – Red Hill Project:** Exploration Target defined using cut-off grades for reporting of 3% THM and 1% THM and ranging from 90 to 150 Mt of material @ 5.4% to 4.1% THM. The Exploration Target also contains between 5 and 6 Mt of THM and **3.8 and 4.5 Mt of contained Garnet** <sup>3</sup>. The potential quality and grade of the Exploration Target is conceptual in nature and there has been insufficient exploration activity to determine a Mineral Resource estimate and it is uncertain if further exploration will result in the estimation of a Mineral Resource. Close proximity to GMA and RDG (<10km)

**Mozambique – Inhambane Project:** JORC Inferred Mineral Resource of 90 Mt @ 3% THM<sup>4</sup>  
- Adjacent Rio Tinto's mineral sands projects

<sup>1</sup> ASX 10 July 2023 Updated Port Gregory JORC Mineral Resource increase by 23% <sup>2</sup> 2021 USGS Mineral Commodity Summary. <sup>3</sup> ASX 4 May 2023 Red Hill Assay Results and Exploration Target.

<sup>4</sup> ASX 6 December 2021 Mineral Resource Increased at Inhambane to 90mt at 3% THM.

# Why is Almandine Garnet in High Demand?

## **Superior hardness (7.5 Mohs), Density (SG4.1+) and Low Friability**

- High quality surface finish means better coating adhesion
- High productivity & low abrasive consumption = lower costs

## **Environmental, social and governance**

- Low nuisance dust generated during blasting
- Inert – environmentally friendly with no hazardous by-products
- Recyclable (Almandine Garnet can be recycled several times)
- Minimal Health and Safety Risks (preferred abrasive to minimise WHS/OH&S risks) – no heavy metals/ no free silica
- Responsible mining and rehabilitation practices

## **Typical Industry Applications**

- Preferred blast media for abrasive blasting in:
  - Military
  - Engineering/ Fabrication Yards servicing the O&G & wind farms industry
  - Maintenance work in O&G, Bridges, Marine
- The only media used in abrasive waterjet cutting for precision cutting of metal & composites





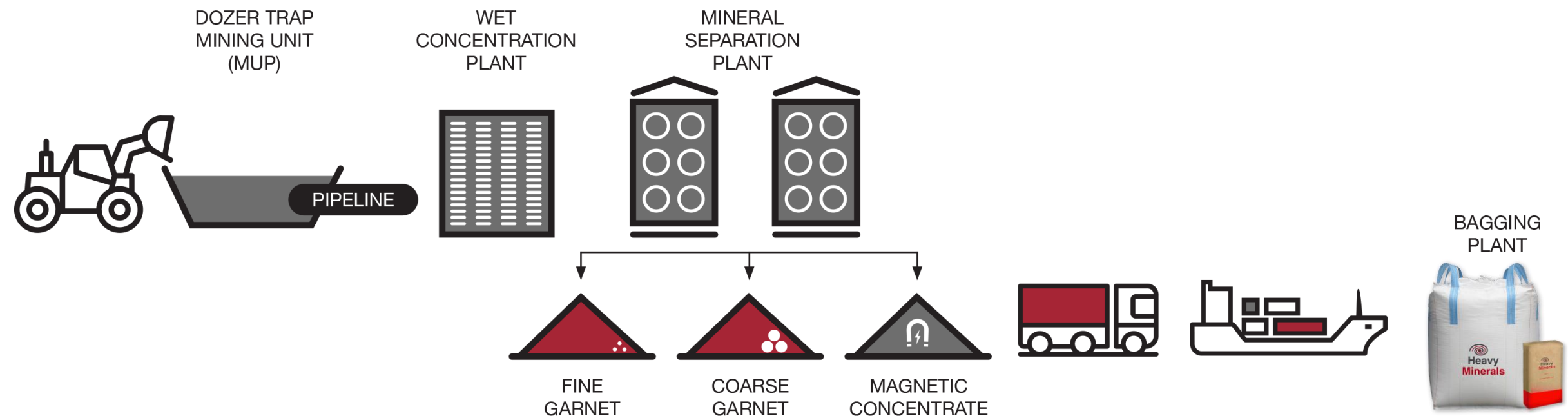
Preliminary results indicate Heavy's Port Gregory Garnet Project is a globally significant Garnet deposit

Furthermore, the sieve sizes are expected to result in large annual tonnage of the 'in-demand' 20/40 mesh and 30/60 mesh (as defined by ISO 11126-10) grades

## Port Gregory Garnet Project: Indicative Annual Tonnage & Sieve Analysis Results

		Annual Tonnes	
	Total Saleable		152,500
	Ilmenite		6,500
	Garnet		146,000
	ISO 11126-10	%	
	<u>Sieve Range</u>	<u>%</u>	<u>Tonnes</u>
20/40#	350 to 850μ	23%	33,288
30/60#	200 to 600μ	45%	64,970
Waterjet Grades		33%	47,888

# Mining & Processing is as simple as it gets!



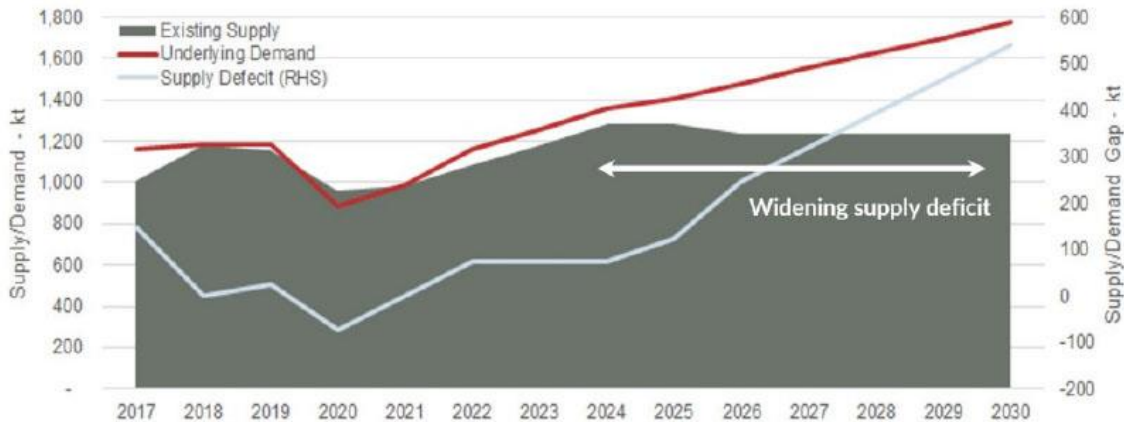


# Market Opportunities for Almandine Garnet

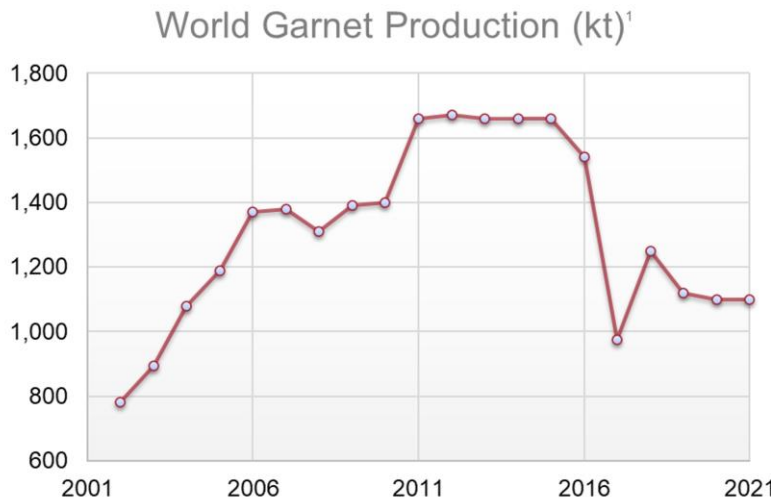
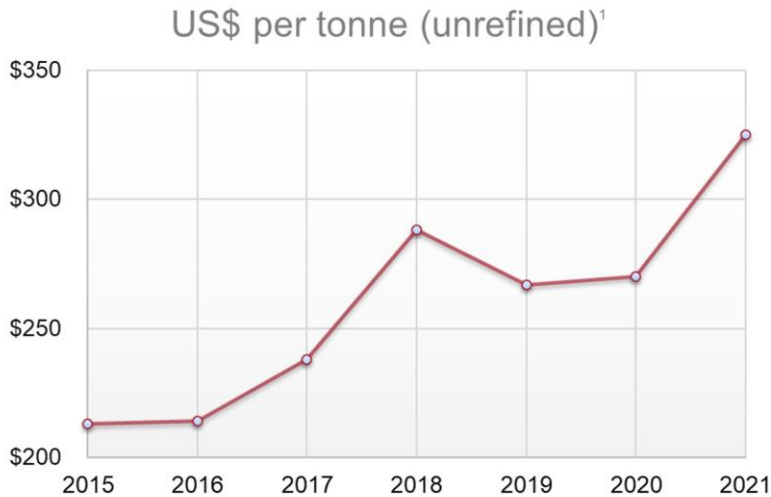
## Garnet Market Analysis

- Indian, Australian and USA supply and production challenges have materially impacted global supply
- Geo-political USA-China tensions bode well for Australian suppliers
- Compound Annual Growth Rate for garnet forecast at >7%<sup>1</sup>
- Heavy's planned production level will contribute <1% to the global blast media market and <10% to world garnet production in 2026 (first production scheduled 2027)
- Heightened regulatory pressure to reduce sand and slag consumption

Market research conducted by TZMI in 2021 highlighted a widening supply demand deficit. Industry players in the Port Gregory region have found that product has been accepted into the market with long term offtakes readily sourced.



*Supply and Demand Fundamentals:  
A story of global garnet supply coming  
off and prices increasing*

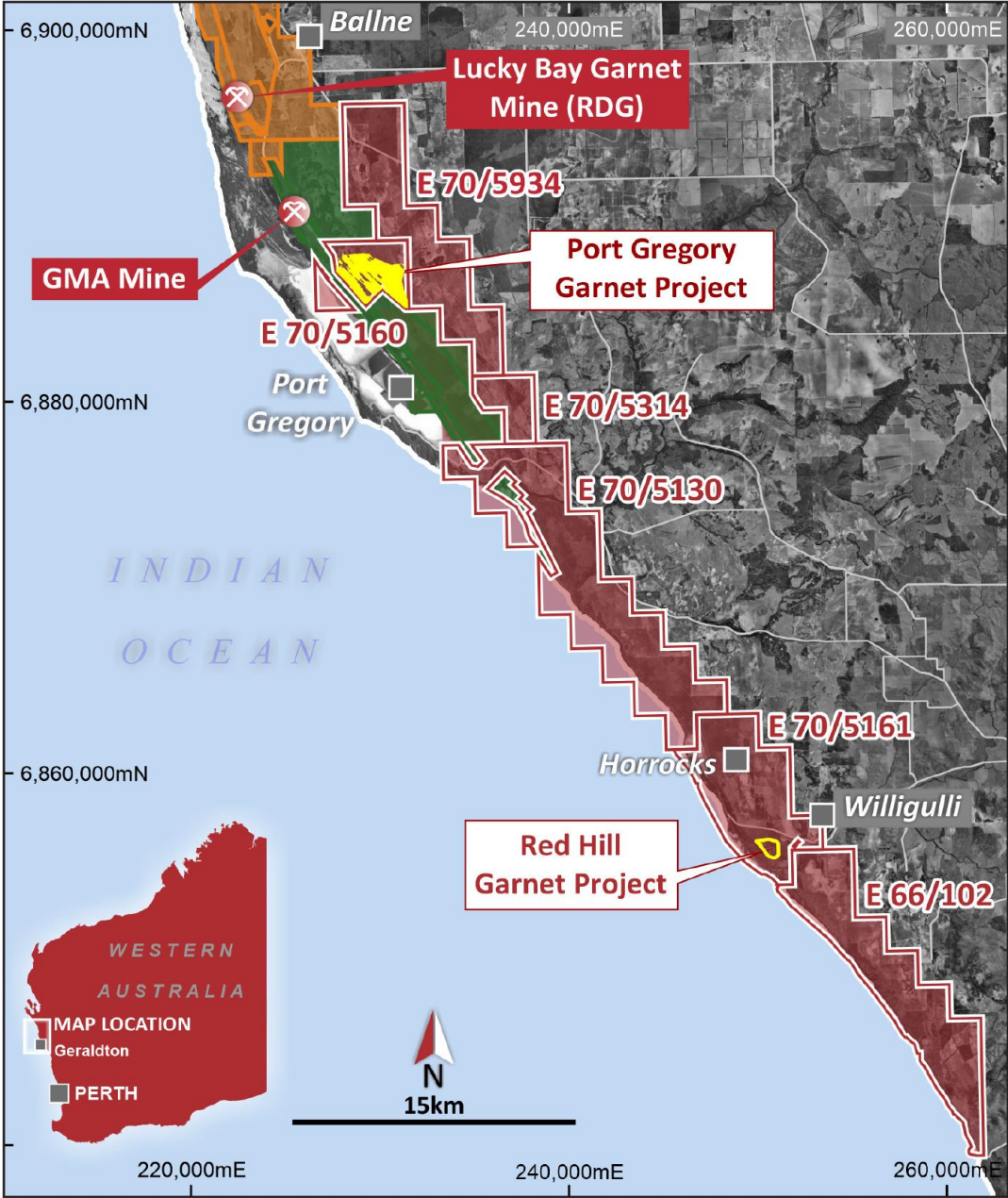


<sup>1</sup> TZMI Garnet Market Data (Project 11759) Jan 2021.

# The Port Gregory Garnet Project

Finance	Low Capex – \$110m NPV <sub>8</sub> - \$253m <sup>1</sup> Payback 4.2 years IRR - 33% <sup>2</sup> FCF - \$588m <sup>3</sup>
Funding	Atradius (Dutch Sovereign Wealth Fund) Letter of Support for project funding Export Finance Australia engagement
Technical	Proven and simple mining & processing Rapid project development & future scale up Pre-Feasibility Study Launched
ESG	Established mining locality – GMA & RDG Local and regional social consensus for development
Market	Strong global market demand for Australian garnet – CAGR >7% to 2030. Target markets – USA, Middle East and South East Asia


<sup>1</sup>After tax NPV<sub>8</sub> <sup>2</sup>After tax IRR <sup>3</sup>After tax FCF






# Competitor Analysis and Garnet End Users – Global Production



 Alluvial Garnet Production \*

 Hard Rock Garnet Production \*

\* Current / Prospective / Historic

## Global Users and potential direct Customers

### Blasting



### Water Jet





# Summary

- Near term production anticipated from the Port Gregory Project (2026-2027)
- Strong overall financial metrics, especially FCF post tax expected following first production creating opportunities for further investment and early shareholder earnings
- Funding options for Port Gregory construction are already advancing including positive indications from Atradius and Export Finance Australia
- Strong indication of offtake opportunities that will be secured over the next 18 months
- Favourable garnet market conditions with CAGR >7% through to 2030. Growth opportunities beyond the current forecast as WHS and ESG regulations change







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