

Element 25 and Circular Partner to Develop the First ESG Transparent Manganese Supply Chain

- E25 partners with leading sustainable supply chain traceability provider, **Circular**, for real-time traceability of its manganese products.
- Partnership plays critical role in E25's strategic pathway to **Zero Carbon Manganese**.
- Real-time, digital visibility of dynamic ESG metrics, including **CO₂ intensity** and energy mix used, will be made available to downstream market participants, including offtake partners.
- Circular's platform will enable E25 to demonstrate **its fulfilment of United Nations Sustainability Development Goals** and the European Commission's Battery Regulation.
- Traceability-as-a-Service (**TaaS**) technology will enable E25 to document supply chain ESG credentials to downstream customers.



Element 25 Limited (**E25** or **Company**) (**ASX:E25**) is pleased to announce a collaborative partnership with Circular Ltd (**Circular**) to establish full manganese traceability and dynamic tracking of CO₂, environmental, social and governance (**ESG**) standards for products produced from the 100% owned Butcherbird Project (**Butcherbird** or **Project**).

The tracking and tracing will include the current manganese concentrate products, as well as the planned production of high-purity manganese sulphate (**HPMSM**) battery materials that will be manufactured through the downstream processing of Butcherbird manganese concentrate¹.

Globally, there is increasing awareness about the impacts associated with extractive industries, including the supply of raw materials that are key to meeting growing demand for critical minerals in **Lithium-ion batteries** industry and **electric vehicles**. End users are increasingly requiring greater traceability and precise carbon accounting for their supply chain inputs. E25's partnership with Circular plays a critical role in the Company demonstrating traceability and ESG compliance for its manganese products.

¹ Reference: Company ASX Release dated 20 January 2022

COMPANY SNAPSHOT

Market Summary

ASX code: E25
Shares on issue: 153M
Share price: \$1.295

Board of Directors:

Seamus Cornelius	Chairman
Justin Brown	MD
John Ribbons	NED

Element 25 Limited is developing the world class Butcherbird Manganese Project in Western Australia to produce high quality manganese concentrate and high purity manganese products for traditional and new energy markets.

E25 Managing Director Mr. Justin Brown commented, “*The collaboration between Circular and Element 25 is a fantastic example of the way the minerals industry is evolving to provide better traceability and accountability as it works tirelessly to provide the new energy sector with sustainable raw materials to power the global energy transition away from fossil fuels. It reinforces E25's commitment to forging a pathway to Zero Carbon Manganese production from the Butcherbird Project.*”

Douglas Johnson-Poensgen, CEO of Circular, said: “*We are thrilled to support Element 25 in their ambition to bring to market Zero Carbon Manganese. They are demonstrating that with real-time transparency, it is possible to work together with downstream customers to bring sustainably produced battery materials to market. With E25 joining the Circular platform, Circular’s network of battery raw material suppliers and customers gets stronger, and the whole industry’s goal of greater sustainability becomes closer within reach.*”

About Circular Ltd

Circular is the leading sustainable supply chain traceability provider. Headquartered in the UK, with a global footprint across Germany, the U.S., Singapore, and Australia, Circular enables businesses to fully analyze, track, and manage their supply chains to ensure responsible sourcing and improve sustainability. Circular does this by providing an enterprise software platform, which creates a reliable chain of custody of materials and attaches GHG emissions and other ESG data directly to the flow of materials. More information can be found at www.circular.com.

E25 Project team focus

E25’s Operations team continues to focus on delivering sustained nameplate production, anticipated by Q1 2022.

The Business Development team is focussing on E25’s multi-stage development strategy, including a Stage 2 expansion of the concentrate business followed by a Stage 3 development to convert the concentrate material into **HPMSM** for electric vehicle **EV** batteries to power the global transition away from fossil fuel powered mobility.

Manganese is emerging as an increasingly important ingredient for EV batteries, with potential supply constraints for nickel and cobalt forcing battery manufacturers to look to high manganese cathodes to produce the vast amount of cathode material required by the EV industry in coming years².

The Project is ideally placed to feed this potential demand, with **advanced flowsheet development** work undertaken in 2019 and 2020 confirming a simple leach process for E25 ores which, when combined with offsets, will target the world’s first **Zero Carbon Manganese** for EV cathode manufacture³.

² <https://thenextavenue.com/2021/01/22/svolt-opens-orders-for-its-nmx-nickel-manganese-batteries/>

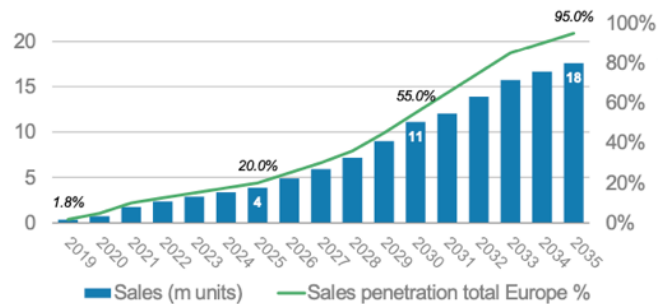
³ Reference: Company ASX release dated 12 February 2019

The Company released a Scoping Study (**Study**) on 20 January 2022 to provide the market with an initial outline of the economic opportunity presented by the HPMSM conversion plans, prior to the release of the Feasibility Study (FS) scheduled for mid 2022.

Battery EV Penetration Rate Forecast to Increase

As battery electric vehicle (BEV) makers seek to increase the uptake of electric vehicles, one commercial driver is cost reduction. VW's Power Day suggested a 50% cost reduction for batteries with cell design (-15%), production process (-10%), cathode/anode materials (-20%) and battery systems (-5%) driving the change.

Global BEV penetration is expected to rise to 15.2% by 2025 and 39.5% in 2030 – led by Europe and China, according to Morgan Stanley's latest report⁴. The main driver in the cathode materials is a shift to a high manganese cathode material for the volume production, which is expected to underpin strong demand growth for battery-grade manganese sulphate. Current estimates put demand by 2030 at 13 times current supply and a deficit of 1.3Mt even factoring in planned supply increases⁵.



Source: ACEA, Morgan Stanley Research estimates

Table 1. Europe BEV sales volumes (m) and penetration (%)

About the Butcherbird Manganese Project

E25's Butcherbird Manganese Project is a world-class manganese resource with current JORC resources of more than 263Mt of manganese ore⁶. In May 2020, the Company completed a Pre-Feasibility Study (PFS)⁷ with respect to developing the deposit to produce manganese concentrate for export to generate early cashflow with a modest capital requirement⁸. Stage 1 of the Project development plan is complete and E25 has commenced shipping ore to offtake partners.

The PFS also highlighted the Project's potential for significant growth beyond the initial Stage 1 production volumes (the studies examined the potential for a 2X and 3X expansion to Stage 1 within 12 months of initial commissioning), and the Company expects to expedite the expansion of the Project in 2H FY2022.

In addition to the concentrate export business, the Company has completed extensive research & development and laboratory test work into the production of high purity manganese products including battery grade manganese

⁴ Morgan Stanley Research published 3 September 2021

⁵ Euromanganese company presentation dated September 2021

⁶ Reference: Company ASX release dated 17 April 2019.

⁷ Reference: Company ASX release dated 19 May 2020.

⁸ Reference: Company ASX release dated 3 December 2020.

sulphate (HPMSM) and High Purity Electrolytic Manganese Metal (HPEMM). The work has highlighted that the Butcherbird ores are highly amenable to an ambient temperature, atmospheric pressure leach process, resulting in a very efficient extraction of the manganese into solution, the key requirement for the cost effective and sustainable production of HPMSM and HPEMM.

The Project straddles the Great Northern Highway and the Goldfields Gas Pipeline, providing turnkey logistics and energy solutions. The Company plans to integrate renewable energy into the power solution over time to target a zero-carbon footprint for the Project, which is expected to also reduce energy costs. A cleaner, lower carbon flowsheet and high penetration renewable energy will place Butcherbird at the forefront of sustainable high purity manganese production.

Mineral Resources

Category	Tonnes (Mt)	Mn (%)	Si (%)	Fe (%)	Al (%)
Measured	16	11.6	20.6	11.7	5.7
Indicated	41	10.0	20.9	11.0	5.8
Inferred	206	9.8	20.8	11.4	5.9
Total	263	10.0	20.8	11.4	5.9

Notes:

- Reported at a 7% Mn cut-off for the Measured and Indicated categories and an 8% Mn cut-off for the Inferred categories.
- All figures rounded to reflect the appropriate level of confidence (apparent differences may occur due to rounding)

Mining Reserve

Based on the results of the Pre-Feasibility Study completed in May 2020, E25 has published a Maiden Ore Reserve for the Project of 50.55Mt in the Proved and Probable categories⁹.

Classification	Tonnes (Mt)	Grade (Mn%)	Contained Mn (Mt)	Recovered Mn (Mt)
Proved	14.4	11.5	1.65	1.35
Probable	36.2	9.8	3.56	2.92
Total	50.6	10.3	5.21	4.27

Justin Brown

Managing Director

Company information, ASX announcements, investor presentations, corporate videos and other investor material in the Company's projects can be viewed at: <http://www.element25.com.au>.

Competent Persons Statement

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 17 April 2019 and 19 May 2020 continue to apply and have not materially changed. The company confirms that the form and context in which the competent person's findings are presented has not been materially modified from the original market announcements.

⁹ Reference: Element 25 Limited Reserve Statement lodged with ASX 19 May 2020.

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.

This announcement is authorised for market release by Element 25 Limited's Board of Directors.

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