



Latrobe 
Magnesium
Smart | Efficient | Green

IMARC 2024

David Paterson – CEO

ASX: LMG

Disclaimer

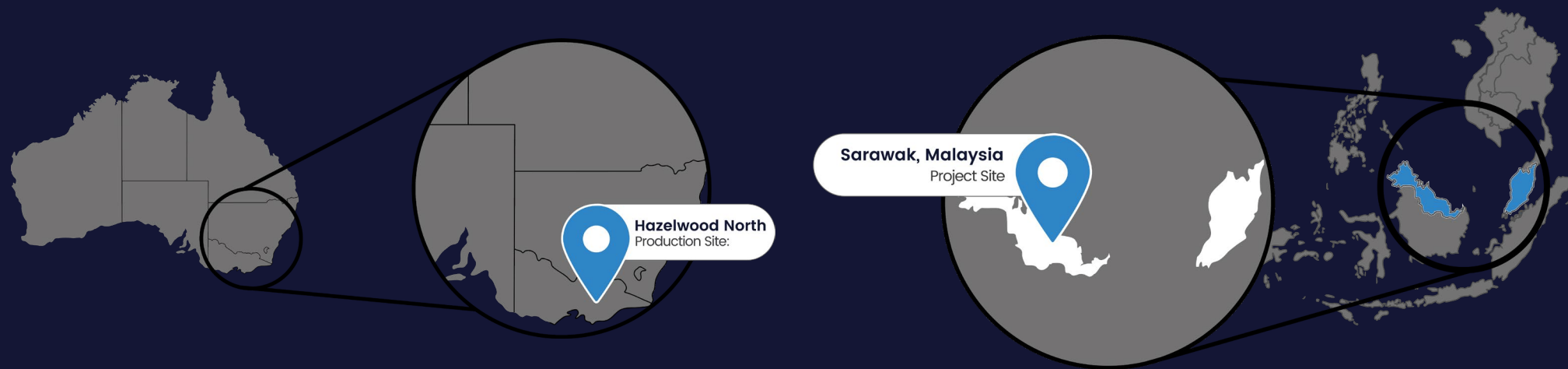
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Investors should undertake their own analysis and obtain independent advice.

All references to dollars, cents or \$ in this presentation are to Australian currency, unless otherwise stated.

Who Are We?

Latrobe Magnesium (ASX: LMG) has developed a **world-first, low-cost, low emission** and environmentally sustainable hydromet / thermal reduction process to convert nearly 100% of waste resources into Magnesium metal and other valuable commodities.

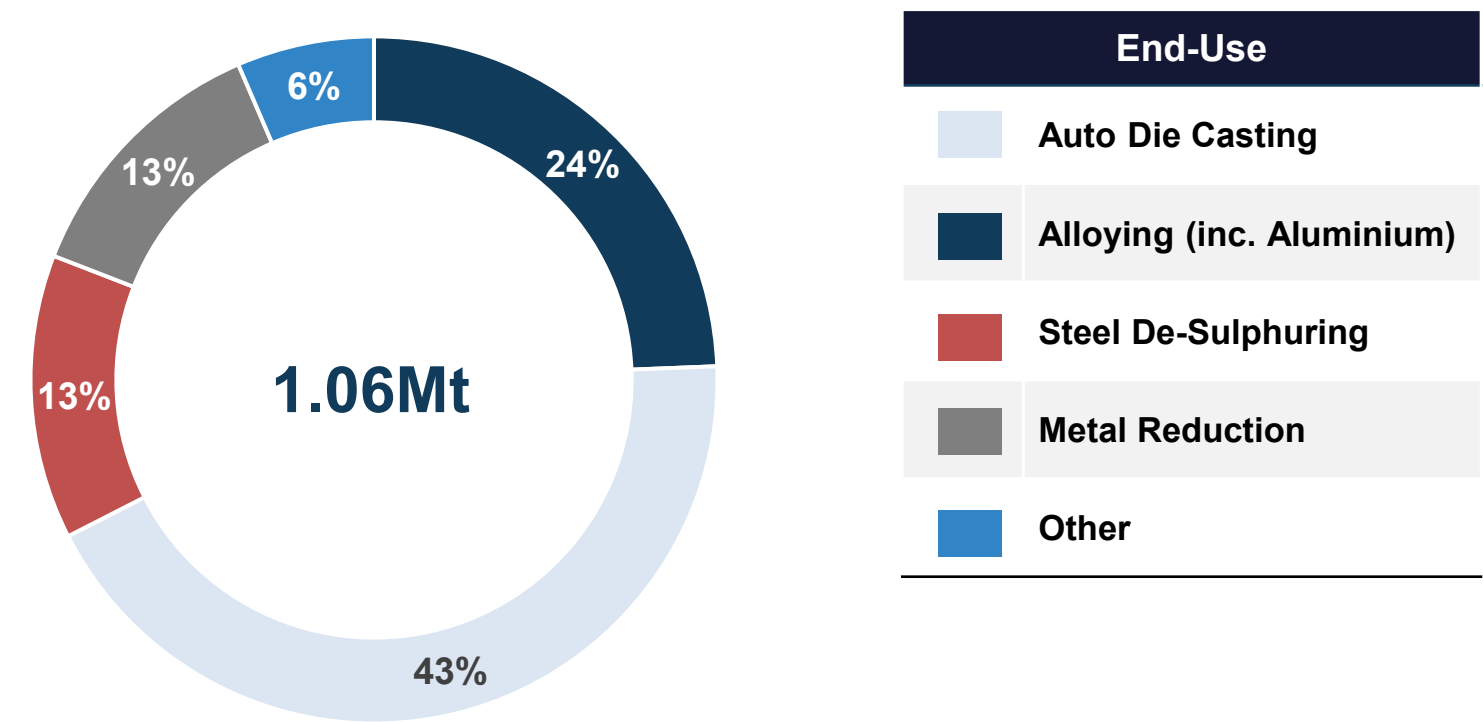


LMG Project Pathway

- 1,000 tpa
Demonstration Plant
- 10,000+ tpa
Australian Commercial Plant
- 100,000 tpa
International Mega-Plant

Magnesium: The Critical Green Mineral

Global Magnesium Demand & Consumption by Market Sector (2022)¹



Global Demand
(2023)
1.04Mt

Forecast Global Demand
(2032)
1.67Mt

China's Share of Global
Supply (2023)
87%



Magnesium is a critical input for auto manufacturers looking to reduce car weight through alloys and improve efficiency, especially in EVs, but supply is currently CO₂ intensive⁽⁵⁾

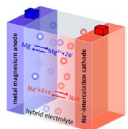


Despite magnesium supply being critical to auto manufacturing economies such as Germany, the US and Japan, 87% of current demand is met by suppliers within the PRC and 6% from Russia, creating supply chain risks⁽⁶⁾



Manufacturers around the globe (including the PRC) are facing growing pressures to de-carbonise their supply chains and find green alternatives to traditional processes

Future Uses – Is Magnesium the new Lithium?



▶ Harvard researchers have found that magnesium solid state batteries could replace lithium-ion batteries given their extended lifespan (6,000 vs 1,000 cycles) and improved charging times.²



▶ Auto gigacasting refers to casting car bodies in one piece (which is c.20% cheaper than current production). Magnesium also provides better castability than aluminium and copper.³

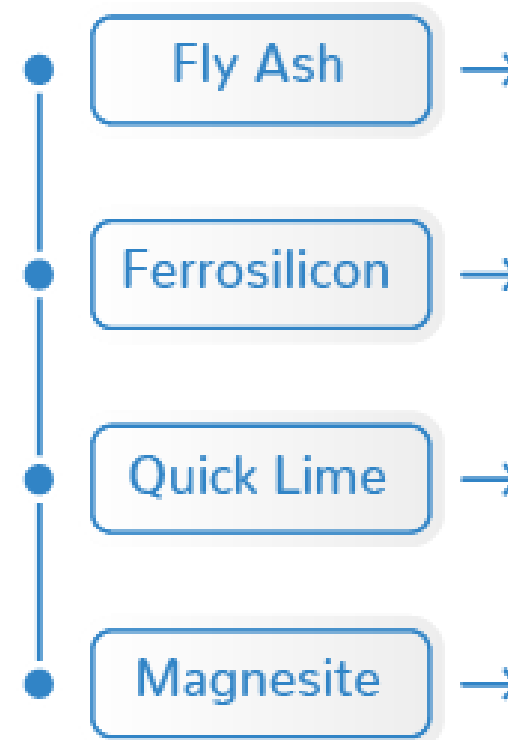


▶ Magnesium hydride may represent a safe, efficient and simple solution for storing Hydrogen.⁴

(1) CM Group, September 2022. (2) Energy Monitor, 11 March 2024. (3) Nikkei Asia, 9 July 2023. (4) Mining.com, 4 March 2024

Converting Waste Resources to Valuable Products

Major Inputs



Proprietary Process Demonstration Plant

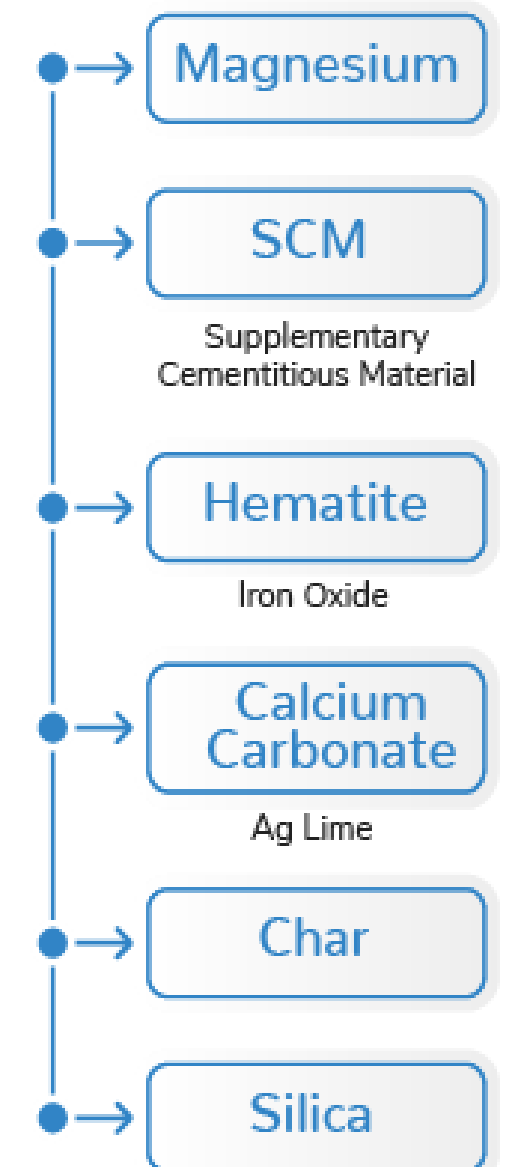


Low Carbon Process

01. Dissolve Mg in Acid Solution
02. Convert Mg Solution to MgO
03. Convert MgO into Mg & SCM using thermal reduction

No Waste Products / Tailings!

Major Outputs



What have we built?

LMG has built a \$57M Demonstration Plant incorporating a patented Hydromet process for producing magnesium with **60% lower CO₂ emissions** compared to the traditional process.

- ✓ Reduce CO₂ emissions from 21t – 40t to 6.6t or lower per ton of magnesium
- ✓ Allow auto manufactures to diversify their supply chains away from China – *a key competitor nation in electric vehicles*
- ✓ Remediate mining sites by recycling 100% of potentially hazardous wastes into valuable, saleable products



Demonstration Plant

- Produces 1,000 tones per annum of Magnesium.
- Processing fly ash waste resource from the Energy Australia, Yallourn West Power Station.
- Demonstration Plant produced **world's first environmentally sustainable Magnesium Oxide from fly ash.**
- Converting 100% of fly ash waste resource into saleable products:
 - Magnesium metal
 - Magnesium Oxide (*interim*)
 - Supplementary Cementitious Material (SCM)
 - Silica
 - Char
 - Agricultural Lime
 - Iron Oxide



Stage 1 Demonstration Plant Virtual Tour

LMG's Pathway for Expansion



Fly Ash

Commenced production of MgO in May 2024

Financials

- \$52M capex
- \$11M revenue
- EBITDA break even

Emissions

- 8.2 tons of CO₂ / ton of Mg



Fly Ash

Commencing production in late 2026

Financials

- \$200M capex
- \$135M revenue
- \$55M EBITDA

Emissions

- 6.6 tons of CO₂ / ton of Mg



Ferro Nickel Slag

Commissioning targeted for late 2029

Financials

- \$1.1B capex
- \$1.16B revenue
- \$490M EBITDA

Emissions

- 4 tons of CO₂ / ton of Mg ⁽¹⁾

(1) Targeting Net Zero once additional renewable capacity comes onstream

Key Achievements and Near-Term Milestones

Following first MgO production in May 2024, LMG will shortly produce magnesium metal ahead of Commercial Plant FID, targeted for mid 2025

1 Demonstration Plant



2 Commercial Plant



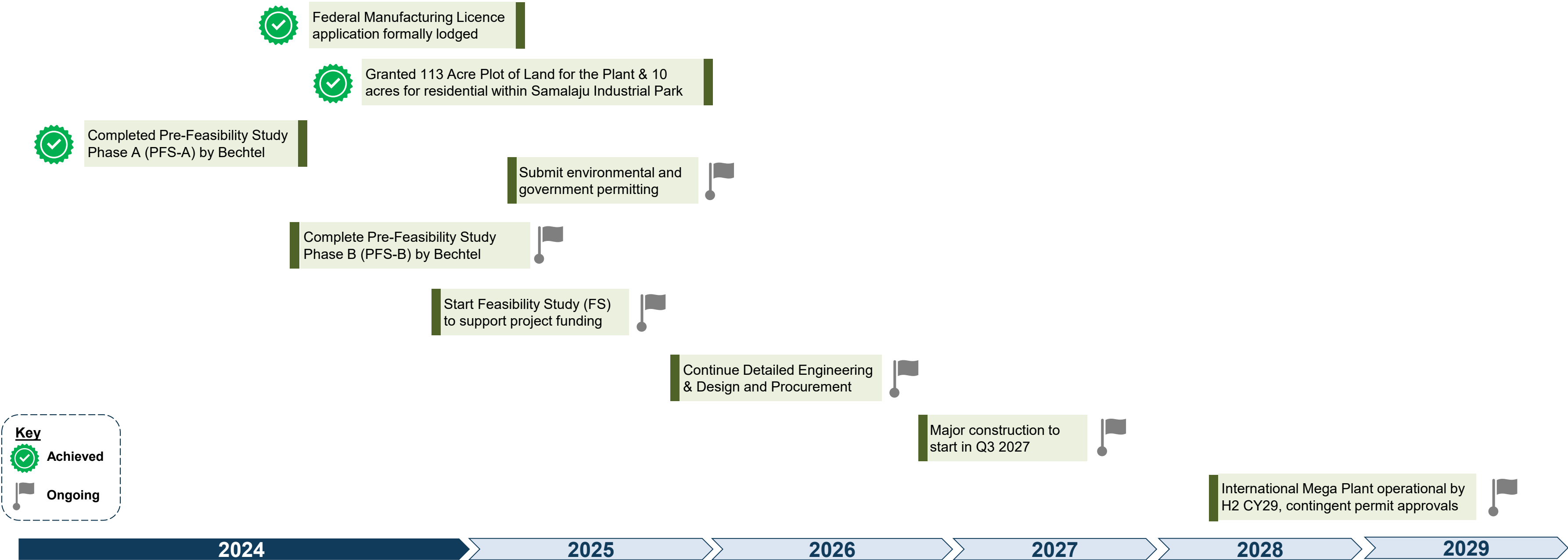
Key

- ✓ Achieved
- 🚩 Ongoing



Key Achievements and Long-Term Milestones

3 International Mega-Plant



Environmental | Social | Governance (ESG)



Environmental

- Minimise waste by rehabilitation of legacy mining site tailings
- Reduce CO₂ emissions by 60%
- Embrace a circular economy approach with 100% waste conversion into valuable products, eliminating downstream waste
- Target net zero emissions with the use of renewable energy
- Support decarbonisation over a products life cycle through light weighting and recycling



Social

- Prioritise health and safety in daily operations
- Cultivate a value-driven, performance-oriented culture for staff, growth and excellence
- Drive long-term community benefits through employment, training, and supplier support
- 100% award of construction tenders to local contractors
- Create up to 100 direct jobs with a 3:1 indirect impact
- Champion local community sports clubs through support and sponsorship



Governance

- Committed to corporate transparency
- Experienced and competent Board of Directors
- Maintain an effective organisational structure for stakeholder communication
- Implement a science-based emission reporting system for operations.
- Rigorously identify and manage material risks

Thank You!



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