UPDATED BUTCHERBIRD EXPANSION STUDY

Growing Manganese Production to Capture Economies of Scale

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TABLE OF CONTENTS

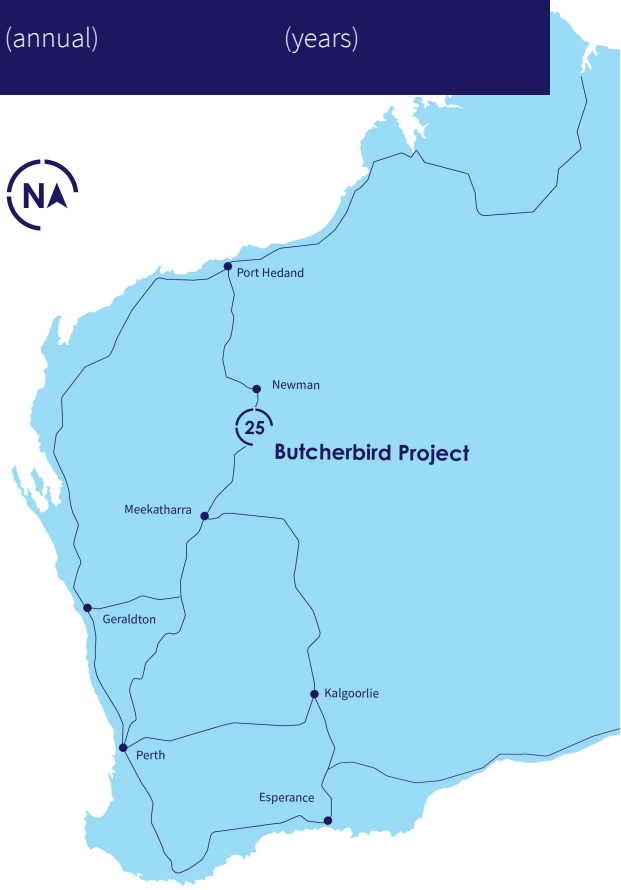
Butcherbird Feasibility Study Update Targets 1.1 Mtpa Manganese Production to Capture Economies of Scale over a Long Mine Life.

A strong result supporting progress toward a Decision to Expand.

Element 25 Limited (**Company**, **Element 25** or **E25**) (ASX: **E25**, OTCQX:**ELMTF**) is pleased to announce that it has completed an updated Feasibility Study (**Study** or **FS**) to increase the mine life of the Butcherbird Project based on the updated Mineral Resource Inventory published in October 2024 and updated Mining Reserve published January 2025.

The Butcherbird Project is located in the southern Pilbara region of Western Australia, approximately 1,050 km north of Perth. The Study demonstrates strong economics with robust economic returns over an 18.3-year mine life with rapid capital payback. The financial summary of the Study outcomes are shown below.

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)



HIGHLIGHTS

The FS examines the expansion of the Butcherbird manganese operation to 1.1M tpa manganese concentrate production using expanded open-cut mining methods, a modified primary comminution circuit and a dense media separation (**DMS**) back-end solution to optimise grade and recoveries.

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.

The Measured, Indicated and Inferred Mineral Resources used to support the 18.3-year mine life represents 68% of the total mineral resource inventory within the granted mining lease M52/1074.

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.

The Proven and Probable Ore Reserve has been increased to 101.4Mt at 10.4% Mn containing 10.5 Mt manganese (8.6 Mt recoverable manganese).

Forecast cashflows generate a simple payback period of 16 months from commencement of operations.

Expanded mining production and process commissioning is currently scheduled to commence within 14 months from the final investment decision and securing project financing.

The base case involves an annual production and sale of 1.1M tpa of lump manganese ore grading 31.6% Mn.

The concentrate production strategy complements and enhances the Company's plan to develop the proposed high- purity manganese sulphate (**HPMSM**) plant in Louisiana to supply offtake partners General Motors LLC (**GM**) and Stellantis NV (**Stellantis**) with HPMSM for electric vehicle (**EV**) battery cathodes[1].

1 Reference: Company ASX Releases dated 9 January 2023 and 26 June 2023.

CAUTIONARY STATEMENTS

The production target referred to in this announcement is based on 11% Measured Resources, 86.4% Indicated resources and 2.6% Inferred Resources for the 18.3-year mine life. The mine plan comprises 78% of the current Measured and Indicated Resources within the Yanneri Ridge and Coodamudgi mineral resource inventories, with the remaining 22% mostly tied up in infrastructure reserves around the Great Northern Highway and Goldfields Gas Pipeline and mineralisation not included in the optimisation due to depth. The Company has used Inferred Mineral Resources as part of the production scenario where it is mined as part of the mine plan and the impacts of the use of Inferred mineralisation is included within the report.

There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised. The use of Inferred mineralisation is not a determining factor in the viability of the Project.

The Study is based on the material assumptions described elsewhere in this announcement. These include assumptions about availability of funding.

The Company considers all the material assumptions to be based on reasonable grounds, however there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Study will be achieved. The Company has a well-defined financing strategy, including a combination of debt and equity under a project financing structure typical for a project of this type.

The Company has concluded that it has a reasonable basis for providing the forward-looking statements included in this announcement and believes it has “reasonable basis” to expect it will be able to fund the development of the Project using existing cash reserves, new equity and project financing from lenders to the project.

The Study focuses on a development option which has been selected as the most likely mining start up scenario. The Study has targeted a part of the manganese resource where it is considered that reasonable grounds exist for the production target to be achieved in both the grade and size which has been reported. Development options in this Study are also well supported by the larger Butcherbird Mineral Resource where there are additional Indicated and Inferred Mineral Resources.

FORWARD LOOKING STATEMENTS

Some of the statements contained in this report are forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning estimates of tonnages, expected costs, statements relating to the continued advancement of Element 25 Limited's projects and other statements that are not historical facts. When used in this report, and on other published information of Element 25 Limited, the words such as 'aim', 'could', 'estimate', 'expect', 'intend', 'may', 'potential', 'should' and similar expressions are forward looking statements.

Although Element 25 Limited believes that the expectations reflected in the forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that the actual results will be consistent with these forward-looking statements. Various factors could cause actual results to differ from these forward-looking statements including the potential that Element 25 Limited's Project may experience technical, geological, metallurgical, mechanical problems, changes in manganese price and other risks not anticipated by Element 25 Limited.

Element 25 Limited is pleased to report this summary of the study in a fair and balanced way and believes that it has a reasonable basis for making the forward-looking statements in this announcement, including with respect to any mining of mineralised material, modifying factors, production targets and operating cost estimates. This announcement has been compiled by Element 25 Limited from the information provided by the various contributors to the announcement.

EXPANSION STUDY UPDATE SUMMARY

Element 25 Limited (ASX:E25, OTCQX:ELMTF) (ASX: E25) is pleased to announce that it has completed an Updated Butcherbird Feasibility Study (**Study** or **FS**) refining the previous feasibility study to include a new mining Reserve, updated capital and operating costs, and extended mine life at the Company's 100% owned Butcherbird Manganese Project, located in the southern Pilbara region of Western Australia (**Butcherbird** or **Project**).

This report is an update of the Feasibility Study released in January 2024[1] and utilises the forecast production data along with a detailed review of the process flow design to optimise the design of an expanded processing facility.

The Project consists of eight known manganese mineral resources located in an approximately 600 km^2 area of the southern Pilbara region, approximately 1,050 km North of Perth and 130 km South of Newman, Western Australia (**WA**). The Butcherbird site is accessible directly from the Great Northern Highway. The Study is based on the extraction and processing of the Yanneri Ridge and Coodamudgi mineral resources to produce manganese concentrate for sale and export.

Element 25 has held exploration tenure in the Butcherbird area since 2009 and commenced mining and manganese concentrate processing operations at Butcherbird in early 2021. Since then, the Company has exported twelve shipments of manganese concentrate to customers in Asia and the product is also the planned feedstock for the Company's proposed HPMSM processing facility to be constructed in Louisiana USA.

The Project is 100% owned by the Company and comprises the granted Mining Lease M52/1074 and two granted exploration licences E52/2350 and E52/3606 as well as several granted and pending miscellaneous licences required for Project infrastructure.

Mining Lease M52/1074 encompasses the Yanneri and Coodamudgi manganese deposits. This expansion plan is predicated on the mining of the measured and indicated mineral resources located at the Yanneri and Coodamudgi mineral resources. The Study does not rely on the inclusion of Inferred Mineral Resources.

The Company has two Native Title mining agreements in place servicing the Project area and covering all planned production areas used in the Study. The Butcherbird Project is located on two pastoral stations and the Company has access agreements in place to allow Project expansion to be undertaken.

This revised Expansion Study includes updated operational costs and macro-economic inputs and other design parameters where appropriate based on current market conditions and on the improved understanding of the optimal processing methodology derived from production data since the commissioning of the current processing plant.

The Study contemplates a revised comminution and procession circuit based on learnings gained from the operation of the current Butcherbird processing facility since 2021. Changes to the processing circuit include the use of a mineral sizer for primary comminution, a dense media separation (**DMS**) drum for final beneficiation and a tailings screen and thickener for tails thickening and improved water recovery.

1 Reference: Company ASX Announcement dated 23 January 2024.

A summary of the parameters used in this Study include:

- Increased manganese concentrate production to 1.1Mtpa.
- DMS process recovery of 83.7%.
- Overall processing plant recovery of 59.1%.
- Increased ore recovery and decreased ore loss due to change in processing equipment.
- Exchange rate (AUD:USD) of 0.67 in 2025, 0.68 in 2026, with a longer-term assumption of 0.69 from 2027 onwards.
- Capital cost estimate of AU$64.8M including:
  - Construction of an expanded processing infrastructure.
  - Construction of an expanded mining camp.
- An revised site organisation chart has been developed with updated costs reflective of the proposed expansion.
- Updated mining costs based on the expanded mining requirements.
- Updated sustaining capex involving an expanded tails storage facility (TSF).
- Updated manganese ore pricing to reflect current forecasts.

The Study results confirm that the robust economics of the Project are further improved, with the economics and performance of the Project benefiting from the inherent economies of scale achieved in the larger-scale production operations. This results in better utilisation of mining and processing equipment, improved operational efficiencies and better utilisation of the large resource/reserve base underpinning the Project.

As part of the revised Study, further resource delineation drilling was completed in June 2024 and an updated Mineral Resource Estimate (MRE) was published in October 2024[2], increasing the Measured and Indicated mineralisation at Yanneri and Coodamudgi.

The resultant 18.3-year project utilises 87% of the Measured resources2 and 77% of the Indicated resources available within the Butcherbird resource base. The remaining 13% Measured and 23% Indicated is mostly tied up in infrastructure reserves around the Great Northern Highway and Goldfields Gas Pipeline and mineralisation not included in the optimisation due to depth.

2 Reference: Company ASX Announcements dated 17 April 2019 and 29 October 2024.

The use of inferred resources is not a determining factor for project viability of the expansion; see Table 1 below.

Table 1: Impact of Inferred Mineralisation on Key Financial Outputs

	Including Inferred	Excluding Inferred
NPV_8 (AUD M) (Pre tax)	$561.7	$528.0
IRR (%)	96%	91%
Mine Life Utilising existing Mining Reserves (Years)	18.3	18.3
Annual Cash Flow (AUD M)	$70.5	$67.3

Table 2: JORC Resource Mineralisation Usage by Classification

	Resources Utilised (Mt)	%
Measured	11.3	11.0%
Indicated	89.5	86.4%
Inferred	2.7	2.6%
Total	**103.5**	**100.0%**

KEY OUTCOMES OF BASE CASE

This updated FS includes optimised pit shells and subsequent staged open pit mine designs, estimated mining and production schedules and metallurgical testing relevant to manganese processing and recovery. Capital costs were based on detailed engineering designs and industry sourced quotations provided by technical experts within Element 25 and by external consultants. Operating costs were sourced from supplier quotations for major operational contracts including mining, ore haulage and camp facilities. The balance of the operating costs were sourced from quotations and database costs and are considered to be at ±15% level of estimation. Open pit optimisation, design and mine scheduling were performed by an external consultant, overseen by Element 25 staff, based on design and operating parameters provided by Element 25.
The Study base case for the Study consists of:

- An Open pit mining and beneficiation operation producing 1.1M tpa (years 1-18) of manganese lump concentrate at an average grade of 31.6% Mn per annum.
- A mine life of 18.3-years based on the use of Proved and Probable Ore Reserves[3] with Inferred mineralisation used where it is mined to gain access to the Proved and Probable reserves in the later years of the Project.
- The current project scenario utilises 11% Measured and 86.4% Indicated and 2.6% Inferred resources, with years 1-5 using 30% Measured and 67% Indicated and 4% Inferred resources.
- Inferred mineral resources are included in the base case study, comprising 2.6% of the 18.3-year ore supply. The inferred resources are not a determining factor for project viability; refer Table 1 above.
- Operating expenses, C1, over the life of mine are currently estimated at AU$4.14/Dry Metric Tonne Unit (dmtu) (US$2.86/dmtu), assuring a low-cost operation that will be profitable throughout the manganese price cycles.
- Low estimated capital costs of AU$64.8M including working capital.

Using a censensus manganese price deck based on market analysis provided by AME, Project Blue, and Wood Mackenzie, with a long-term average manganese price forecast of US$6.06/dmtu (44% Cost, Insurance and Freight (CIF) China basis), NPV_8 (Net Present Value at 8% discount factor) pre-tax is AU$561.7M, post-tax is AU$379.7M, and the Internal Rate of Return (IRR) is 96%.

The Project NPV_8 of AU$561.7M highlights that the Project is robust and offers returns even at conservative pricing assumptions. The Project breaks even at a manganese invoiced price of US$3.19/dmtu (FOB Port Hedland basis) for the life of the Project.

The assumptions for the expansion study are detailed within the remainder of this Study report.

3 Reference: Company ASX Announcement dated 19 May 2020.

DEVELOPMENT TIMELINE

A project implementation plan and schedule has been developed based on forecast lead times for equipment procurement, permitting, project financing and construction. The total time required for project delivery from contract signature to start of commissioning is estimated at approximately 15 months from Final Investment Decision (FID).

Task Name	Duration
Butcherbird Expansion Project	471 days
Approvals and Permitting	237 days
Engineering	239 days
Procurement	373 days
Camp Construction	120 days
BBX Construction	158 days
BBX Commissioning	22 days
Operations Commence	0 days

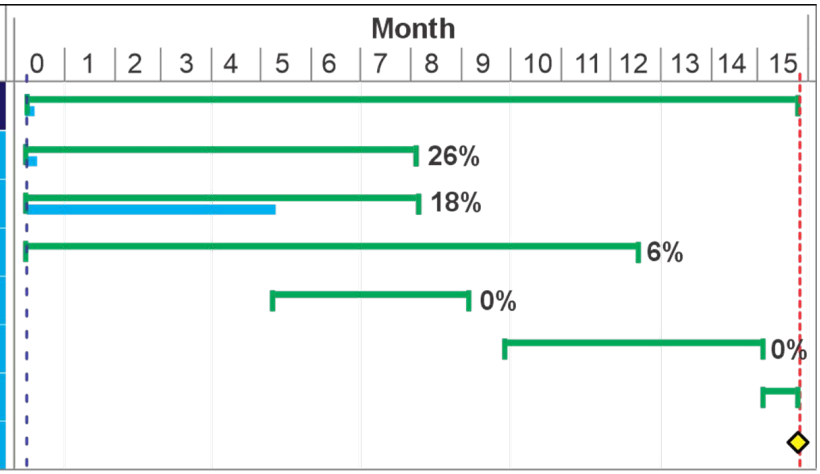


Figure 1: Project Development Timeline

EXPANSION PROJECT APPROACH

Element 25 have been working closely with specialist WA project delivery consultant, Aspect Engineering (Aspect) for the proposed Butcherbird expansion project. Aspect and Element 25 are jointly designing the proposed Butcherbird expansion plant, which incorporates plant design and supply by specialist vendors of key process equipment.

Given that various process equipment is subject to long lead times, an optimised project delivery schedule is currently being developed that aims to identify all opportunities for schedule improvement, including Early Contractor Involvement (ECI) partnerships to identify long lead time items for early procurement, optimisation of manufacture strategy (i.e. local manufacture overseas), fast track of certain design elements, and innovative construction methodologies. Element 25 are targeting a project period of 14 months, followed by a one month commissioning period.

1. GEOLOGY

The manganese mineralisation at the Project with the most economic value occur where the manganiferous shales of the Ilgarari formation intersect the weathering profile and display a supergene overprint where deep chemical weathering has upgraded the grade of the manganese and partitioned the manganese mineralisation into discrete high-grade bands, resulting in an ore that is amendable to simple physical beneficiation.

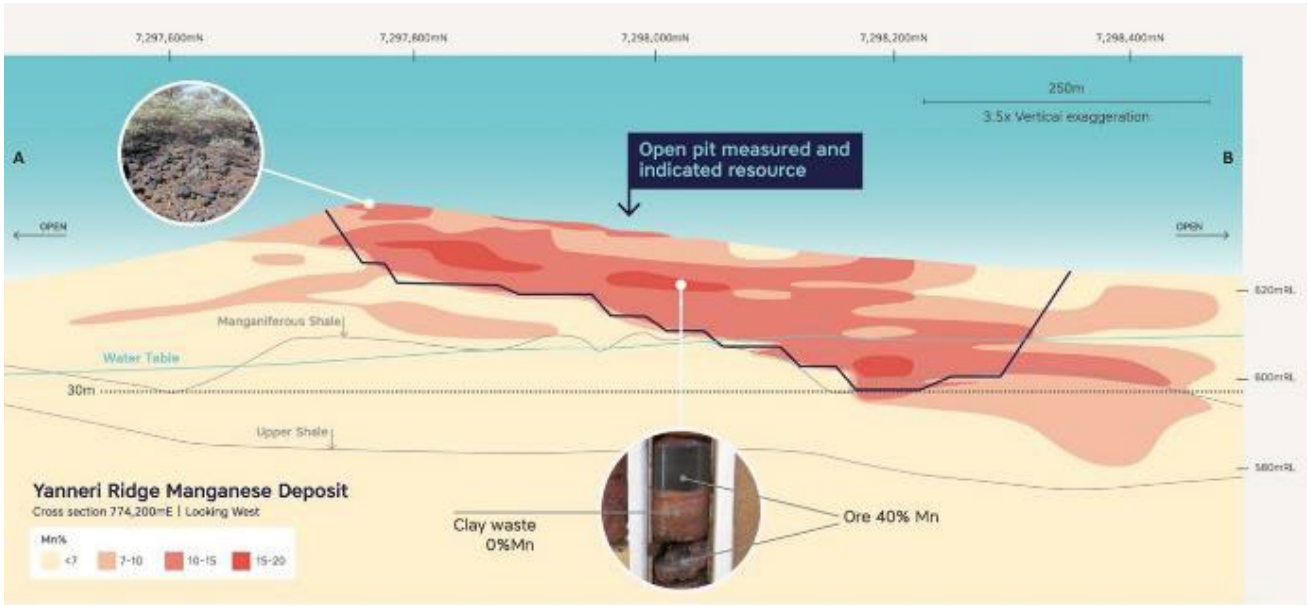


Figure 2: Yanneri Ridge Deposit cross section with simplified geology.

Figure 2 illustrates the interlayered supergene manganese layers in the manganiferous shale unit which is the primary ore source at Butcherbird.

The photo was taken during the bulk sampling program conducted in December 2019[4] and is typical of the mineralisation style at the Project.

Ore beneficiation is achieved by separating the non-manganese bearing clays and shales via comminution, scrubbing, screening and dense media separation (DMS).

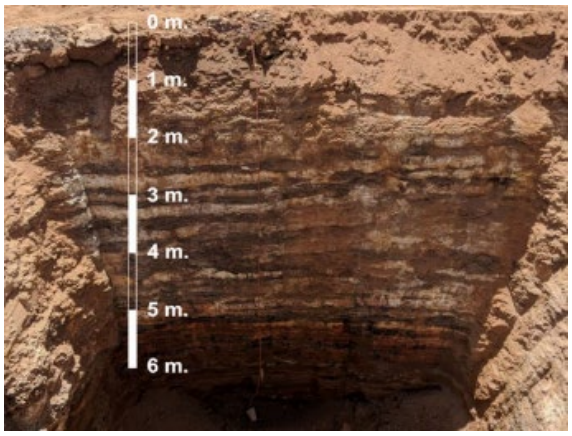


Figure 3: Bulk Sample Trial Pit - Pit Wall showing Manganese Lithology.

The liberated concentrate product has a relatively high silica content with low levels of deleterious contaminants, making it suitable for manganese allow manufacturing as well as chemical refining to produce HPMSM for EV batteries.

[4] Company ASX released dated 19 December 2019

2. RESOURCE ESTIMATE AND MINING RESERVE

2.1 Resource Estimate

The 2024 JORC Measured, Indicated and Inferred Mineral Resource Estimate at Yanneri Ridge and Coodamudgi was completed by MEC Mining consultants following a major infill drilling program in 2024[5]. The Mineral Resource at 29 October 2024 is shown below. The non-Yanneri Ridge and Coodamudgi mineral resources were completed in 2019 by IHC Robbins and in 2017 by Extomine Pty Ltd.

Table 3: 2024 Butcherbird Manganese Project Mineral Depleted Resource Estimate [5]

Category	Tonnes (Mt)	Mn (%)	Fe (%)	Si (%)
Measured	13.6	11.3	11.6	20.6
Indicated	116.0	10.1	11.4	21.0
Inferred	144.3	9.8	11.5	20.6
Total	**273.9**	**10.0**	**11.5**	**20.8**

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).

2.2 Mining Reserve

Based on the results of this study, E25 published an updated Ore Reserve for the Project of 101.4Mt in January 2025 [6] in the Proved and Probable categories. The depleted Ore Reserve summary is shown below.

Table 2. Butcherbird Depleted Ore Reserve Summary.[6]

Classification	Tonnes (Mt)	Grade (Mn%)	Contained Mn (Mt)	Recovered Mn (Mt)
Proved	11.9	11.7	1.4	1.1
Probable	89.5	10.2	9.1	7.5
Total	**101.4**	**10.4**	**10.5**	**8.6**

The estimated ore reserves and/or mineral resources underpinning the production target have been prepared by a competent person or persons in accordance with the requirements in Appendix 5A (JORC Code 2012).

[5] Reference: Company ASX Announcement dated 29 October 2024

[6] Reference: Company ASX Announcement dated 22 January 2025 - Ore Reserve Statement.

3. MINING

The mine plan has been designed to exploit the distinctive tabular structure of the mineral deposit at Yanneri Ridge and Coodamudgi, enabling the establishment of an uncomplicated and cost-effective open-pit mining approach. The mining operations will employ multiple pit configurations, including excavation beneath the water table. Local drainage measures will be implemented where required. Geotechnical studies (confirmed by mining activities) have shown that the orebody will predominantly be mineable using free dig techniques; however, drilling and blasting will be required in some areas to break up the cap-rock. Mining within the Yanneri Central and the Coodamudgi Central pits will require the transportation of ore and waste across the Goldfields Gas Pipeline (GGPL). An initial plan has been formulated with the assistance of APA to incorporate engineered crossings of the GGPL at 3 strategic locations to facilitate this process without any disturbance or risk to the GGPL.

Mining has been scheduled to maintain ore supply to the processing plant to meet production requirements. Mining will consist of hydraulic excavator(s) mining 2.5m tall benches and delivering the ore to the run-of-mine (ROM) pad via haul trucks, where it will be fed directly to the processing plant or stockpiled for future feed.

To enable the excavator to efficiently extract the ore, the ore may be cross ripped if required with a dozer prior to mining. This is shown schematically below in Figure 4.

The proposed mining areas for the Yanneri Ridge and Coodamudgi mineral resources are situated with within the boundary of granted Mining Lease M52/1074 and cover an area of some 4,200m (East-West) by 2,000m (North-South), centered around the planned processing plant location.

The optimised final pit shapes for Yanneri and Coodamudgi pits provide for a mine life of 18.3-years at the planned production rate of 1.1 Mt of concentrate per annum. These pits target the higher-grade proved and probable mining reserve and allow access for mine scheduling to minimise waste removal.

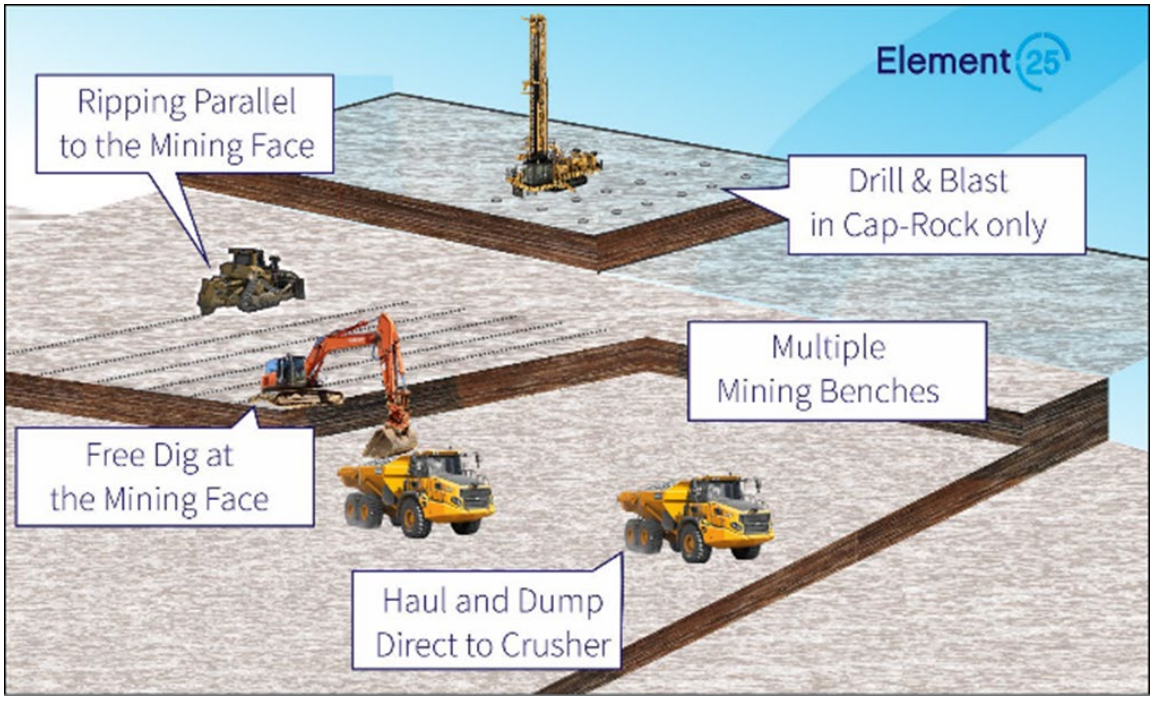


Figure 4: Mining System Schematic

The pit designs contain 103.5Mt of ore at an average grade of 10.4% Mn and are expected to be mined along with 46.5Mt of waste for an overall strip ratio of 0.45 to 1 (waste:ore). The optimisation of the pit shells uses a base manganese index price of US$5.75/dmtu (44%Mn CIF China basis), which converts to AU$5.80/dmtu (31.5% FOB Port Hedland basis) after the deduction of sea freight. The pit design on which the expansion is modelled contains 11.0% Measured Resources 86.4% Indicated Resources and 2.6% Inferred Resources which are mined during the excavation of primary ore and are not included in the reserve. A preliminary mining schedule is illustrated in Figure 5 below.

The current mining schedule was designed as a series of nested pits within the ultimate pit shell. Project economics are not significantly impacted where low volumes of Inferred resources are utilised in the life of mine schedule.

Given that there is a low level of geological confidence associated with Inferred Mineral Resources, their treatment as an ore source after the Measured and Indicated ore is depleted is considered conservative.

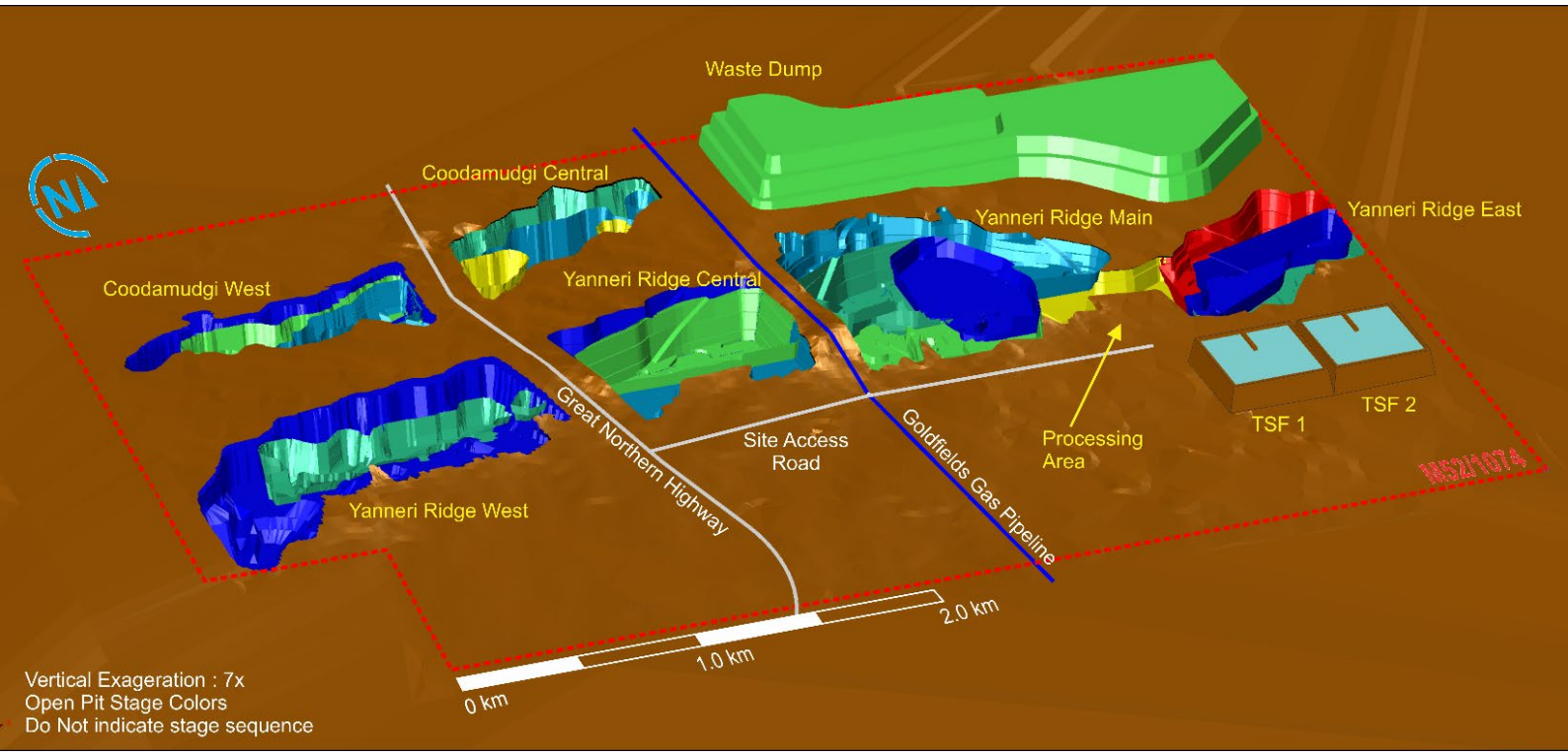


Figure 5: Butcherbird site layout showing open pit staging - Looking Northeast

3.1 Pit Design

Although the majority of mining at Butcherbird is free-dig, previous mining operations have encountered some small areas of caprock that will require drill and blast. These areas include mainly the upper levels of the Yanneri Ridge resource down to a depth of approximately 6m from the surface that will be drilled and blasted to ensure the hard cap rock is fully broken up prior to mining. This will be undertaken with the use of a contractor with specialized blasting skills and significant experience in blasting close to critical infrastructure in order to ensure that the GGPL is not affected by blast-related vibration. Drill and blast activities will be

campaign-based, with a contractor mobilising to the site from time to time as required as part of the schedule. The associated costs have been factored into Project operating costs.

The rest of the mining areas will be mined by dozer ripping and extraction using conventional hydraulic excavators to mine directly from the mining face into haul-trucks which will transport the ore to the ROM pad for direct tip process plant feed. Waste will be mined by diggers and transported to the dedicated waste dump.

Mining costs used for the pit optimisation and subsequent financial evaluation were sourced from a first principles estimate of the mining costs and supported by the Company's mining contractor in November 2024, which was based on the 18.3-year mining plan for the expanded operation.

Mining factors used for the pit optimisation include 100% ore recovery and 5% dilution. These are considered appropriate because of the style of the mineralization and the fact that all mineralisation within the pit designs will be processed with minor pit edge dilution.

The pit designs are based on open pit shells derived from an open pit optimisation study using operating costs shown in Table 4.

Table 4: Optimisation Costs (AUD)

Cost Area	Value
Fixed Mining Cost	$1.93/t
Fixed E25 Mining Costs	$0.19/t
Drill & Blast costs	$1.21/t where applicable.
Waste in-pit Haulage	$0.69/tkm
Ore in-pit Haulage	$0.612/tkm
Processing Costs	$3.01/t
Ejects Disposal	$2.00/t
Site Administration	$1.29/t
Concentrate Haulage	$55.0/t to Port Hedland for year 1
	$51.0/t for subsequent years
Port Logistics	$17.0/t
Royalties and Access Fees	5.7% revenue.

A manganese concentrate price based on a consensus model of three leading independent manganese industry market consultants has been used (AME, Project Blue and Wood Mackenzie). The resultant price of US$5.75/dmtu (CIF 44% China basis) equivalent to AU$5.85/dmtu (FOB 31.5% Port Hedland basis) was applied in the optimisation calculation.

Mining production by JORC resource category and average yearly manganese grade is shown below.

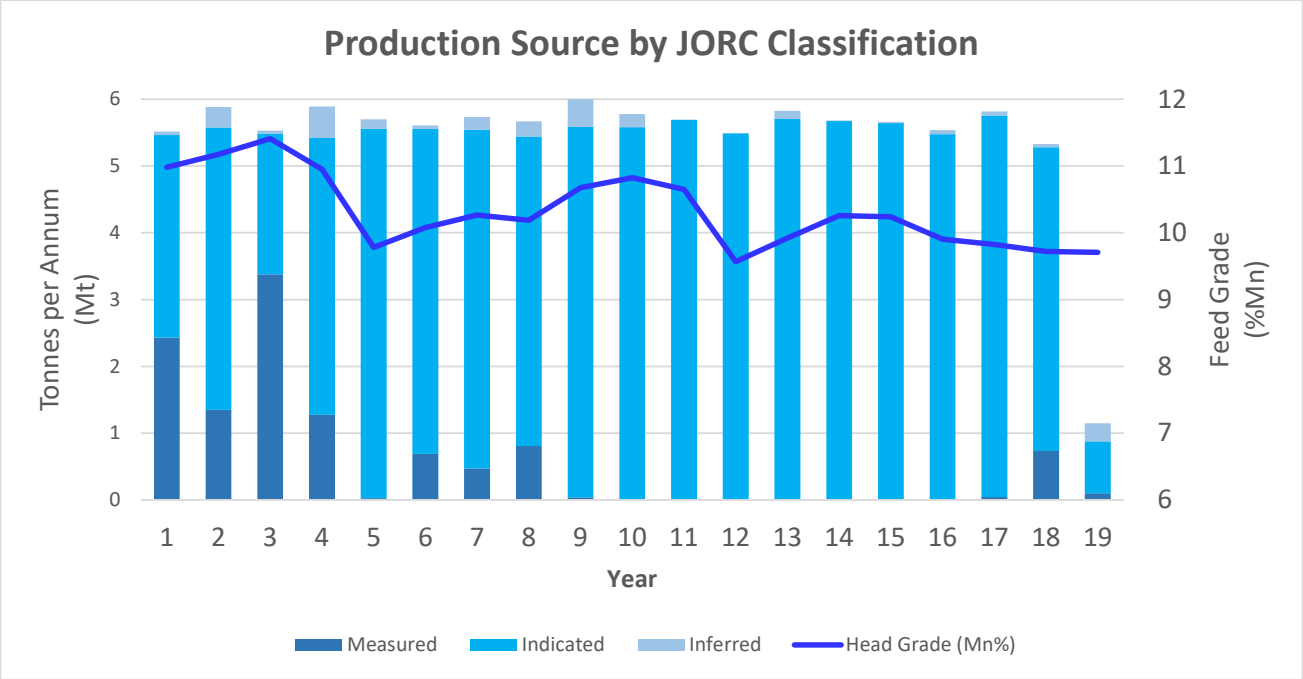


Figure 6: Ore Supply by JORC Resource Category.

A summary of the mining schedule showing ore and waste movement as well as average stripping ratio is shown in Figure 6 and Figure 7.

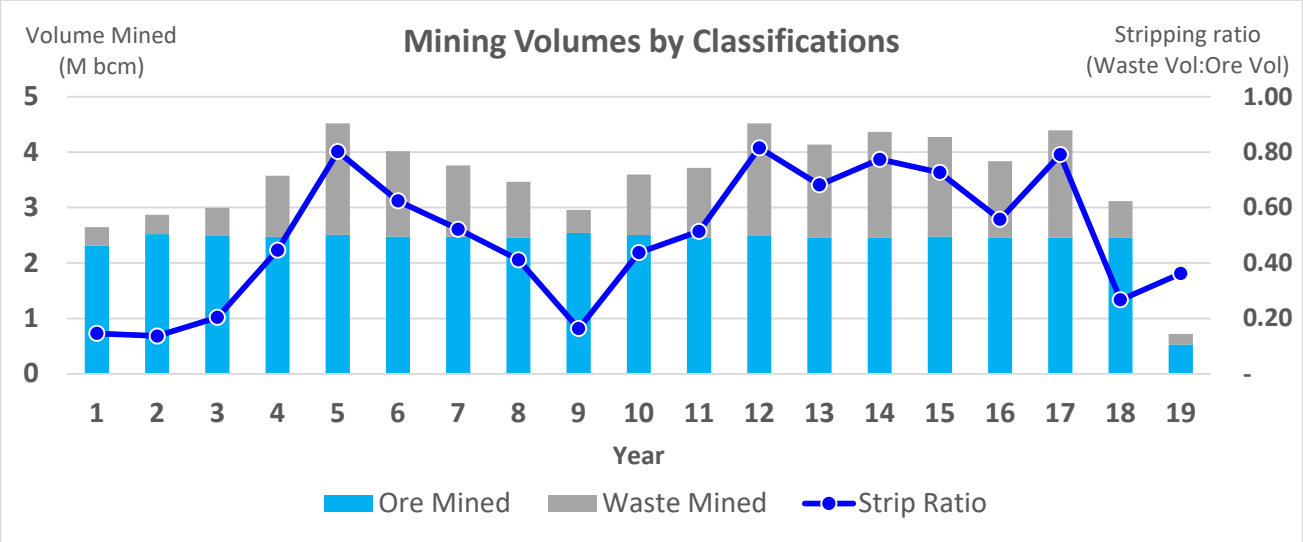


Figure 7: Mining Material Movement and Stripping Ratio.

3.2 Geotechnical and Diggability Assessment

Peter O'Bryan and Associates were engaged to conduct an open pit geotechnical assessment study on the Yanneri Ridge section of the deposit. The study was based on nine geotechnical holes and was completed in March 2019. The geotechnical assessment utilised information on geotechnically logged boreholes from June 2018 to conduct wall stability analysis. Kinematic Analysis and Limit Equilibrium Analysis were undertaken under the following conditions:

- Likely Case Materia Properties -Static loading.
- Worst Case Materia Properties -Static loading.
- Worst Case Materia Properties -Seismic loading.

Open pit mining activities were subsequently undertaken from 2021 until 2023 in compliance with the pit slope angle designs assumptions. Inspections by Peter O'Bryan and Associates have subsequently shown that the walls are stable under these design conditions and they have been applied for all future mining designs.

The key findings of the base case wall design parameter limits for all walls in the Yanneri Ridge pit considered highly conservative design parameters which include:

- Face height 5m from surface to 5m depth.
- Face height 10m below 5m depth for the first 10m.
- Face angles 50˚ from surface to 15m depth.
- Face angles 60˚ below 15m depth with a face height of 10m.
- Berm width - 5m throughout.

Subsequent geotechnical inspections on site by Peter O'Bryan and Associates have supported the original findings and design considerations and show that there is a very low pit stability risk at Butcherbird.

4D Geotechnics (4DG) were engaged and completed two detailed diggability reports evaluating likely excavation rates. These reports were completed on 18 July 2018 and 15 March 2019.

The 4DG study used ten diamond drill holes. Hole sections were assessed and tabulated with ninety-seven individual ratings. Of these ninety-seven ratings the high values were two values above 60 (62 at 3.9m to 6.0m and 68 at 1.0m to 1.3m) and seven values in the 51 to 60 range. The study concludes that based on the results of their examination and testing of ten diamond holes in the Yanneri Ridge area, the area to be mined will mostly be free digging.

Mining activities at Butcherbird have mostly been completed since 2021 as free-dig. Some areas on the upper portions of the Yanneri resource will require drill and blast ground preparation prior to mining. The FS has included a drill and blast provision to allow for these activities.

3.2.1 Goldfields Gas Pipeline

The GGPL has been specifically included in the assessment of the geotechnical stability involved with mining adjacent to the GGPL. The recommended open pit wall design profile and proposed stand-off from the Goldfields Gas Pipeline reserve have been applied to the pit design methodology to mitigate the risk of ground disturbance due to instability within the adjacent pit wall adjacent to the GGPL reserve. Allowances have also been made for potential material loss due to erosion over time where debris from mass wastage would remain at or near the toe of the pit wall and retard and eventually choke the progression of the process. This can be further mitigated by the placement of mine wastes against the walls whilst mining other areas of the open pit.

The pit sectors adjacent to the pipeline are designed to allow a stand-off of ≥ 75m from the crest of the ~25m deep pit near the boundary of the GGPL reserve. This approach places the outer toe of an abandonment bund ≥ 50m from the pipeline reserve boundary. Limit equilibrium analysis of slopes adjacent to the gas pipeline under anticipated likely case conditions yield a minimum Factor of Safety of 3.71 for geometrically feasible rotational shearing surfaces approaching the pipeline reserve, noting however that the lowest Factor of Safety of a surface that intersects the natural surface at the pipeline reserve boundary is ~4.8.

3.3 Mining Costs

Mining costs were sourced from a quotation from the Company's mining contractor, ReGroup Australia Pty Ltd (ReGroup) and were checked against a first principles validation by an independent mining consultant. These costs have been used in the financial evaluation of the Study. All costs have been based on a traditional mining fleet and systems. Butcherbird has large lateral extents and so it presents a unique opportunity to leverage many of the benefits that an autonomous trucking fleet may bring and this will be evaluated and implemented where a benefit exists.

These costs include:

- Mining equipment and personnel.
- Maintenance parts and equipment.
- Service truck.

The scope of work includes:

- Mining.
- Ore Haulage to the ROM pad.
- ROM pad management and plant feed.
- Fines haulage and from the process plant and placement at the tailings storage facility (TSF).
- Road construction and maintenance.

Other mining costs were developed from first principals based on a staff allowance and staff pricing sourced from mining industry recruitment agencies. Details of the Mining Costs are discussed in the Economic Analysis section.

4. PROCESSING

Comprehensive material test work has been completed for all key processing stages of the Butcherbird plant. Processing performance data was derived from both the operational experience at the Butcherbird pilot plant and various off-site testing programs. These analyses examined the ore's physical and chemical characteristics, including particle size distribution, abrasiveness, moisture content, and mineral composition. The data collected from these tests is being used to inform the design of equipment such as crushers, screens, scrubbers, dense media separation (DMS), and tailings units.

The Company has also collected ongoing operational data regarding pilot plant performance and identified areas where the plant design can be improved to deal with the manganese ores being processed, particularly with respect to the high clay content of the Butcherbird ores. This information has been used in the optimisation of the process flow sheet for the expanded processing facility, the subject of this Study.

4.1 Butcherbird Operations 2021 to 2024

During the period from April 2021 to February 2024, the pilot plant operation processed a total of 2,599,175 tonnes of ROM ore. This delivered manganese concentrate production of 525,238 tonnes at an average grade of 28.4% Mn with an overall mass yield of 20.2% across that period. The manganese concentrate had a measured dilution of 9.9% and ore loss to ejects of 6.2%, which is in-line with expected ore sorter performance.

The plant expansion will be redesigned to minimise ore loss and dilution through the introduction of a revised manganese processing circuit including a DMS drum which upgrades the ore using density as opposed to colour as was the case with the ore sorters in the pilot facility. This change will minimise ore loss and product dilution by enabling a cleaner cut between manganese concentrate and waste materials.

4.2 DMS Testwork Conducted

Element 25 has undertaken test work to evaluate the efficacy of the proposed DMS process for processing Butcherbird ore, compared to the ore sorting employed in the pilot plant. This assessment involved the processing a composite sample, combining both the product and rejects from our existing ore sorter, which was sent to Bootu Creek for DMS testing.

The Bootu Creek DMS testing yielded markedly superior results to the results achieved by the pilot plant utlising ore sorter separation of ore and waste. The DMS process achieved a Mn grade of 32% in the sinks fraction at a density of SG2.7. The rejects from this process contained a significantly lower Mn grade of only 4.7%. Projecting these results across the average operational period since the plant's inception, the DMS circuit is expected to recover 96.15% of the manganese processed by the DMS circuit, a substantial increase in both the recovery rate and the grade of manganese compared to our current ore sorting operations.

The DMS circuit is able to process a broader size range of material compared to ore sorters which are sensitive to the particle size distribution of the feed material. The DMS circuit can handle particles larger than 8mm, compared to the ore sorter's limitation to a screen cut size of between 12mm and 19mm in the dry circuit. This capability means a greater mass of feed will be directed to the DMS circuit. The crush size in the DMS circuit

has been increased from 65mm to 80mm, which is expected to reduce the generation of fines and consequently increase the mass percentage of ROM ore processed by the DMS, as compared to the current ore sorting plant.

4.3 Process Plant Design

The site layout for the Butcherbird processing plant will be designed to optimize operational efficiency and safety. The layout will ensure sufficient space for stockpiles, allowing for easy access and storage capacity that accommodates production needs. The distance between key process areas will be minimized to reduce material handling times and improve overall workflow efficiency.

Designated areas will be allocated for critical facilities such as workshops, maintenance areas, and administrative buildings, ensuring proximity to process areas while maintaining safe separation. The beneficiation process plant and other infrastructure have been designed in accordance with industry practice and the unit operations included in the flowsheet are well established within the resources industry for the processing of manganese and clay ore feeds.

The design philosophy has utilised fixed plant equipment with a focus on minimising materials handling and complexity whilst enabling efficient unit operations as well as access for maintenance and minimising spillage.

The processing plant is broken up into three major processing areas namely the crushing section, the screening and scrubbing section and the DMS section.

Figure 8: Butcherbird Schematic Flowsheet.

4.3.1 Crushing

The primary crusher has been selected to handle ROM material with a maximum size of up to 1 meter. The crusher will be a sizer designed to account for the material's layered structure, ensuring efficient breaking and processing. It is also capable of handling sticky ROM material during damp conditions to maintain consistent performance. The design discharge size of this sizer is P100 smaller than 230mm.

Traffic light systems will be used to control the movement of mobile equipment around the ROM area, improving operational safety and flow. Additionally, dust suppression systems will be implemented in the crushing area to minimize dust generation and ensure compliance with environmental standards.

Figure 9: Planned primary feed hopper and mineral sizer installation (representative only)

4.4 Screening and Washing

The screened product oversize will be crushed at secondary crushing for material larger than 80mm size to meet the desired specifications. The secondary sizer crusher has been selected based on the MB, defined throughput requirements and the material characteristics.

Screened material will be transferred via a radial stacker to the crushed ore stockpile, while undersized material will be directed to a discard stockpile. The selected screens must deliver high efficiency, particularly for material under 8mm in size, and must be capable of handling moist and potentially sticky material.

To maintain screening efficiency, the screens will incorporate self-cleaning features, which help prevent clogging and ensure consistent performance. The screening process must facilitate the efficient separation of -8mm material.

Screen panels will be made from materials that are resistant to abrasion and corrosion, offering both durability and flexibility. The design of these panels will be optimized to suit the specific characteristics of the feed material, ensuring effective screening. Additionally, the screens shall offer operational flexibility, with adjustable amplitude and frequency settings to adapt to changing feed conditions and material properties.

Dust suppression measures will be implemented in areas prone to high dust generation to maintain a safe and environmentally compliant operation.

4.4.1 Scrubbing

The scrubber circuit will be fed via a single belt feeder and transfer conveyor positioned beneath the crushed ore stockpile. Provisions will be made for emergency feed options to the transfer/log wash conveyor, ensuring continuous operation in case of disruptions.

Scrubbing will be performed using a log washer and screening system, designed to effectively remove clay and other impurities from the manganese ore. The scrubber must be highly efficient while minimizing energy consumption wherever possible.

The scrubber system will incorporate water recycling mechanisms to reduce overall water usage, utilizing efficient spray systems and recirculated process water to optimize performance. It must handle variations in ore characteristics without compromising efficiency or leading to excessive power and water consumption.

Ease of operation and maintenance is a priority for the selected scrubbing equipment, with components that are easily accessible for cleaning and replacement, ensuring minimal downtime.

The system will be designed to meet local environmental regulations, focusing on minimizing water usage, and controlling dust and noise emissions. After scrubbing, the -8mm +1mm fraction will be dewatered and discharged to a stockpile, while a screening and cyclone dewatering system will be used to dewater reject material efficiently.

The dewatering circuit will prioritize efficient water recovery and aim to produce dry material for stockpiling, reducing the load to the thickener. Slimes from the dewatering process will be directed to a tailings thickener before being discharged to the TSF.

4.4.2 DMS Circuit

Material separation will be achieved through dense media separation using a Heavy Media Drum (HMD). The final DMS product will be derived from the sinks fraction, which will report to the final product stockpile after dewatering for further transport. The floats fraction will be dewatered and transported by a conveyor to the combined log-washer rejects and DMS floats stockpile.

Densifiers and magnetic separators will be integrated into the circuit to ensure efficient recovery and reuse of the dense media, minimizing losses and operational costs. Ferrosilicon (FeSi) will be used as the dense media due to its high density and magnetic properties, which allow for effective separation and ease of recovery.

Precise control of the medium's density is essential for maximizing separation efficiency and ensuring the desired product quality. Automated systems will be employed to monitor and adjust the medium density in real time, ensuring optimal performance under varying feed conditions.

The design of the DMS drum will focus on achieving efficient mixing and separation while minimizing wear and tear on components. Durable materials and abrasion-resistant coatings will be utilized to prolong equipment life and reduce maintenance costs. The drum shall be capable of handling variations in feed size, moisture content, and material composition without compromising separation efficiency.

Additional considerations include the integration of advanced sensors and control systems to monitor key performance indicators, such as medium density, throughput, and product quality. These systems will provide real-time data and feedback to operators, enabling fine-tuning of the process and ensuring consistent performance.

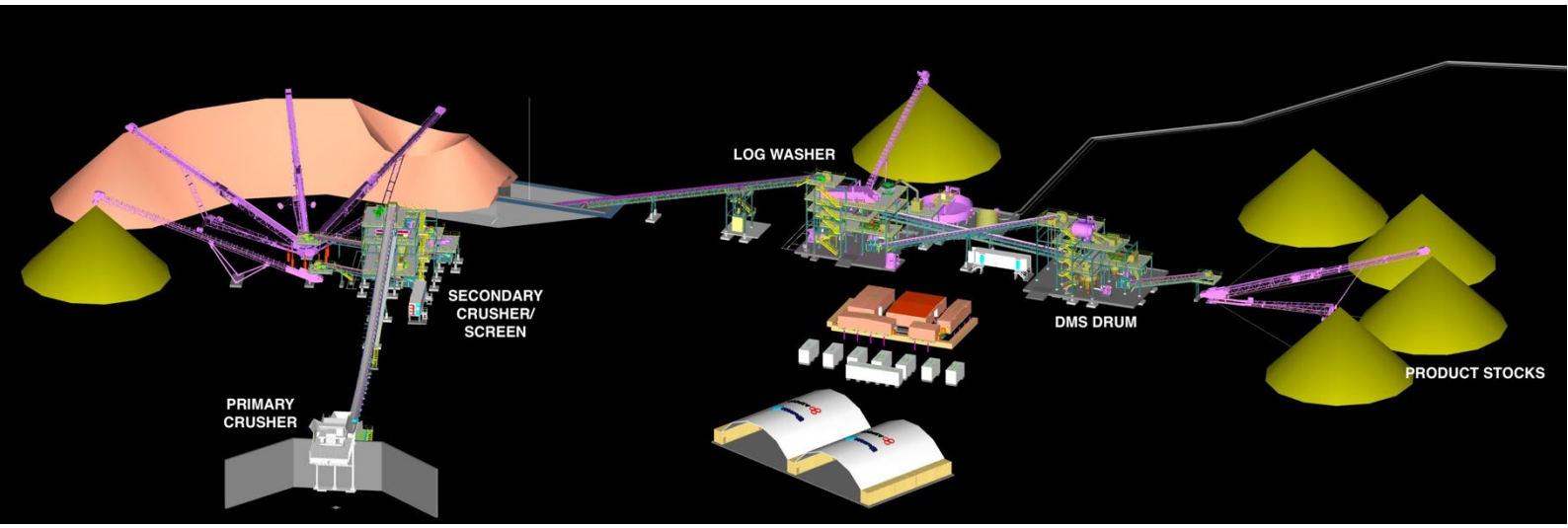


Figure 10: Butcherbird Expansion Proposed Plant Layout

4.5 Implementation Schedule

The implementation schedule of the processing plant will take 15 Months to full operation. All major mechanical equipment has been selected and detailed design stage will take place in parallel to long lead items being ordered.

A basic breakdown of the implementation schedule is outlined as follows:

Task Name	Duration
Butcherbird Expansion Project	471 days
Approvals and Permitting	237 days
Engineering	239 days
Procurement	373 days
Camp Construction	120 days
BBX Construction	158 days
BBX Commissioning	22 days
Operations Commence	0 days

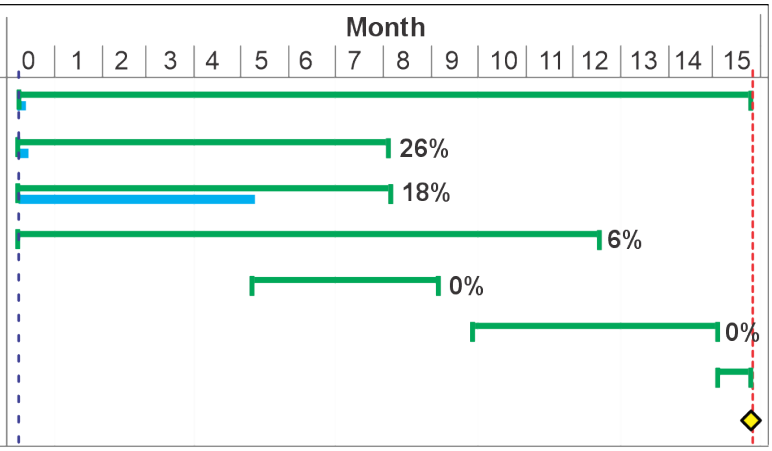


Figure 11: Expansion Project Schedule

5. LOGISTICS AND ORE TRANSPORT

Manganese concentrate produced at Butcherbird will be trucked 580 km from product stockpiles at the Butcherbird mine site to the Utah Point common user facility at Port Hedland via the Great Northern Highway, where it will be loaded on to ships for export.

Concentrate trucking and ship loading is proposed to be completed by a licenced operator and will be in compliance with Main Roads and Pilbara Ports and other requirements. A 'mine gate to ship' logistics cycle that is endorsed by the Pilbara Port Authority and that is like the approach utilised by other companies in the Pilbara will be adopted. This included dust measurement and minimization techniques.

The proposed concentrate handling method is fully compliant with Class 9 transport requirements and no special bulk shipping restrictions currently apply for UN 3077 mineral concentrates.

5.1 Concentrate Haulage

The company currently utilises a haulage contractor, ReGroup, as a contractor for its ore haulage. The Butcherbird operation is located 1.6km off the Great Northern Highway, 130km south of Newman, which allows for quick turnaround times. The entire route is a defined route under the existing concessional loading provisions applying to the Pilbara allowing the uses of the quad road trains permissible under the Main Road permitting system. Transport costs have been included in the financial model are based on the commercial in confidence contracted rates with ReGroup.

The manganese ore is neither classified as a dangerous or, hazardous good in transit. It is a benign product and is not affected by typical atmospheric conditions (heat, cold, or rain).

5.2 Port Operations

Element 25 had an access and use agreement with the Pilbara Ports Authority (PPA) to utilise the Utah Point common user facility at Port Hedland for production during previous operations. The Butcherbird manganese concentrate produced since early 2021 was handled under that agreement.

Element 25 are currently in discussions with PPA to gain a firm allocation for the export of the planned 1.1M tpa of production from the expanded facility.

The Company has been advised that PPA has increased its manganese allocation within its operating licence under the Department of Water and Environmental Regulation as well as having increased the number of common user bunkers, available to public operators.

5.3 Shipping

Element 25 have engaged with a number of shipping lines and brokers to obtain indicative shipping rates for ore transport to China. These ranged from US$15 to US$20/tonne, depending on the size of the vessel and the destination port(s).

Quotes are also based on an assumed bunker rate at the time of publication. The majority of manganese ore shipments are sold on a Cost, Insurance and Freight (CIF) basis at the destination port, with some concluded on a Free on-board (FOB) basis ex Port Hedland. As cargo owners, E25 does not have to provide for destination port charges. Cargo will be insured for sea movements based on the industry standards.

Element 25 has used a shipping cost of $16/t for the Study.

6. PROJECT INFRASTRUCTURE

The Project location is remote and has existing infrastructure which will be expanded to support the mining and process operations (see Figure 12). The expansion capital has provided capital and operating costs based on the infrastructure typical of the resources industry. This includes:

6.1 Borefield

Water is currently sourced from bores located within the E25 mineral tenements. An estimate of 4.4Ml will be required per 24hr cycle for site usage in processing and general activities. Preliminary investigations have concluded that adequate water is available from the existing borefield, located approximately 6km from the Project site, although the borefield will need to be expanded to meet this capacity. The geotechnical and evaluation work for the borefield expansion is underway and allowances have been made within the capital estimate for the exploration and development of a larger borefield.

6.2 Camp

Element 25 has an existing 44 room, fit for purpose mining camp located at the Kumarina Roadhouse, approximately 30km south of the Project.

As part of the expansion plan, the Company will expand the camp to an 88 room camp to be located at the Kumarina Roadhouse. This is included in the capital and expansion planning activities for the site.

6.3 Access Roads

The Butcherbird operations has a main roads approved driveway off the Great Northern Highway enabling access to the mine site. The access road also crosses the Goldfields Gas Pipeline at a location approved by APA Ltd the Gas Pipeline Owner and operator. The access road is suitable for use in the expanded operation.

6.4 Power

A principal diesel power station will be leased and will be expanded for the processing equipment. Multiple smaller diesel generators will power the borefield and tails storage water recovery systems.

The company will be reviewing the option of installing a solar power station to supplement the power requirements on site. This will lower operating costs and decrease the carbon footprint of the operation.

6.5 Other Infrastructure

Allowances will be included for additional administration and storage buildings, mine and plant workshops, laboratory, communications, power, security, fuel storage, product laydown area, waste and refuse management as well as an airstrip to allow shorter turn-around of staff during shift changes.

6.6 Tailings Storage Facility

Wet tails from the expanded processing facility will continue to be deposited into the existing tailings storage facility (TSF) which will have capacity for ten years of expanded storage capacity.

E25 has engaged Resource Engineering Consultants (REC) to undertake a design of the TSF for the expanded operating volumes and mine life. The design assumes conventional wet tailings facility with an average deposition rate of 334,800tpa. Mine waste rock and dry processing waste streams will be the main material of construction for the TSF embankment walls. Fines generated from processing have been assessed and are suitable for use in the construction of TSF walls, reducing the costs and complexity of these works.

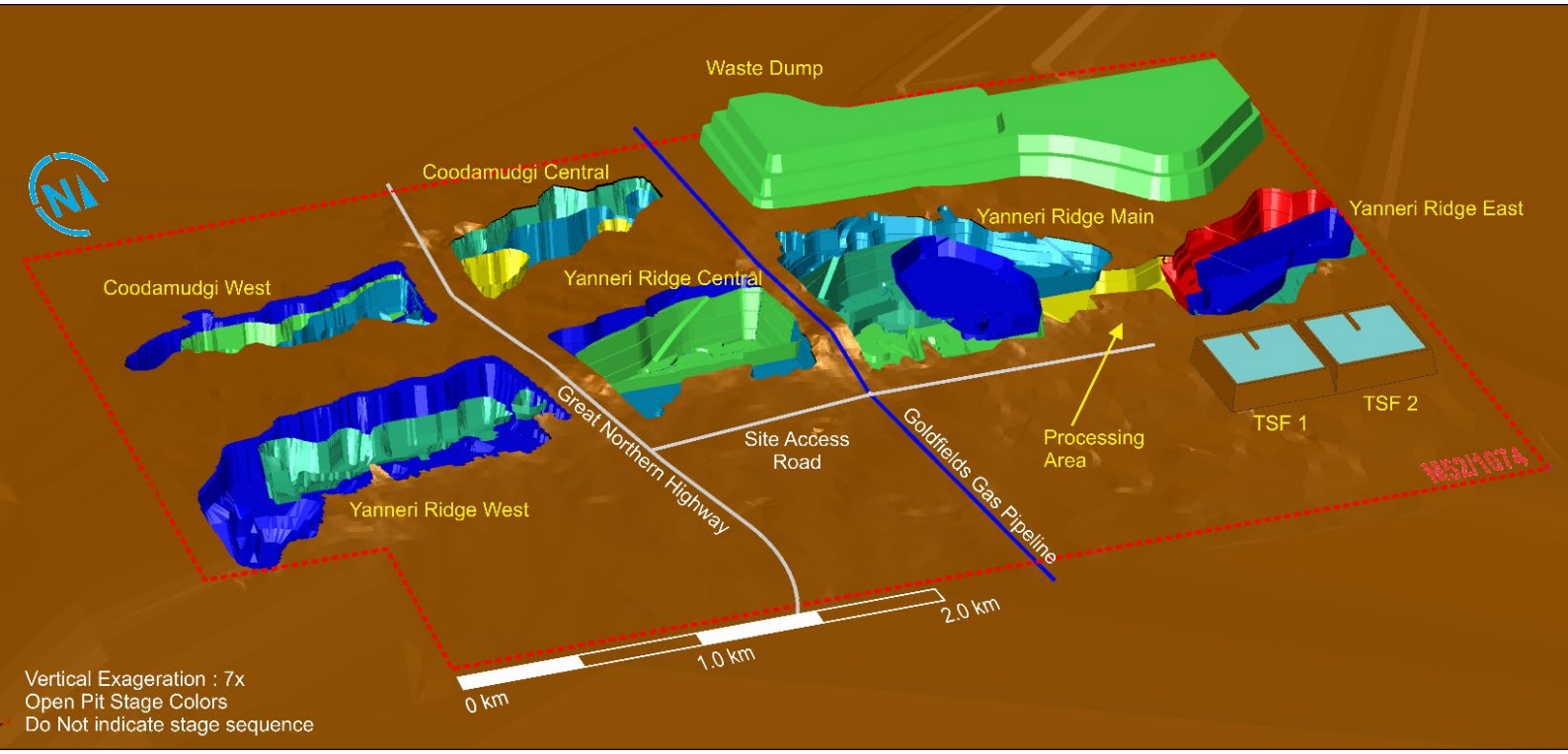


Figure 12: Butcherbird Project – proposed site layout diagram.

Water recovery from the TSF will be designed to maximise water reclamation. There is no requirement for the TSF to be lined.

Costs for the TSF construction have been sourced from the companies Mining Contractor, who has completed a TSF wall lift of the existing TSF walls in early 2023.

7. MANGANESE MARKET

Manganese is predominantly consumed in its alloy or metal form, accounting for over 90% of manganese processing. Production of intermediates is dominated by silico-manganese (SiMn) (71%), followed by Ferro-Manganese (HC FeMn and MLC FeMn) (20%), and then specialty high purity manganese products comprising High Purity Manganese Sulphate (HPMSM), Electrolytic manganese Metal (EMM) and Electrolytic Manganese Dioxide (EMD) (9%).

China is the largest producer of manganese alloys and metal, accounting for over 60% of global production. The Chinese crude steel industry consumes all its domestic manganese ferroalloy and metal output, supplemented by imports from major ferroalloy-producing countries. Manganese is also consumed in non-ferrous alloys and various other applications, including agriculture and the chemical industry.

Manganese, as a battery material, has gained momentum in recent years, with demand primarily favouring manganese sulphate due to its widespread use in key EV cathode formulations. In 2023, batteries accounted for 6% of manganese demand, and this demand is expected to grow at a CAGR of 7.5% by 2034.

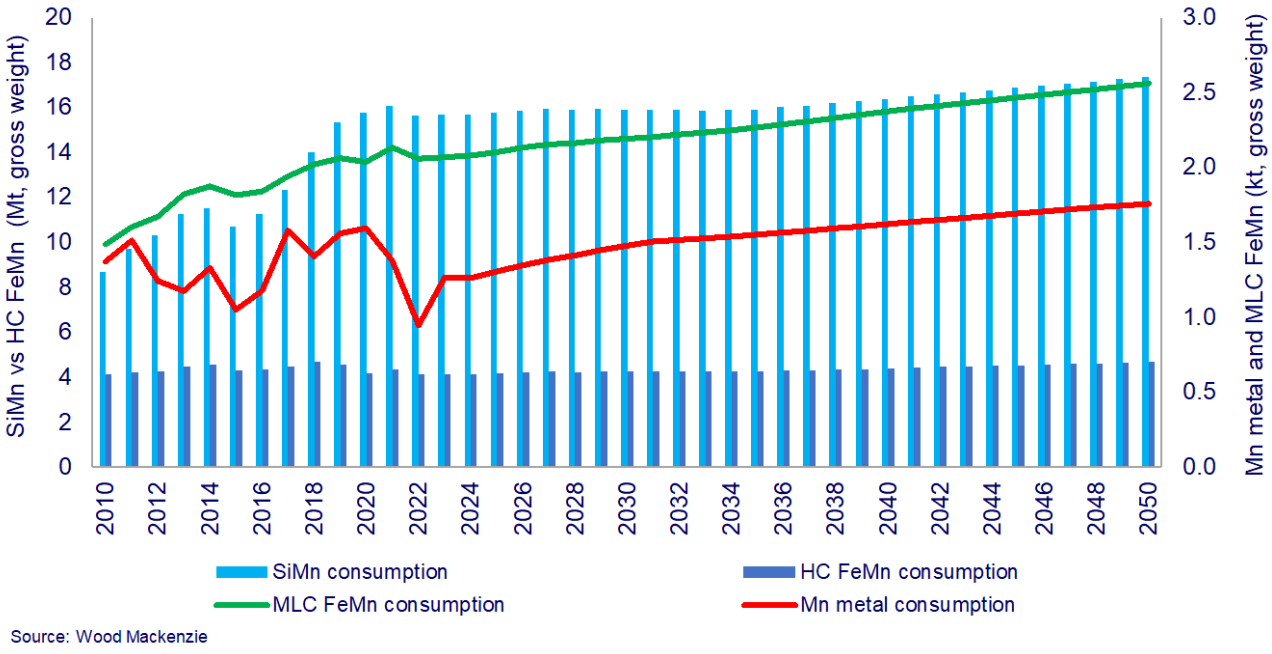


Figure 13: Global manganese alloy consumption historical and forecast.

Manganese is added to steel to improve its properties and performance. It is an effective hardening agent that increases the strength and toughness of steel. It also improves the workability and weldability of steel by reducing brittleness and improving ductility. Additionally, manganese forms a protective oxide layer on the surface of steel, which enhances its resistance to wear and corrosion.

Manganese promotes the formation of fine-grained structures in steel, which improves its strength and toughness. Overall, manganese plays a critical role in steel production, and its addition to steel can significantly enhance the quality and performance of the final product.

The latest available data indicates that 2024 steel production should exceed 1.9 billion tonnes. Project Blue believes that China's steel production has plateaued and will gradually decline over the second half of the 2020s, reflecting a less steel-intensive maturing economy combined with carbon emissions limitation. In the rest of world (ROW), output growth will primarily come from large emerging economies, India, Brazil, Iran, and Southeast Asia. Developed economies are forecast to post flat steel output with production increasing in the USA and declining in Japan. India was the only significant steel-producing country that saw strong growth in output in 2022 and in 2023 so far. Growth in India is expected to continue and should outweigh the modest decline in China.

Forecast manganese requirements by sector are shown below:

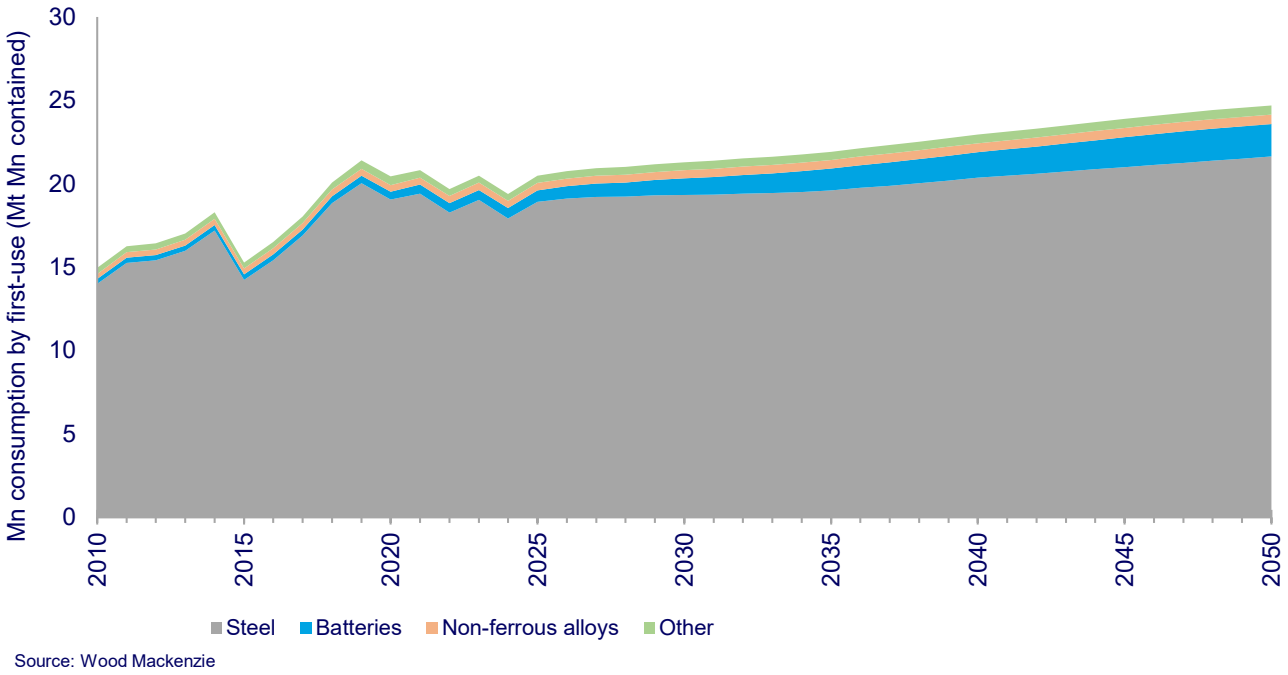


Figure 14: Global Manganese Ore Production Forecast, 2010-2050

Manganese is a key player in battery technology, particularly in lithium-ion and alkaline batteries.

High Nickel NCM: For high-end EV applications, where improved energy density is required to deliver greater range, high-nickel content cathodes, including NCM 811, NCM 90, and NCMA, will increase market share at the expense of lower nickel chemistries. No cobalt NCM (NMx) is also expected to increase share as a means to reduce reliance on cobalt, although this will be restricted to certain producers.

High manganese: High-manganese cathode chemistries, including Mn-rich NCM and LMFP, look to provide benefits over existing stoichiometries by providing structural

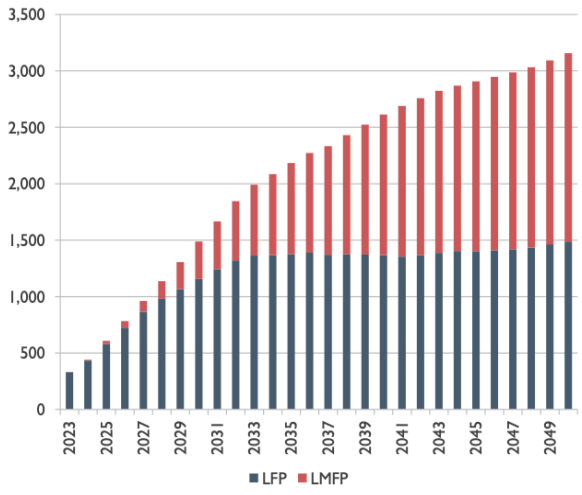


Figure 15: Global EV demand by cathode chemistry (GWh)

stability and enhanced energy density. Technological advancements over the coming years are expected to progress this further.

Next generation: Next-generation cathode chemistries, such as LMNO and lithium-rich layered oxides (LLOs), are expected to gain market share once they reach technological maturity within real-world commercial settings. Hurdles must be overcome before their implementation. Early adoption will be largely by the high-end sector, which will be more willing to soak up additional purchase costs in return for improved performance In lithium-ion batteries

LFP: Improvements in energy density for LFP batteries will see the LFP battery segment make gains against NCM batteries, particularly in low-to-mid-range EVs and energy storage applications. The addition of manganese (LMFP) will look to gain further market share over NCM. Current generation LMFP has inferior cycle life and safety characteristics compared with LFP; however, if these can be improved, LMFP will likely gain more share from LFP to increase energy density.

7.1 Manganese Ore Price

Manganese ore pricing in recent years has changed from long-term contracts to contracts being negotiated on a short-term basis. This has marked a step change in historical manganese ore price levels.

World-wide demand for Manganese in steel remains strong, and there is currently no known substitute material. Current longer- term average price forecasts place predict prices of between US$5.50 and US$7.50/dmtu bracket for high-grade, 44% Mn, ores. The Company's manganese concentrate is placed in a market typically termed "medium grade ore." Historically medium grade ores have traded at a manganese content-based discount to high grade ore. The Company has an offtake agreement in place with OM Materials (S) Pte Ltd (OMS), a subsidiary of OM Holdings Limited (ASX: OMH) (OMH) for Butcherbird concentrate, with the price calculated using the high-grade CIF China index as the base with appropriate deductions and credits for specific grade and impurities levels.

Element 25 has developed a consensus manganese pricing model for the high-grade CIF China index price sourced from manganese industry forecast groups, including AME, Project Blue and Woodmac. The resultant price deck has been used as a basis for forecast sale price in the Study financial analysis. Pricing adjustments have been assumed to be in line with the existing offtake agreement with OMH. The calculated price assumes an average grade of 31.6% Mn with the price adjusted to an FOB Port Hedland basis throughout the operational life.

All three analysts groups have adjusted the forecast for manganese demand in steel in line with current market conditions as at Quarter 4, 2024. Although prices are currently relatively soft, the steel industry is expected to experience a recovery in early 2025, leading to an increased demand for manganese ore and supply issues driven by issues at a major manganese supplier, in early 2025. Additionally, the demand for manganese in stainless steel is projected to continue growing beyond 2024. Longer term, stainless is expected to track a stronger upside compared to steel, while steel will see regional variations begin to impact the international trade flows.

7.2 Marketing Strategy

The Project enjoys a number of advantages over competitors including a low-cost base, high quality, proximity to market and the Company believes a new manganese producer in a stable well-regulated jurisdiction like Western Australia will be welcomed by existing consumers.

The Company has an offtake arrangement with OMS under a take-or-pay offtake arrangement[7].

Definitive agreements in relation to offtake for the expansion are at an advanced stage of drafting.

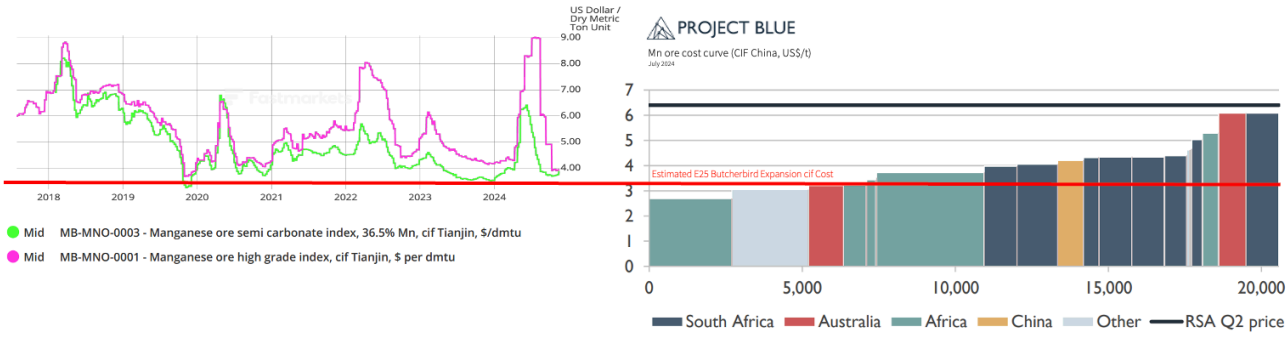


Figure 16: Forecast Butcherbird Production cost charted against global manganese ore cost curve and Historical Mn index pricing.

The reduced cost base of the expanded operation the subject of this Study is expected to deliver a low-cost operation that is globally competitive and will generating operating surpluses at all parts of the manganese price cycle.

8. ECONOMIC ANALYSIS

Element 25 commissioned Model Answer, an independent Perth-based financial modelling company, to develop a comprehensive financial model for its proposed manganese expansion case at Butcherbird. The financial model is based on capital and operating costs estimates described below. The model, including all cost assumptions and is calculated in Australian Dollars (AUD/AU$). Revenue assumptions are calculated in United States Dollars (USD / US$) and converted to Australian Dollars using exchange rate assumptions. The model is shown in real dollar terms, no inflation, cost, or revenue escalation has been applied to the financial model. The model consists of 18.3-years of financial data modelled on a monthly basis. The mine production has been scheduled outside of the financial model.

The financial analysis of the Study shows that the project has the potential to return a positive NPV_8 of AU$561.7M (Pre-Tax) AU$379.7M (Post-tax) with an annualized cash flow of AU$70.2M (Years 4-18 average).

The Project requires a modest start-up capital investment of AUD 64.8 million and provides estimated returns supporting an internal rate of return of 96%.

[7] Reference: Company ASX Release dated 12 October 2020.

8.1 Project Assumptions

The following assumptions have been made in the construction of the financial model for the Project and are relevant to the base and the two expansion options:

- AUD:USD exchange rate in 2025 of 0.67 to 0.69 in 2027 and beyond
- 20-year straight line depreciation for capex. Based on the ongoing potential of the Project.
- Discount Factor 8%.
- Project Capital costs totalling AU$64.8m, which includes a contingency of AU$8.5M.
- State Royalties of 5%.
- Native Title Royalties, Farm Access payments and other varied government payments included.
- Manganese price forecasts sourced from a consensus model of 3 manganese industry forecasting organisations including AME, Project Blue and Woodmac updated in November 2024.
- Expansion funding to be sourced from debt and equity.
- Independent mining schedule developed for the operating scenario.

8.2 Manganese Price

Element 25 has developed a consensus manganese pricing model for the high-grade CIF China index price sourced from manganese industry forecast groups, including AME, Project Blue and Woodmac. The resultant price deck has been used as a basis for forecast sale price in the Study financial analysis. Adjustments have been assumed to be in line with the existing offtake agreement with OMH. The calculated price assumes an average grade of 31.6% Mn.

The manganese prices are then converted to a FOB Port Hedland manganese price by subtracting sea freight and insurance. Freight and insurances costs were sourced from industry sources. The pricing assumptions are supported by the pricing structure built into the offtake agreement, the terms of which are commercial in confidence. This discount equates to an approximately US$1.70/dmtu for a 31.6%Mn product FOB Port Hedland manganese. The historical manganese pricing, benchmark manganese pricing and manganese pricing applied to the model are shown in the diagram below.

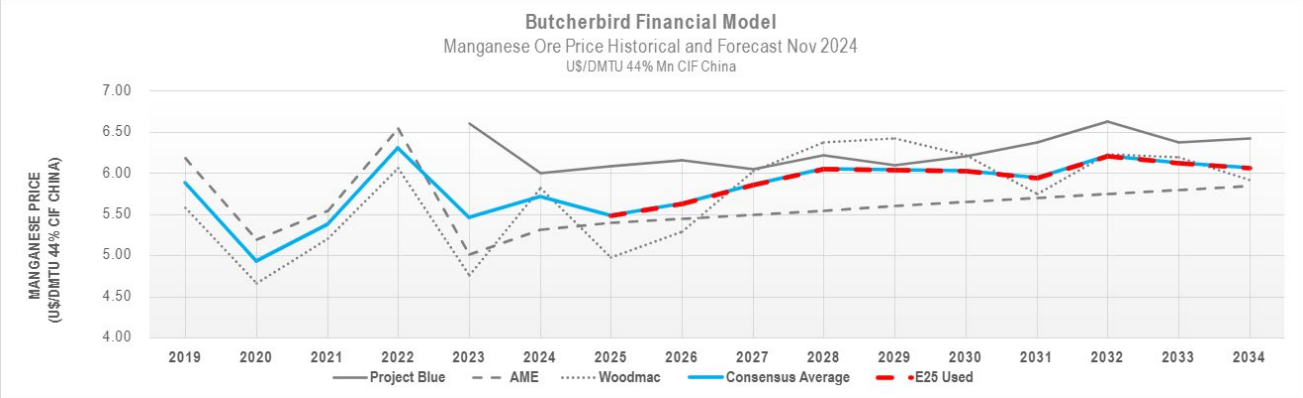


Figure 17: Historic and Forecast Mn Ore Prices (Consensus Data Nov, 2024)

8.3 Key Financial Parameters

Table 5: Key Economic Metrics

Key Economic Metrics	Unit	1.1M tpa
Ore Mined	K tpa	6,100
Manganese Concentrate Produced	K tpa	1,100
Manganese Concentrate Grade	Mn	31.6%
Manganese Price	USD/dmtu 44% CIF China	Variable
Exchange Rate	AUD:USD	0.67-0.69
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%
Operating Cost C1	AUD/dmtu FOB Port Hedland	$4.14
	USD/dmtu FOB Port Hedland	$2.86
Capital Cost	Project Capital AUD	$53.7M
	Contingency AUD	$8.5M
	Pre-Operational Expenditure AUD	$2.6M
	Total Capital AUD	$64.8M

8.4 Operating Costs Summary

For the expansion options all operating costs were reviewed according to the expense type. Fixed costs remained fixed or were adjusted where extra costs would be incurred, i.e.: Increased staffing. Where appropriate variable costs were checked to ensure suitability for use. In other cases variable costs where based on known usage of a cost component e.g. fuel, were calculated based on the increased power required for the plant for the expanded option. Due to the use of fixed costs in certain areas efficiencies of scale impacts were seen resulting in lower overall unit costs for the expansion cases. Unit operating costs for the expansion is shown below:

Table 6: Life of Mine Operating Costs (C2), Projections

Operational Area	AUD/dry tonne Product	AUD /dmtu produced	USD /dmtu produced
Site Cost	$60.20	$1.90	$1.31
Logistics & Marketing	$70.68	$2.24	$1.54
Royalties & Rehabilitation	$11.24	$0.36	$0.25
Total Operating Cost (FOB Port Hedland)	$142.12	$4.50	$3.10

8.5 Project Sensitivity

The financial model was constructed so that the sensitivity or variance of model inputs could be evaluated. These sensitivities are shown graphically below:

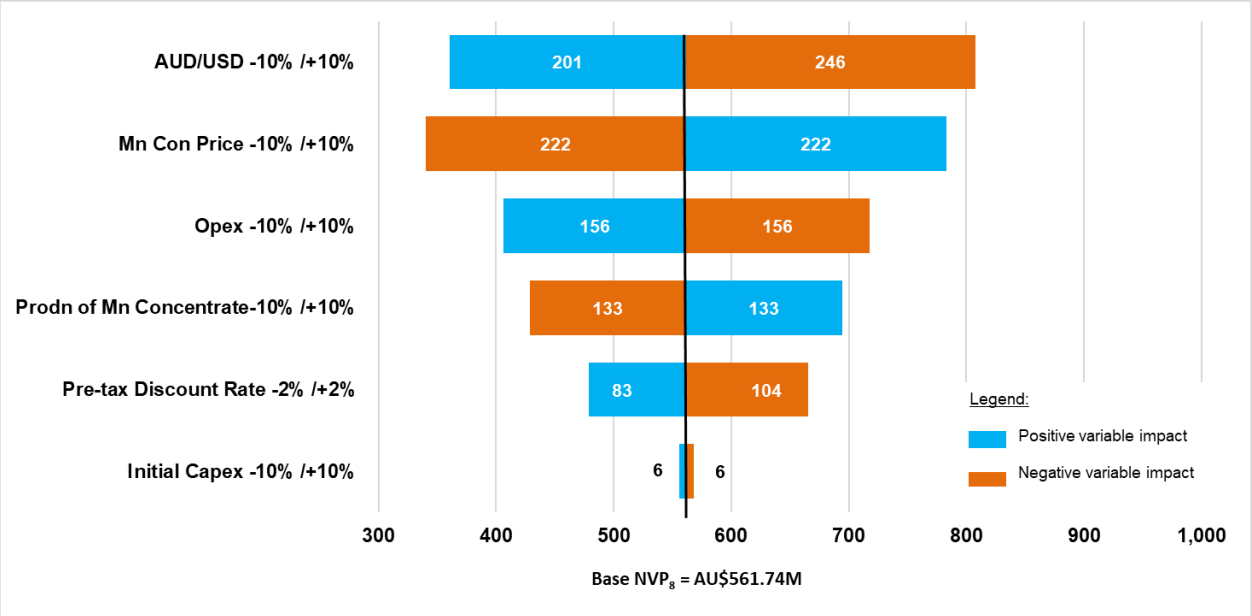


Figure 18: NPV Sensitivity Tornado Chart (note Mn Recovery variability is ±10%).

9. MATERIAL ASSUMPTIONS

The proposed Butcherbird plant is located approximately 400m east of the existing processing plant. This is shown in the plant layout shown below as Figure 19.

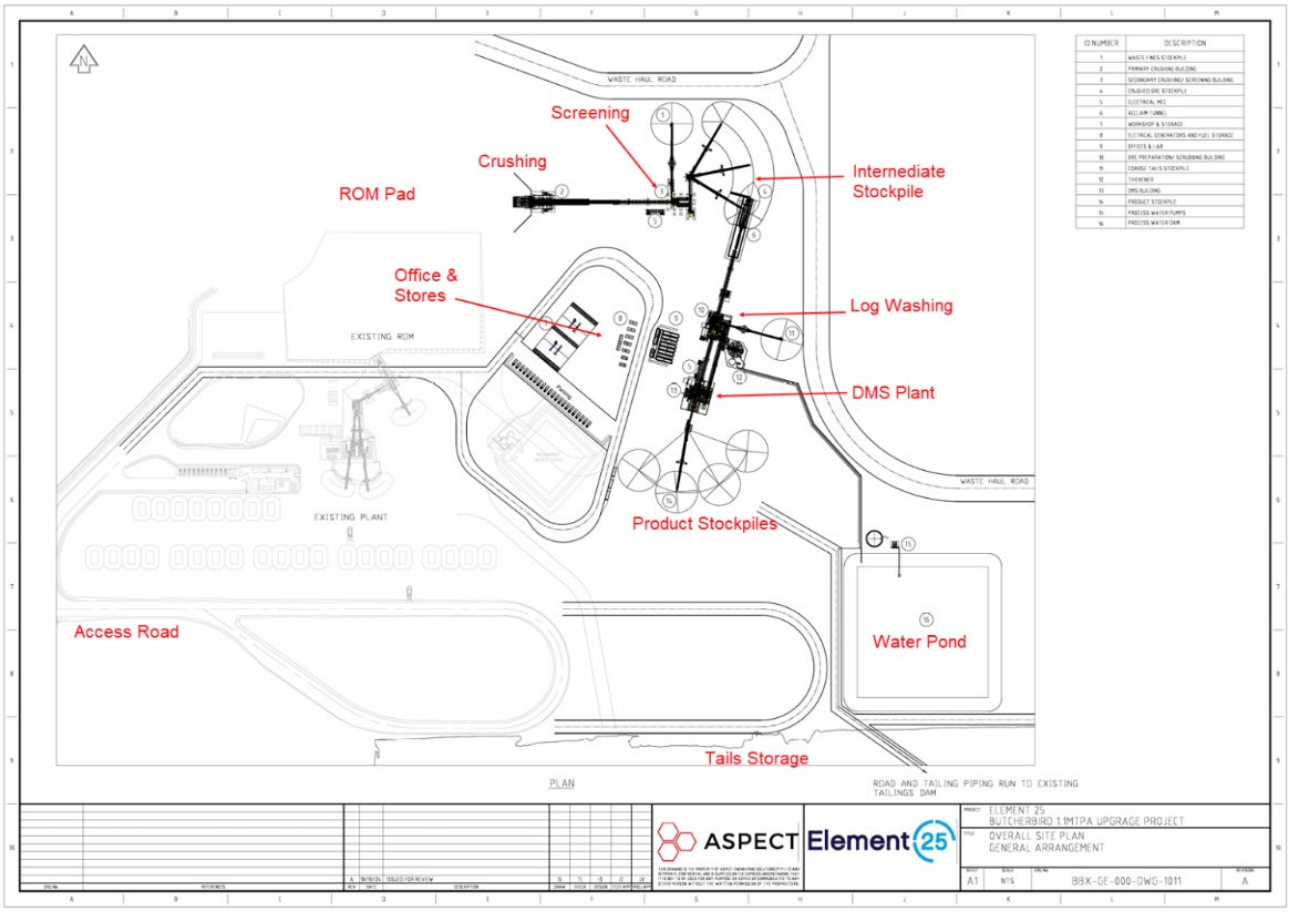


Figure 19: Proposed Plant Layout showing Expansion Proposal

Element 25 has a good understanding of the expected operational and capital costs for the expansion project. These costs have been used to update the capital assumptions and have been used.

The following table details the material assumptions taken within the analysis of the project expansion case.

MATERIAL ASSUMPTIONS

Mineral Resource Estimate - The most recent Mineral Resource estimate was declared on 29 October 2024, in the Mineral Resource Estimate Update. The estimate was prepared by a Competent Person in accordance with the JORC Code 2012.

The depleted Measured, Indicated and Inferred Mineral Resource estimate for the Butcherbird area is 273.9Mt at 10% Mn which includes 13.6Mt at 11.3% Mn in the Measured Resource category, 116.0Mt at 10.1% Mn in the Indicated Resource Category and 144.3Mt at 9.8% Mn in the Inferred Mineral Resource Category.

Approximately 11% of the total production target is in the Measured Resource category, 86.4% is Indicated Resource and 2.6% is Inferred Resources. Inferred Resources have not been used for the evaluation of the project.

The mine plan comprises 87.3% of current global Measured resources, 77.1% of current global Indicated resources.

The mineral resource has been subdivided into three oxidisation states; oxide, transition and fresh. Each zone exhibits different material characteristics including density, magnetic recovery, and hardness.

Mining Assumptions and Factors - The production target is 1,100,000t manganese lump concentrate per annum. Mining will consist of 5.64 million tonnes of ore and up to 4.7M tpa of waste per annum. Waste pre-stripping varies from 14% to 83% of ore mined per annum.

The mining design has been developed assuming conventional open pit mining methods using a hydraulic excavator, and conventional off-highway truck haulage to the ROM pad and tipping ore directly into a crusher.

Mining costs were sourced from quotations received from the Company's mining contractor, who has sufficient experience to manage this style of operation. These costs have been validated by an independent consultant to ensure accurate and industry standard estimations have been used.

Mining productivities and costs do vary marginally by bench as the mining faces advance. This has been included in the operational cost assumptions.

Mining factors for pit optimisation include 100% ore recovery and 5% dilution. Recovery factors were applied to all material types in the pit optimisation.

Pit slope angles of 40 degrees in all directions and rock types were used for pit design.

For the purpose of modelling and financial evaluation Inferred Resources has been included as ore and the impact of this has been included in the evaluation of the project.

Cut-off Grades - Cut-off grades have been calculated as 7% Mn based on work completed during the Study.

Low grade domains, basal shales are not considered for processing as ore in the base case.

It is considered that the cut-off grades used for all cases are suitable as the optimisation selects the majority approximately 98% of all mineralisation within the base case.

Lower cut-off grades for higher throughputs will only marginally increase mineralisation conversion.

Open Pit Optimisation - Optimisation parameters used have been updated to November 2024; costs are considered suitable for optimisation purposes.

Mine Design - Mine Designs based on optimised pit shells are considered suitable for all cases.

Mine Schedule - The mining has been scheduled to allow for 1.1M tpa plant production at 31.6% Mn.

Mining Costs - Sourced from the companies Mining Contractor in September 2024.
The mining fleet will consist of the following equipment;

- Excavator PC 1250.
- Dump Truck - Caterpillar 777. Fleet size varies by haul distance.
- Dozer - Caterpillar D10.
- Grader - Caterpillar 140M.
- Water Cart - Scania Electric Water Cart.
- Loaders - WA500 Loader (982) x 2.
- Service Truck.

The mining Fleet will operate on a day and night shift basis on a continuous basis to meet production requirements. Extra trucks will be brought in in future years to allow for longer haulage distances. Mining Costs are commercial in confidence.

Organisation Chart - Staffing numbers as per organisation chart developed for this scenario.

Mining Staff costs sourced from mining labour hire companies and Industry salary surveys.

BUTCHERBIRD EXPANSION FEASIBILITY STUDY

Proposed Expansion Organisation Structure

Position	No.	Position	No.	Position	No.	Position	No.
GMO	1	**Mining Manager**	1	**Snr. Geologist**	1	**Plant Manager**	1
		Planning Eng	1	Mine Geo	2	**Process Metallurgist**	1
Admin Clerk	2			Pit Tech	2	**Production Manager**	1
				Lab Super	1	**Production Supervisor**	3
OHSE	2	**Mining Contractor**		Lab Tech	2	CRO	3
		Manager	1			Plant Operators	3
		Supervisor	1			**Maint. Manager**	1
		Maint Sup	2			Maint. Planner	2
		Clerk	2			**Maint. Supervisor**	3
		Operators	44			Fitter	6
						Boilermaker	3
						Electrician	3
						Stores	
						Purchasing Officer	2
						Stores	2
Total	5		52		8		34
						Total	99

Miscellaneous Mining Costs - Miscellaneous costs including Geology and Survey consumables sourced from Element 25 database costs.

Process Design Criteria - A conventional crushing and beneficiation process has been designed to produce manganese concentrate as described in the body text above.

The designs are based on preliminary annual average mine schedule data and metallurgical test-work and benchmark information where required.

Process detail design has been undertaken by Aspect Engineering consultants.

Major Mechanical Equipment -

Item	Supplier	Model	Nominal Throughout
			(t/Hr)
Apron Feeder	MMD	D7 Plate Apron Feeder	859
Primary Mineral Sizer		Model 625	859
Secondary Mineral Sizer	MMD	Model 500	84
Dry Screens (2 off)	Dabmar	SS2200 G X 8.7m	859
Log Washer	KISA	SWL600/3500/10000	420
HMD Drum	Malvern Engineering	HMD 3050mm x 3660mm	228
Thickener	FLS	12m Dia High Rake	48

Processing Costs - Plant equipment consumables and repair costs sourced from Supplier estimates.

Plant power usage sourced from Supplier estimates.

Power supply designed for this operating scenario.

Diesel costs sourced from supplier quotation. Fuel price was assumed to be $1.60/ltr less the primary producer rebate of $0.496/ltr.

Plant labour allocated as per the Organisation chart developed for this scenario. Labour efficiencies achieved through plant layout design. Plant staff costs sourced from Labour Hire companies and Industry Salary Surveys.

Plant mobile plant & loaders pricing included in the Mining Tender completed in Sept 2020. Costs are commercial in confidence.

Metallurgical Factors - A comminution and beneficiation process using a combination of conventional techniques including crushing, scrubbing, screening, and dense media separation has been proposed to produce a manganese concentrate. Metallurgical test-work supports these processes which are well proven and in operation across the mining industry. The metallurgical recoveries adopted for the base case of 59.1% metallurgical recovery were based on metallurgical assessment of the orebody since the commencement of operations in 2021 with adjustments made for the revised processing circuit.

Capital Costs - Capital Costs are based on process design criteria, material balances, electrical load schedule and a selected equipment list. The main equipment pricing is sourced from vendor quotes. Quotes and estimates were utilised for infrastructure and mine support facilities. All costs are estimated in Australian dollars as at Q4 2023 and are calculated to have an overall project accuracy of +/-10%.

The capital costs summary is tabulated below:

Section	AUD M	Comments
Crushing & Screening	14.1	Suppliers sourced quotes based on engineering designs and scopes of work TSF Includes 2-year expansion of existing TSF and then ongoing lifts included in sustaining capital
Log washer	2.6	
Dense Media Separator	6.0	
Civils	0.7	
Camp	3.6	
Non-Process Infrastructure (NPI)	0.4	
Power	1.7	
Services	1.0	
Borefield	2.3	
Tails Storage Facility (TSF)	1.3	
Water Management	3.3	
Approvals	0.3	
Construction	8.1	
PCM	8.0	
Sub Total	**53.4**	
Contingency	8.5	16.5% Weighted allowance
First Fill	0.2	
Capitalised Opex	2.6	
BCTIF	0.1	
Total	**64.8**	

Table 7: Material Assumptions

Tails Storage - Tails storage costs derived from water balance requirements designed for the operating scenario. Pumping and power designed for this scenario and costs sourced from Supplier quotes based on detailed designs.

Tails storage facility wall lifts will be included in the Mining Contractors Scope of work.

Pricing used in the study was sourced from works completed in April 2023. Costs are commercial in confidence.

Power Supply - Power will be derived from hire diesel generators designed to suit the plant power usage for this scenario.

Hire costs sourced from supplier quotations.

Diesel usage as per supplier guidelines.

Diesel costs sourced from supplier quotations.

Element 25 will review the use of solar renewable power to supplement diesel power once operational.

Water Supply - The borefield operation has been reviewed as part of the expansion planning. The borefield will be upgraded to meet the expansion water requirements.

Extra bores will be equipped to supply water for the expansion, and duplicate piping will be required to maintain water flow volumes.

Pump hire and operating costs were sourced from suppliers. Gensets for the borefield will be sized for the power required for each scenario.

Genset hire and diesel costs were sourced from supplier quotations.

Administration - Site administration staffing numbers as per an Organisation chart developed for this expansion.

Site administration miscellaneous costs have been derived from Database costs and are in-line with similar operations of this scale.

Ore Haulage - Ore haulage costs from Butcherbird to Utah Point at Port Hedland have been sourced from supplier quotations.

Haulage for the base case involves the use of 25-30 quad roadtrains of 154t each per day. Haulage costs including fuel are approximately 8.4c/tkm.

Port Charges - Utah Port handling and ship loading charges are based on quotations from Pilbara Ports and Qube contractors.

There are no economies of scale available as charges are throughput based.

Perth Office - The Butcherbird expansion project is a project level feasibility study and only includes costs and revenues associated directly with the expansion of Butcherbird. Other costs i.e. Perth office and HPMSM costs have not been used in this study.

Royalties - Three Royalties have been allowed for, for the project.

- State Royalties have been based on 5% of the value of each monthly shipment based on a schedule of rates from the Mining Act. These are payable quarterly.
- Native Title payments are based on mining agreements with the two Native Title parties. The details of these payments are commercial in confidence.
- Pastoral access agreements have been included as per agreements with the two Pastoral Stations which the project sits on. The details of these payments are commercial in confidence.

Environmental - Base case environmental surveys have been completed and no environmental issues have been found. The Company is up to date with its environmental reporting obligations. No environmental issues have been reported since operations began in 2021.

Approvals - The Company has lodged and received approval for the Mining Proposal and the Native Vegetation Clearing Permit.

The Works Approval has been submitted and it is anticipated that approval will be received by the end of Q1, 2025.

No issues of significance were encountered during the various surveys or applications.

The driveway access to the great northern highway has been granted. The Old Great Northern Highway has been de-gazetted.

Market Assessment - Manganese market information and forward-looking manganese prices have been sourced from the commissioned “Manganese Medium Term Outlook” dated September 2024, by Project Blue.

The current price of manganese at the time of writing is approximately US$4.25/dmtu 44% CIF China. The long-term average manganese price utilised is US$6.06/dmtu 44% Mn CIF China.

Social - Element 25 has signed mining agreements, which include heritage agreements, with the Karlka Nyiyaparli and Ngarlawanga Native Title Claimant Groups.

Element 25 has conducted three aboriginal heritage clearance programs coinciding with previous drilling activities at Butcherbird.

The Company has a mining agreement with the Bulloo Downs and Kumarina Pastoral station to enable mining and other development activities on lands impacted by mining or required for development of the Project.

Site personnel will be mostly contractor based overseen by a small Element 25 management team.

The site will operate on a Fly In/Fly Out (FIFO) basis, utilising Newman as a transport hub. Finalised site rosters are yet to be determined.

The Company will move to a new local Butcherbird Airstrip early in the expansion.

10. BUSINESS PLAN RISKS

Element 25 has undertaken a comprehensive risk management review, which identified key business and operational risks and have developed strategies to mitigate and control these risks.

10.1 Operating Costs

The top four cost areas are manganese ore transport, processing, mining and royalties. Manganese ore transport is minimised by establishment of long-term relationships with haulage contractors utilising maximum payloads available on the roads. Fuel price variability is managed through appropriate rise and fall clauses in all contracts and long-term arrangements with fuel providers.

Processing costs are mitigated by establishing fit-for-purpose maintenance systems focusing on reliability with a multi-skilled, flexible workforce. The balance between owned/operated equipment and contract services will be optimised to minimise operating costs. Plant utilisation and availability has been conservatively modelled and there is a natural opportunity available by improved plant performance.

Mining costs are minimised by minimising equipment hours by application of suitable mining planning systems. Ultimately, the Company will review the option to convert to an owner-mining cost model at the appropriate time.

Royalties and other state charges are fixed via State Regulations. Land Access Agreements with Native Title and pastoral lease holders are also fixed or tied to production volumes and/or revenue.

Potential medium term cost savings that have been identified include building an airstrip to provide roster flexibility and reduce plant downtime during shift changes and the integration of solar or wind generation for site power supply.

Further review may identify operational cost savings in these areas which have been excluded from capital costs at start up.

10.2 Revenue

The Project will always be a price taker regarding what manganese prices can be achieved. The opportunity exists to establish long term relationships with potential offtake partners, traders, and manganese smelters wherein the properties of the Project manganese including impurity levels can be used as a marketing tool.

Credits may be available for some chemical components where they have a value in use advantage, and these opportunities will always be explored. The opportunity to sell screened or sorted solid waste streams may add value if local disposal can be achieved.

10.3 Social Licence

Although the Project has minimal interaction with local pastoralists, Native Title groups and local communities, all effort is made to ensure that these stakeholders concerns can be raised without impediment, are addressed in a timely fashion and that systems are in place to ensure that any relevant statutory or contractual commitments are met.

The Company will develop a schedule of statutory and other reporting requirements to actively manage all stakeholder requirements.

11. ENVIRONMENTAL, HERITAGE AND APPROVALS

11.1 Environment

All environmental baseline studies have been completed for the Project, including flora and vegetation, fauna, short range endemics (SRE), groundwater, surface water, subterranean stygofauna, groundwater, waste rock characterisation, tailings characterisation, landform and soils and tailings characterisation have been completed.

Statutory approvals including a Mining Proposal including Mine Closure Plan and Native Vegetation Clearing Permit, Works Approval, Project Management Plan (PMP), and Groundwater Abstraction Licence have also been developed and submitted for the relevant departmental approval.

The Mining Proposal and Native Vegetation Clearing Permit have been updated and approved for the Butcherbird Expansion. The PMP and Works Approval have been submitted. It is anticipated that it will be approved by the end of Quarter 1, 2025.

11.2 Flora, Fauna, and Communities

No threatened flora, vertebrate fauna or ecological communities listed at Federal or State levels or Groundwater Dependent Ecosystems (GDEs) are present within the Project area. Four priority flora species and one priority fauna species were identified in baseline surveys, although these are to be expected in the sub-region.

Priority species are listed by the State's Department of Biodiversity, Conservation and Attractions (DBCA) generally in the regard of being poorly known taxa, but as areas are surveyed the understanding of listed species are increased.

The Priority Fauna species' (Brush-tailed Mulgara) associated habitat is distributed outside of the mining lease area (not to be disturbed). Priority Flora populations were found both within and external to the project tenements and proposed disturbance footprint. Project impacts to Priority Flora species will be managed through avoidance as part of the project design. Project impacts on flora, vegetation and fauna are currently not regarded as significant.

11.3 Subterranean Fauna

Mining in the Butcherbird Stage 2 development is planned to go into the water table. A stygofauna assessment of drill holes within the proposed mining footprint was conducted in 2022. This showed the absence of any stygofauna with the proposed mining area. This is consistent with the known geology of the Yanneri Ridge and Coodamudgi mineral resources, which are unlikely to host stygofauna.

Annual subterranean stygofauna surveys have been undertaken at the Butcherbird borefield, since 2020. These results have confirmed the existence and spread of existing and known stygofauna species across the borefield. The impact area for groundwater drawdown, within the borefield has been designed to ensure habitat availability remains at least 70% of pre mining habitat during the period of active abstraction. This is consistent with current industry practices for stygofauna impact minimisation.

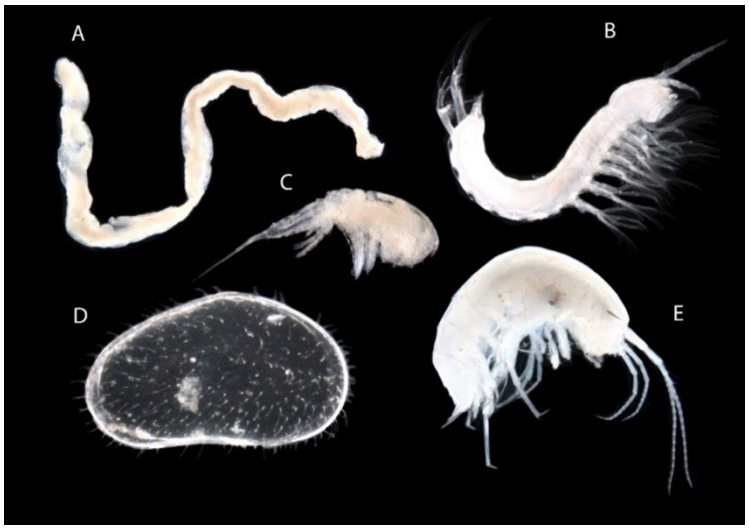


Figure 20: Stygofauna sourced from the Butcherbird borefield.

11.4 Surface water

Surface water characteristics of the site include flow velocities generally less than 0.5 m/s with some higher velocities located adjacent the Great Northern Highway and Old Road. Modelling of 10, 50 and 100 year rainfall events indicates fairly stable water accumulation (ranging between 0 – 0.5 m deep across ARI events) throughout site, but with ponding likely to occur in heavy downpours at particular locations near Old Road to the east and Great Northern Highway to the west. These conditions have been considered for project design.

11.5 Groundwater

Hydrogeological studies and test bores have found a silcrete aquifer approximately 6km Southeast of the project area. This aquifer will be developed as part of the project development plan. Recent water exploration drilling has identified a deeper paleo channel aquifer. This is being investigated as a backup/contingency water source to alleviate potential over-use of the silcrete aquifer or where short-term water is required in excess of the borefields' ability to supply it.

11.6 Heritage

Nine Aboriginal heritage surveys have been conducted for the Project. While artefacts were found, and several unregistered sites identified in the local vicinity, there are no registered heritage sites within the mining lease.

11.7 Cyclones

Newman is situated 350 kilometres inland and sits in Wind Region A4 in the Building Code of Australia (BCA). Of the major towns in the Pilbara, Newman is least at risk to tropical cyclones. However, whilst cyclones weaken as they move inland, the intensity of the winds can remain capable of causing damage.

11.8 Project Finance

Study outcomes indicate that project funding of approximately AU$64.8m (excluding working capital and financing costs) is required to achieve first production.

Manganese is a critical mineral for Australia and its major trade partners, which has been exacerbated in recent years due to China's supply chain dominance for manganese products. Manganese supply in Australia is in decline, with the closure of the Bootu Creek Mine in 2023 and the progressive decline in reserves at South 32 Limited's Groote Eylandt Mine.

The strategic importance of the Butcherbird Project to future Australian manganese production and the suitability for the Project's concentrate for downstream processing into battery grade HPMSM mean that it attracts strong interest from strategic partners including global automakers Stellantis NV and General Motors LLC who are supporting the Company's planned HPMSM refinery in Louisiana USA which will use the Butcherbird concentrate as the primary feedstock.

The Company plans to secure financing for the project using a combination of existing cash on hand, traditional equity and debt financing. A range of equity and debt financing options are being considered, and discussions with potential financing parties are well advanced. In April 2024, E25 announced that the Project has passed the Strategic Assessment phase of the financing process with the Northern Australia Infrastructure Fund (NAIF)[8] .

Subsequent to this announcement, the Company has initiated full technical due diligence to support project financing and has engaged with a range of potential financiers other than NAIF, including bank lenders, offtake partners (by way of pre-payment), royalty funds and private equity groups. These discussions are well advanced and the Company has a reasonable basis to believe that funding to support the development of the Project will be available in line with the Project schedule.

Market studies outlined in this FS indicate robust long-term demand for manganese both in existing markets and emerging HPMSM markets. Based on the strong financial metrics presented as part of the FS results, long term demand indicators for manganese, and the progress of various ongoing discussions, the Company considers there are reasonable basis that the project outlined in this FS can be financed subject to prevailing market conditions. The financial metrics from the Study show that based on the assumptions used in the model, the cashflows from the Project will support debt financing based on loan covenants typical for a Project of this type using conservative debt service coverage ratios (DSCR).

There is no guarantee that the Project will be financed and continues to be subject to prevailing market conditions.

It is also possible that funding may be dilutive to existing shareholders which may affect the value of the Company's existing shares. It is also possible that the Company will pursue other strategies to provide alternative funding options including undertaking a corporate transaction.

The ultimate financing structure for the Project will be dependent on several factors but will be determined on the basis of delivering an optimal outcome for shareholders.

[8] Reference: Company ASX Release dated 8 April 2024

12. PROJECT EXECUTION

The delivery model for the project outlining responsibilities has been developed for the project based around an Integrated Project Team (IPT) with members from E25 supplemented with personnel from an engineering service provider as required.

The integrated approach will keep E25 in complete control of the Project to manage the project delivery process from start to finish. This includes engineering, procurement, construction and commissioning with a seamless transition into operations.

The Engineering Services Contractor will conduct the majority of the design works with the exception of the process engineering, vendor supplied items and certain scope items.

The majority of the mechanical equipment, electrical equipment, structural steel and bulk materials will be supplied by the E25 IPT to reduce capital costs by eliminating the margin from the Structural Mechanical Electrical and Instrumentation (SMPEI)

contractor. The construction of the project will predominately be completed by a civil contractor and a SMPEI contractor or contractors. The civil contractor will be responsible for site establishment, bulk earthworks, detailed earthworks and concrete installation. Following closely behind the civil contractor will be the SMPEI contractor which will be responsible for the installation of structural steel, mechanical equipment, pipework, electrical, control systems and commissioning. The SMPEI contractor may be a single organisation or multiple organisations focussed on the appropriate skill-set for the planned activities.

A project implementation plan and schedule has been developed based on forecast lead times for equipment procurement, permitting, project financing and construction. The total time required for project delivery is estimated at approximately 10 months from FID.

Task Name	Duration
Butcherbird Expansion Project	471 days
Approvals and Permitting	237 days
Engineering	239 days
Procurement	373 days
Camp Construction	120 days
BBX Construction	158 days
BBX Commissioning	22 days
Operations Commence	0 days

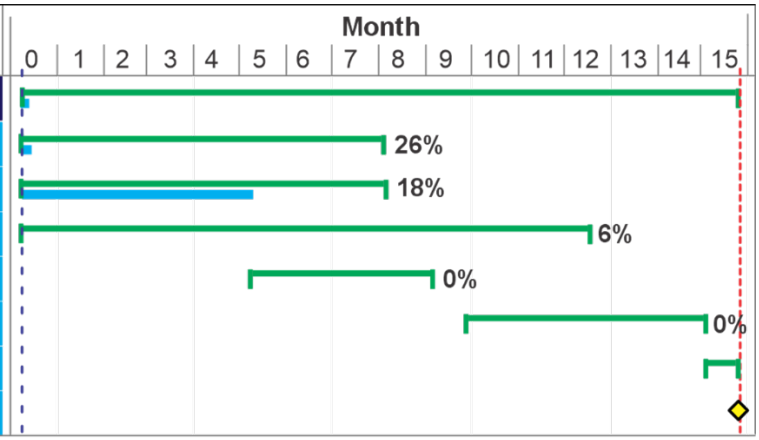


Figure 21: Expansion Project Schedule

13. CONSULTANTS AND CONTRIBUTORS

The internal E25 team has unique expertise in process design, start-up, and operation of manganese operations throughout the world. E25 has partnered with a similar team of outstanding professionals across multiple disciplines to assure that the Butcherbird Project Study is of the highest quality. The external team includes input and services from a number of external parties as listed in Table 7 below.

Table 7: Butcherbird FS Major Consultants and Contributors.

Group	Abbreviation	Function
4DG	4DG	Open Pit Excavatability assessment
ALS Laboratories	ALS	Metallurgical test-work
AME		Manganese market and pricing assessment
Aspect		Overall plant design and Project Management
GPA Engineering		Pipeline crossing engineering
HPS (WA) Pty Ltd	HPS	Mn Marketing, Offtake and Logistics support
IHC Robbins	IHC	Resource Modelling
Jenike & Johanson		Chute design and hold-up of material calculations
Karlka Nyiyaparli		Native Title Clearance and Approvals
MBS Environmental Pty Ltd	MBS	Environmental surveys Preparation of the environmental approval documents
MEC Mining	MEC	Resource Modelling
Mine Planning Services	MPS	Open Pit Optimisation, Design and Scheduling
Mining Solutions Pty Ltd		Project management, Mine Engineering, Financial Modelling.
MMD		Crushing circuit design
MWES Pty Ltd	MWES	Water Resource Definition and assessment
PESCO		Ore Processing and DMS Testwork
Peter O'Bryan and Associates	PROB	Open Pit Geotechnical Review and Waste Dump Stability assessment. GGPL safety assessment
Project Blue		Manganese market and pricing assessment
Resource Engineering Consultants	REC	Tailings storage planning and design
Wood Mackenzie		Manganese market and pricing assessment
MEC	MEC	

14. COMPETENT PERSONS STATEMENT

14.1 Disclaimer

The Company confirms that in the case of estimates of Mineral Resources, all material assumptions and technical parameters underpinning the estimates in the market announcements dated 29 October 2024[9] continue to apply and have not materially changed.

The Company confirms that in the case of Mining Reserves, all material assumptions, modifying factors and technical parameters underpinning the Mining Reserve in the market announcements dated 22 January 2025[10] continue to apply and have not materially changed.

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.

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.

14.2 Competent Person 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 information in this report that relates to Mining, Metallurgical and Financial Modelling is based on information compiled by independent consulting mining engineer Ian Huitson (B.Eng. Mining Eng, Fellow AusIMM). Mr. Huitson is a Fellow of The Australasian Institute of Mining and Metallurgy. Ian Huitson is employed by Element 25 Ltd. Mr. Huitson is a shareholder of Element 25 Limited. Mr. Huitson has visited site on a number of occasions as part of the ongoing studies and the development and operation of the Butcherbird Project. Mr. Huitson has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which is undertaken, 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'.

[9] Reference: Company ASX Announcement dated 29 October 2024

[10] Reference: Company ASX Announcement dated 22 January 2025

Mr. Huitson consents to the inclusion in the report of the matters based on the information made available to him, in the form and context in which it appears.

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

15. ACRONYMS & DEFINITIONS

Table 8: Acronyms & Definitions.

Abbreviation	Definition
ACN	Australian Company Number
ASX	Australian Securities Exchange
BOOT	Build Own Operate and Transfer
Butcherbird	Element 25's Butcherbird Manganese Mine, located in Western Australia
C	Celsius
CAPEX	Capital Expenditure
CCR	Central Control Room
CIF	Cargo Insurance and Freight
Concentrate	Bulk manganese oxide concentrate product from Butcherbird
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CWI	Crushing Work Index
D&C	Design and Construct
DCS	Distributed Control System
DD	Detailed Design
DID	Natural Resources and Environment Board
DMIRS	Department of Mine, Industry, Resources and Safety
dmtu	Dry Metric Tonne Unit
DOBM	Design One, Build Many
dwg	An Autocad™ drawing file format
dxf	An Autocad™ design file format
EDG	Emergency Diesel Generator
Element 25 or E25	Element 25 Limited – The ASX listed Element 25 entity
EMP	Environmental Management Plan
EPC	Engineering, Procurement and Construction
EPCM	Engineering, Procurement and Construction Management
ESG	Environmental, Social, and Governance
EV	Electric Vehicle
F	Fahrenheit
FEED	Front End Engineering Design
FEL	Front End Loader
FID	Final Investment Decision
Fig	Figure
FS	Feasibility Study
FY	Future Year

Abbreviation	Definition
GHG	Greenhouse Gas
GWh	Gigawatt hour
Ha	Hectare (equals approximately 2.47 acres)
HAZID	Hazard Identification Workshop
HAZOP	Hazard and Operability Workshop
HDPE	High Density Polyethylene
HPMSM	High Purity Manganese Sulphate Monohydrate with the chemical formula MnSO4.H2O
HR	Human Resources
HV	High Voltage
Hwy	Highway
I/O	Input/Output
IMnI	International Manganese Institute
IP	Intellectual Property
IRR	Internal Rate of Return
JORC	The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves
k	Thousand
km	Kilometre / Kilometer (1,000 metres)
k tpa	Thousand tonnes per annum
kWh	Kilowatt hour
LCA	Life Cycle Assessment
LV	Low Voltage
M	Million
MACRS	Modified Accelerated Cost Recovery System
MCC	Motor Control Centre
MEL	Mechanical Equipment List
MERV	Major Equipment Replacement Value
Mn	Manganese
MoC	Materials of Construction
MSL	Mean Sea Level
Mt	Million tonne
M tpa	Million tonne per annum
NPI	Non-Process Infrastructure
NPV	Net Present Value
OEM	Original Equipment Manufacturer
OPEX	Operating Expenditure
P&ID	Piping and Instrument Diagram
P2P	Procure to Pay

Abbreviation	Definition
PCS	Process Control System
PDC	Process Design Criteria
PFD	Process Flow Diagram
pH	pH is a measure of the hydrogen ion concentration (acidity scale between 1-14)
PLC	Process Logic Controller
PMC	Project Management Consultant
PPE	Personal Protective Equipment
Q1	First (1st) quarter of a nominated year
Q2	Second (2nd) quarter of a nominated calendar year
Q3	Third (3rd) quarter of a nominated calendar year
Q4	Fourth (4th) quarter of a nominated calendar year
QRA	Quantitative Risk Assessment
R&D	Research and Development
RO	Reverse Osmosis
SDC	Seismic Design Categories
SI	International System of Units
SLD	Single Line Drawing
Study (or FS)	This Feasibility Study
SysCAD	Process Plant Simulation Package for Minerals Processing
T	Tonne (metric), 1,000Kg
TBC	To be Confirmed
TDS	Total Dissolved Solids
tpa	Tonne/s per annum
tph	Tonne/s per hour
UPS	Uninterruptable Power Supply
VOIP	Voice over Internet Protocol
WBS	Work Breakdown Structure

The future has always been electric...

Element 25

BUTCHERBIRD EXPANSION STUDY

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