

# Element 25 Limited

## AGM Investor Update



Building a World-Class Battery Grade Manganese business

November 2023

ASX:E25 OTCQX:ELMTF

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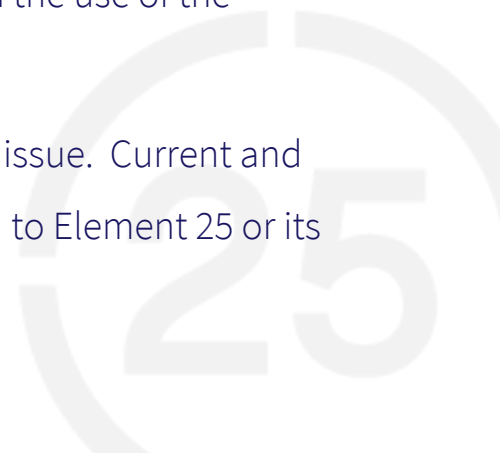
This presentation contains only a brief overview of Element 25 Limited and its associated entities ("Element 25") and their respective activities and operations. The contents of this presentation, including matters relating to the geology of Element 25's projects, may rely on various assumptions and subjective interpretations which it is not possible to detail in this presentation and which have not been subject to any independent verification.

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ASX Ticker: E25

OTCQX Ticker: ELMTF

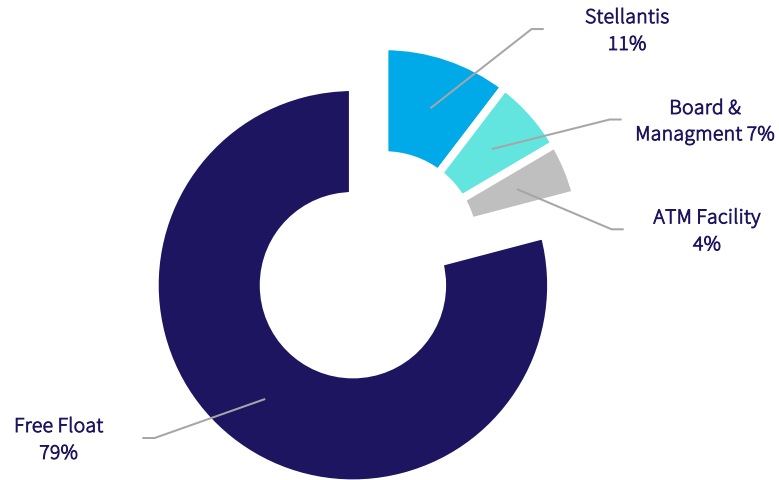
Issued Shares: 220M

Share Price: A\$0.50

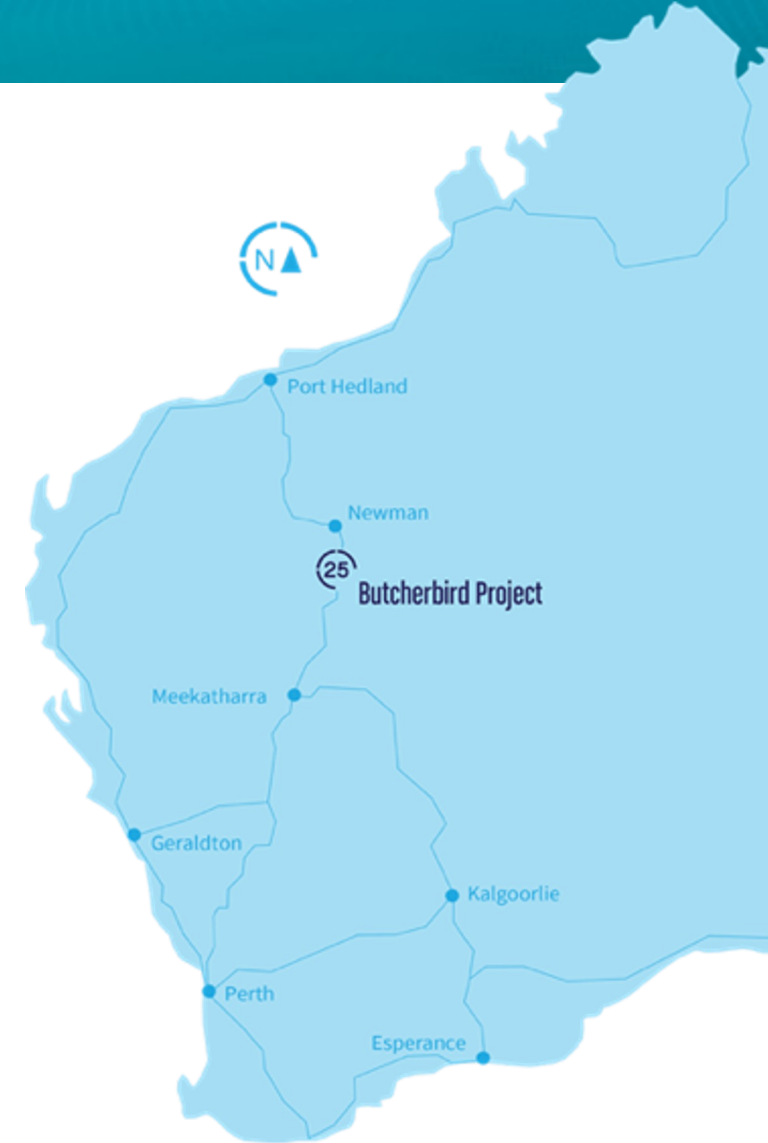
Market Capitalisation: A\$110M

Debt: Nil

## Share Ownership:



Growing the world class Butcherbird Manganese Mine in Western Australia to produce high quality manganese oxide concentrate and ethical supply of battery grade High Purity Manganese Sulphate Monohydrate (HPMSM) products to our offtake partners General Motors (GM) and Stellantis for electric vehicle (EV) batteries.



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## Mn ALLOYS

Used in steel, alloys and aluminium products.

High silica concentrate suitable for Si-Mn alloys

Global demand grows in line with steel consumption

Australian location close to Asian markets



## HPMSM - EV FUEL

A key raw material for Electric Vehicle (EV) Batteries

New approach to improve HPMSM ESG credentials

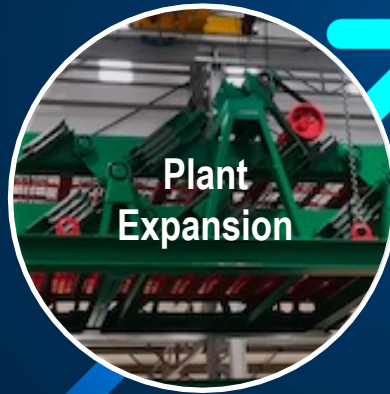
Strong demand growth linked to the rapid transition to EV mobility

E25 process offers key advantages

# Growth through ethical, strategic critical mineral supply...

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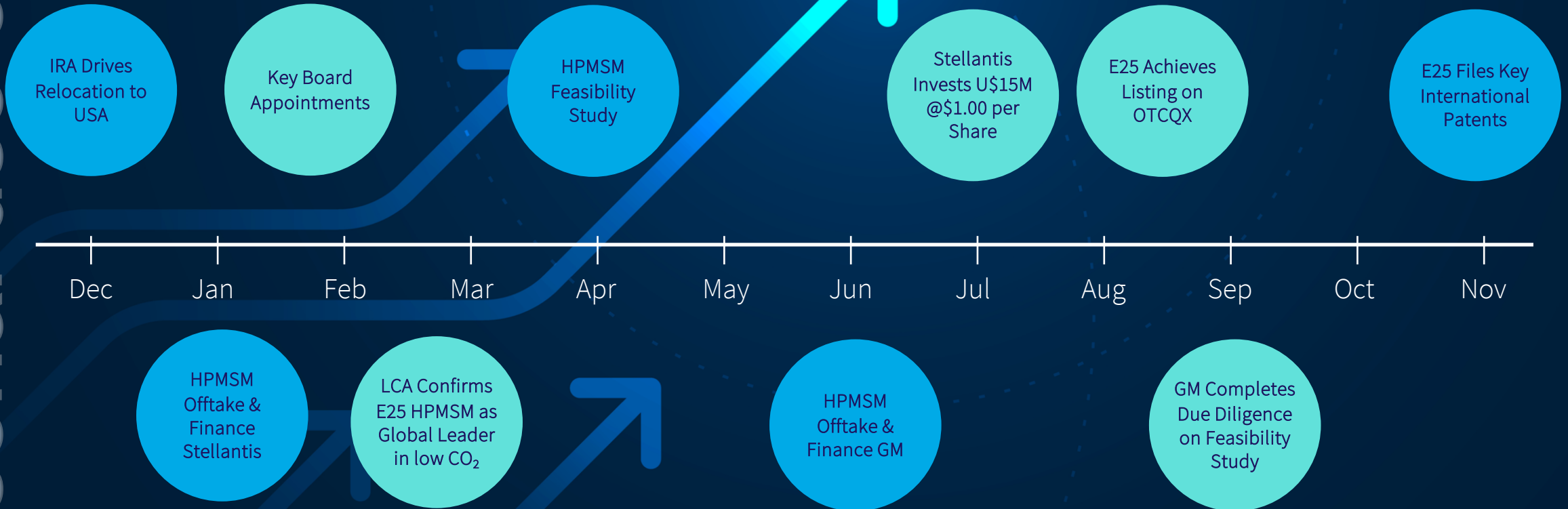
Butcherbird  
Manganese Mine



Louisiana  
HPMSM Plant



## Key Milestones



## BOARD OF DIRECTORS



Justin Brown  
Managing Director  
Geologist



John Ribbons  
Non-Executive Director  
CPA



Fanie van Jaarsveld  
Non-Executive Director  
Analytical Chemist



Sam Lancuba  
Non-Executive Director  
Chemical Engineer

Experienced Board & Management

## PROJECT DEVELOPMENT AND OPERATIONS TEAM



Michael Jordon  
Chief Financial Officer  
CPA



Neil Graham  
VP Battery Materials  
Chemical Engineer



Sias Jordaan  
VP Marketing & Logistics  
Accountant



Doug Flanagan  
COO (HPMSM)  
Mechatronics Engineer



Ian Huitson  
Study Manager  
Mining Engineer



Gideon van Wyk  
GM Manganese Ore Bus.  
Mechanical Engineer



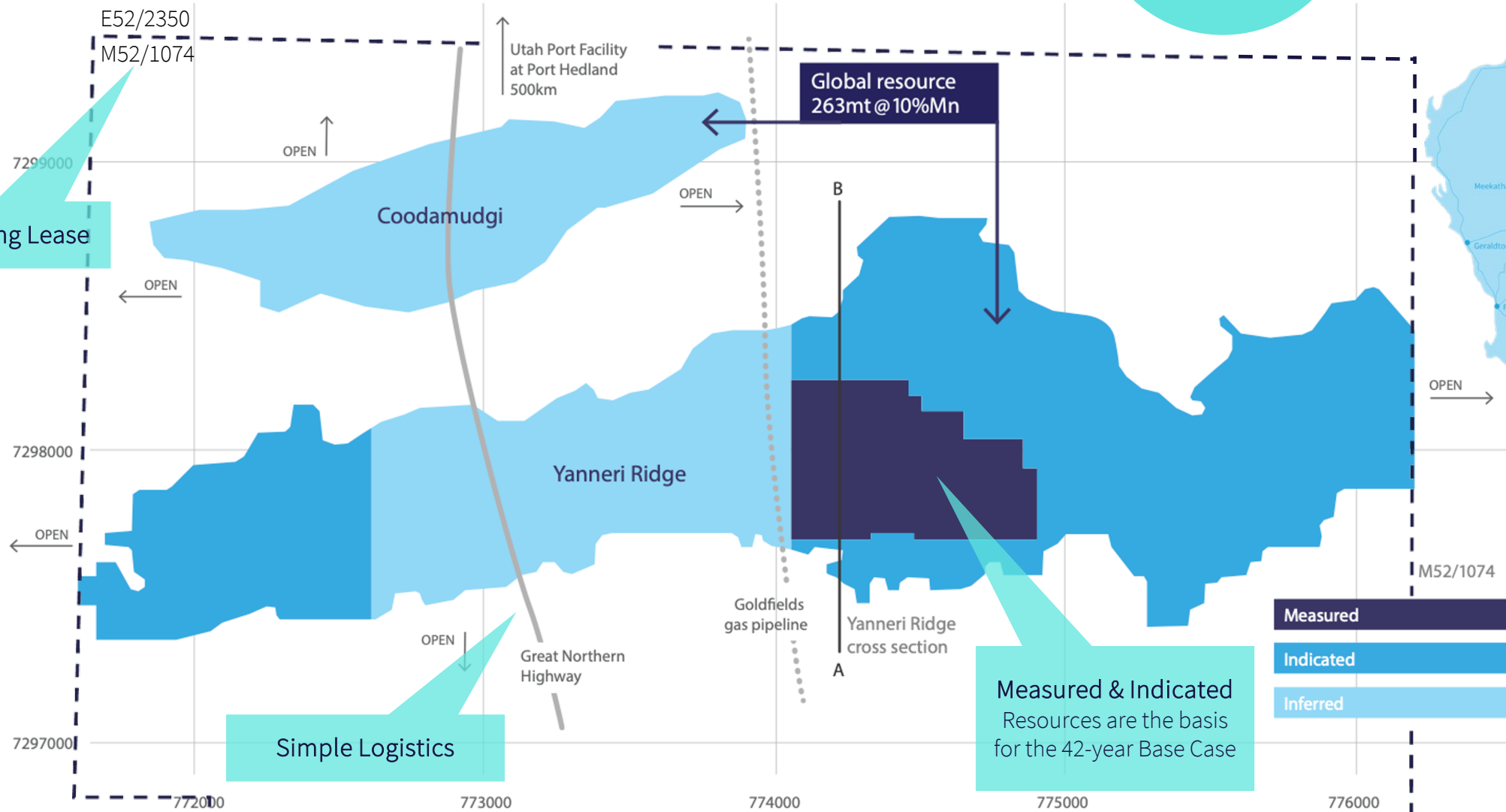
Clint Moxham  
GM Operations.  
Mining Engineer/Geol.

# Large long mine life manganese concentrate operation

100% E25 owned,  
long term  
tenure.



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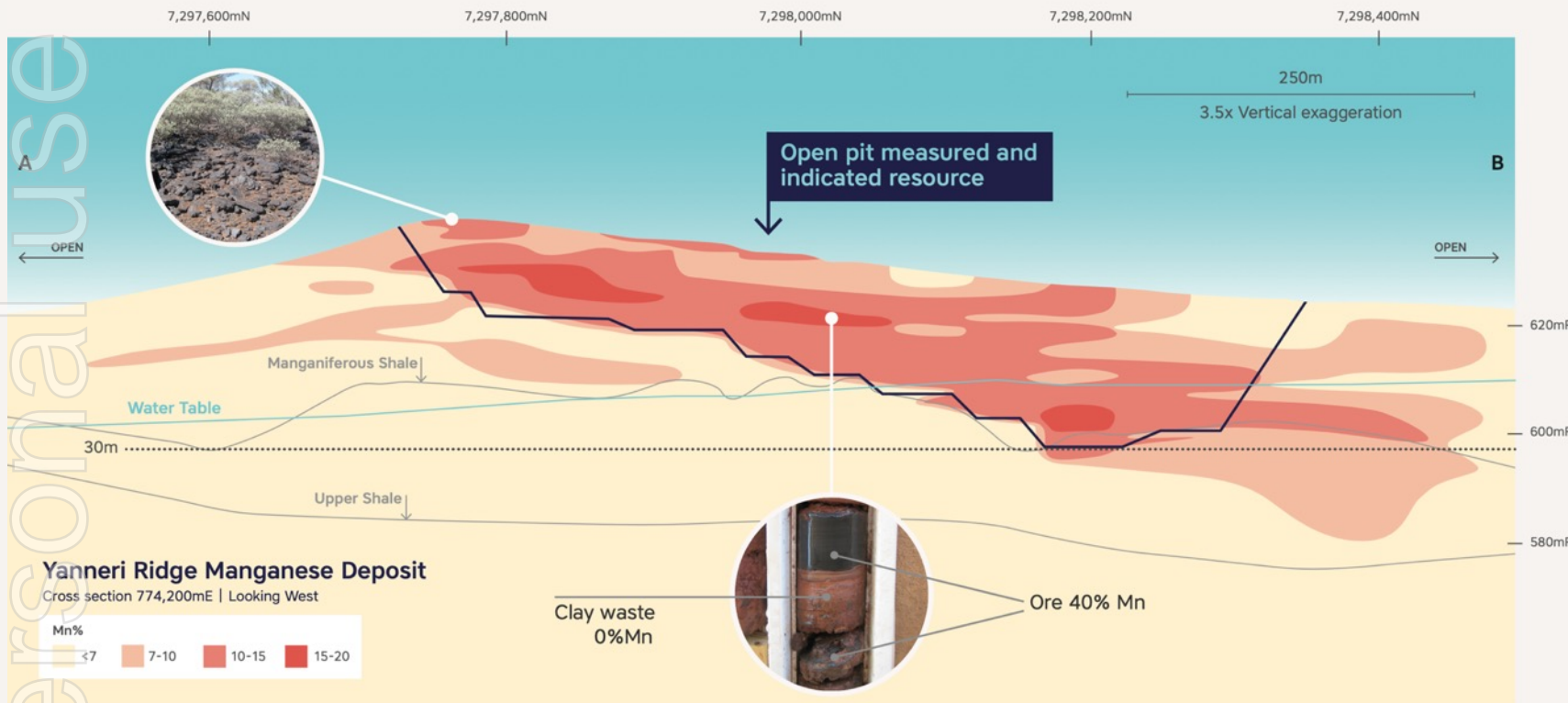


Measured & Indicated Resources are the basis for the 42-year Base Case



# Very simple geology equals low-cost, low impact manganese units

Classification	Tonnes (Mt)	Mn (%)	Contained Mn (Mt)
Resource	260.9	9.9	25.8
Reserve	49.2	10.2	5.0



## RESOURCE GROWTH POTENTIAL

- Enough resource base for multi-decade long expansion pathway
- Can produce concentrate, battery grade HPMSM and EMM without resource limitation

## ENVIRONMENTALLY BENIGN OPERATION

- Ore from surface
- No explosives required
- No waste water
- One reagent – water
- Extremely low levels of contaminants

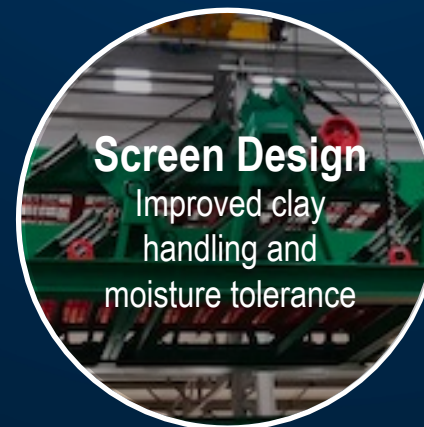
## Key Goals of Butcherbird Expansion Design:

- Increase in production volume.
- Reduction in unit operating costs.
- Reduction in labour intensity.
- Improved reliability, clay (and moisture) handling.
- Increased profitability.

## Butcherbird Expansion Feasibility Study:

- Equipment selection complete.
- Costing near complete.
- Implementation timeline and final study report pending.

## Key Design/Equipment Selection Outcomes:



# Our Goal - Zero Carbon High Purity Manganese...



Capturing value through down-stream processing...

**Stage 1**  
First production of manganese concentrate to sell to manganese alloy manufacturers

**Stage 2**  
Expansion of the concentrate production to produce manganese feedstock to convert to MnSO<sub>4</sub>

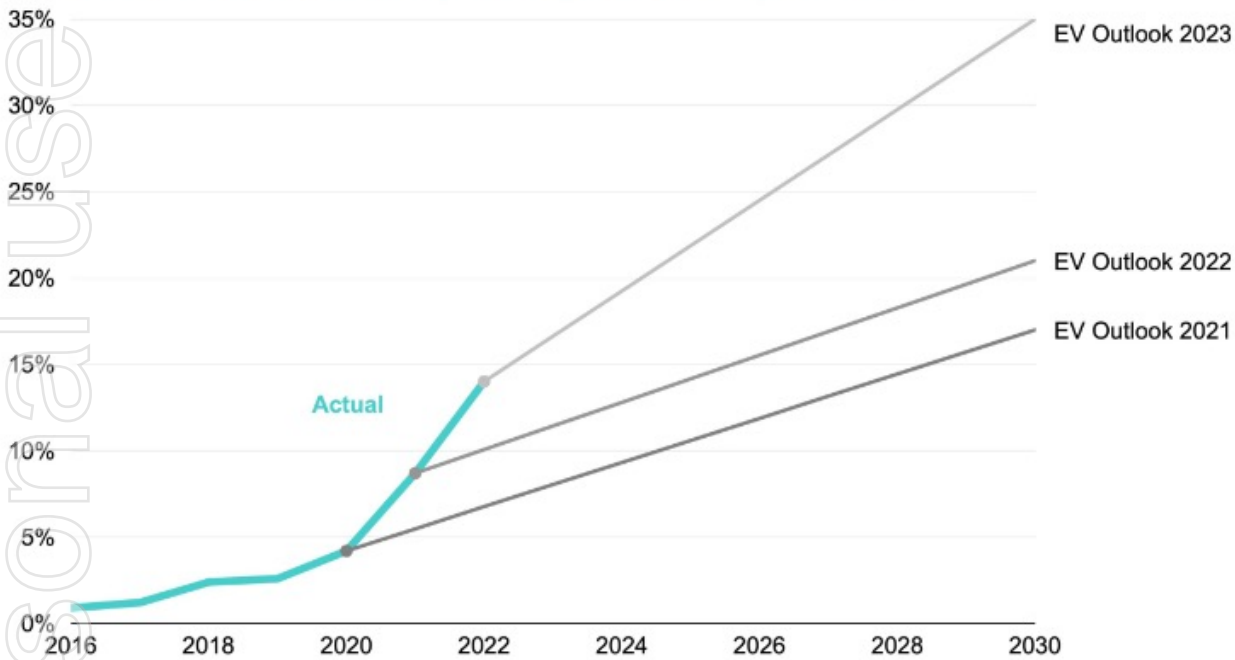
**Stage 3**  
Establishing a conversion facility to convert the concentrate to battery grade HPMSM with renewable energy

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# Electric Vehicle (EV) uptake accelerating...

“...S-curve modelling, based on the EV growth so far and the lessons of other technology shifts, suggests EV sales will grow at least four-fold by 2030, and make up between 62 percent and 86 percent of global car sales in 2030...” RMI – Energy Transformed 2023

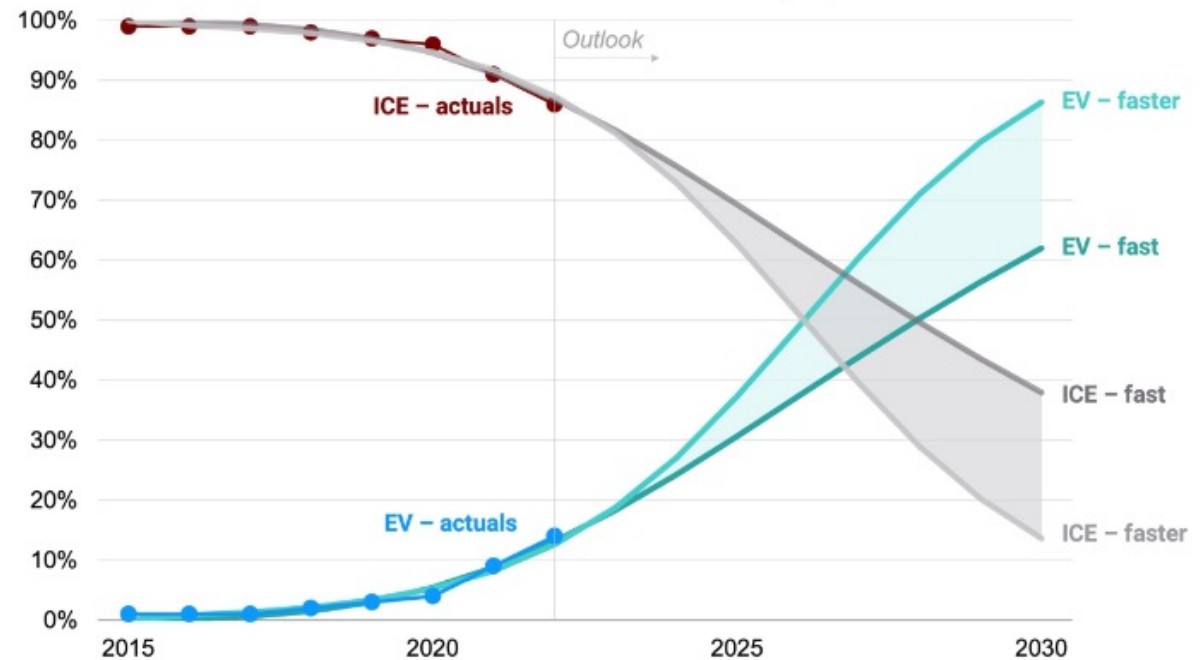
## EV sales forecasts keep being revised upwards



RMI – Energy, Transformed.

Source: IEA's STEPS scenarios from IEA's Global EV Outlooks via Hannah Ritchie

## Global EV and ICE market share forecast (%)



RMI – Energy, Transformed.

Source: IEA, RMI forecasts

# The EV battery industry is looking to Manganese...



“High-manganese represents the **optimum cost-benefit ratio.**”

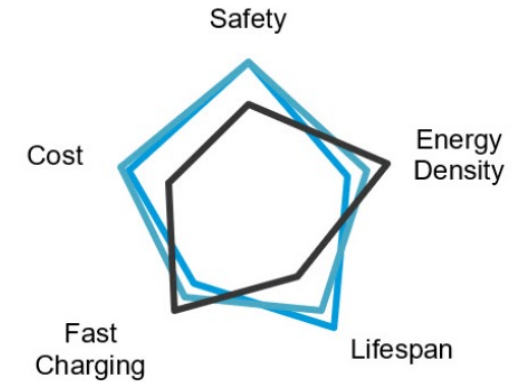
Volkswagen, March 2021



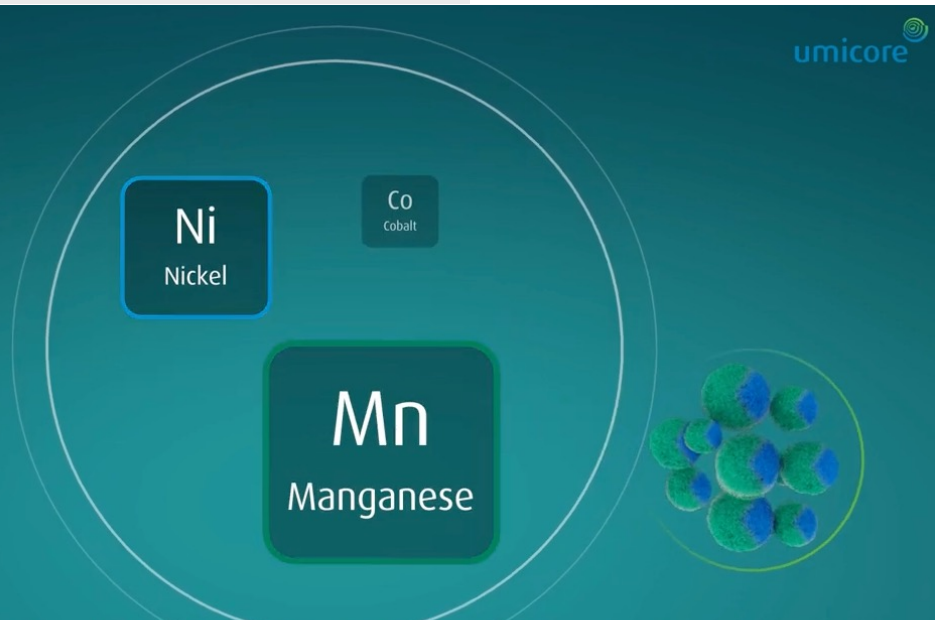
Li-Mn-rich technology shown as “**cost**” solution in electrification roadmap.

BMW, November 2021

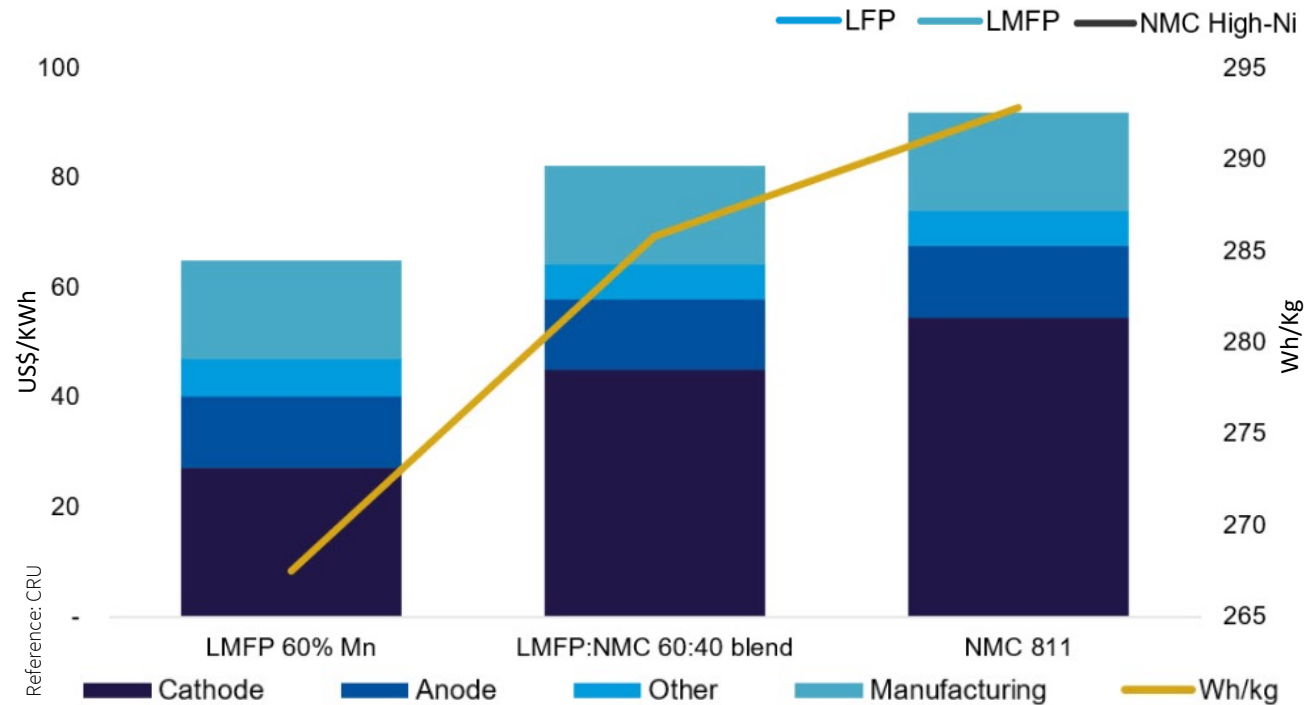
LMFP, LMNO and  $NM_x$  cathode chemistries offer improved safety, higher energy density, reduced cost per kWh and greater supply chain flexibility



High Lithium Manganese Material



reduced nickel and very low to no cobalt content.



# Manganese, the battery raw material supply chain solution...

PDAC 2023 Keynote Speaker

“...manganese (is) the single most critical mineral for batteries right now,” he said.

“How many companies outside of China make manganese commercially for a battery right now? Which is the hottest metal for batteries? How many? None, not one,” Hoffman said, adding “and there’s where the opportunity is — unbelievable.”

**“...manganese is the single most critical mineral for batteries right now...”**

Ken Hoffman, co-head of the EV battery materials research group and senior expert at McKinsey & Company



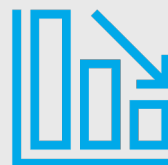
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# Low cost, efficient HPMSM process - significant improvements...

## Problems with Current Technologies

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

The Element 25 Process makes significant changes & improvements...



Reagents/Cost



Carbon Emissions



Waste Residue

## 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.



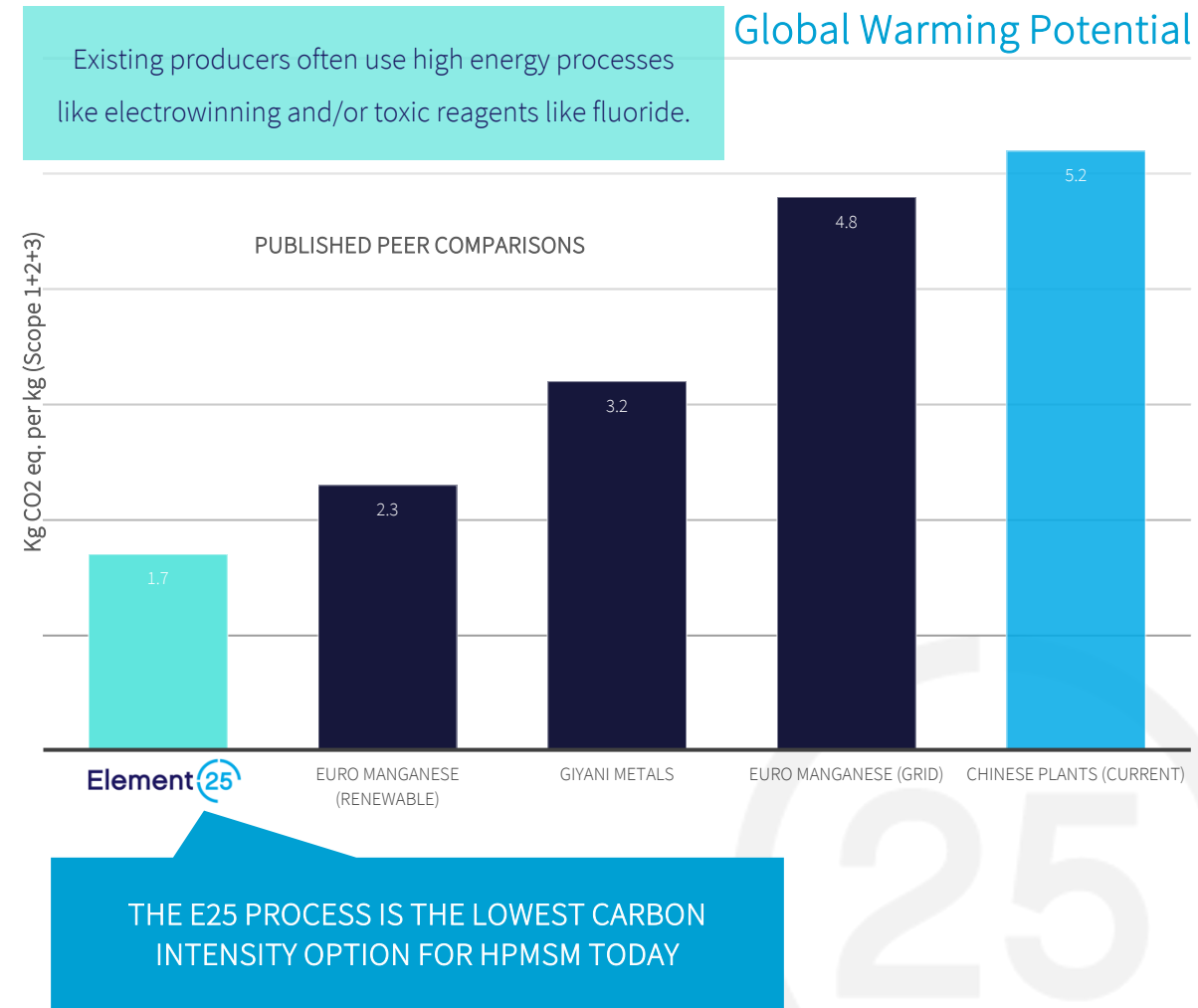
99.99%  
 $\text{MnSO}_4$

# Targeting Zero Carbon Manganese - ESG is integral to our thinking

- LCA covers Scope 1,2 and 3 emissions from mining through to the proposed USA-based HPMSM processing plant.
- E25 HPMSM to produce ~1.7kg of CO<sub>2</sub> for every 1kg of HPMSM:
  - ~ 67% lower than competitors in China.
  - up to 47% lower than competitors outside China.
  - ~26% lower than next lowest project's optimised case.
- E25 process is not yet fully optimised for carbon reduction.
- E25 to explore renewable energy and other potential carbon reduction strategies to further reduce CO<sub>2</sub>.



Supply chain transparency and traceability partner.

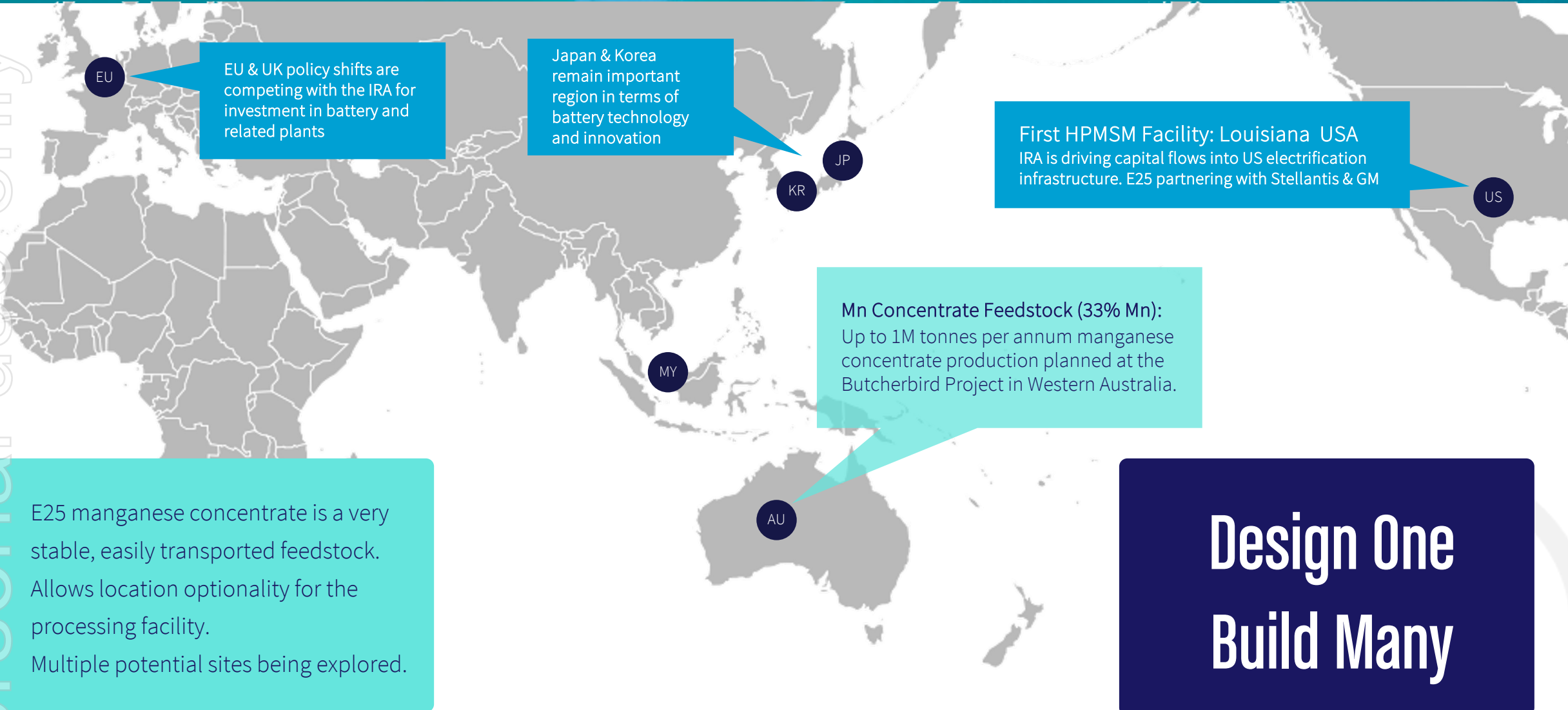


Reference: Company ASX Release dated 16 February 2023



# Stage 3 Expansion of Conversion Capacity - Multiple Plants Planned

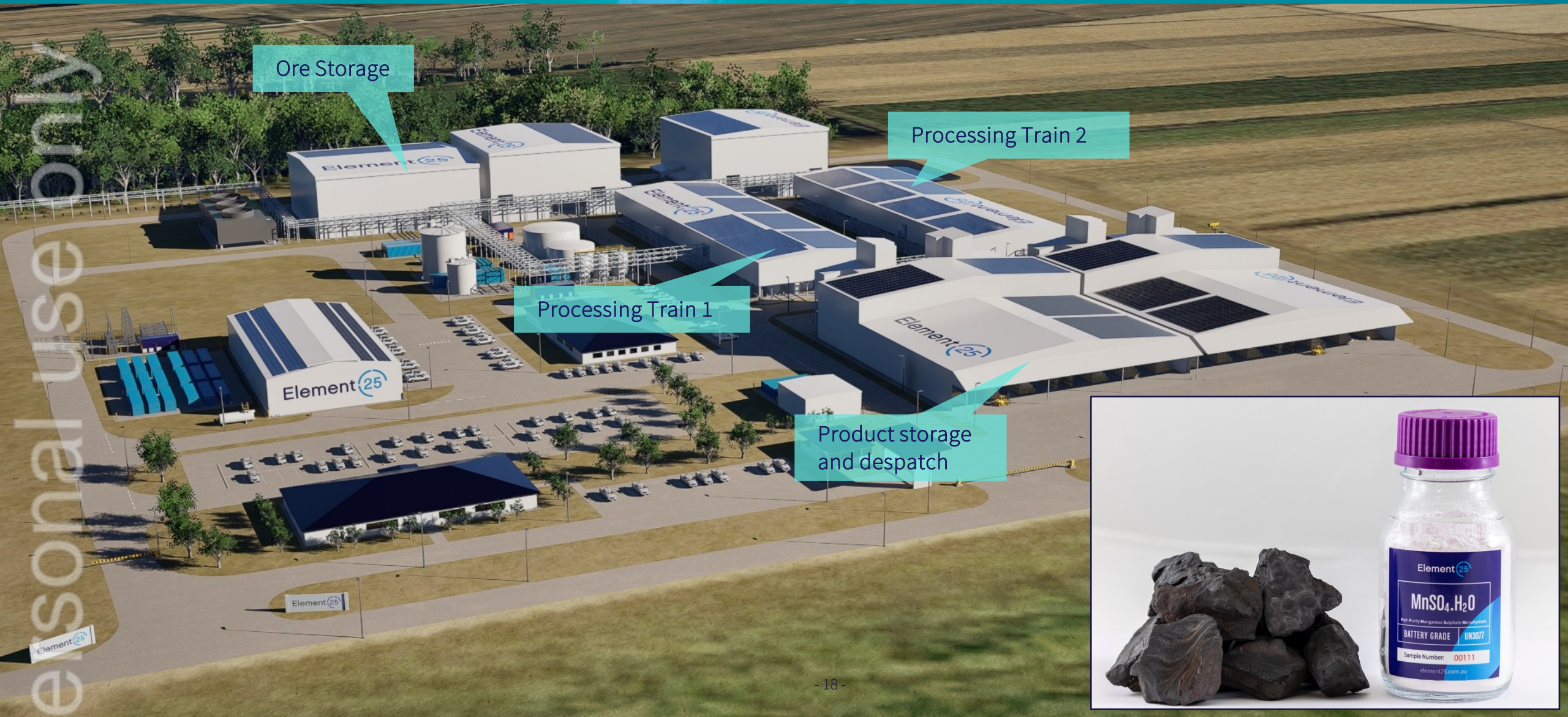
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- E25 manganese concentrate is a very stable, easily transported feedstock.
- Allows location optionality for the processing facility.
- Multiple potential sites being explored.

# Proposed Production Plant - France

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Ore Storage

Processing Train 2

Processing Train 1

Product storage and despatch



## Strong financial results underpinned by competitive capital and operating cost estimate



Cashflow

US\$155M

pre-tax average cashflow p.a. at full production (2 trains)



NPV

US\$1,662M

pre-tax (real) at full production  
Discount Rate 8%



IRR

29%

pre-tax at full production



Capital

US\$289M

for train 1 with an additional US\$187M required for train 2



HPMSM

65,000 t/a

expanding to 130ktpa with a second train



USD\$30M | equity & prepay

- Binding agreements signed for offtake and funding.
- Key commercial terms include:
  - Five (5) year HPMSM supply commitment (nominal 10Ktpa).
  - Stellantis commits US\$30M funding to E25's HPMSM processing facility.
  - First US\$15 has been completed as equity at A\$1 per share.
- Arrangement includes commitments from E25 with respect to ESG and IRA.

(Reference: Company ASX Release dated 9 January 2023)



general motors

USD\$85M | senior debt

- Binding agreements signed for offtake and funding.
- Key commercial terms include:
  - Seven (7) year HPMSM supply commitment (up to 32,500Ktpa).
  - GM commits \$85M funding to E25's HPMSM processing facility.
  - Funding committed as senior project debt.
  - Seven year post construction repayment schedule.
- Arrangement includes commitments from E25 with respect to ESG and IRA.

(Reference: Company ASX Release dated 26 June 2023)





Multiple funding pathways being actively negotiated:

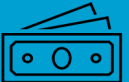
- US\$115M secured through GM and Stellantis deals.
- Discussions in progress with other potential offtake partners.
  - Offtake + Finance.
  - Debt/Pre-Pay/Equity all in play.
- Other funding avenues:
  - Nordic/Green Bonds/PE Debt.
  - Traditional project finance.
  - Government funding – DoE/DoD.
  - Green bonds.

**US\$30M**   
\$15M Equity & \$15M Prepay  
Binding documents executed

**US\$85M**  general motors  
Senior debt  
Binding documents executed

**US\$30-50M**   
Senior debt/Prepay/Equity with offtake  
Negotiations in progress.

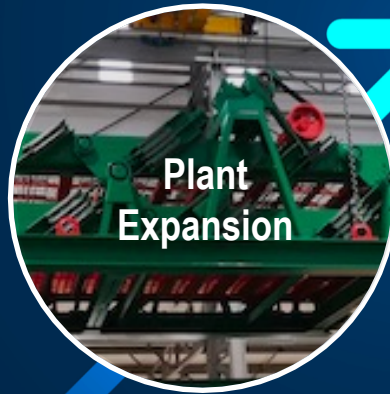
**US\$100-150M**   
Senior debt plus equity  
Negotiations in progress

**US\$289M**   
**Construction Capital Cost**  
Feasibility Study Estimate for Train 1 Construction

# Growth through ethical, strategic critical mineral supply...

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Butcherbird  
Manganese Mine



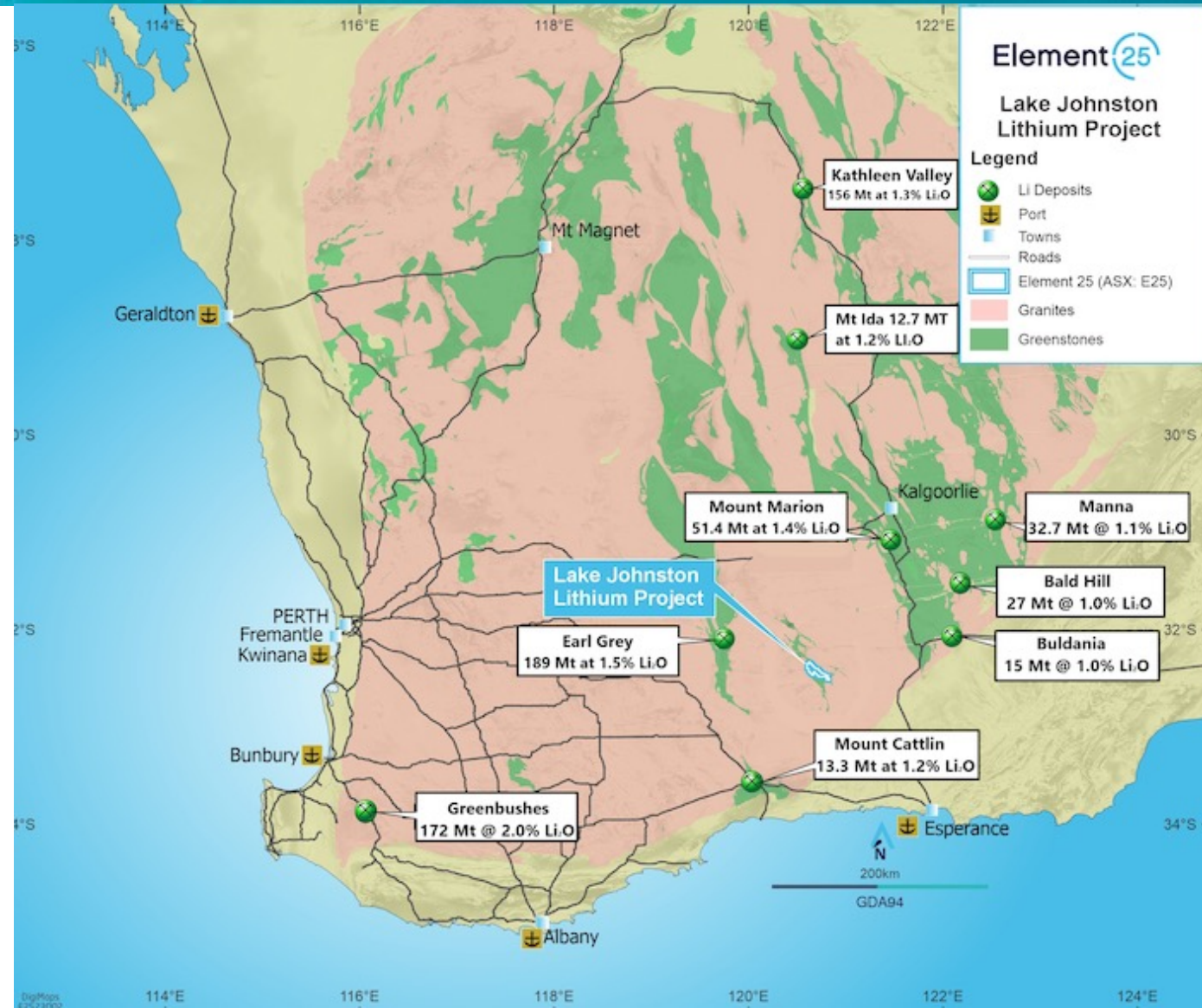
Louisiana  
HPMSM Plant



# Lake Johnston Project Summary

E25 is exploring for lithium in the Lake Johnston Greenstone belt of Western Australia.

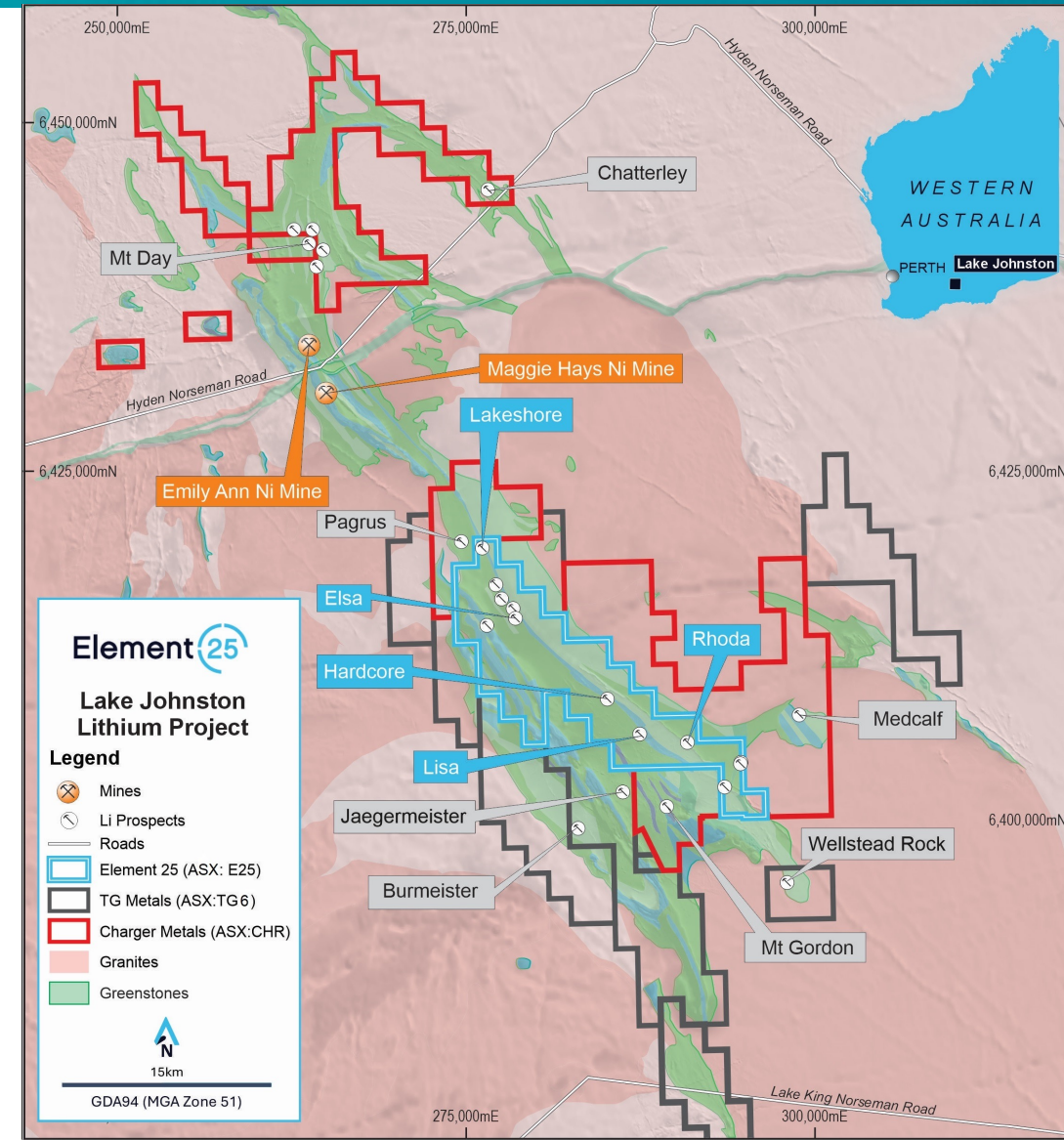
- Consists of one exploration licence 63/2027.
- 450kms east of Perth.
- Total project area of 136km<sup>2</sup>
- Tenement covers +25 km strike of Lake Johnston Greenstone Belt.
- Recent exploration success by adjoining tenement holders has shown the belt is a fertile LCT pegmatite field.



# Lake Johnston Competitor Activity

Significant exploration and corporate activity in the region

- TG Metals Ltd
  - Recent high-grade spodumene lithium pegmatite discovered at the Burmeister Prospect.
  - MC increase from ~\$6m to ~\$60m in past 2 months
- Charger Metals Ltd
  - High-grade Li within spodumene-bearing swarm at the Medcalf prospect
  - Rio Tinto have recently farmed into Charger's project. Deal involves potentially spending up to \$42.5m to earn 75%





# Thank you

Element 

For more information, please contact Element 25 Limited:

+61 8 6375 2525

[admin@e25.com.au](mailto:admin@e25.com.au)

[www.element25.com.au](http://www.element25.com.au)

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# Reserves and Resources

## Maiden Ore Reserve<sup>1</sup>

Category	Tonnes (Mt)	Mn (%)	Contained Mn (Mt)
Proved	13.0	11.1	1.4
Probable	36.2	10.1	3.6
Total	49.2	10.2	5.0

## Global Mineral Resource<sup>2</sup>

Category	Tonnes (Mt)	Mn (%)	Si (%)	Fe (%)	Al (%)
Measured	14.1	11.4	20.6	11.7	5.7
Indicated	40.8	10.0	20.9	11.0	5.8
Inferred	206.0	9.8	20.8	11.4	5.9
Total	260.9	9.9	20.8	11.4	5.9

- 89% conversion of measured and indicated resources to reserve.
- Maiden Reserve only exploits approximately 20% of global mineral resource.
- Excellent potential for future expansion.
- More drilling has potential to add to global resource.

<sup>1</sup>Reference: Element 25 Limited ASX release - Annual Report, year ending 30 June 2023, released 29 September 2023

<sup>2</sup>Reference: Element 25 Limited ASX release - Annual Report, year ending 30 June 2023, released 29 September 2023.

# Competent Person's Statement

The information in this presentation that relates to Exploration Results is based on information compiled by Mr Justin Brown who is a full-time employee of the Company and is a member of the Australasian Institute of Mining and Metallurgy. Justin Brown 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'. Justin Brown consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

All references to Mineral Resources pertain to the ASX release – Element 25 Limited Annual Report for the year ending 30 June 2023, released 29 September 2023. The Company confirms that all material assumptions, underpinning the estimations continue to apply and have not materially changed.

All references to Mineral Reserves pertain to the ASX release Element 25 Limited Annual Report for the year ending 30 June 2023, released 29 September 2023. . The Company confirms that all material assumptions, underpinning the estimations continue to apply and have not materially changed.

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

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