

Building a Global Manganese Business

Sustainable manganese ore and HPMSM for global steel and battery markets.

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Element 25 Introduction

Long Life 100% Owned Manganese Mine

Construction Ready Mine Expansion

Strong Feasibility Study/Financials

ESG Leading Innovative HPMSM Flowsheet

Tier 1 Jurisdiction

Tier 1 Project Customers & Partners

ASX

E25

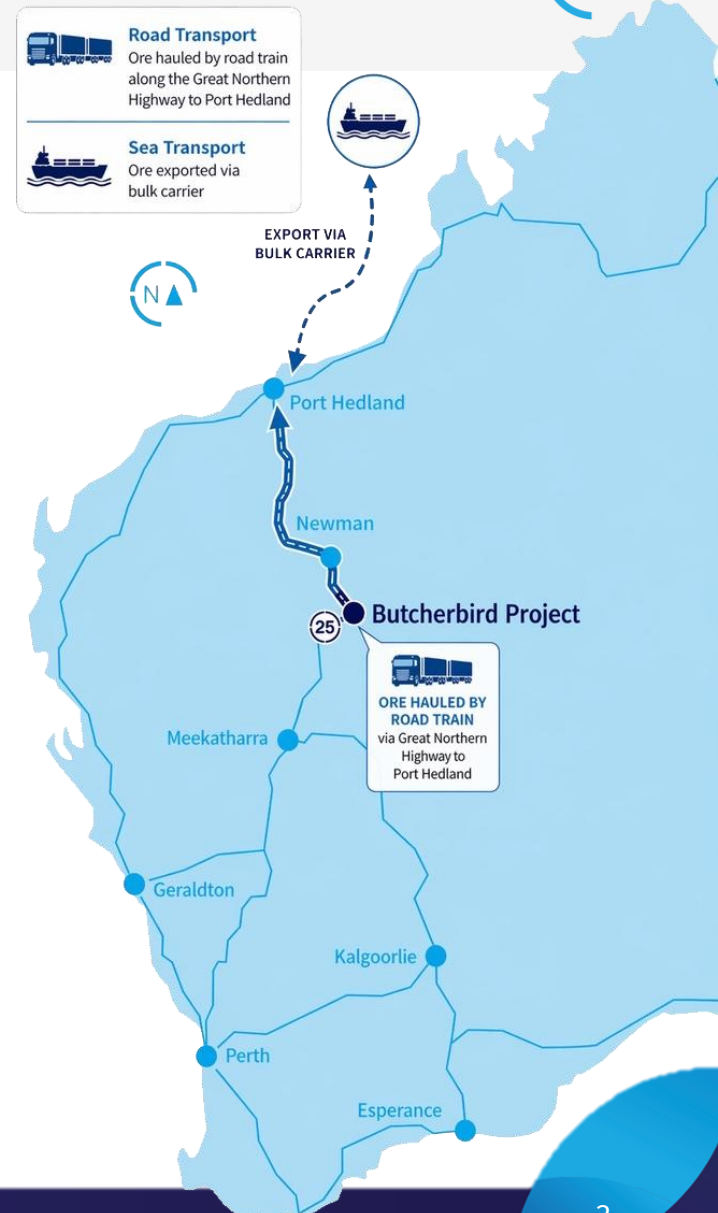
OTC QX

ELMTF

ISSUED SHARES | 326M

TOTAL DEBT | NIL

Element 25



Butcherbird Expansion

1.1Mt p.a. Manganese Concentrate

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



Louisiana HPMSM

USA Critical Raw Materials

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 markets targeting Europe and Asia.

1-Year Plan

3-Year Plan

10-Year Plan

Best in class, secure supply, ethically produced,
scalable HPMSM for lithium-ion batteries:
Sustainably Supplying Global Markets

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The Butcherbird Manganese Project

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The Butcherbird Manganese Project

World Class Resource
>270M tonnes

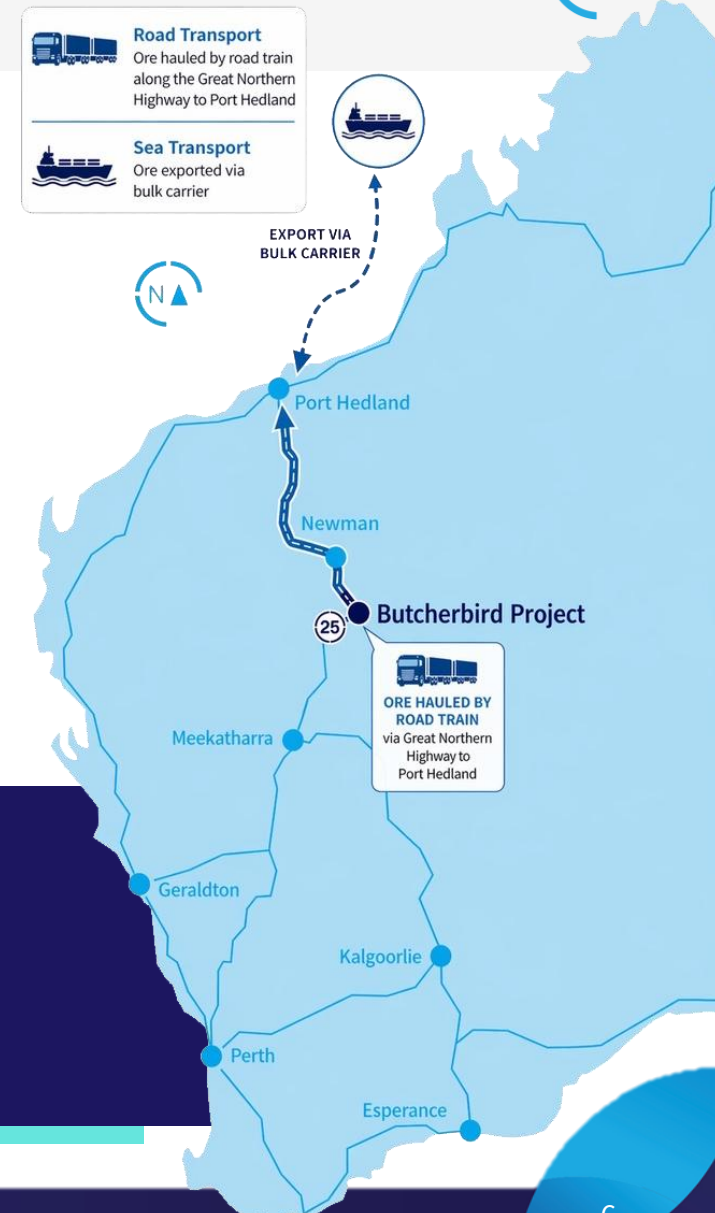
Long-Life Mine
>18 years production

Large Scale Production
1.1M tonnes per year

- Unique geology - very clean metallurgically – no toxic contaminants.
- Located in **Australia**, a Tier-1 jurisdiction with strong ESG regulation.
- Produces a high-quality manganese concentrate ideal for manganese alloys and battery grade high-purity manganese sulphate (HPMSM).

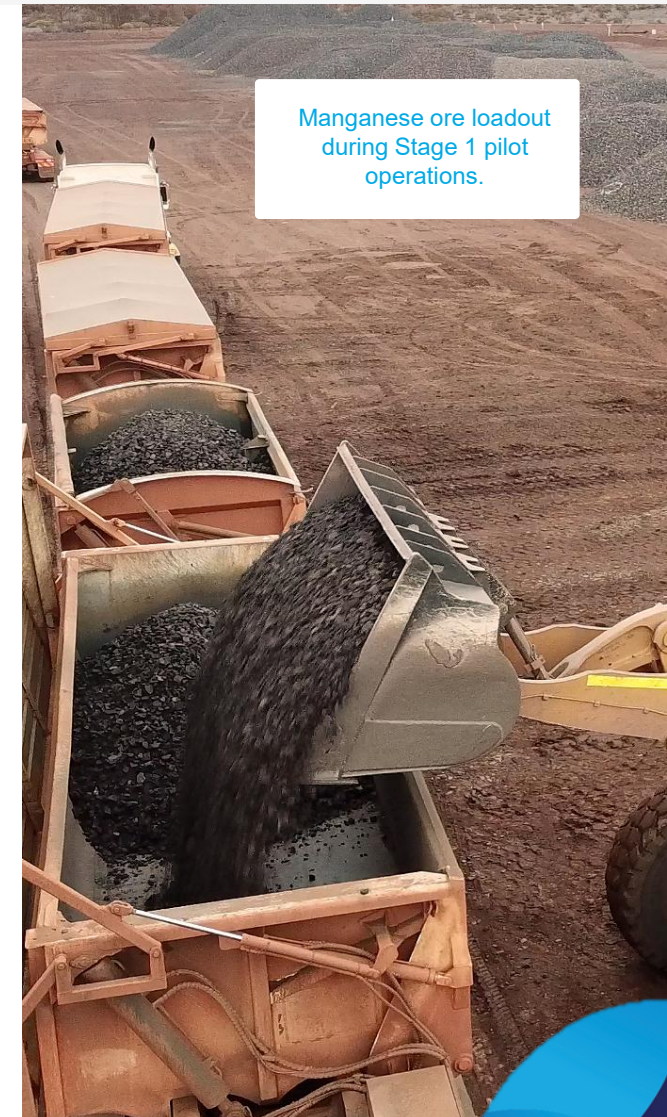
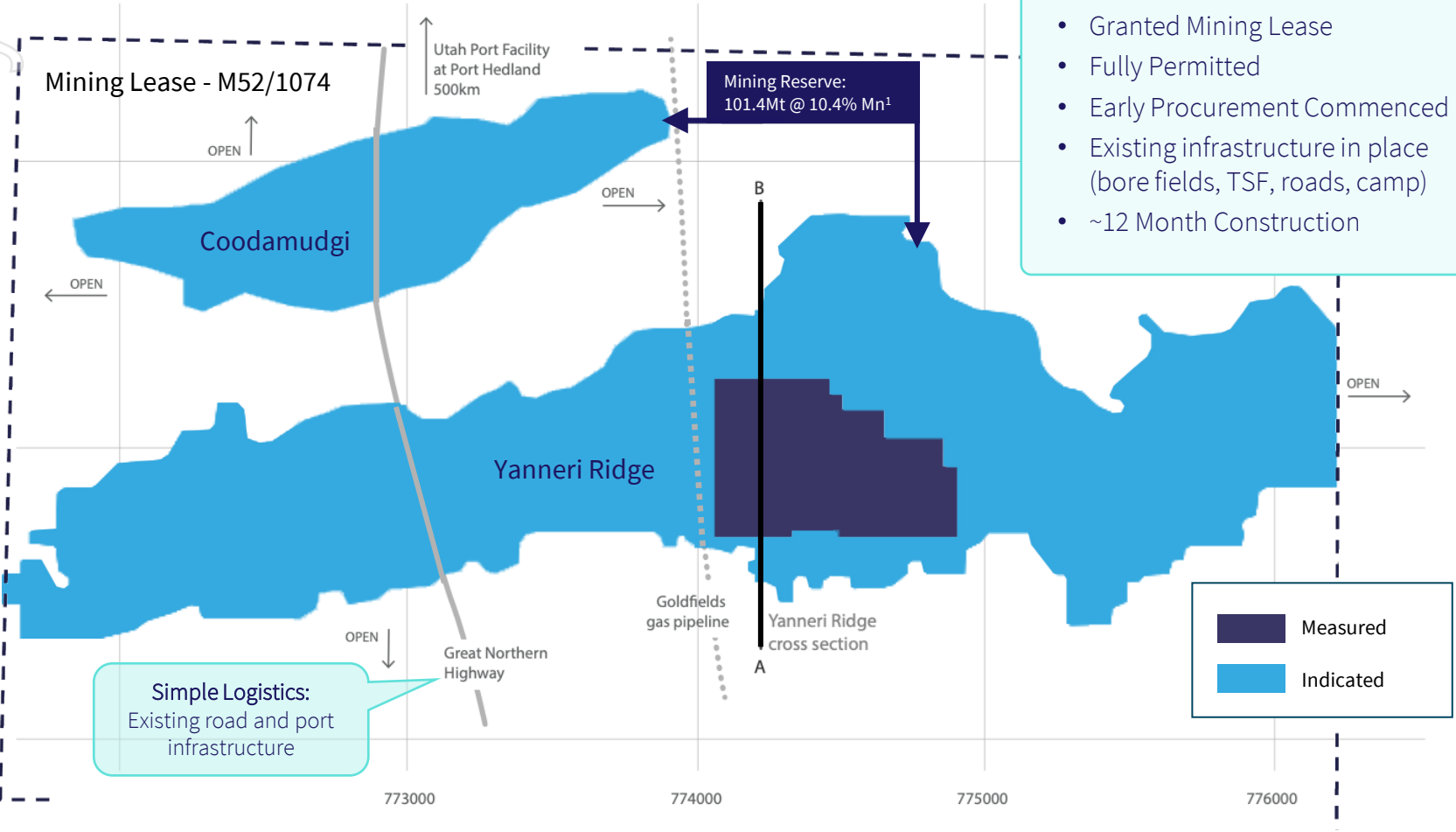


Providing high quality manganese for traditional and new energy markets.



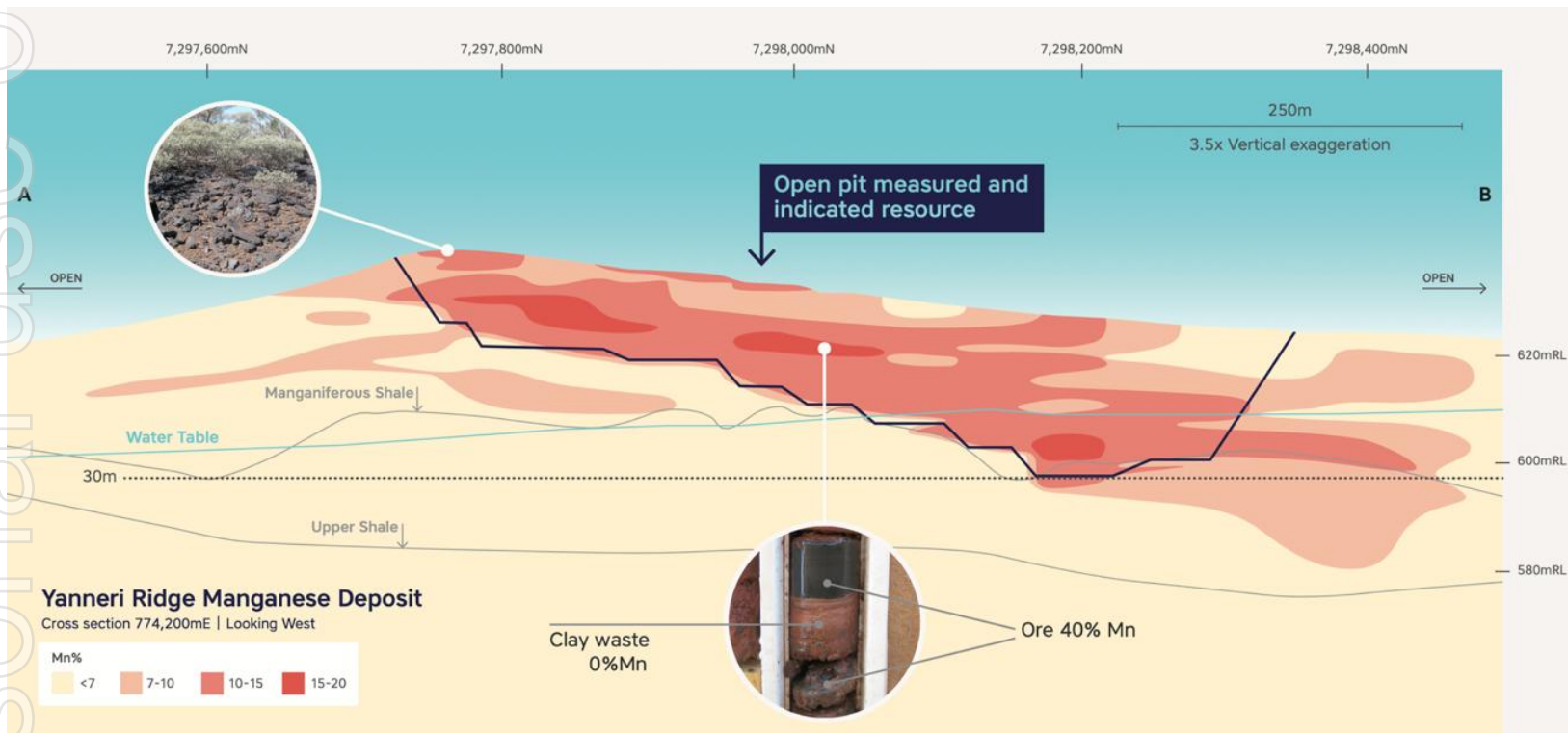
Large, Long-Life Manganese Mine in Western Australia

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Simple Geology: Low-Cost, Low-Impact Operations

Classification	Tonnes (Mt)	Mn (%)	Contained Mn (Mt)
Resource	274	10.0	27.4
Reserve	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.

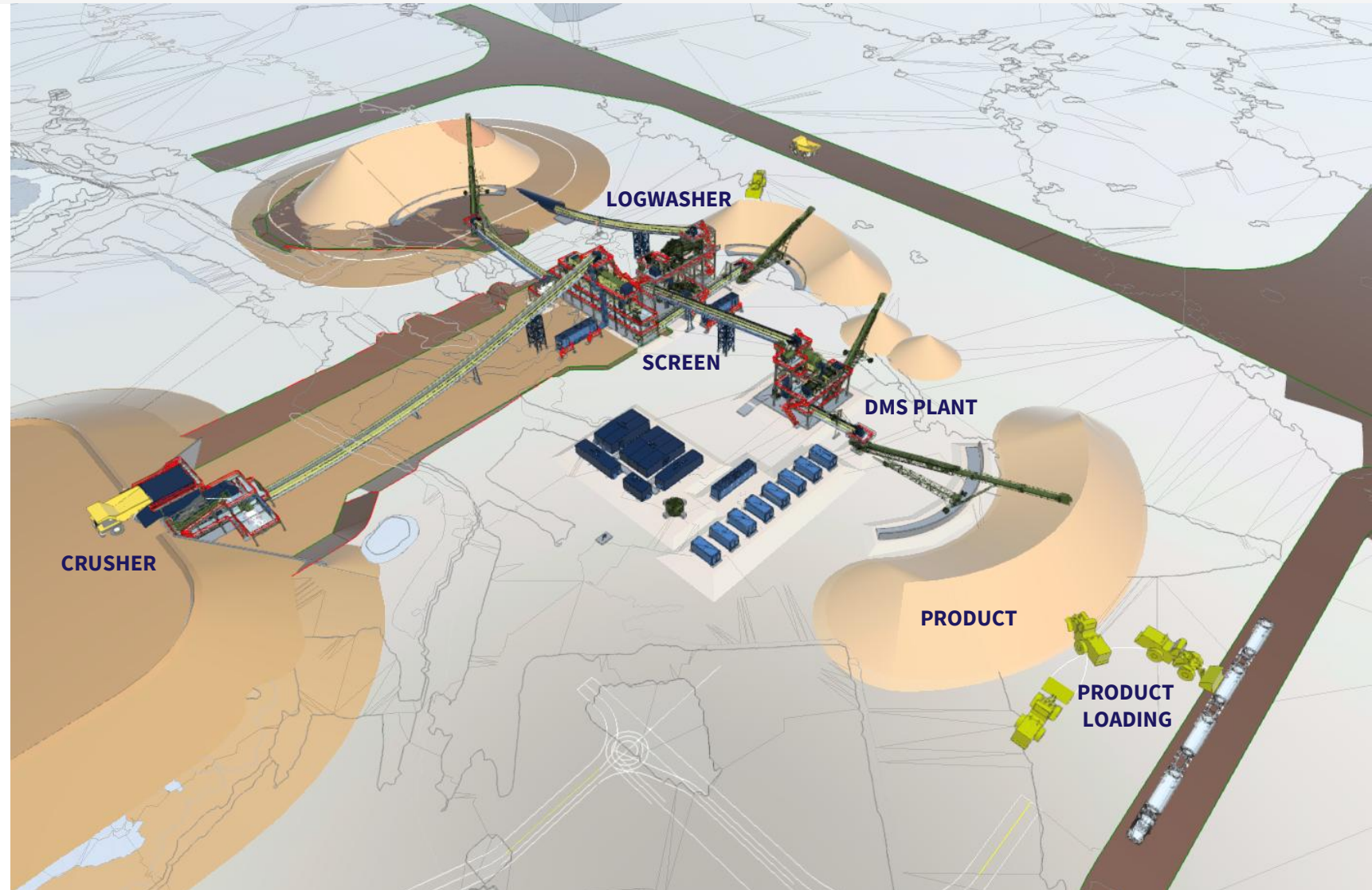
ENVIRONMENTALLY BENIGN OPERATION

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

Butcherbird to Expand to 1.1Mt p.a. Production

New, re-designed and expanded processing facility to optimise and scale the process.

Key Metrics	Unit	Value
Ore Mined	Ktpa	6,100
Concentrate Prod.	Ktpa	1,100
Concentrate Grade	Mn	31.6%
Undiscounted Cashflow	AUD (pa)	\$70.5
Mine Life	Years	18.3
NPV ₈ (Real) (Pre-Tax)	AUD	\$561M
NPV ₈ (Real) (Post-Tax)	AUD	\$379M
IRR (pre-tax)	%	96%
Op. Cost C1 (FOB)	USD/dmtu	\$2.86
Capital Cost	AUD	\$64.8M



Washing Circuit:

Clay removal from laterite feed

- The logwasher is an agitated scrubber which acts to break up and wash clays out of the feed material.
- The clay contains very little manganese so its removal upgrades the concentrate to approach the target Mn grade for sale.
- The process uses water as the only reagent making the tailings environmentally benign.



Clays and other impurities are scrubbed by rotating intermeshing paddle shafts and washed by counter-current water flow.



Capital Cost

AU\$64.8

(incl. contingency)



NPV₈

AU\$561M

(Pre-tax, real)



IRR

96%



Cashflow

AU\$70.5M

(annual)



Payback

1.3

(years)

AUSTRALIAN FEDERAL GOVERNMENT (NAIF) TO PROVIDE \$50 MILLION FINANCE PACKAGE FOR BUTCHERBIRD EXPANSION PROJECT



Low cost operation with forecast C1 cost of US\$2.86/dmtu FOB.



Long-life asset with >18-year Ore Reserve.



Low capital costs of A\$64.8M (2025 Feasibility Study Estimate).

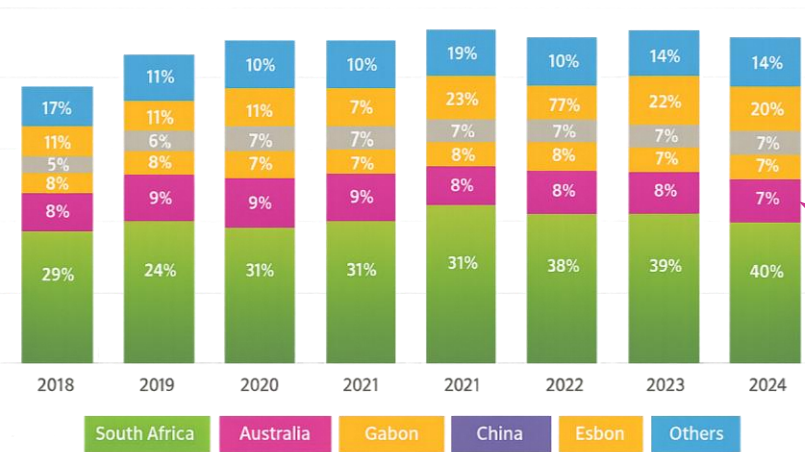


Operating cashflows of \$70.5M per annum drive rapid capital payback.

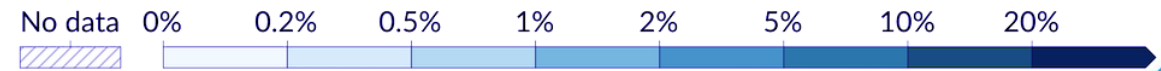
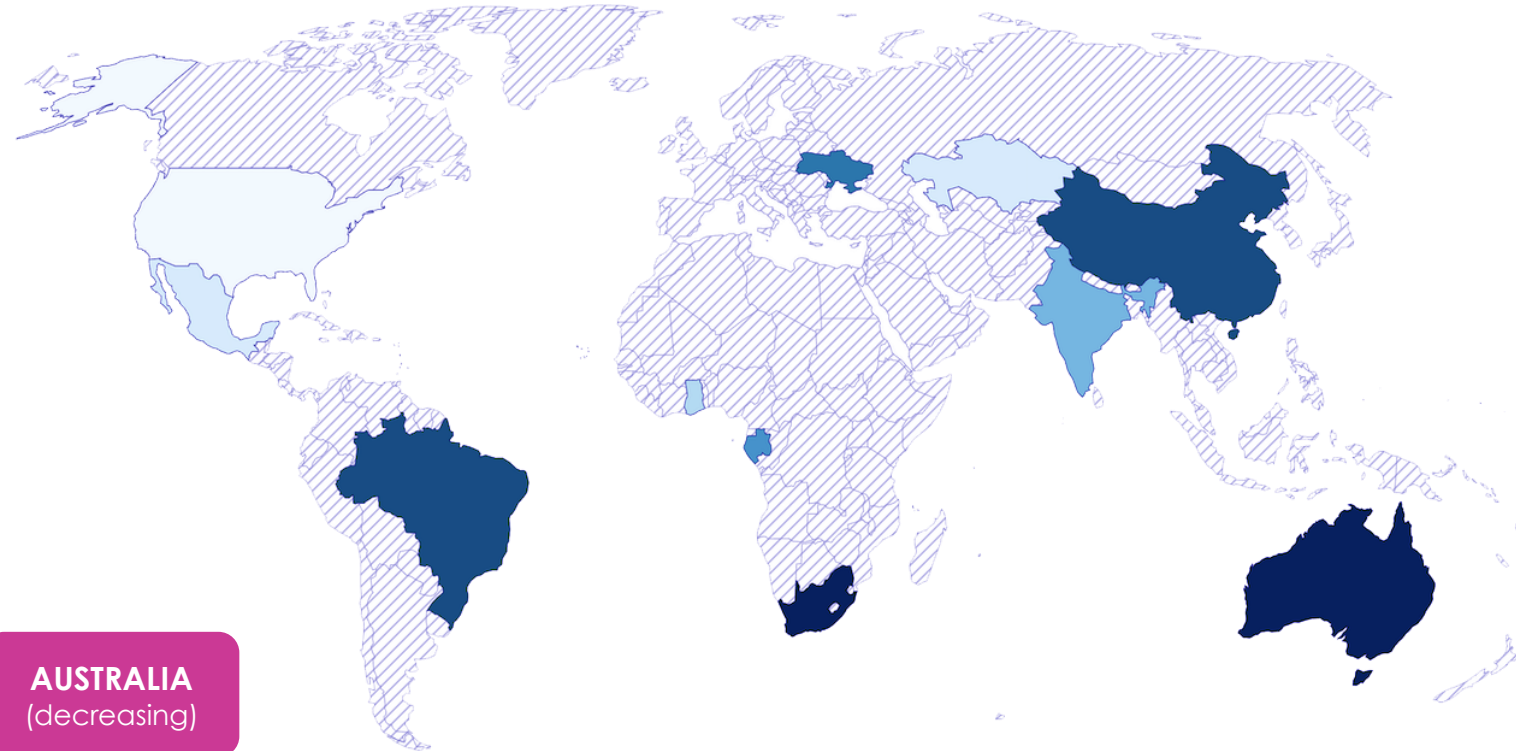
- Northern Australia Infrastructure Facility (NAIF) to provide up to AU\$50 million senior debt facility for Element 25's Butcherbird Manganese Expansion Project.
- Butcherbird development based on a 1.1 Mtpa manganese concentrate operation and delivers outstanding metrics.
- Manganese concentrate to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

- Manganese deposits heavily concentrated in challenging jurisdictions.
- Australia is the only allied country with significant manganese reserves and production.
- Australian manganese production declining with old mines closing and limited new production.

Manganese Ore Production 2020-2024:

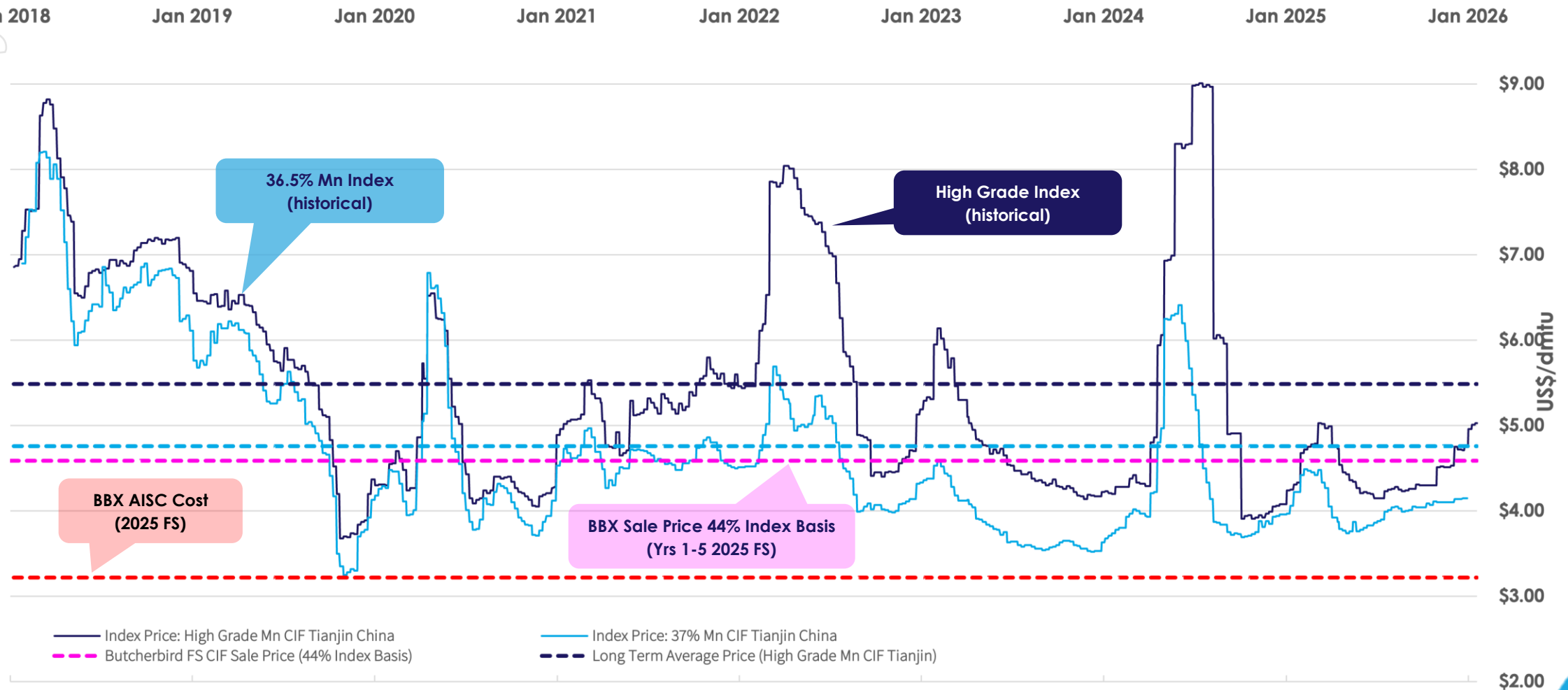


Manganese ore global distribution:



AUSTRALIA
(decreasing)

Historical Mn Ore Price Cycles – US\$/dm³ CIF China





- Detailed engineering well advanced utilizing Integrated project Team (IPT) approach.



- Long lead time procurement progressed with orders placed for crusher and logwasher equipment.



- Key construction and operational contracts being finalised including road haulage, mining, port and offtake.

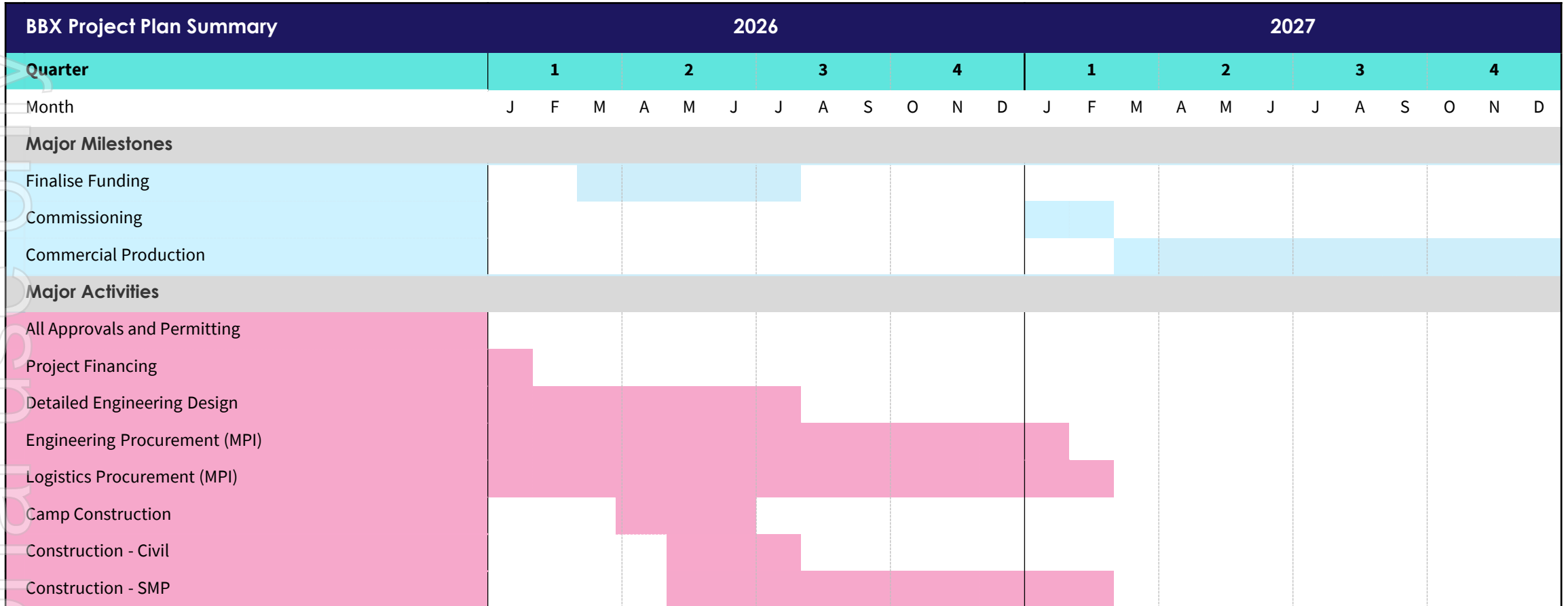


- Fully permitted under Department of Local Government, Industry Regulation and Safety (LGIRS) regulations.

Construction Tender in Progress

- Civils, SMP, E&I packages in the market with tender submissions under review. Subject to WHS compliance requirements.

Butcherbird Expansion Project Timeline Guidance

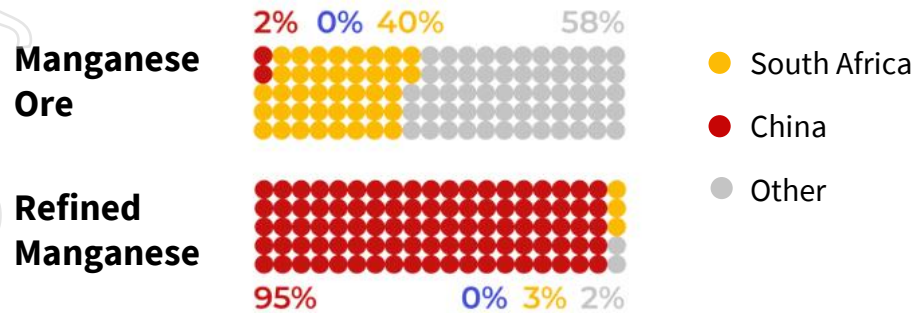


The schedule remains subject to a number of key dependencies including achieving project financial close, completion of detailed engineering, procurement of key equipment and finalising the construction contract(s) in accordance with the planned key dates.

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High Purity Manganese Strategy

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Breaking the Chinese Supply Chain Dominance

- Refined manganese (HPMSM) capacity is heavily concentrated with >95% of refining capacity 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 manganese supply.
- Element 25 provides a long-life mine and a future facing processing technology.

Refined battery grade manganese capacity is heavily concentrated in China.



The Element 25 Process brings significant changes & improvements:



Fewer Reagents



Lower Emissions



No Waste Residue

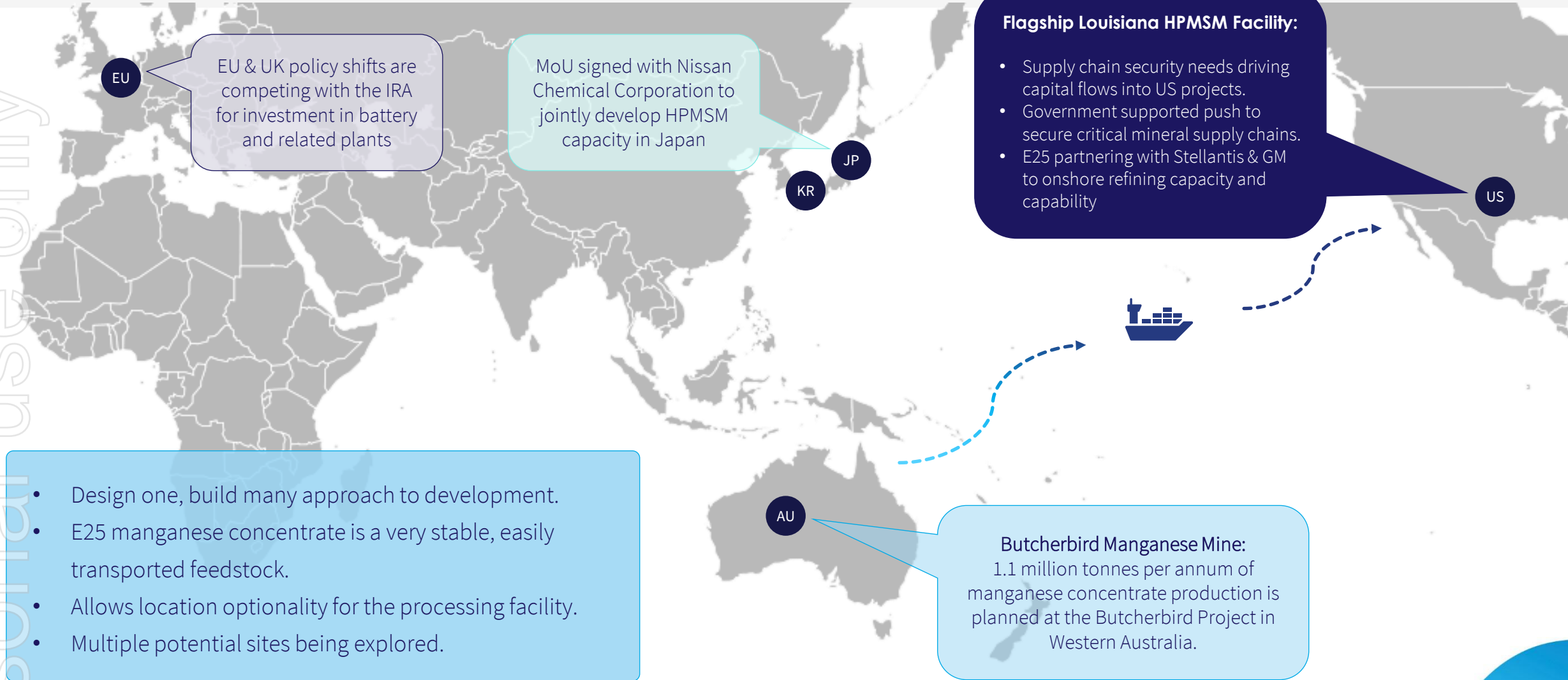
E25 technology enhances ESG profile by:

- Eliminating waste residues.
- Eliminating toxic Reagents like fluorine.
- Increased efficiency and lower costs.
- Faster permitting due to lower impacts.

Cleaner, more efficient
technology to deliver long term
reliable, clean supply of HPMSM

Global Refining Capacity in the Longer Term **

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- 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.

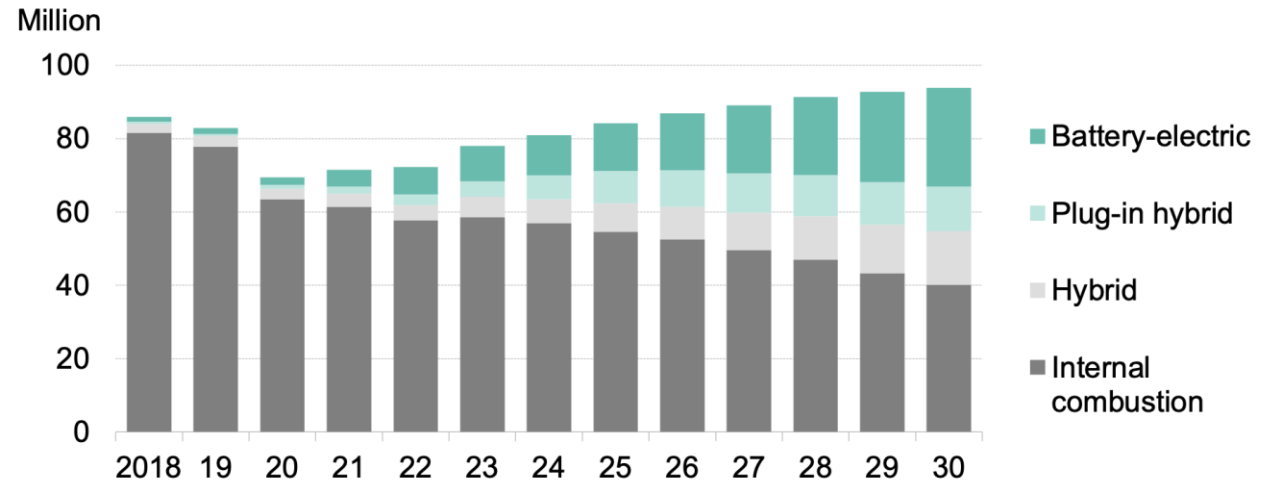
- Flagship Louisiana HPMSM Facility:**
- Supply chain security needs driving capital flows into US projects.
 - Government supported push to secure critical mineral supply chains.
 - E25 partnering with Stellantis & GM to onshore refining capacity and capability.

Butcherbird Manganese Mine:
1.1 million tonnes per annum of manganese concentrate production is planned at the Butcherbird Project in Western Australia.

EV market share continues to grow:

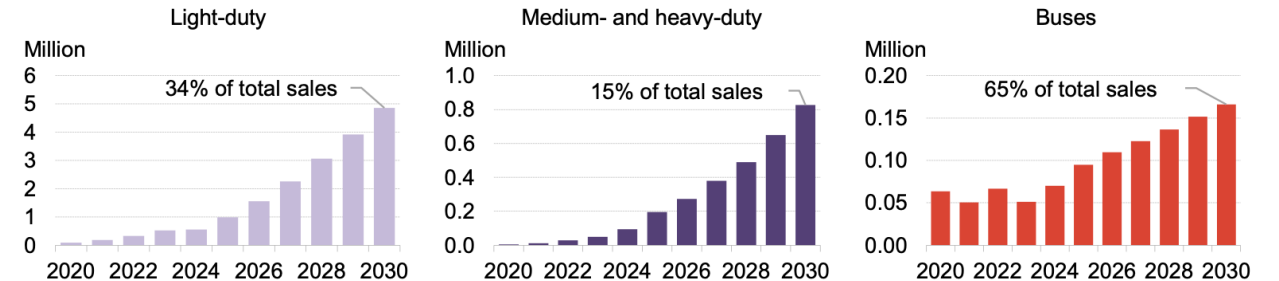
- Electric vehicles to reach over 50% market penetration by 2030 according to Bloomberg NEF.
- Short term policy settings have reduced uptake in some markets but medium-term demand forecasts remains bullish.
- Critical raw material supply remains a key geopolitical challenge with near total dominance by China of key raw materials including manganese.
- Battery grade manganese expected to see strong demand due to increase in electric vehicle sales and shift to higher manganese cathode materials.

Global passenger-vehicle sales by drivetrain



Source: BloombergNEF

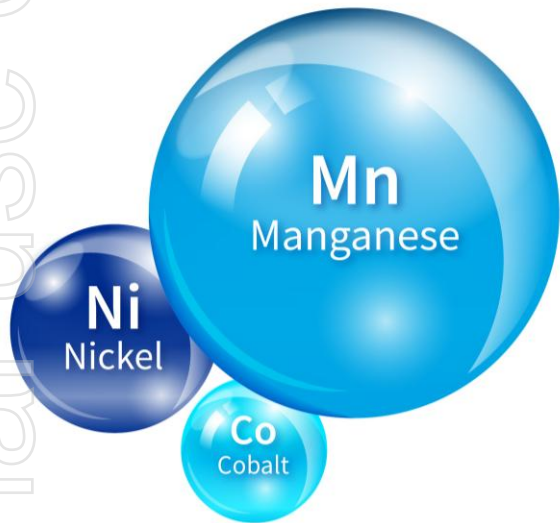
Near-term global sales outlook for electric and fuel-cell vans, trucks and buses



Source: BloombergNEF. Note: Electric vehicles include battery-electric and plug-in hybrid vehicles. Buses include city buses apart from China, which also includes coaches and intercity buses.

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:



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

Reduced nickel and very low to no cobalt content.

Reference: Umicore 2023



NEWS



May 13, 2025 | TECHNOLOGY

Why LMR batteries will change the outlook for the EV market

Share article: [f](#) [X](#) [in](#) [@](#)

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



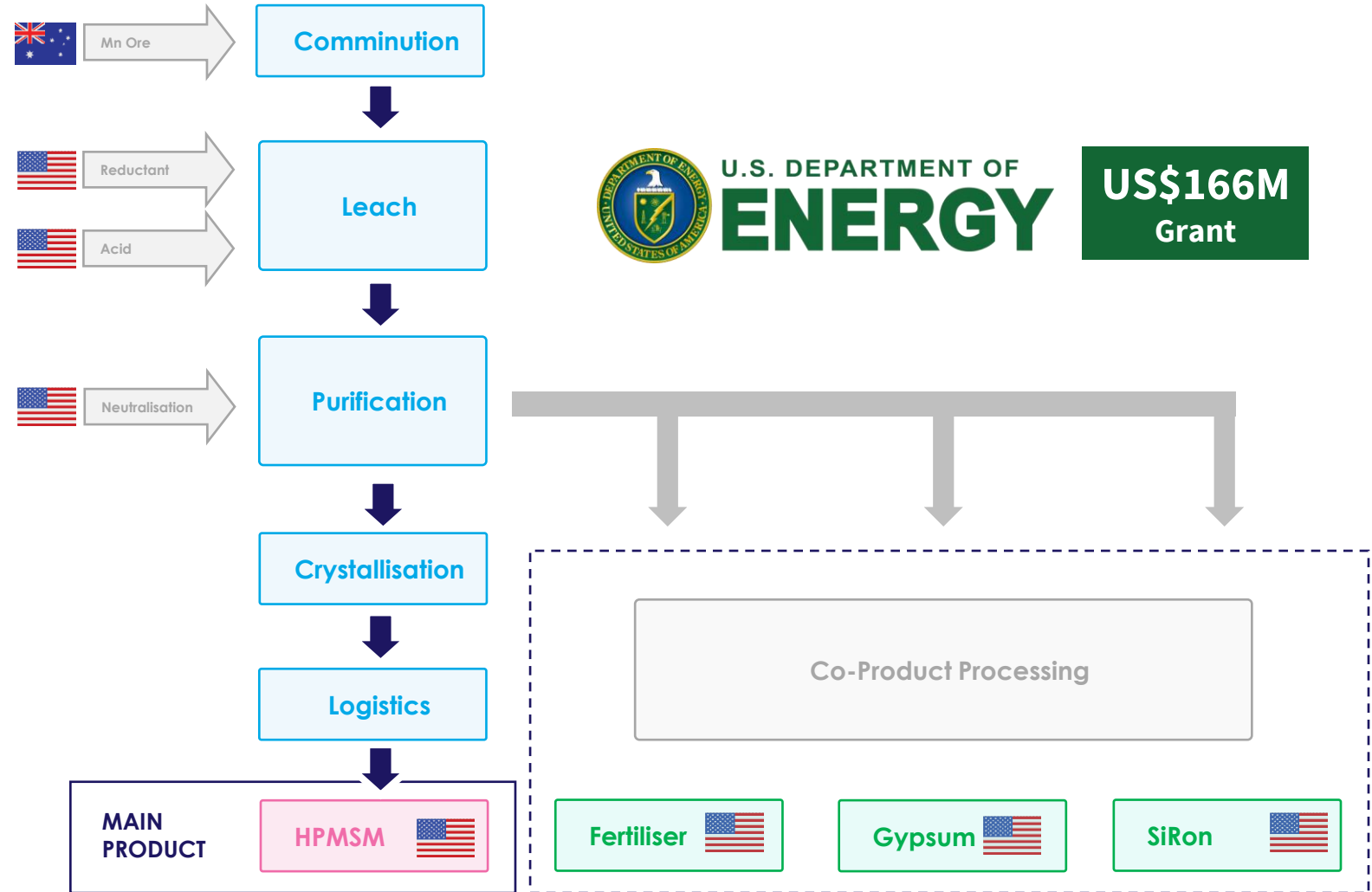
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Louisiana Battery Grade HPMSM

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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 adjacent to acid recycling facility.
- Solid residues as co-products will be placed into local industries targeting zero waste.
- Low carbon, circular economy approach.



	<h2>Long Mine Life</h2>	<ul style="list-style-type: none"> • 18.3 Year Reserve within granted Mining Lease • 274Mt Resource global resource with exploration upside
	<h2>Construction Ready</h2>	<ul style="list-style-type: none"> • Feasibility Study and project permitting complete • Northern Australia Infrastructure Facility (NAIF) finance of up to \$50M approved
	<h2>ESG Leading HPMSM Flowsheet</h2>	<ul style="list-style-type: none"> • Life cycle assessment (LCA) completed confirming industry leading carbon intensity • Further reductions available via renewable energy and reagents
	<h2>Strong Feasibility Study/Financials</h2>	<ul style="list-style-type: none"> • \$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)
	<h2>Innovative HPMSM Flowsheet</h2>	<ul style="list-style-type: none"> • Competitive cost structure through innovation • Waste minimisation and reduced emissions provides competitive advantages
	<h2>Tier 1 Jurisdiction</h2>	<ul style="list-style-type: none"> • Australian owned and operated mine providing long term secure ethical Mn supply • USA, Japan and EU Partnerships to enhance battery raw material supply chains
	<h2>Tier 1 Project Customers & Partners</h2>	<ul style="list-style-type: none"> • 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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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.

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.