

## Highlights

- Beneficiation flowsheet optimisation test work very successful.
- Beneficiation test work including crushing, screening, wet scrubbing and ore sorting produced a commercially marketable 33%Mn concentrate product.
- Opportunity identified for a low capital, accelerated cashflow opportunity for Stage 1 of the development of the Butcherbird Project.
- PFS investigation into the ore concentrate start-up operation well advanced and due for completion in the coming quarter.
- Test work also enhances the flowsheet for the larger scale high purity manganese Stage 2 development strategy to produce EMM and HPMSM.

The quarter ending 31 March 2020 has seen excellent progress for the Element 25 Limited (**Company** or **E25**) team across multiple work streams. The work continues to progress the Pre-Feasibility Study (**PFS**) in relation to the Butcherbird High Purity Manganese Project (**Project**) as well as bringing forward plans for a potential start of production at the Project via a low capex manganese concentrate export operation. The manganese concentrate opportunity offers the potential for near term cashflow to strengthen the E25 balance sheet whilst complimenting the Company's strategy to produce high purity manganese including Electrolytic Manganese Metal (**EMM**)<sup>1</sup> and manganese sulphate for lithium ion batteries (**HPMS**). Strengthening prices in manganese ore markets also favour a staged strategy<sup>2</sup>.



<sup>1</sup> Company announcement dated 17 October 2017

<sup>2</sup> <https://www.jupitermines.com/projects/tshipi/manganese-price-information>

## Company Snapshot

ASX Code:	E25	Board of Directors:		Element 25 Limited is developing the world class
Shares on Issue:	97M	Seamus Cornelius	Chairman	Butcherbird manganese project in Western Australia to
Share Price:	\$0.17	Justin Brown	MD	produce high purity manganese sulphate for lithium ion
Market Capitalisation:	\$16.5M	John Ribbons	NED	batteries and electrolytic manganese metal.
Element 25 Limited	Level 2, 45 Richardson Street,			
P +61 8 6315 1400	West Perth, WA, 6005			
E admin@e25.com.au	PO Box 910 West Perth WA 6872			
element25.com.au	Australia			

## COVID-19 Impacts

In keeping with government guidelines all E25 staff and contractors have been observing social distancing measures and working from home where possible to minimise contact.

Notwithstanding this, despite some impact on the provision of services by third parties, the Company continues to make excellent progress in relation to the development of the Butcherbird Manganese Project.

The Board will continue to monitor the situation and take all steps as necessary to maintain safe working conditions while continuing with planned work programmes where it is safe to do so.

## PRE-FEASIBILITY STUDY

The Company is currently completing a PFS which is anticipated to provide a robust base case for the commercialisation of the Company's world class manganese resource.

All key flowsheet components have been confirmed through test work and the Company remains of the view that the Project has the potential to underpin a long life, low cost high purity manganese production hub producing Electrolytic Manganese Metal (EMM) for the steel industry and High Purity Manganese Sulphate Monohydrate (HPMSM) for the lithium ion batteries that will drive the Electric Vehicle (EV) transition.

Importantly, the work to date has identified a number of potential modifications to the flowsheet implementation strategy which are expected to have a positive impact on capital and operating costs.

Another critical outcome was the confirmation of the potential to beneficiate the Butcherbird ore utilising a cost effective flowsheet, providing an opportunity to implement a staged development approach with a start-up manganese concentrate export operation.



Figure 1: Bulk manganese ore post crushing.



Figure 2: Scrubbing and screening removes clays.



Figure 3: Ore sorting removes additional waste to improve concentrate grade to 33% Mn.

## Processing Methodology

In December 2019, approximately 40 tonnes of near surface material (1-7m vertical depth) was excavated from the Project site as feed for the pending pilot plant programme for the production of EMM<sup>3</sup>.

The optimisation of the beneficiation circuit was targeted at maximising hydrometallurgical feed grade in order to minimise capital and operating costs. The test results exceeded expectations and the new data will be incorporated into the EMM Pre-Feasibility Study (PFS<sub>EMM</sub>).

The optimised flowsheet (see Figure 5: ) utilises crushing, scrubbing, screening and high-speed ore sorting technology to reject waste material and increase the concentrate grade. The success of this approach has highlighted an opportunity to produce a bulk manganese concentrate at a suitable manganese grade for direct export to provide early cashflow to fund the overall Project development strategy.

The test work utilised samples from the five test pits excavated in the measured area of the resource and focussed on two nominal 1 tonne samples A003 and B006 from pits BBS-A and BBS-B respectively as highlighted in Figure 4: . The material is believed to be representative of Yanneri Ridge Measured Resource.

The concentrate product returned favourable impurity levels and excellent recoveries of over 80% as outlined in Table 1: .

Market studies have confirmed that the concentrate grade and levels of deleterious elements are suitable for the production of ferromanganese and silicomanganese alloys. Additionally, there are a number of unique characteristics that may make this product suitable for premium niche markets.

A Pre-Feasibility level study is currently being prepared (PFS<sub>CON</sub>) to confirm the potential economics for a low capital ore export business as a start-up stage, to be completed in parallel with the ongoing PFS<sub>EMM</sub>.

Mn	Fe	P	SiO <sub>2</sub>	Al	LOI	Recovery
33.1%	8.2%	0.08%	21.78%	2.97%	10.2%	82%

**Table 1:** Test concentrate analysis returned from the optimised processing flowsheet.

<sup>3</sup> Reference: Company announcement dated 19 December 2019

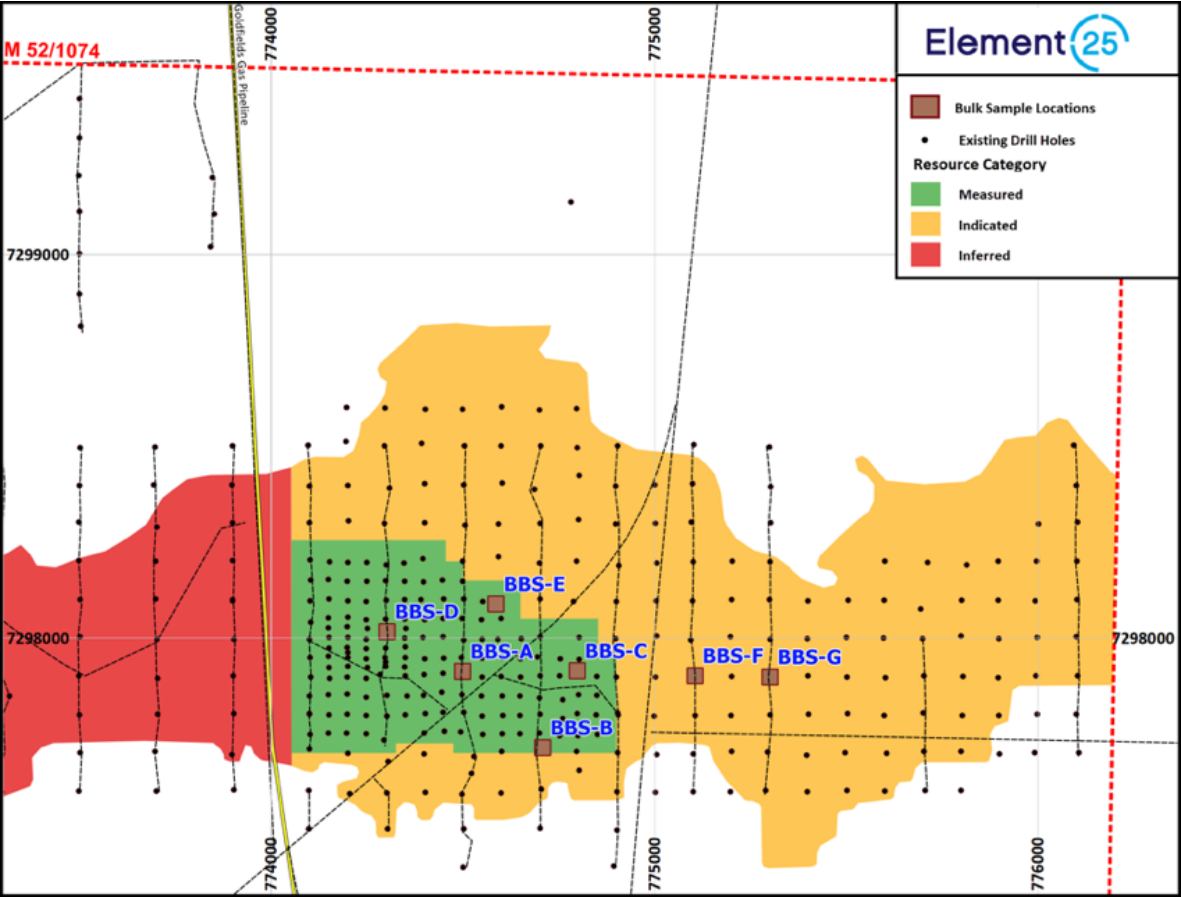


Figure 4: Bulk sampling pit locations. Each pit (BBS-A through G) was sampled in one metre intervals with approximately 1t per sample.

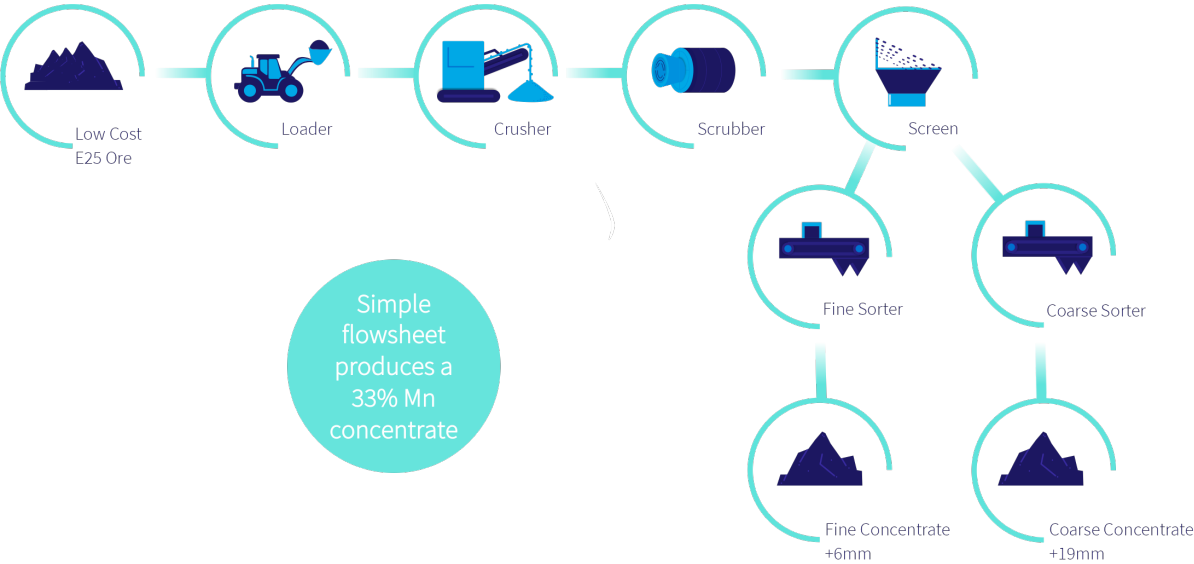


Figure 5: Beneficiation flowsheet for producing an ore export product and high-grade hydrometallurgical feed.

## Power Generation

Continuous ten minute wind and solar data continue to be collected via SODaR and Pyranometer equipment installed at site. Wind data has now been collected for eleven months and solar data for approximately eight months.

## Process Water

A prospective groundwater supply area was identified to the south and east of the mining lease area and the first round of water exploration drilling has now been completed on this target. This includes the downstream extension of the Cenozoic basin and the associated superficial and palaeochannel aquifers.

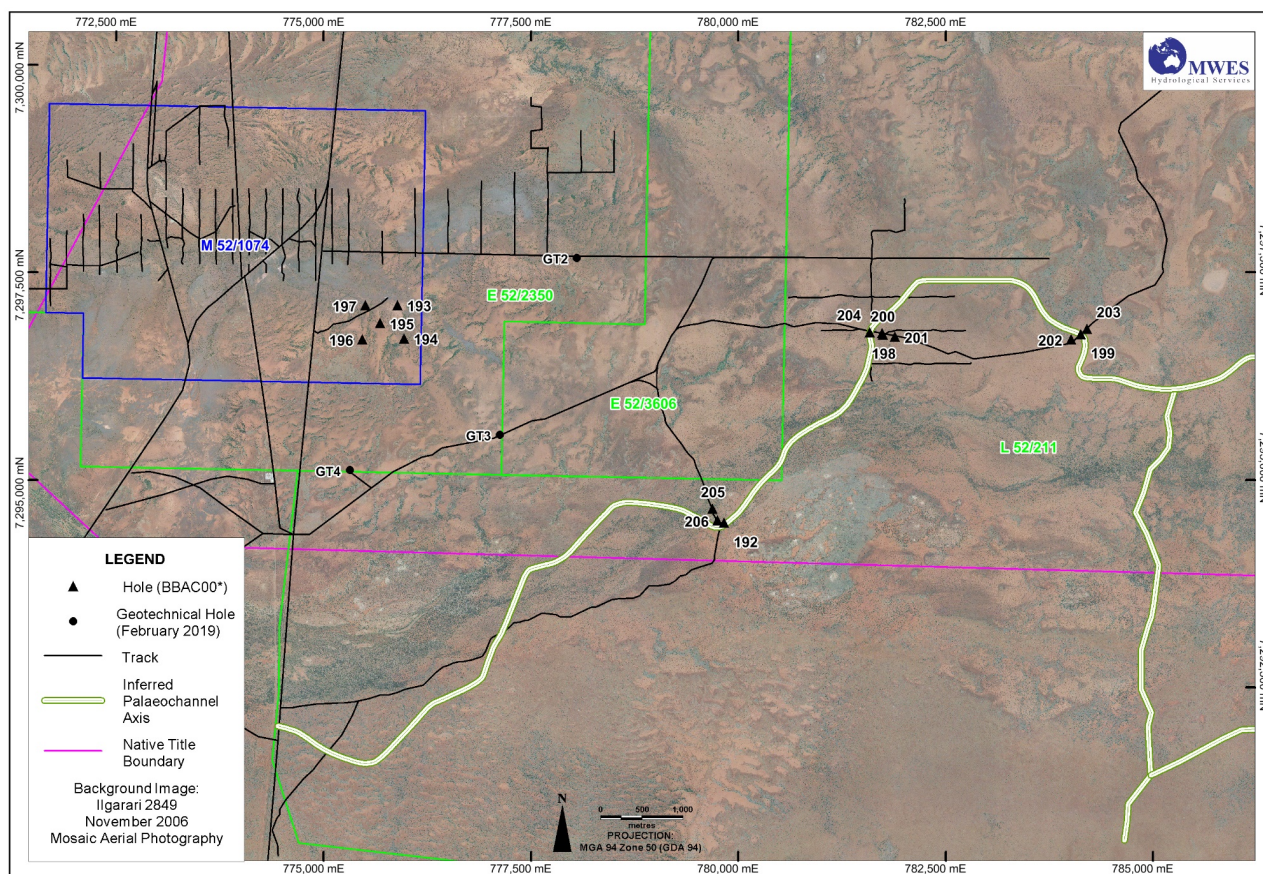
The drill target selection was informed by the following factors: proximity to the mining lease, regional geology, surface topography, pastoral tenure and native title claim boundaries. A total of ten holes were completed as detailed in Table 2.

Two aquifers were identified during the programme, a shallow aquifer within the near surface calcretes and silcretes and deep aquifer (DA) comprising a palaeochannel sand. It is believed that they will yield sufficient process water for the current development plans at the Project and subsequently pump tests will be carried out to confirm the capacities of the aquifers,.

Bore ID	Location	Easting	Northing	Hole Depth
BBAC00192	Line 1	779825	7294484	37
BBAC00198	Line 4	781743	7296748	38
BBAC00199	Line 7	784129	7296757	84
BBAC00200	Line 4	781734	7296768	84
BBAC00201	Line 4	781884	7296725	78
BBAC00202	Line 7	784009	7296692	78
BBAC00203	Line 7	784200	7296819	78
BBAC00204	Line 4	781583	7296778	78
BBAC00205	Line 1	779687	7294653	78
BBAC00206	Line 1	779747	7294512	65

Table 2: Water exploration drillhole collar locations





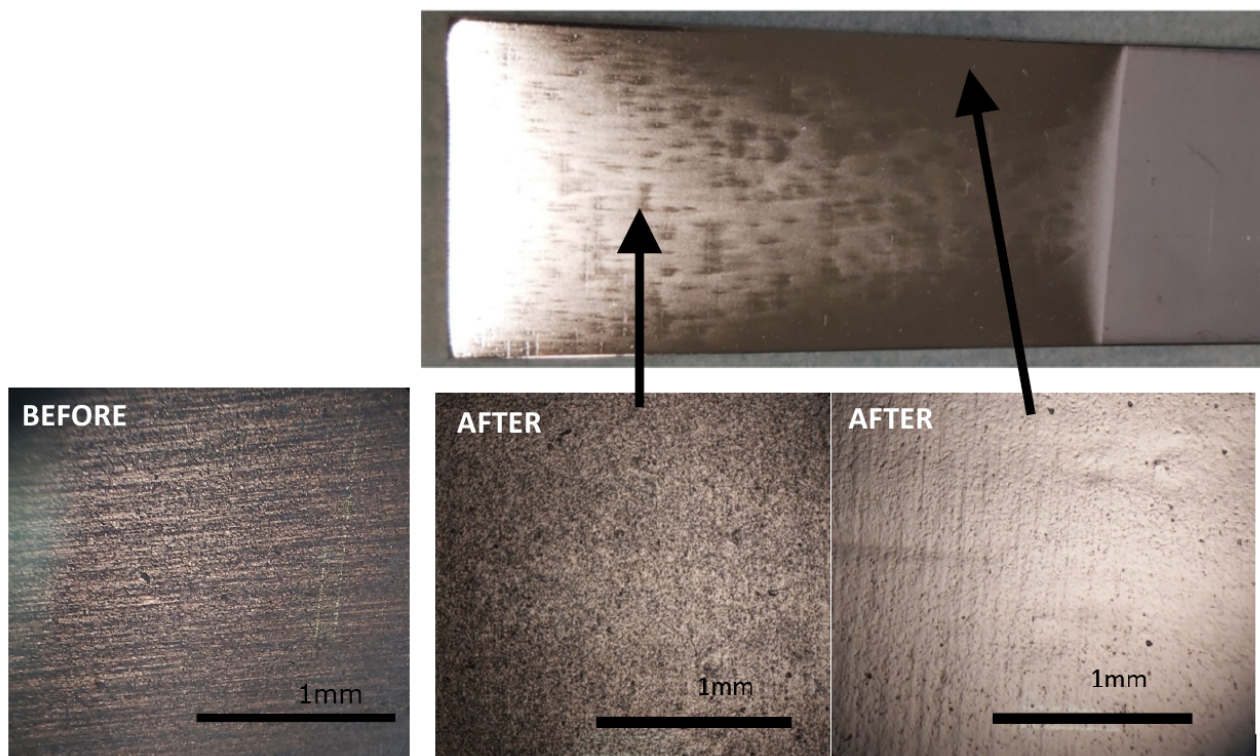
**Figure 6:** Groundwater Exploration Drilling - Aerial Image

In addition, five shallow (5m) holes (BBAC00193 to 197) were drilled on the Butcherbird mining lease and filled with coarse gravel. These will be used to test the permeability of the proposed Tailings Storage Facility site.

### ARENA Sponsored IDE Investigations

Phase 3 of the ARENA grant programme involves the finalisation of the EMM electrowinning parameters, establishment of cathode pre-treatment protocols and then the testing of these on a quarter scale electrowinning cell using intermittent power, modelled on the site data profiles, commenced during the quarter.

Initial testing has shown that electropolishing has been successful in smoothing the cathode and the work can now proceed to the next steps. The Covid-19 outbreak, however, has meant that all laboratory work has been put on hold pending clearance by the University authorities that work can continue. During this down time the literature review components of the programme have been completed. IDE demonstration activities will recommence once the Covid-19 restrictions allow.



**Figure 7:** IDE cathode electropolishing test results.

### About the Butcherbird High Purity Manganese Project

The Butcherbird High Purity Manganese Deposit is a world class manganese resource with current JORC resources in excess of 263 Mt of manganese ore<sup>4</sup>. The Company has completed a robust scoping study with respect to developing the deposit to produce High Purity Manganese Sulphate for lithium ion battery cathodes as well as Electrolytic Manganese Metal for use in certain specialty steels. A PFS is currently being completed and is expected to further confirm the commercial potential of the Project. In optimising the comminution circuit for the plant design, an opportunity has been identified to bring forward production via a low capital cost ore concentrate option.

This is envisaged as the first stage of a staged ramp up for the project and has the advantage of potentially providing early cashflow to strengthen the Company's balance sheet and assist in funding of the larger high purity manganese production hub. A PFS<sub>CON</sub> is currently being finalised to demonstrate the potential economics of a staged start up strategy,

<sup>4</sup> Reference: Company ASX release dated 17 April 2019.

The Project straddles the Great Northern Highway and the Goldfields Gas Pipeline providing turnkey logistics and energy solutions. The Company is also intending to integrate renewable energy into the power solution to minimise the carbon intensity of the Project as well as reducing energy costs. A cleaner, lower carbon flowsheet and high penetration renewable energy will place Butcherbird at the forefront of sustainable metal production.

## Mineral Resources

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

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).

## Corporate

### Silverstream Royalty Sale

During the quarter, the Company entered into a binding sale and purchase agreement with SilverStream SEZC dba Vox Royalty (**SilverStream**) to dispose of a portfolio of royalties relating to several project areas.

Consideration for the sale is A\$500,000 in SilverStream shares. The sale is subject to a number of conditions, including the resolution of first rights of refusal held by third parties and the successful listing of SilverStream on the TSX no later than 15 May 2020. Proceeds from the eventual sale of the Silverstream shares will be used to continue the development of the Project. The royalties included in the sale agreement are<sup>5</sup>:

- The 1.0% Gross Revenue royalty over the Fortnum / Peak Hill project held by Westgold Resources Limited;
- The 2.0% NSR royalty over the Green Dam project held by St Barbara Limited;
- The 1.0% NSR royalty over the Holleton project held by Ramelius Resources Limited;
- The 0.75% Gross Revenue royalty over the Yalbra project held by Buxton Resources Limited; and
- The A\$7.50 / ounce discovery payment over the Yamarna project held by Gold Road Resources Limited.

<sup>5</sup> See Company ASX releases dated 27 September 2012, 10 April 2019, 31 July 2018, 21 June 2012 and 11 October 2017.



## About SilverStream

SilverStream is a mining-focused royalty and streaming company building a portfolio of royalties and streams across a diverse commodity base. SilverStream holds a basket of royalties covering precious, base, battery and bulk metals. The portfolio consists of >25 royalties and streams globally, with both cash-flowing and longer-term growth-oriented assets.

## Acuity Capital Funding Facility

As announced during the quarter, the Company has entered into a Controlled Placement Agreement (CPA) with Acuity Capital to provide E25 with up to \$2 million of standby equity capital over the coming 23 month period. This standby facility may be used to fund the development of the Project and working capital.

## Controlled Placement Agreement

Under the CPA, E25 retains full control of all aspects of the placement process: having sole discretion as to whether or not to utilise the CPA, the quantum of issued shares, the minimum issue price of shares and the timing of each placement tranche (if any). There are no requirements on E25 to utilise the CPA and E25 may terminate the CPA at any time, without cost or penalty.

Acuity Capital and the CPA do not place any restrictions on E25 raising capital through other methods. If E25 does decide to utilise the CPA, E25 is able to set a floor price (at its sole discretion) and the final issue price will be calculated as the greater of that floor price set by E25 and a 10% discount to a Volume Weighted Average Price (VWAP) over a period of E25's choosing (again at the sole discretion of E25).

As collateral for the CPA, E25 has agreed to place 4.8M ordinary shares ("New Shares") from its LR7.1 capacity, at nil consideration to Acuity Capital (**Collateral Shares**) but may, at any time, cancel the CPA and buy back the Collateral Shares for no consideration (subject to shareholder approval).

## Investment Portfolio (as at 31 March 2020)

In addition to cash reserves, the Company also currently holds securities in the following listed entities:

Listed securities at market value:	No. Held	Closing Price	Market Value
Anova Metals Ltd (ASX:AWV)	7,000,000	\$0.009	\$63,000
Buxton Resources Ltd (ASX:BUX)	356,001	\$0.04	\$15,664
Duketon Mining (ASX:DKM)	1,450,000	\$0.11	\$159,500
Danakali Limited (ASX:DNK)	7,966,670	\$0.35	\$2,788,335
Rare X Limited (ASX:REE)	13,338,261	0.014	\$186,736
<b>Total</b>			<b>\$3,213,235</b>

Justin Brown

### Managing Director

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

## Competent Persons 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 and Exploration Targets'. Mr Brown consents to the inclusion of this information in the form and context in which it appears in this report

Please note with regard to Exploration Targets, the potential quantity and grade is conceptual in nature, that there has been insufficient exploration to define a Mineral Resource and that it is uncertain if further exploration will result in the determination of a Mineral Resource.

The information in this report that relates to Mineral Resources is based on information announced to the ASX on 17 April 2019. Element 25 confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements, and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

## Disclaimer

The views expressed herein are not necessarily the views of the Australian Government, and the Australian Government does not accept responsibility for any information or advice contained herein.

# ASX Additional Information for Quarterly Report to 31 March 2020

	Tenement reference	Location	Interest at beginning of quarter	Acquired/Disposed	Interest at end of quarter
The mining tenements held at the end of the quarter and their location	E20/659	Eelya Hill WA	10%	N/A	10%
	E20/948	Yallon Well WA	100%	N/A	100%
	E20/953	Sunday Well WA	100%	N/A	100%
	E28/2577	Pinnacles WA	100%	N/A	100%
	E28/2761	Flanker South WA	100%	N/A	100%
	E28/2908	Pinnacles WA	100%	N/A	100%
	E28/2925	Fraser Range WA	100%	Disposed	0%
	E37/1295	Leonora WA	100%	N/A	100%
	E39/2135	Mulga Tank	100%	N/A	100%
	E46/1300	Black Hill WA	100%	Disposed	0%
	E46/1352	Black Hill WA	0%	Acquired	100%
	E52/1529	Mt Padbury WA	100% (Note 1)	N/A	100% (Note 1)
	E52/2350	Butcher Bird WA	100%	N/A	100%
	E52/3606	Yanneri Bore WA	100%	N/A	100%
	E52/3704	Corner Bore WA	100%	N/A	100%
	E52/3706	Yanneri Pool WA	100%	Disposed	0%
	E52/3708	Millidie Creek WA	100%	N/A	100%
	E52/3710	Neds Gap WA	100%	Disposed	0%
	E52/3735	Limestone Bore WA	100%	N/A	100%
	E52/3738	Mt Padbury WA	100%	N/A	100%
	E52/3762	Dead Camel WA	100%	N/A	100%
	E52/3769	Kumarina WA	100%	N/A	100%
	E52/3779	Beyondie Bluff WA	100%	N/A	100%
	E52/3788	Neds Gap WA	100%	N/A	100%
	E52/3789	Coner Bore WA	100%	N/A	100%
	L52/211	Limestone Bore WA	100%	N/A	100%
	M52/1074	Yaneri Ridge WA	100%	N/A	100%
	E57/1060	Victory Well WA	20%	N/A	20%
	E59/2408	Twin Peaks WA	0%	Acquired	100%
	E63/2027	Lake Johnston WA	0%	Acquired	100%
	E69/3541	Cunyu Woolshed WA	100%	N/A	100%
	E80/5056	Eileen Bore WA	100%	N/A	100%

Notes:

1) 100% interest held in all minerals other than iron ore and manganese.