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Building a Global Manganese Business

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

2025 Diggers & Dealers Mining Forum (August 2025)

ASX : E25
OTCQX : ELMTF

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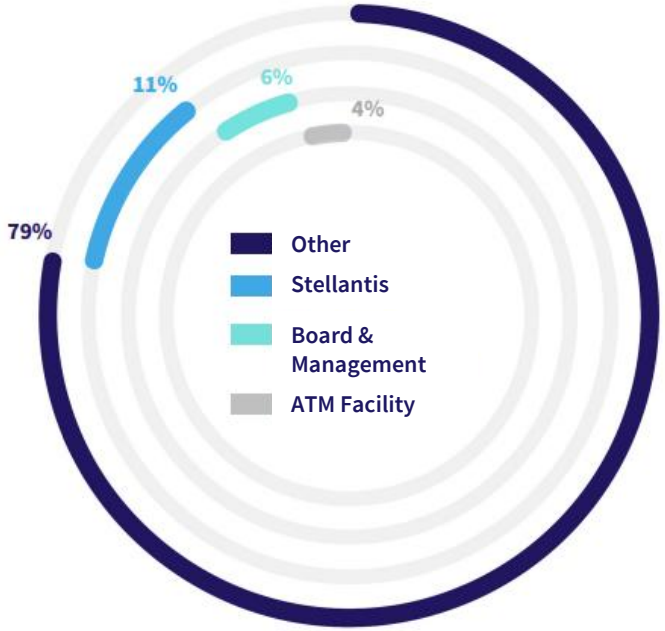
Element 25 Introduction

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

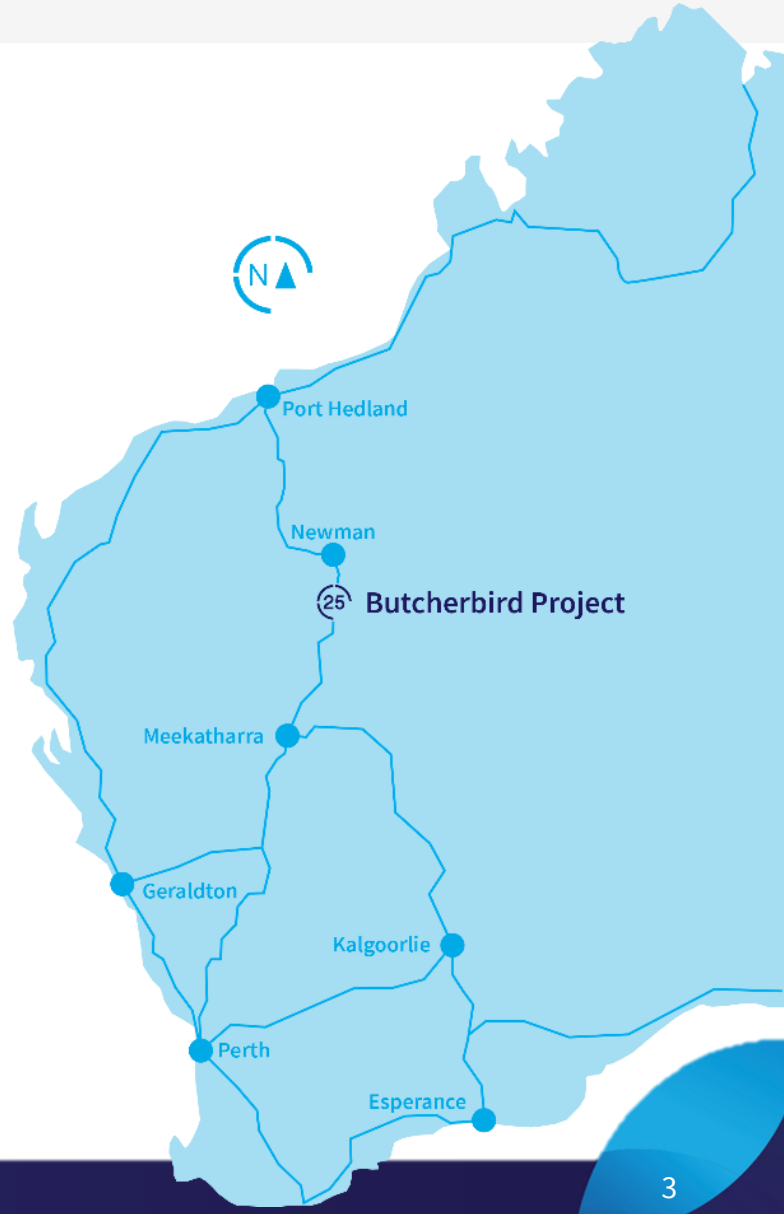
Developing a USA-based refinery to supply ethical battery-grade High Purity Manganese Sulphate Monohydrate (HPMSM) products.

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

Share Register:



ASX Ticker:	OTCQX Ticker:	Shares on Issue:	Debt:
E25	ELMTF	229M	NIL



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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
Chemical Engineer

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Company strategic vision for growth

Butcherbird Expansion

1.1Mt/a Manganese Ore[1]

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

Louisiana HPMSM

USA EV Critical Raw Materials[2]

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 carbon[3], ethically produced, scalable HPMSM for electric vehicle batteries:

Sustainably Supplying Global EV Markets

[1] Reference: Company ASX Release Dated **22 January 2025**
[2] Reference: Company ASX Release Dated 12 **April 2023**
[3] Reference: Company ASX Release Dated **21 February 2023**

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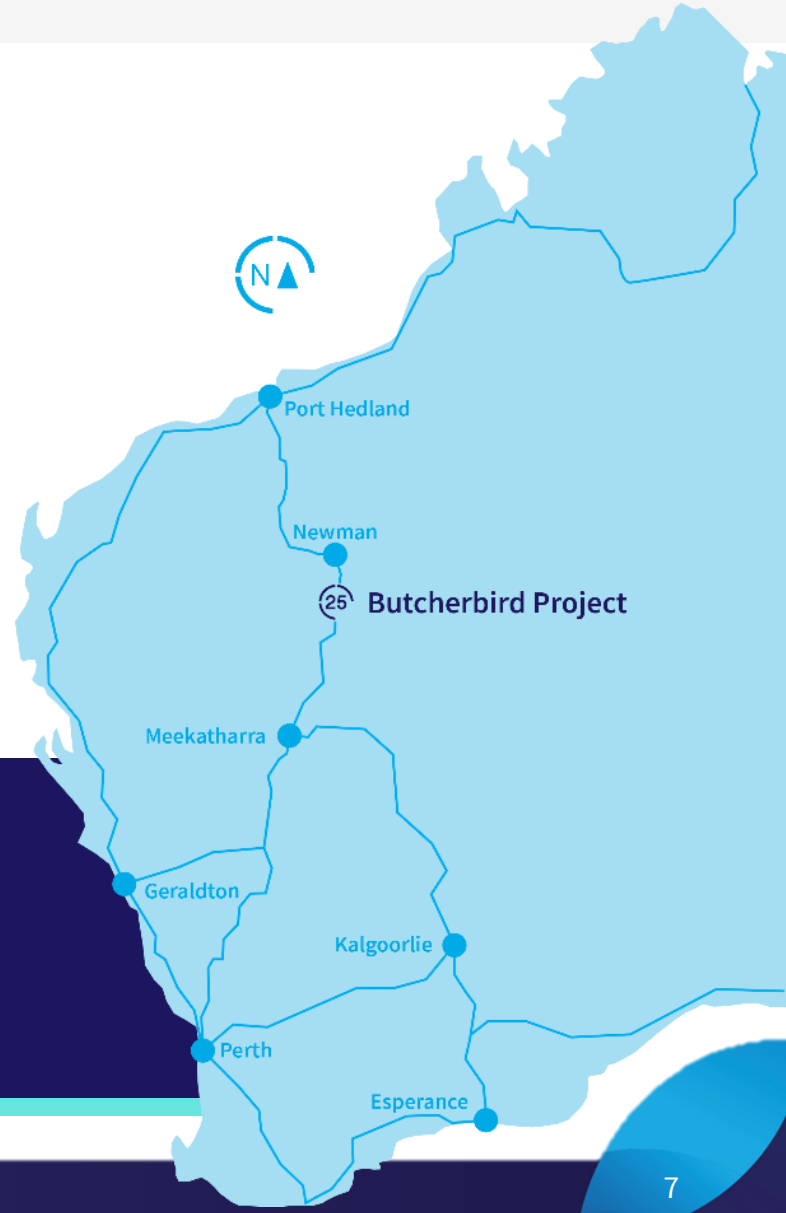
The Butcherbird Manganese Project

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 update[1]).
- > 18-year Reserve at 1.1Mt per annum production supported by an updated Feasibility Study[2].
- 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.



[1] Reference: Company ASX Release Dated 29 October 2024
[2] Reference: Company ASX Release Dated 22 January 2025
[3] Reference: Company ASX Release Dated 21 February 2023

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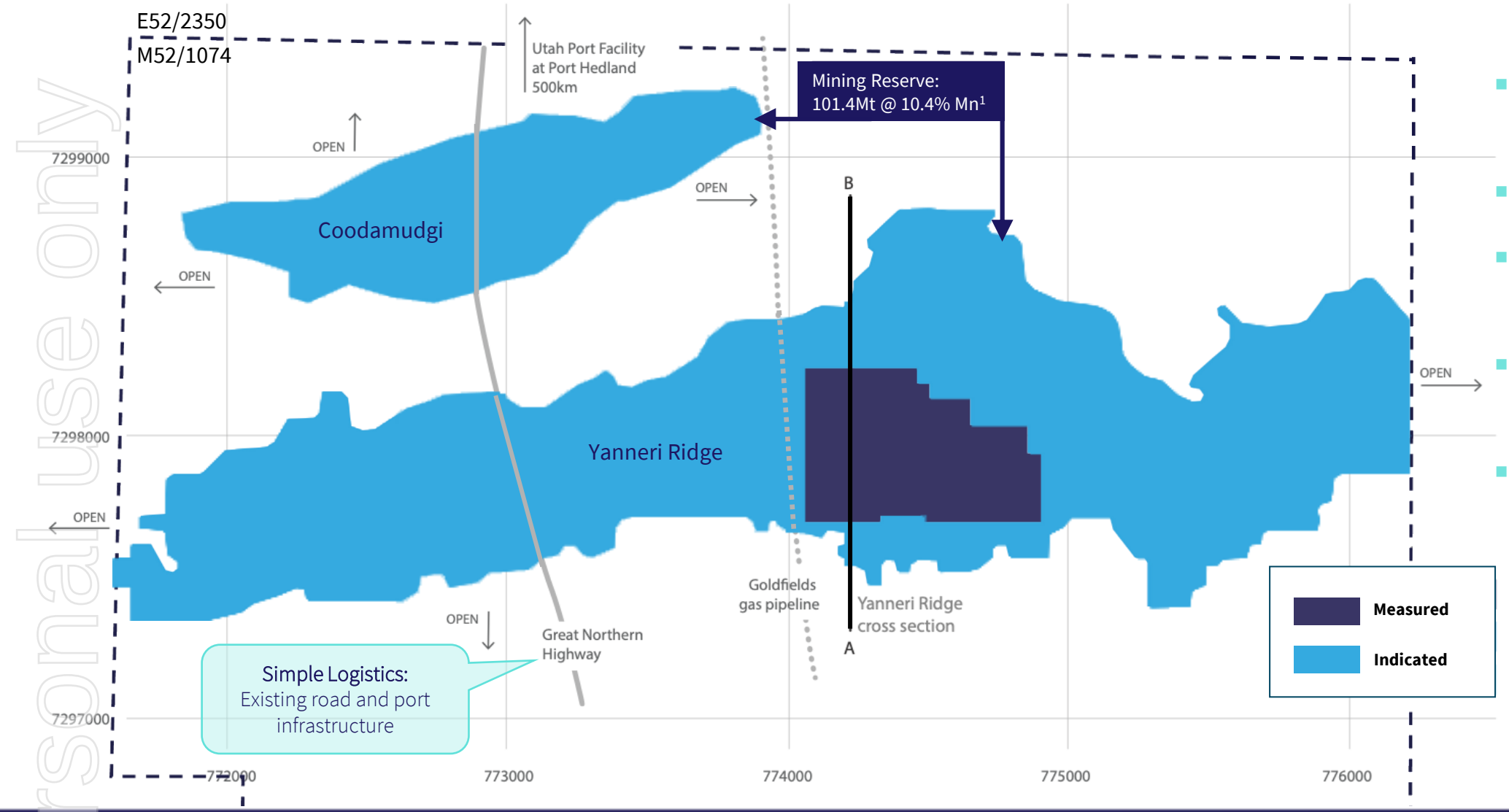
Large, long-life manganese ore mine in Western Australia



- Granted Mining Lease
- Fully Permitted
- >18 Year Reserve (1.1 Mtpa)
- Early Procurement Started
- ~12 Month Construction

[1]Reference: Company ASX Release dated 22 January 2025

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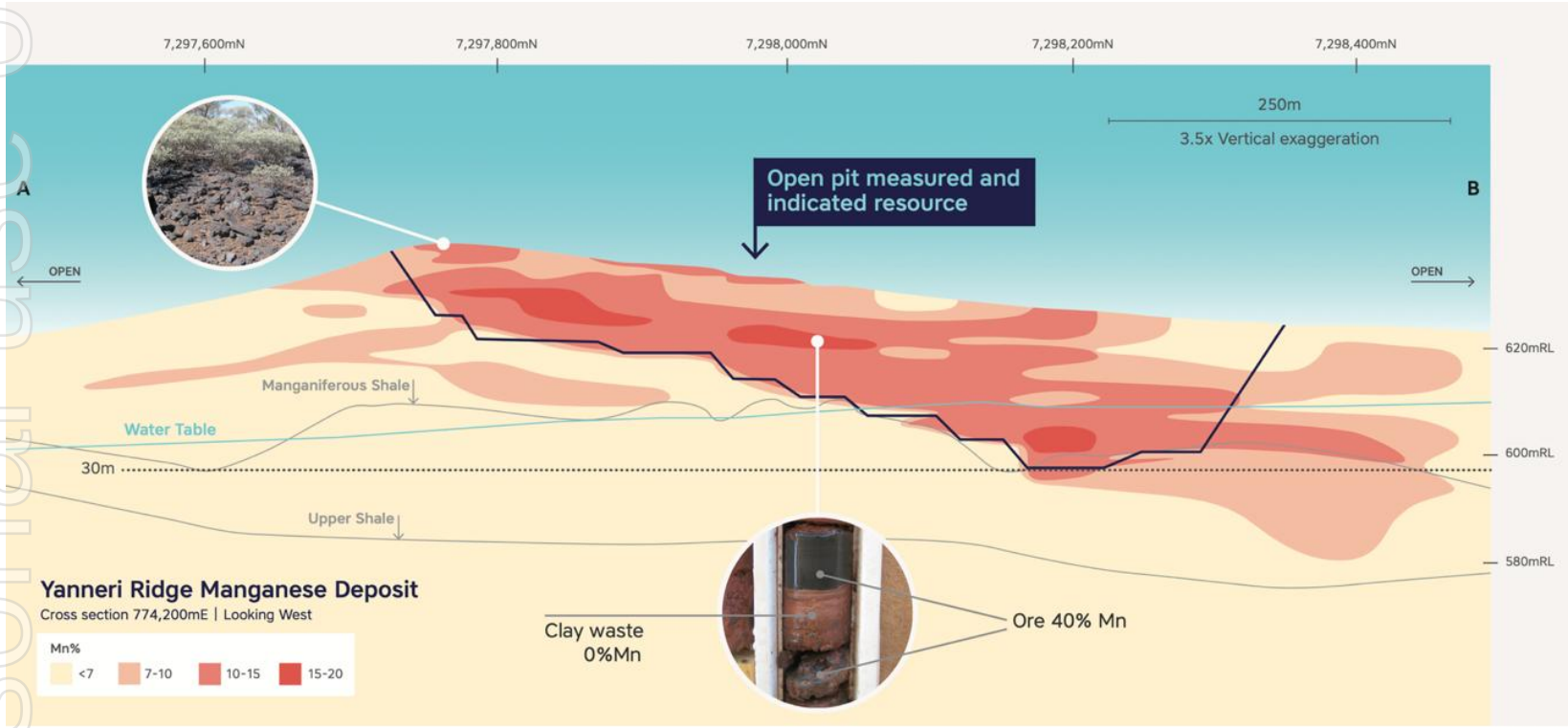
Simple Geology: low-cost, low-impact operations

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 offers long term operating potential.
- Mineralisation outside existing resource provides upside.
- Ore suitable for ferroalloys, battery grade HPMSM and EMM.

ENVIRONMENTALLY BENIGN OPERATION

- Ore from surface.
- Low strip-ratio.
- No explosives required.
- No dewatering required.
- One reagent – water.
- Very low levels of contaminants.

[1] Reference: Company ASX Release Dated 29 October 2024 (Mineral Resource Estimate Update)
[2] Reference: Company ASX Release Dated 22 January 2025

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Butcherbird Expansion – Feasibility Study[1] delivers robust economics

Capital Cost	NPV_8	IRR	Cashflow	Payback
AU$64.8	AU$561M	96%	AU$70.5M	1.3
(incl. contingency)	(Pre-tax, real)		(annual)	(years)

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.

NAIF TO PROVIDE $50 MILLION FINANCE PACKAGE FOR BUTCHERBIRD EXPANSION PROJECT[2]

- Northern Australia Infrastructure Facility (NAIF) to provide up to AU$50 million senior debt facility for Element 25's Butcherbird Manganese Expansion Project[2].
- Butcherbird development based on a 1.1Mtpa manganese ore operation and delivers outstanding metrics[1].
- 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 Framework[3].
- 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.

[1]Reference: Company ASX Release Dated 22 January 2025
[2]Reference: Company ASX Release Dated 17 June 2025
[3]Reference: Company ASX Release Dated 12 March 2025

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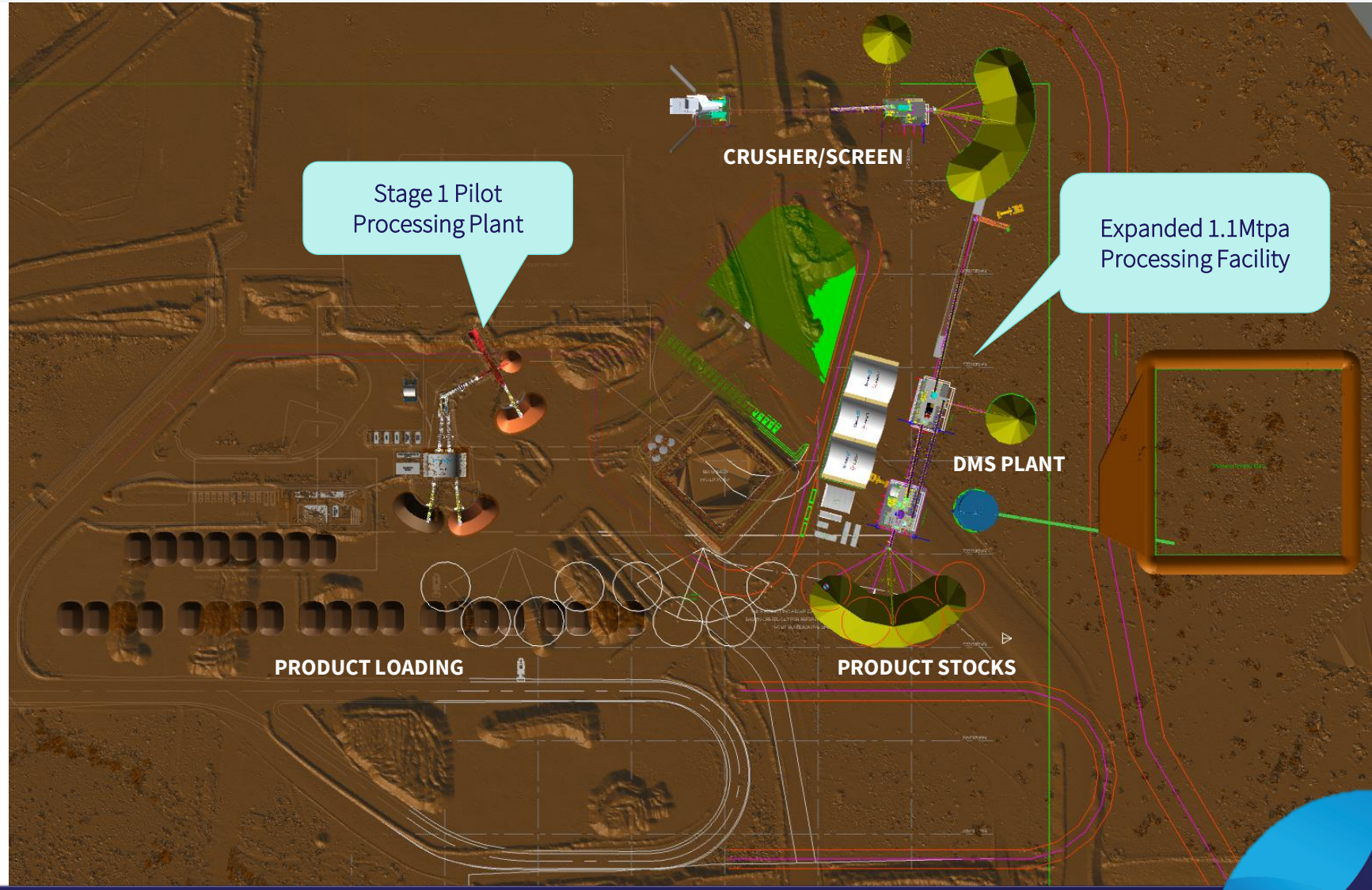
Butcherbird Manganese Mine Expansion

- New, **re-designed and expanded** processing facility to optimise and scale the process.
- Scale and **improved efficiencies** target **lower costs** and increased profits[1].
- Process optimisation to de-bottleneck and improve key processing outcomes:
  - Uptime (Availability and Utilisation)
  - Throughput (tonnes)
  - Grade (Mn & impurities)
  - Production Volume



[1]Reference: Company ASX Release Dated **22 January 2025**
[2]Reference: Company ASX Release Dated **7 October 2024**

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Butcherbird Expansion – Process Optimisation: Ore Crushing

Upgrade 1 - Crushing:

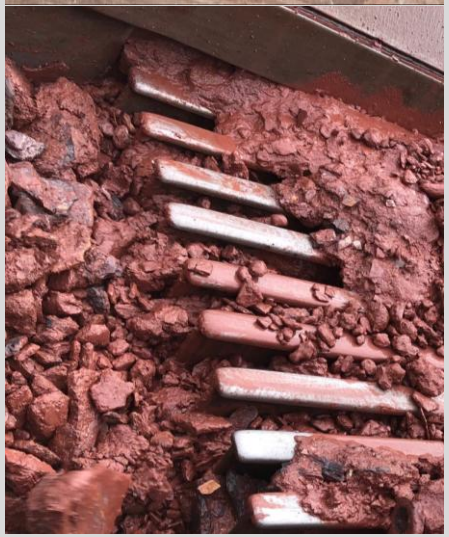
Opportunity: Better clay handling

- High clay feed material can cause throughput challenges in the crushing circuit.
- Production impacts materially compromises unit costs in a bulk operation.

Solution – Design Change

Two stage mineral sizer solution.

- Eliminate grizzly
- Designed for clay rich feed
- Will handle wet or dry feed



Butcherbird Stage 1 Pilot Grizzly/Jaw Crusher

Process Upgrade:
Mineral Sizer /Rolls Crusher

Examples of Mineral Sizers in use in similar settings

Reference: MMD Sizing Iron Ore

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Butcherbird Expansion – Process Optimisation: Grade/Quality

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Upgrade 2 – Quality/Grade:

Opportunity: Improve Product

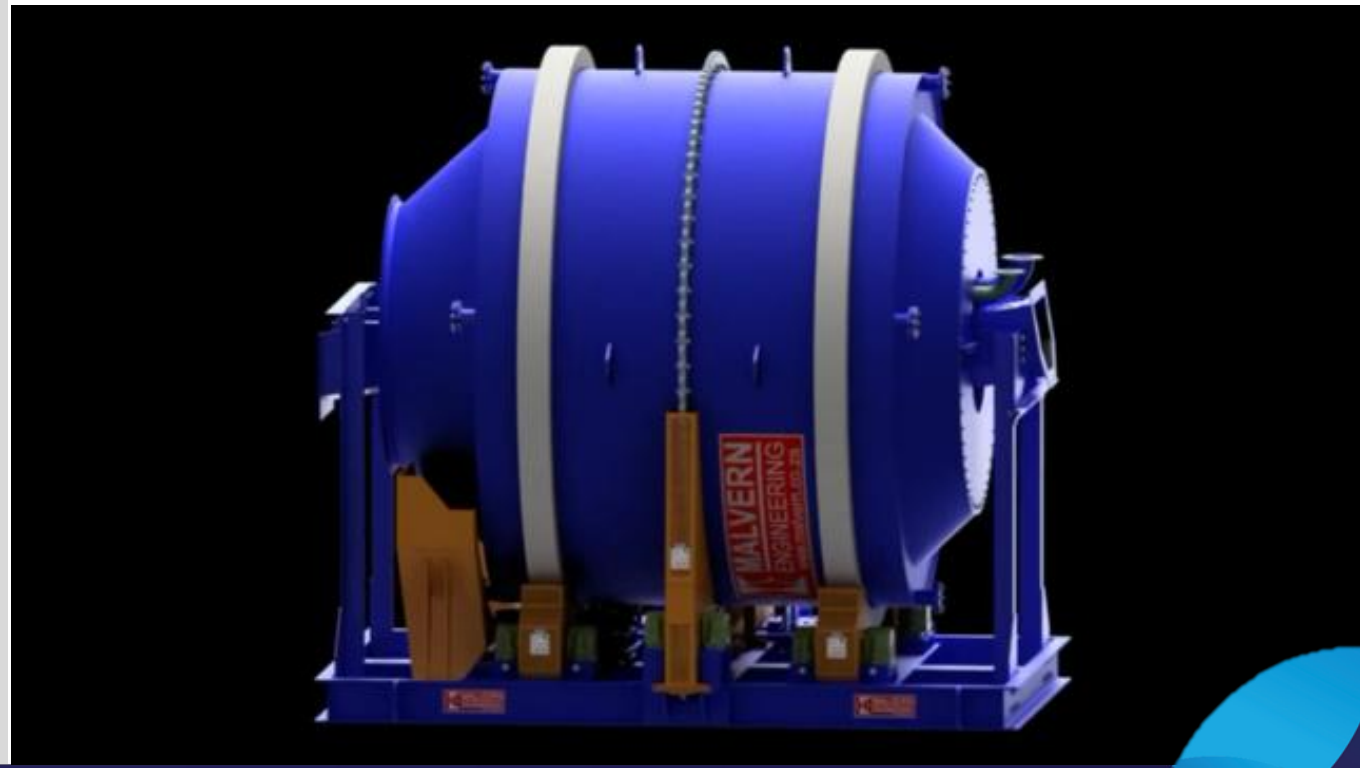
- More effective separation of ore from waste.
- Increased product grade (improved sale price).
- Increase recovery and yield.

Solution – Design Change

Replace ore sorters with DMS.

- Separate ore from gangue based on density not optics/colour
- Eliminate separation challenges associated with imperfect washing and ore presentation.

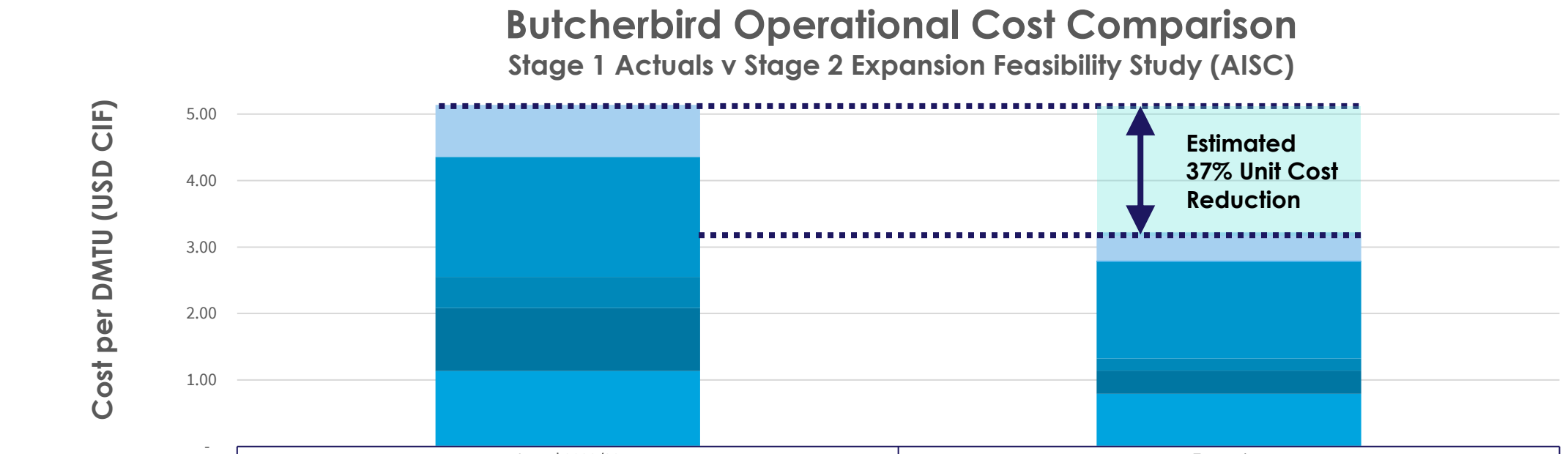
Dense media Separation (DMS) is a mature process technology used in a wide range of mineral processing plants including iron ore and manganese to separate lighter waste material from denser ore material by floating the waste in a ferro-silicon slurry to create separate product and waste streams.



Reference: Heavy Media Drum – Malvern Engineering

Butcherbird Expansion – Scale Strengthens the Business

Butcherbird Expansion Project economies of scale deliver ~3X Increase in production volume and 37% reduction in unit operating costs…



	Actual 2022/23	Expansion
Shipping Cost	0.78	0.43
Total Rehabilitation Costs	-	0.02
Total Logistics Costs	1.80	1.45
Total Administration Costs	0.47	0.18
Total Processing Costs	0.95	0.35
Total Mining Costs	1.14	0.79
Total Operational Cost (FOB)	4.36	2.80
Total Operating Cost (CIF)	5.14	3.22

Reference: Company ASX Release dated 22 January 2025

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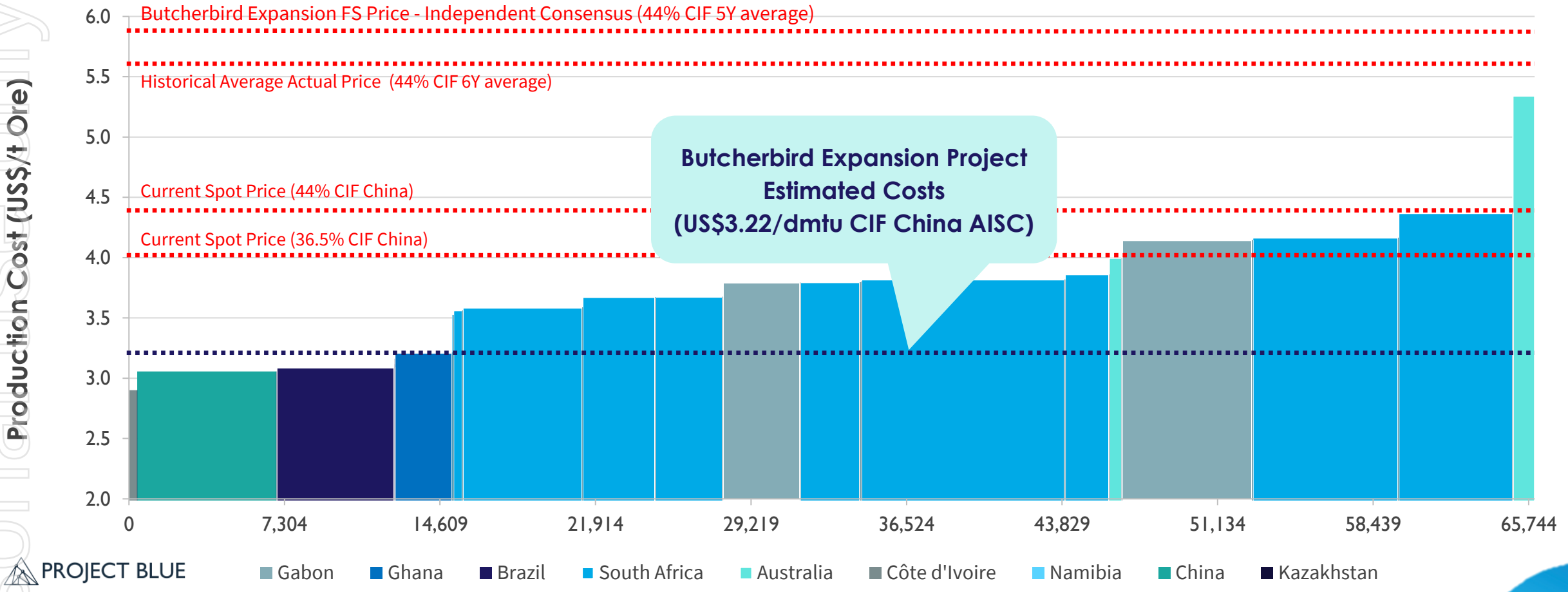
Butcherbird Expansion – Scale Strengthens the Business

Global Production Cost Curve – US$/dmtu CIF China



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Reference: Project Blue 2025
Reference: Company ASX Release dated 23 January 2024

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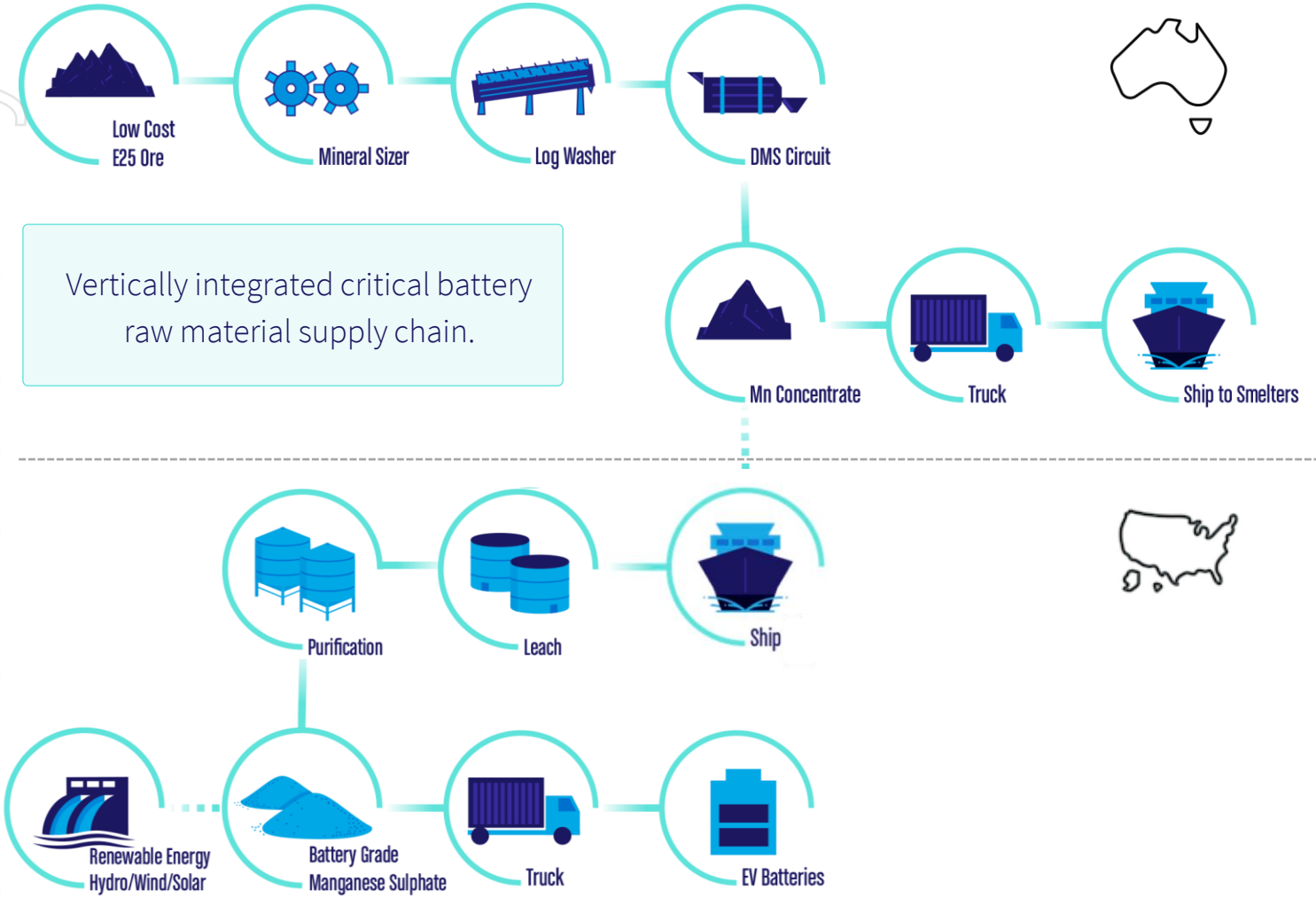
E25 HPMSM Strategy

Vertically-integrated global HPMSM supply



Vertically integrated critical battery raw material supply chain.

WA Manganese Ore:

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

Louisiana HPMSM:

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

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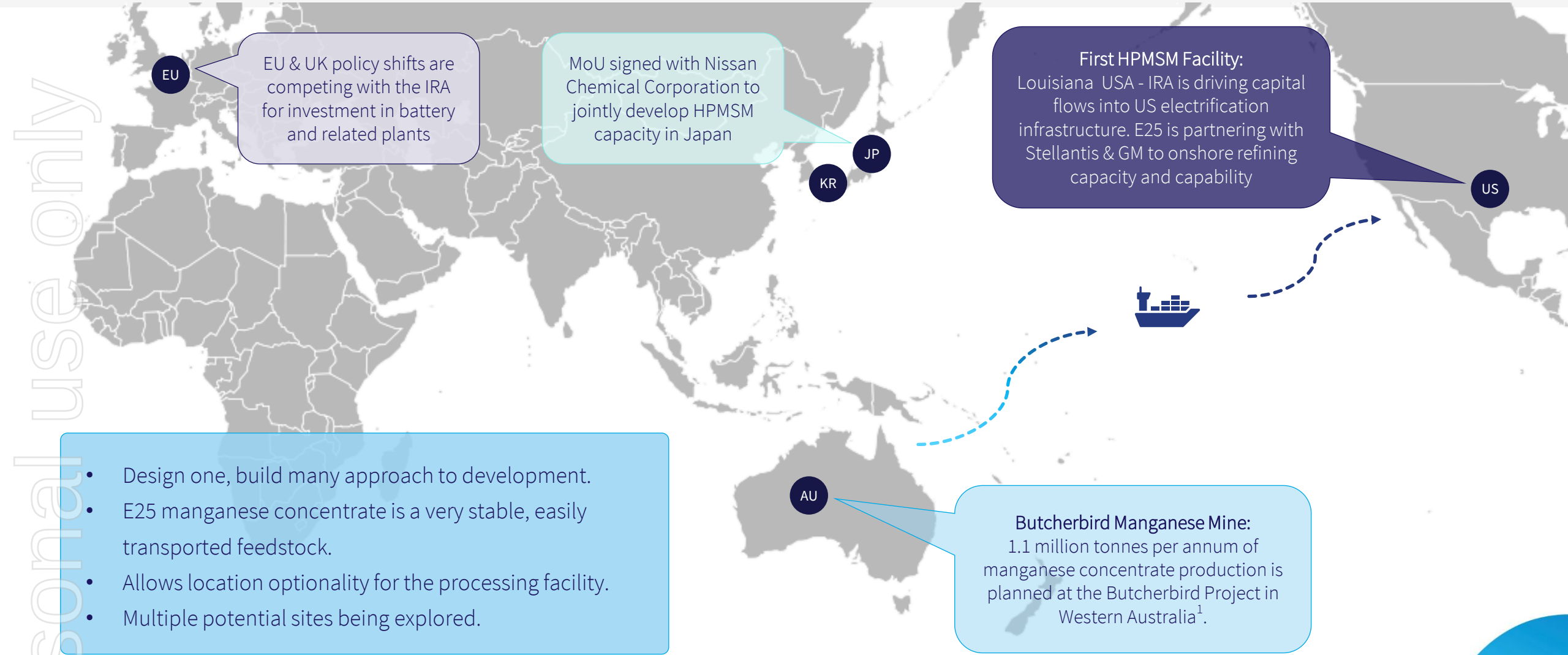
Global Refining Capacity in the Longer Term



- Design one, build many approach to development.
- E25 manganese concentrate is a very stable, easily transported feedstock.
- Allows location optionality for the processing facility.
- Multiple potential sites being explored.

[1] Reference: Company ASX Release Dated 22 January 2025

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Improved, Cost-Competitive Cleaner Process Technology

The Element 25 Process makes significant changes & improvements:

Reagents/Cost

Carbon Emissions

Waste Residue

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.

Reference: Company ASX Release Dated **16 February 2023**

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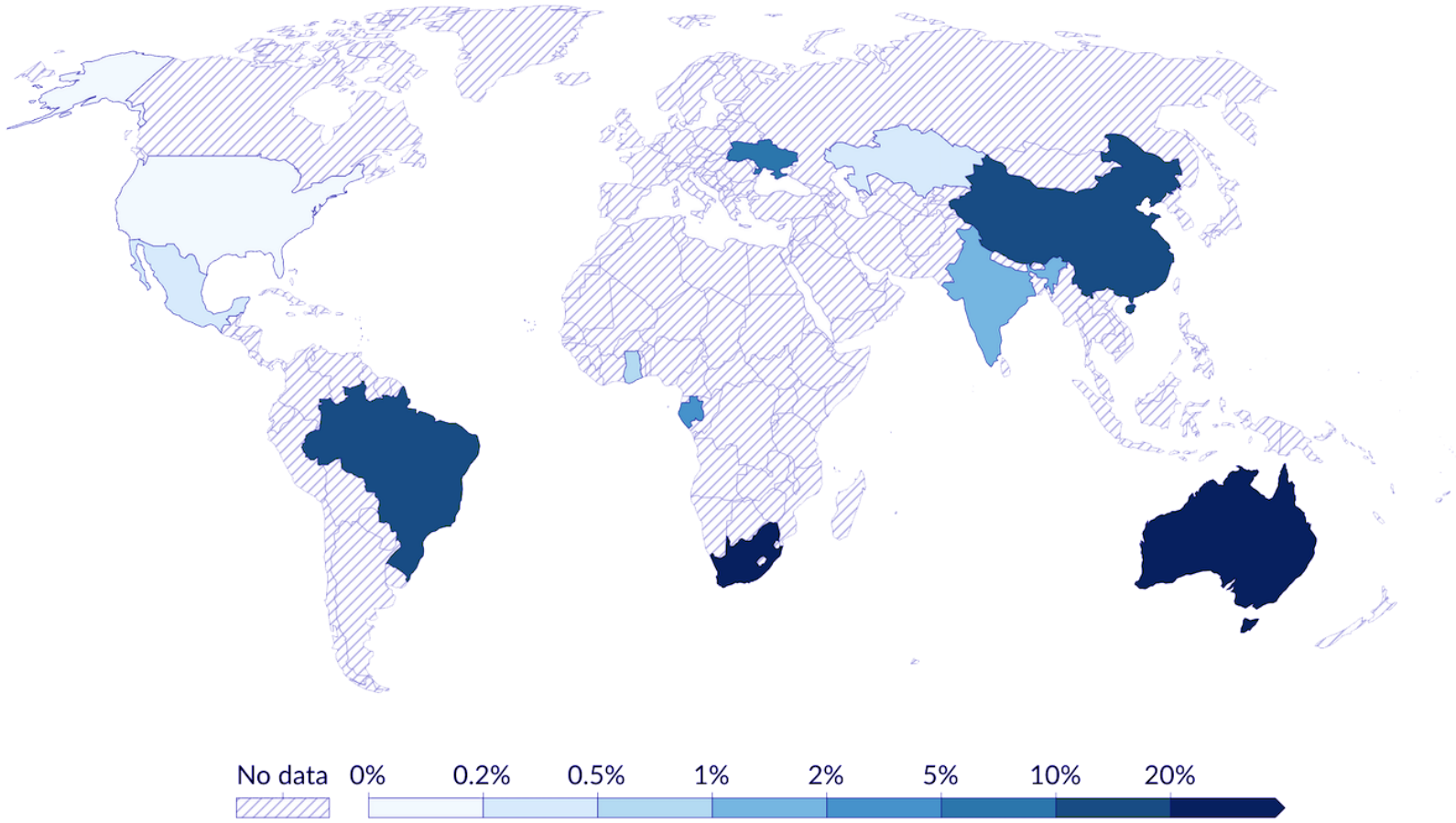
The Importance of Manganese

Manganese is comparatively abundant but not everywhere…

- Heavily concentrated in a small number of jurisdictions:
  - South Africa
  - Gabon
  - Ghana
  - Australia
  - China
  - Brazil
- Supply chain security a key factor in sourcing strategies.
- Refined manganese even more heavily concentrated - >95% in China.



Data source: USGS - Mineral Commodity Summaries (2024)

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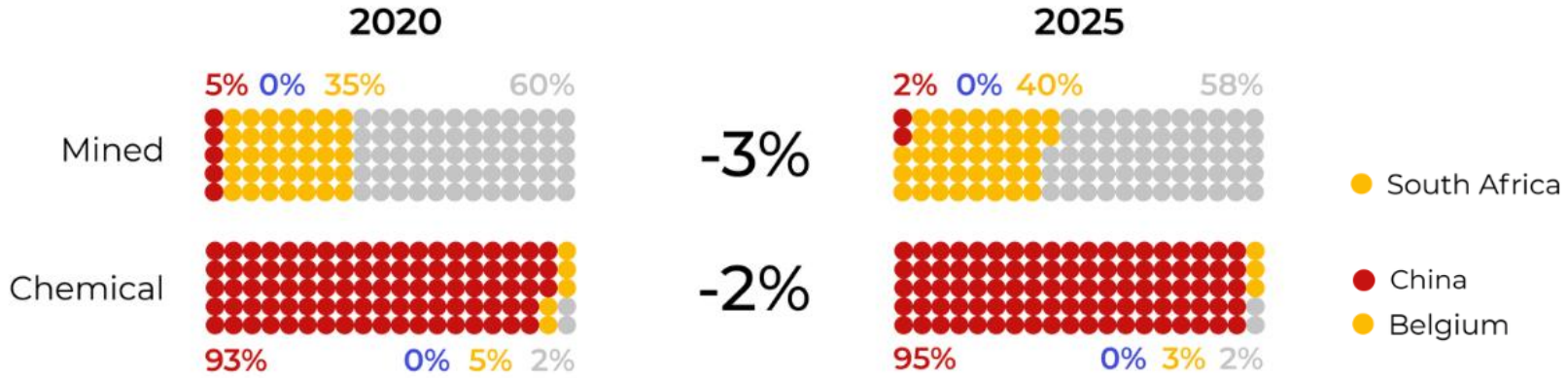
Manganese is abundant but refining capacity is not…

- Refined manganese (**HPMSM**) is heavily concentrated.
- >95% of manganese refining capacity is located in China.
- Concentrated supply creates supply risk for critical raw materials used in batteries including **manganese**.
- Customers are seeking alternative sources of long-term supply.
- Element 25 provides a long-life mine and a future facing processing technology.



Refined battery grade manganese (HPMSM) capacity is heavily concentrated in China.

Source: Benchmark Forecasts – www.benchmarkminerals.com

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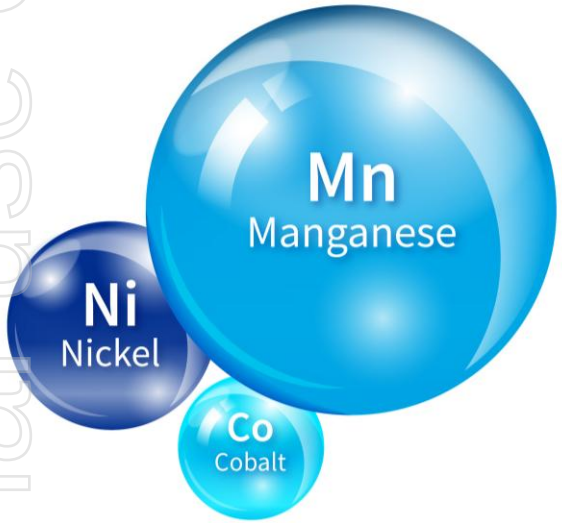
Transition to Higher Manganese Cathodes

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

High Mn means reduced reliance on Ni and Co:



Reduced nickel and very low to no cobalt content.

Reference: Umicore 2023

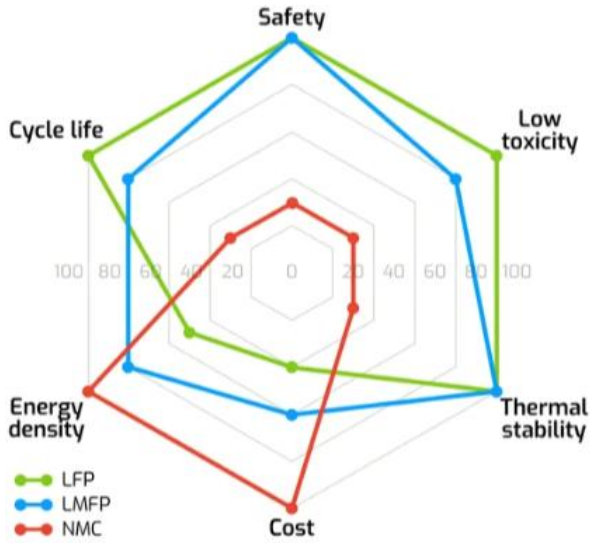
”Japan’s manganese-boosted EV battery hits game-changing 820 Wh/Kg…”

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



LMFP offers **improved energy density** over LFP, **lower cost/kWh** and **improved safety** over NMC

Reference: Integrals Power

[Next-gen LMFP batteries could boost EV range by 20%]

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Transition to Higher Manganese Battery Cathodes

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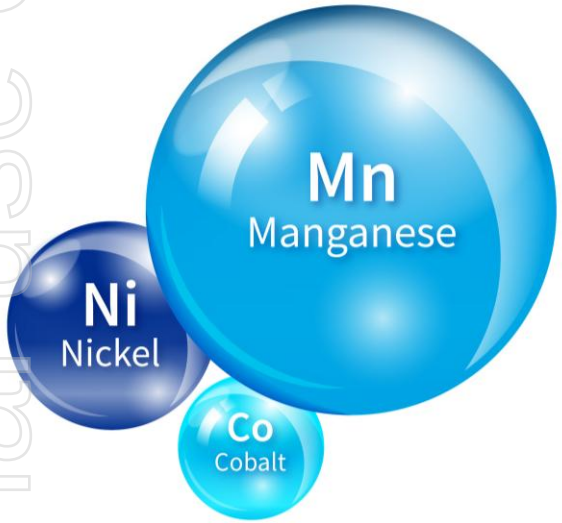


Reduced nickel and very low to no cobalt content.

Reference: Umicore 2023

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

Charles Poon
Director, Electrified Propulsion Engineering

April 23, 2025

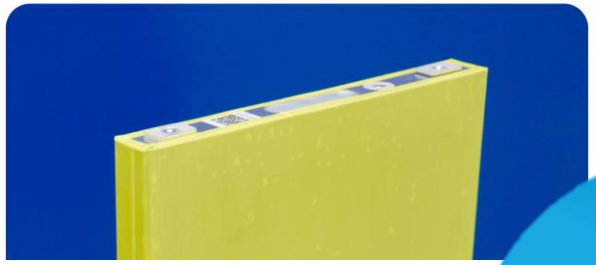
gm NEWS

May 13, 2025 | TECHNOLOGY

Why LMR batteries will change the outlook for the EV market

Share article:

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



[Why LMR batteries will change the outlook for the EV market]

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Transition to Higher Manganese Cathodes

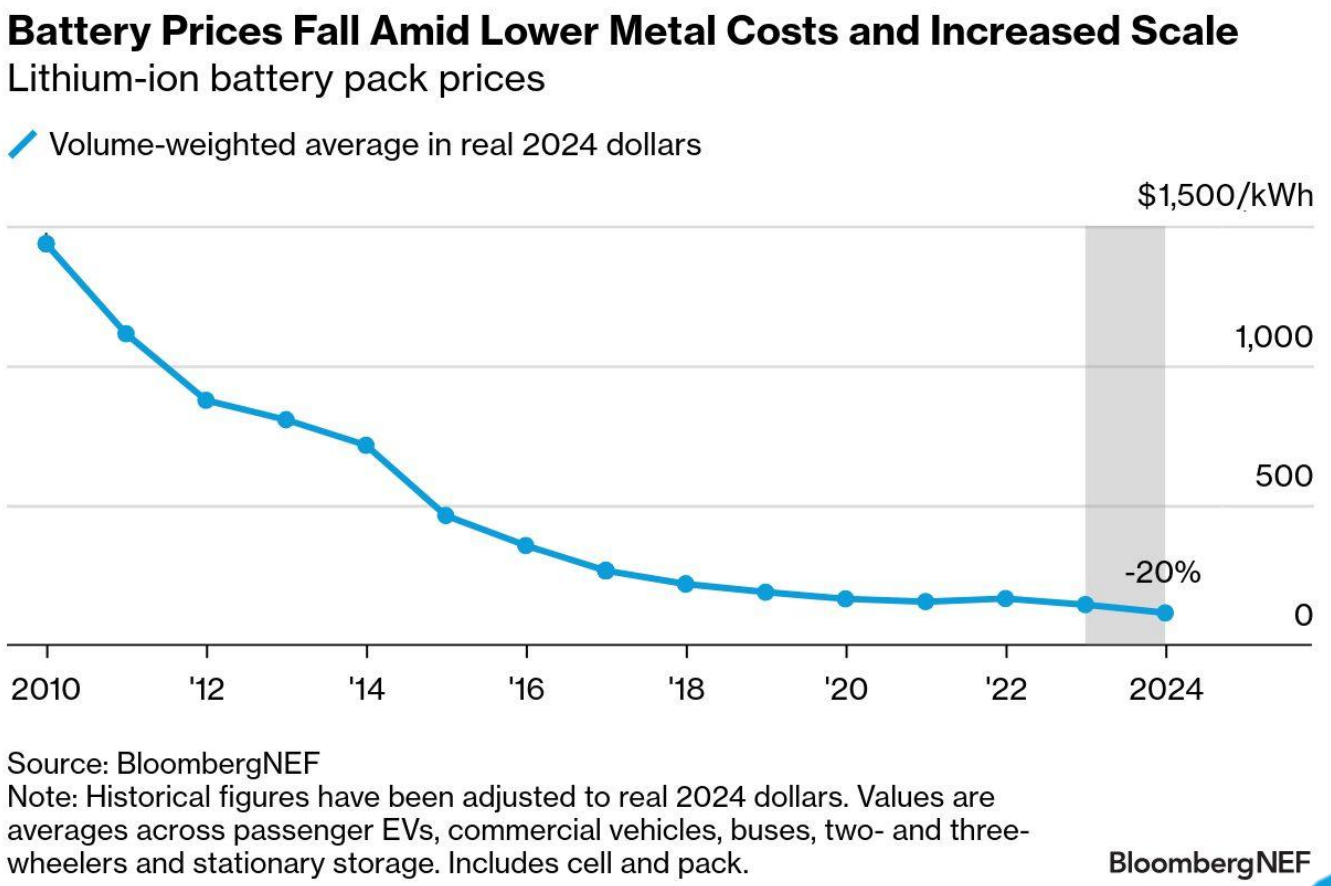
LMFP, LMR, LMNO and NM_X cathode chemistries offer improved safety, higher energy density, reduced cost per KWh and greater supply chain flexibility.

Lithium Manganese Rich (LMR) batteries offer a number of key advantages over high nickel:

Enhanced Safety and Stability: With a safety profile comparable to Lithium Iron Phosphate (**LFP**) batteries, LMR offers peace of mind without compromising performance.

Industry-Leading Energy Density: LMR chemistry provides higher energy density than high-nickel batteries, allowing EVs to achieve greater range and reduce consumer range anxiety.

Unprecedented Cost Reduction: Targeting a cost point well below current mid-nickel batteries. This cost efficiency is essential to reaching parity with gasoline-powered vehicles and making EVs more accessible to the masses.



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(17) Ford Makes Breakthrough with LMR Battery Chemistry

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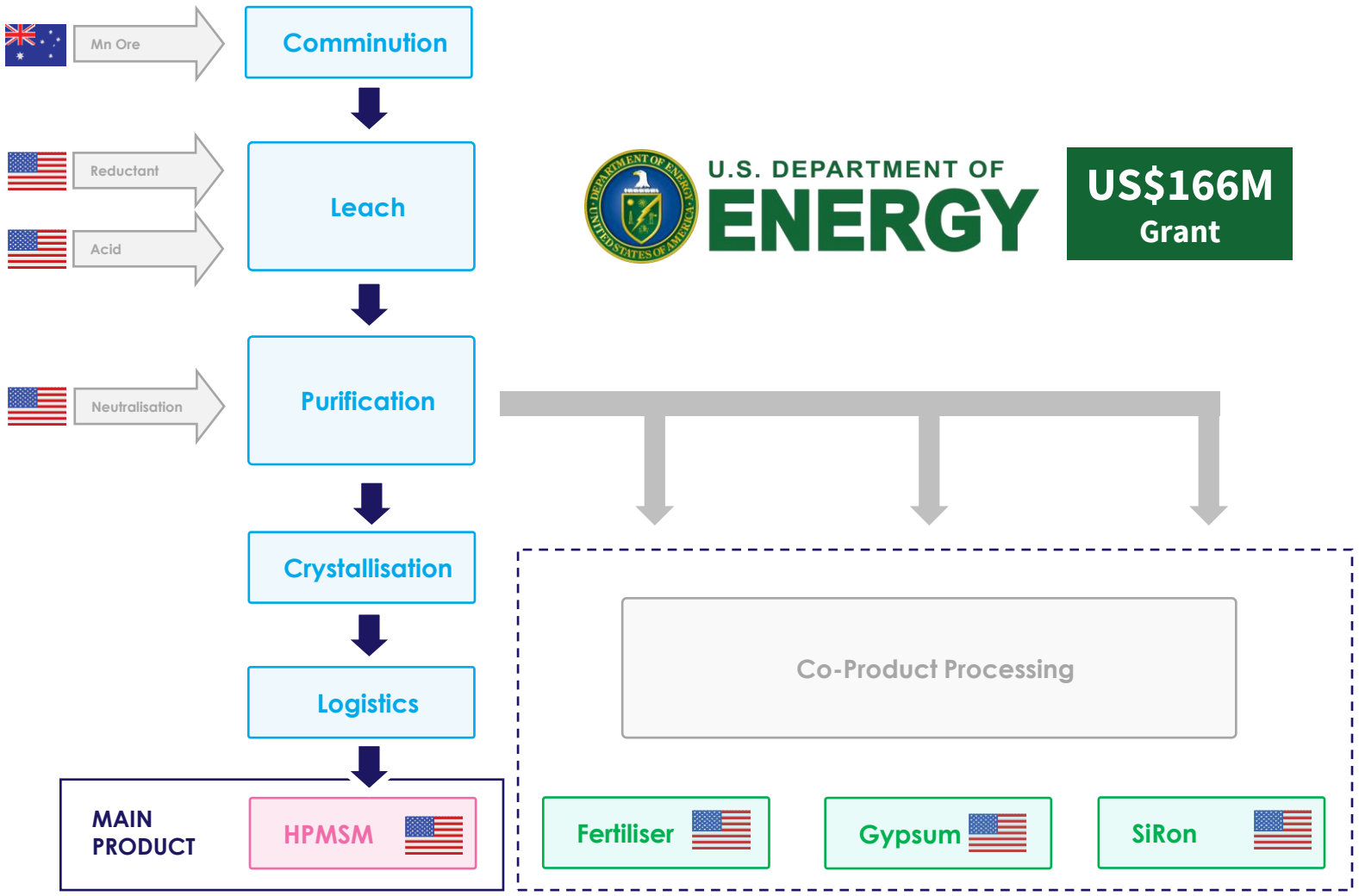
Louisiana Battery Grade HPMSM

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.**



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DoE Grant Award Underpins Project Capital Stack

- DoE US$166M grant award provides cornerstone funding to support project success[1].
- 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 Stellantis.
- Discussions in train with prospective financiers to close out remaining capital funding requirement.

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

[1] Reference : Company ASX Release Dated **20 January 2025**

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Global Sustainable Secure Manganese Supply

	**Long Mine Life**	• 18.3 Year Reserve within granted Mining Lease [1] • 274Mt Resource global resource with exploration upside [1]
	**Construction Ready**	• Feasibility Study and project permitting complete [2] • Northern Australia Infrastructure Facility (**NAIF**) finance of up to $50M approved [2]
	**ESG Leading HPMSM Flowsheet**	• Life cycle assessment (**LCA**) completed confirming industry leading carbon intensity [3] • Further reductions available via renewable energy and reagents [3]
	**Strong Feasibility Study/Financials**	• $64.8M Construction Capital ($70.5M approved NAIF project budget) [4] • 96% Internal Rate of Return (**IRR**) and $561M Net Present Value (**NPV**) (Pre-Tax, Real) [4]
	**Innovative HPMSM Flowsheet**	• Competitive cost structure through innovation [5] • Waste minimisation and reduced emissions provides competitive advantages [5]
	**Tier 1 Jurisdiction**	• Australian owned and operated mine providing long term secure ethical Mn supply [6] • USA, Japan and EU Partnerships to enhance battery raw material supply chains [6]
	**Tier 1 Project Customers & Partners**	• Stellantis N.V and General Motors LLC – Louisiana HPMSM Project [7] • Nissan Chemical Corporation – Tokyo Bay Japan HPMSM Project [7]

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[1]Reference: Company ASX Release Dated **29 October 2024**
[2]Reference: Company ASX Release Dated **17 June 2025**
[3]Reference: Company ASX Release Dated **21 February 2023**
[4]Reference: Company ASX Release Dated **22 January 2025**
[5]Reference: Company ASX Release Dated **12 April 2023**
[6]Reference: Company ASX Release Dated **26 June 2023**
[7]Reference: Company ASX Release Dated **2 April 2025**

The Planned Element 25 HPMSM facility in Louisiana, USA

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ASX : E25
OTCQX : ELMTF

Butcherbird Manganese Mine - Resources & Reserves

Ore Reserve[1]

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 Resource[2]

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 years[1].
- 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.

[1] Reference: Company ASX Release Dated 22 January 2025 (Ore Reserve Update)
[2] Reference: Company ASX Release Dated 29 October 2024 (Mineral Resource Estimate Update)

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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 with regard to 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.

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