

Building a Global Manganese Business

Supplying sustainable manganese ore and EV battery grade HPMSM to global markets

ASX: E25 OTCQX: ELMT

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Element 25 Introduction



Expanding the 100% owned Butcherbird Manganese Mine in Western Australia to produce high-quality manganese oxide concentrate.

Developing a USA-based refinery to supply ethical battery-grade High Purity Manganese Sulphate Monohydrate (HPMSM) products.

Offtake and funding agreements in place with our partners General Motors and Stellantis to supply HPMSM for Electric Vehicle batteries¹.



Company Leadership



Board of Directors



John Ribbons Chairman CPA



Justin Brown Managing Director **Geologist**



Fanie van Jaarsveld Non-Executive Director **Analytical Chemist**



Sam Lancuba Non-Executive Director Chemical Engineer

Experienced, Multi-disciplinary Board & Management

Project Development & Operations



Michael Jordon Chief Financial Officer CPA



Neil Graham VP Battery Materials Chemical Engineer



Sias Jordaan VP Marketing & Logistics Accountant



Chad Moloney Technical Services Mining Engineer



Leon Lima Technology Manager Chemical Engineer



Liam O'Connor Business Systems IT Professional



The Butcherbird Manganese Project

Butcherbird Manganese Project

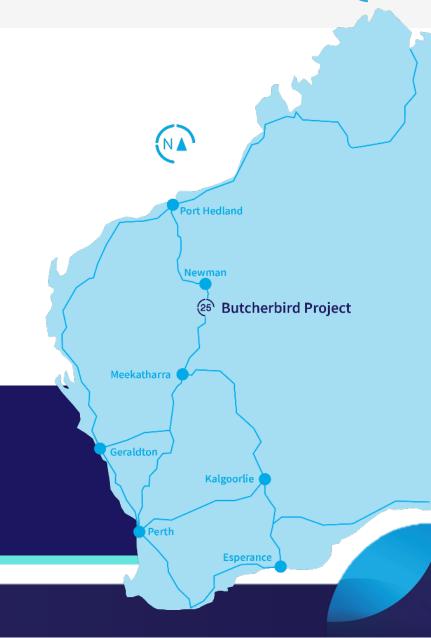


- World-class manganese resource.
- Located in a Tier-1 jurisdiction with strong ESG regulation.
- Over 270 million tonnes in resources with potential to expand (2024 resource update¹).
- > 18-year Reserve at 1.1Mt per annum production supported by an updated Feasibility Study².
- Long mine-life with further upside by converting Inferred Resources.
- Very clean metallurgically no toxic contaminants.
- Produces a low carbon, high-quality manganese concentrate ideal for manganese alloys and high-purity manganese sulphate monohydrate (HPMSM)³.





Providing high quality manganese for traditional and new energy markets.



Butcherbird Manganese Mine - Resources & Reserves



Ore Reserve¹

Deposit	Classification	Tonnes (Mt)	Grade (Mn%)	Contained Mn (Mt)
Yanneri Ridge	Proved	11.3	11.8	1.33
	Probable	70.4	10.2	7.15
Coodamudgi	Proved	-	-	-
	Probable	19.1	10.3	1.97
Stockpiles	Proved	0.6	9.2	0.06
Total		101.4	10.4	10.5

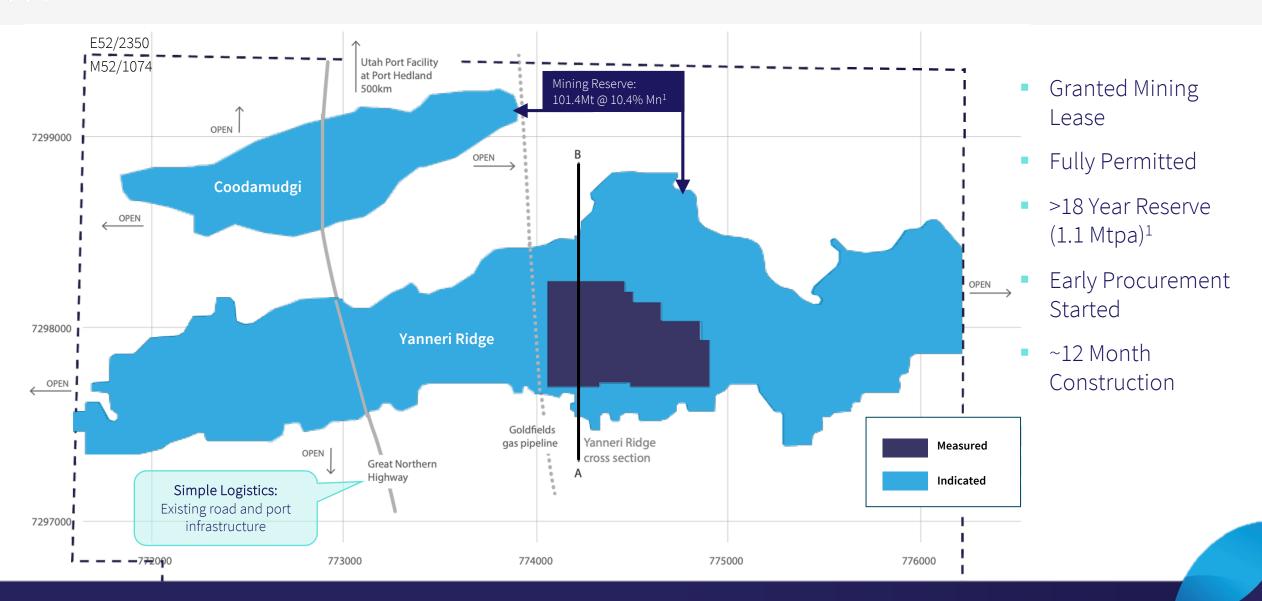
Mineral Resource²

Resource Category	Tonnes (Mt)	Mn (%)
Measured	14	11.3
Indicated	116	10.1
Inferred	144	9.8
Total	274	10.0

- Current Reserve:
 - Only utilises approximately ~40% of global Mineral Resource;
 - Provides for a mine life of >18 years¹.
- High conversion of measured and indicated resources to reserve.
- Excellent potential for future expansion with known mineralization outside resource areas.
- Simple geology, low technical risk.
- Global resources not closed off.

Large, long-life manganese ore mine in Western Australia

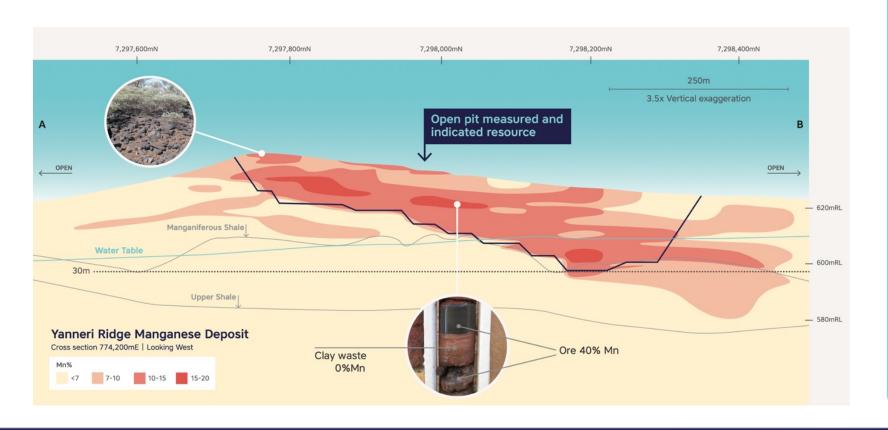




Simple Geology: low-cost, low-impact operations



Classification	Tonnes (Mt)	Mn (%)	Contained Mn (Mt)
Resource ¹	274	10.0	27.4
Reserve ²	101.4	10.4	10.5



RESOURCE GROWTH POTENTIAL

- Large resource, long mine life with over 18 years in current Reserve.
- Mineralisation outside existing resource provides upside.
- Ore suitable for ferroalloys, battery grade HPMSM and EMM.

ENVIRONMENTALLY BENIGN OPERATION

- Ore from surface.
- Low strip-ratio.
- Minimal explosives required.
- One reagent water.
- Very low levels of contaminants.

Company strategic vision for growth



Butcherbird Expansion

1.1Mt/a Manganese Ore¹

Build and commission a full large-scale processing facility at the 100% owned Butcherbird Manganese Mine in WA.



Louisiana HPMSM

USA EV Critical Raw Materials²

Construct the first US HPMSM processing facility (Louisiana), producing 65,000 tonnes per annum of battery-grade HPMSM with GM and Stellantis



Expand Globally

HPMSM Expansion - EU & Asia

Multiple HPMSM modules globally to deliver sustainable HPMSM supply to global EV markets targeting Europe and Asia.

1-Year Plan

3-Year Plan

10-Year Plan



Best in class, low carbon³, ethically produced, scalable HPMSM for electric vehicle batteries:

Sustainably Supplying Global EV Markets

² Reference: Company ASX Release Dated 12 April 2023 ³ Reference: Company ASX Release Dated 21 February 2023

Butcherbird Manganese Mine Expansion



- New processing facility to optimise and scale the process.
- Scale and improved efficiencies target lower costs and increased profits¹.
- CO₂ emission intensity and ESG outcomes will be improved by:
 - Integration of renewable energy (targeting year 3 of operations).
 - Equipment selection criteria for energy efficiency.
 - Investigating potential for autonomous mining fleet².
 - Transition to EV mining fleet (targeting Year 3 of operations).



Butcherbird Expansion – Feasibility Study delivers robust economics













Payback

Capital Cost

(incl. contingency)

NPV₈

IRR

.

Cashflow

1 2

(Pre-tax, real)

AU\$561M

(annual)

(years)

NAIF TO PROVIDE \$50 MILLION FINANCE PACKAGE FOR BUTCHERBIRD EXPANSION PROJECT²



The expansion will establish Butcherbird as a low-cost manganese operator (US\$ 2.86/dmtu C1 cost) able to produce high-quality manganese concentrate at a globally competitive operating cost.



The Feasibility Study utilises all the available measured and indicated resources within the 18.3-year mine plan supporting this Study.



Low capital requirement of AU\$64.8M capital in total construction costs including process and non-process infrastructure. Average base case annual operating cashflow of AU\$ 70.5M at full production.



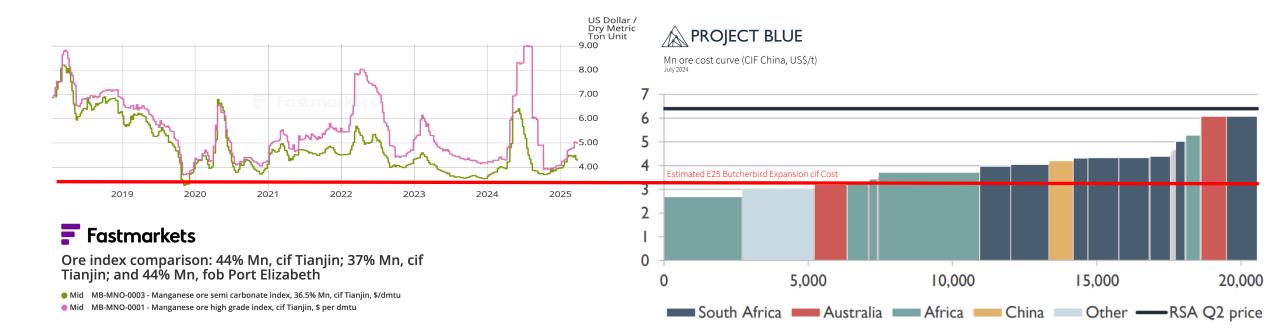
Forecast cashflows generate a simple payback period of 16 months from commencement of operations.

- Northern Australia Infrastructure Facility (NAIF) to provide up to AU\$50 million senior debt facility for Element 25's Butcherbird Manganese Expansion Project².
- Butcherbird development based on a 1.1Mtpa manganese ore operation and delivers outstanding metrics¹.
- Manganese concentrate to be sold to steel industry partners and provide feedstock for E25's planned HPMSM facility in Louisiana, USA.
- Butcherbird Expansion plan is fully approved under WA Regulatory Framework³.
- NAIF to act as the sole senior secured lender to the project the balance of funds to be sourced from financiers including offtake prepayment, subordinated debt and royalty financing as potential mechanisms.

Butcherbird Expansion – Scale Strengthens the Business



Economies of scale from the expanded operation intend to move the Butcherbird production costs lower on the global cost curve and strengthen the business through all price cycles.

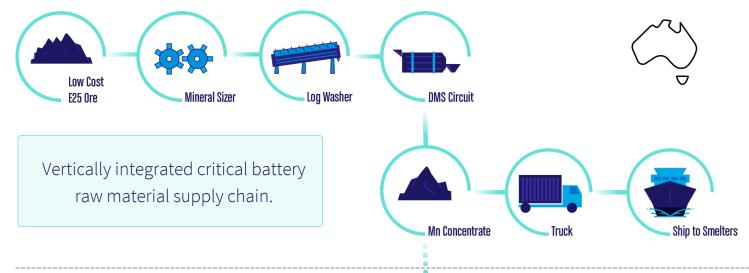




E25 HPMSM Strategy

Vertically-integrated global HPMSM supply



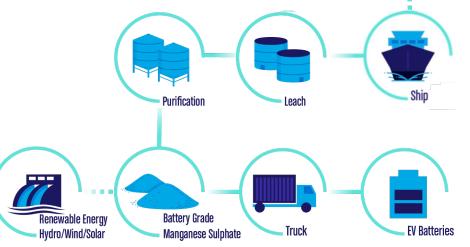


WA Manganese Ore Supply:

Australian manganese ore concentrates as feedstock for HPMSM production to supply US EV markets.
Surplus ore will supply

existing ferroalloy customers.







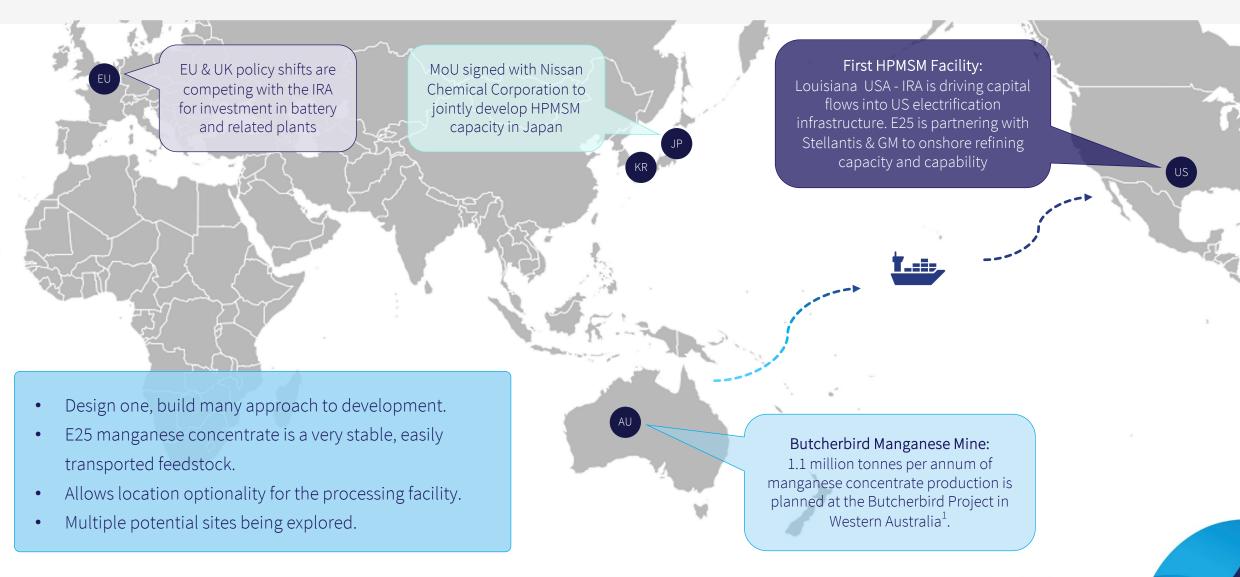
Louisiana HPMSM Refinery:

Louisiana manganese refinery will utilise the Australian ore as feedstock to produce high purity low carbon IRA compliant battery grade manganese sulphate.



Global Refining Capacity in the Longer Term





Improved, Cost-Competitive Cleaner Process Technology



The Element 25 Process makes significant changes & improvements:







Current Outdated Technologies mean:

- Large volumes of waste residues.
- Toxic Reagents like fluorine.
- Inefficient.
- Higher Cost.
- Outdated processing technology.

Element 25 Process

- More efficient (fast kinetics, reduced energy)
- Minimises reagent requirements
- Reduced carbon intensity
- Lower volumes of waste residues
- Non-toxic residues may be able to be repurposed.





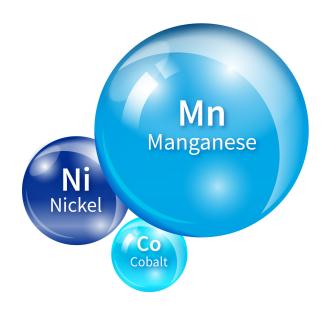
The Importance of Manganese

Transition to Higher Manganese Battery Cathodes



LMFP, LMR, LMNO and NM_x cathode chemistries offer improved safety, higher energy density, reduced cost per KWh and greater supply chain flexibility.

High **manganese** means reduced reliance on **nickel** and **cobalt**:



Reduced nickel and very low to no cobalt content.

Reference: Umicore 2023

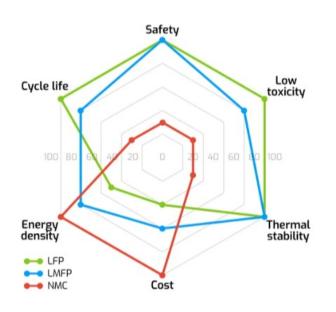
"Japan's manganese-boosted EV battery hits game-changing 820 Wh/Kg..."

Yokohama University Japan

"...our manganese-rich HLM technology moves closer to commercial production for future customers and provides an optimum alternative for the production of low-cost EV batteries..."

Umicore Finland

LMFP vs LFP vs NMC



improved energy density over LFP, lower cost/kwh and improved safety over NMC



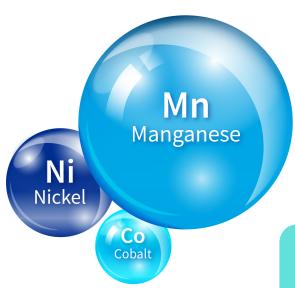
Reference: Integrals Power

Transition to Higher Manganese Battery Cathodes



LMFP, LMR, LMNO and NM_x cathode chemistries offer improved safety, higher energy density, reduced cost per KWh and greater supply chain flexibility.

High **manganese** means reduced reliance on **nickel** and **cobalt**:



Lithium Manganese Rich means:

5-10x Mn*

Reduced nickel and very low to no cobalt content.

Reference: Ufflicore 202.



LMR Cell Production at Ford Ion Park

Ford Makes Breakthrough with LMR Battery Chemistry: Targeting More Affordable, Long-Range Electric Vehicles by End of Decade



April 23, 2025



NEWS

Lithium
Manganese
Rich

May 13, 2025

TECHNO

Mn

Why LMR batteries will change the outlook for the EV market

Share article:



N



By Kushal Narayanaswamy, director, advanced battery cell engineering, GM





Louisiana Battery Grade HPMSM

DoE Grant - Part of US Government Drive for Domestic Manufacturing



DoE Grant Selection¹

- E25's planned HPMSM facility in Louisiana awarded a US\$166
 million grant from the U.S. DoE.
- Louisiana HPMSM Project selected under DoE's MESC Battery Materials Processing Grant Program.
- Binding agreements signed, grant awarded for the project.
- The DoE's funding commitment is in addition to U\$115M financing commitments from GM and Stellantis.

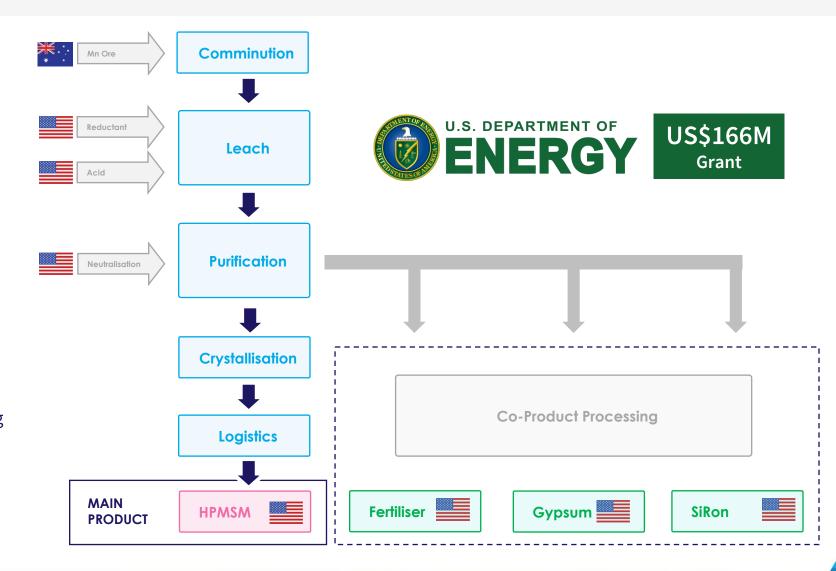


DoE MESC Grant - Supporting Local Raw Material Supply



Local Supply Chain

- Process and supply chain developed to maximise U.S. industry involvement.
- Working with partners GM and Stellantis to supply low carbon HPMSM for EV batteries.
- All reagents sourced locally from established suppliers.
- Site located close located adjacent to acid recycling facility.
- Solid residues as co-products will be placed into local industries targeting zero waste.
- Low carbon, circular economy approach.



DoE Grant Award Underpins Project Capital Stack



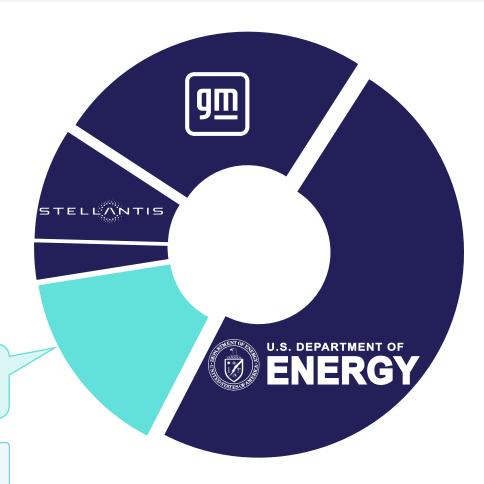
- DoE US\$166M grant award provides cornerstone funding to support project success¹.
- Louisiana HPMSM Project grant awarded under DoE's MESC Battery Materials Processing Grant Program.
- Binding grant agreements signed, award committed.
- Grant support is in addition to U\$115M financing **commitments** from GM and Stellantis².
- Discussions in train with prospective financiers to close out remaining capital funding requirement.

Process underway.

Final funding piece ~15% of capital requirement.

Grant award secures 50% of capital requirement up to US\$166M





Global Sustainable Secure Manganese Supply



100	Long Mine Life	 18.3 Year Reserve within granted Mining Lease 274Mt Resource global resource with exploration upside
<u> </u>	Construction Ready	 Feasibility Study and project permitting complete Northern Australia Infrastructure Facility (NAIF) finance of up to \$50M approved
(\$)	ESG Leading HPMSM Flowsheet	 Life cycle assessment (LCA) completed confirming industry leading carbon intensity Further reductions available via renewable energy and reagents
	Strong Feasibility Study/Financials	 \$64.8M Construction Capital (\$70.5M approved NAIF project budget) 96% Internal Rate of Return (IRR) and \$561M Net Present Value (NPV) (Pre-Tax, Real)
9	Innovative HPMSM Flowsheet	 Competitive cost structure through innovation Waste minimisation and reduced emissions provides competitive advantages
	Tier 1 Jurisdiction	 Australian owned and operated mine providing long term secure ethical Mn supply USA, Japan and EU Partnerships to enhance battery raw material supply chains
	Tier 1 Project Customers & Partners	 Stellantis N.V and General Motors LLC – Louisiana HPMSM Project Nissan Chemical Corporation – Tokyo Bay Japan HPMSM Project

The Planned Element 25 HPMSM facility in Louisiana, USA











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Competent Person's Statement



The information in this report that relates to Exploration Results and Exploration Targets is based on information compiled by Mr. Justin Brown who is a member of the Australasian Institute of Mining and Metallurgy. At the time that the Exploration Results and Exploration Targets were compiled, Mr. Brown was an employee of Element 25 Limited. Mr. Brown is a geologist and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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. Brown consents to the inclusion of this information in the form and context in which it appears in this report.

The Company confirms that in the case of Production Targets, all material assumptions underpinning the production target, or the forecast financial information derived from a production target, in the market announcement dated 22 January 2025 continue to apply and have not material changed.

The Company confirms that in the case of estimates of Mineral Resource or Ore Reserves, all material assumptions and technical parameters underpinning the estimates in the market announcements dated 29 October 2024 and 22 January 2025 continue to apply and have not materially changed. All estimates or Mineral Resources or Ore Reserves underpinning the production target have been prepared by a competent person/s in accordance with the requirements of the JORC Code, Appendix 5A. The Company confirms that it is not aware of any new information or data that materially affects information included in previous announcements, and all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

Please note regarding exploration targets, the potential quantity and grade is conceptual in nature, that there has been insufficient exploration to define a Mineral Resource and that it is uncertain if further exploration will result in the determination of a Mineral Resource.

For further information on Element 25 Limited and its Projects please visit its website at www.element25.com.au which contains copies of all continuous disclosure documents to ASX, Competent Persons' Statements and Corporate Governance Statement and Policies.

This release has been approved by the Element 25 Limited Board of Directors.