

Butcherbird Resource Infill Drilling Programme Assays Received

Highlights

- All assay results now received and compiled from the Butcherbird Resource infill drilling programme.
- Results will underpin a resource upgrade in preparation for Pre-Feasibility Study and maiden Reserve.
- Infill designed to target 25% Measured and 75% Indicated Resources over initial 20 year mine plan.
- IHC Robbins appointed to complete the resource upgrade which is currently in progress.
- Results in line with expectations in terms of geology, grades and thicknesses of mineralisation.

Element 25 Limited (“E25” or “Company”) is pleased to advise that assay results from resource infill drilling at the Company’s 100% owned Butcherbird High Purity Manganese Project have been received and compiled.

The resource infill drilling programme comprised 210 aircore holes for a total of 6,672m. The drilling was completed in late 2018. The results from the programme will form the basis of a revised mineral resource estimate which is expected to upgrade the planned starter pit area from Inferred and Indicated to Indicated and Measured categories as a basis for a maiden reserve, expected to be published with the PFS.

The assay results and geological logging of the drill holes both compare favourably with the existing drilling data in terms of geology as well as mineralised widths and grades of the ore zone, confirming the robustness of the current understanding of the deposit. Refer to Appendix 1 for a tabulation of the results.



Figure 1: X350 track mounted aircore drilling rig.

Company Snapshot

ASX Code:	E25	Board of Directors:		Element 25 Limited is developing the world class
Shares on Issue:	83.5M	Seamus Cornelius	Chairman	Butcherbird manganese project in Western Australia to
Share Price:	\$0.185	Justin Brown	ED	produce high purity manganese sulphate for lithium ion
Market Capitalisation:	\$15.4M	John Ribbons	NED	batteries and electrolytic manganese metal.
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element25.com.au	Australia			

IHC Robbins have been appointed to undertake the updated mineral resource estimate for the Yanneri Ridge Deposit which is the target area for ore supply to the proposed high purity manganese processing plant the subject of the PFS. IHC Robbins are part of the Royal IHC Group and provide multi-disciplinary mining and geological services to a range of clients both in Australia and overseas.

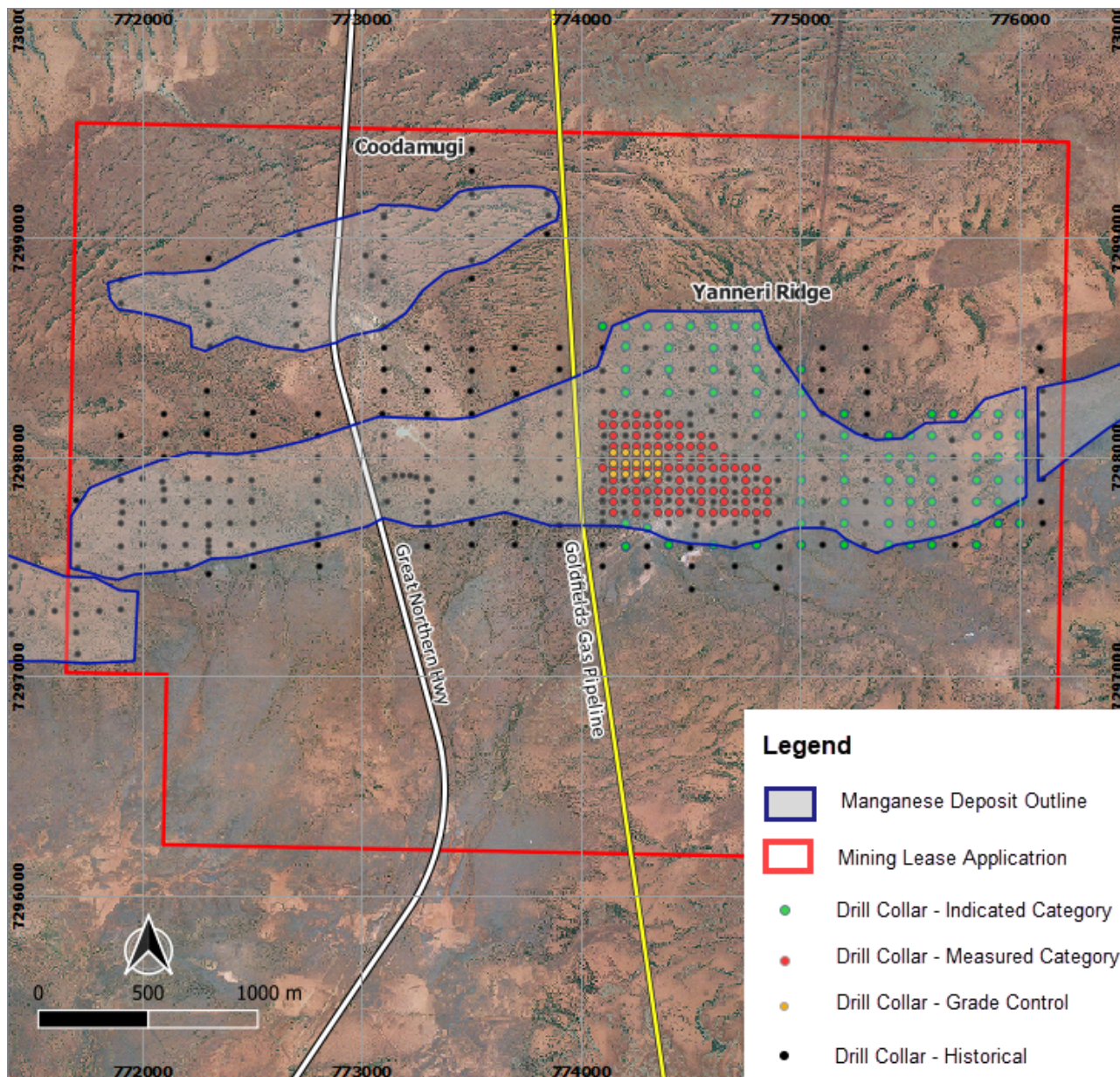


Figure 2: Completed infill drilling collar locations in relation to the previous drilling, Yanneri Ridge and Coodamudgi resource outlines and infrastructure.

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 180Mt of manganese ore¹. The Company has completed a positive 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.

The Butcherbird 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 further reducing energy costs.

Justin Brown

Executive 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>.

¹ Reference: Company ASX release dated 12 October 2017 (released under the Company's previous ticker MZM)

Appendix 1 - Tabulated Drilling Results

Significant intercepts from the resource infill drilling programme at the Yanneri Ridge manganese deposit are tabulated below. Assays are composited based on a cut-off grade of 10% Mn with up to 4m of consecutive 1m intervals below this limit in the composite.

Hole ID	Easting (GDA94)	Northing (GDA94)	RL	Dip	Total Depth	Depth From	Significant Intercept
BBAC00001	774099.24	7297849.54	636.31	-90	45	6	23m @ 11.56% Mn
BBAC00002	774100.73	7297949.4	632.8	-90	42	7	10m @ 14.26% Mn
BBAC00003	774103.38	7298150.93	627.46	-90	42	5	24m @ 11.86% Mn
BBAC00004	774151.59	7298198.9	626.77	-90	40	2	28m @ 11.95% Mn
BBAC00005	774149.77	7298153.17	627.72	-90	40	1	28m @ 11.71% Mn
BBAC00006	774150.6	7298101.85	629.17	-90	40	6	18m @ 12.68% Mn
BBAC00007	774148.28	7298052.87	631.08	-90	38	0	22m @ 11.3% Mn
BBAC00008	774149.1	7298026.18	631.99	-90	38	4	16m @ 13.23% Mn
BBAC00009	774150.94	7298001.46	632.4	-90	36	0	17m @ 12.93% Mn
BBAC00010	774148.88	7297953.27	633.5	-90	36	1	24m @ 10.21% Mn
BBAC00011	774150.7	7297973.53	632.82	-90	36	8	10m @ 12.73% Mn
BBAC00012	774150.16	7297922.99	634.67	-90	36	2	14m @ 11.18% Mn
BBAC00013	774152.68	7297894.99	635.42	-90	40	0	27m @ 10.68% Mn
BBAC00014	774149.75	7297851.51	635.81	-90	40	3	18m @ 14.26% Mn
BBAC00015	774151.34	7297799.81	638.57	-90	40	0	15m @ 14.04% Mn
BBAC00016	774149.41	7297752.58	639.41	-90	41	1	7m @ 11.95% Mn
BBAC00017	774197.72	7297853.26	637.83	-90	40	0	18m @ 13.37% Mn
BBAC00017	774197.72	7297853.26	637.83	-90	40	24	3m @ 10.47% Mn
BBAC00018	774199.91	7297926.18	635.66	-90	36	0	17m @ 13.41% Mn
BBAC00019	774199.75	7297949.93	634.88	-90	36	0	15m @ 12.02% Mn
BBAC00020	774198.87	7297975.76	633.97	-90	36	6	13m @ 13.02% Mn
BBAC00021	774197.9	7298029.09	632.52	-90	36	2	23m @ 11.27% Mn
BBAC00022	774199.32	7298053.98	631.7	-90	36	5	16m @ 12.89% Mn
BBAC00023	774197.54	7298148.84	628.58	-90	36	2	24m @ 11.39% Mn
BBAC00024	774248.46	7298197.17	627.34	-90	40	7	2m @ 11.85% Mn
BBAC00024	774248.46	7298197.17	627.34	-90	40	14	16m @ 12.65% Mn
BBAC00025	774248.64	7298147.48	628.85	-90	40	0	25m @ 11.96% Mn
BBAC00026	774248.19	7298094.82	630.33	-90	36	3	21m @ 11.89% Mn
BBAC00027	774247.64	7298047.15	631.69	-90	36	5	17m @ 14.59% Mn
BBAC00028	774250.12	7298024.52	632.41	-90	34	5	15m @ 12.68% Mn
BBAC00029	774247.21	7297996.29	633.29	-90	36	4	14m @ 11.95% Mn

Hole ID	Easting (GDA94)	Northing (GDA94)	RL	Dip	Total Depth	Depth From	Significant Intercept
BBAC00030	774248.18	7297971.41	634.18	-90	36	0	17m @ 11.35% Mn
BBAC00031	774248.3	7297945.73	635.09	-90	36	5	7m @ 15.01% Mn
BBAC00032	774250.92	7297923.65	635.66	-90	40	6	15m @ 12.43% Mn
BBAC00033	774247.76	7297894.8	636.59	-90	40	6	11m @ 13.09% Mn
BBAC00034	774247.26	7297846.29	638.6	-90	40	4	12m @ 16.47% Mn
BBAC00035	774247.98	7297798.39	640.19	-90	40	0	15m @ 13.89% Mn
BBAC00035	774247.98	7297798.39	640.19	-90	40	21	3m @ 11.5% Mn
BBAC00036	774248.05	7297750.36	640.12	-90	45	10	3m @ 11.47% Mn
BBAC00036	774248.05	7297750.36	640.12	-90	45	18	2m @ 12.6% Mn
BBAC00037	774301.63	7297850.27	637.39	-90	45	4	13m @ 14.36% Mn
BBAC00037	774301.63	7297850.27	637.39	-90	45	26	2m @ 13.4% Mn
BBAC00038	774298.01	7297926.61	633.83	-90	40	1	15m @ 13.93% Mn
BBAC00039	774296.84	7297948.59	633.34	-90	36	0	19m @ 13.84% Mn
BBAC00040	774299.03	7297974.53	632.82	-90	36	7	9m @ 12.41% Mn
BBAC00041	774302.08	7298028.2	631.63	-90	36	2	17m @ 14.12% Mn
BBAC00042	774297.78	7298049.35	631.22	-90	34	1	20m @ 13.5% Mn
BBAC00043	774298.1	7298149.61	628.57	-90	36	2	23m @ 12.54% Mn
BBAC00044	774345.59	7298195.36	626.98	-90	24	4	20m @ 11.58% Mn
BBAC00045	774347.38	7298148.6	627.99	-90	34	1	23m @ 11.57% Mn
BBAC00046	774347.43	7298099.81	629.23	-90	34	5	19m @ 11.94% Mn
BBAC00047	774348.41	7298049.68	630.01	-90	32	0	20m @ 12.75% Mn
BBAC00048	774351.48	7298024.38	630.35	-90	30	0	17m @ 12.42% Mn
BBAC00049	774347.43	7298000.29	630.58	-90	30	0	16m @ 14.08% Mn
BBAC00050	774349.53	7297976.93	630.71	-90	34	1	17m @ 14.26% Mn
BBAC00051	774349.26	7297948.68	631.08	-90	38	0	19m @ 14.74% Mn
BBAC00052	774347.42	7297925.18	631.12	-90	40	0	16m @ 15.4% Mn
BBAC00053	774349.93	7297901.42	632.08	-90	40	1	16m @ 13.84% Mn
BBAC00054	774355.02	7297849.57	636.06	-90	40	3	12m @ 17.13% Mn
BBAC00055	774349.44	7297799.16	636.7	-90	42	0	13m @ 13.59% Mn
BBAC00058	774448.04	7297806.67	630.66	-90	40	0	9m @ 11.86% Mn
BBAC00059	774397.78	7297850.59	633.64	-90	42	0	15m @ 13.32% Mn
BBAC00060	774400.45	7297946.45	629.41	-90	42	0	18m @ 12.79% Mn
BBAC00061	774400.91	7298047.51	627.98	-90	36	0	17m @ 13.35% Mn
BBAC00062	774397.11	7298146.73	627.22	-90	36	0	21m @ 12.36% Mn
BBAC00063	774447.13	7298150.94	626.37	-90	36	1	20m @ 12.34% Mn
BBAC00064	774449.87	7298102.25	626.58	-90	36	1	17m @ 12.55% Mn
BBAC00065	774448.12	7298051.73	626.49	-90	36	1	18m @ 13.12% Mn

Hole ID	Easting (GDA94)	Northing (GDA94)	RL	Dip	Total Depth	Depth From	Significant Intercept
BBAC00066	774448.57	7298003.5	626.81	-90	40	1	16m @ 13.11% Mn
BBAC00067	774449.41	7297947.98	628.57	-90	42	2	14m @ 15.23% Mn
BBAC00068	774448.16	7297907.65	630.34	-90	40	0	18m @ 14.16% Mn
BBAC00069	774445.69	7297857.96	631.55	-90	36	0	14m @ 16.3% Mn
BBAC00070	774497.87	7297852.23	629.82	-90	38	0	21m @ 11.72% Mn
BBAC00071	774495.99	7297949.57	627.41	-90	36	2	16m @ 13.65% Mn
BBAC00072	774498.1	7298051.39	625.44	-90	40	2	20m @ 13.09% Mn
BBAC00073	774551.62	7298095.73	624.68	-90	40	3	20m @ 12.65% Mn
BBAC00074	774548.89	7298048.35	624.67	-90	40	3	15m @ 12.69% Mn
BBAC00075	774550.2	7297997.02	624.72	-90	40	3	15m @ 16.57% Mn
BBAC00076	774549.87	7297946.74	626.31	-90	36	1	12m @ 10.55% Mn
BBAC00077	774550.17	7297897.56	627.43	-90	40	0	16m @ 11.71% Mn
BBAC00078	774549.16	7297848.42	628.34	-90	36	0	14m @ 10.79% Mn
BBAC00079	774550.11	7297796.27	627.35	-90	40	1	3m @ 12.1% Mn
BBAC00080	774551.11	7297749.3	627.48	-90	40	2	2m @ 14.1% Mn
BBAC00080	774551.11	7297749.3	627.48	-90	40	9	9m @ 11.61% Mn
BBAC00081	774603.43	7297750.09	626.88	-90	40	1	13m @ 13.49% Mn
BBAC00081	774603.43	7297750.09	626.88	-90	40	20	2m @ 13.75% Mn
BBAC00082	774601.85	7297849.19	626.89	-90	40	0	9m @ 11.53% Mn
BBAC00082	774601.85	7297849.19	626.89	-90	40	15	4m @ 10.24% Mn
BBAC00083	774602.11	7297948.67	625.41	-90	40	4	9m @ 13.4% Mn
BBAC00084	774599.83	7298051.57	623.64	-90	40	2	16m @ 12.41% Mn
BBAC00085	774652.26	7297999.07	624.18	-90	40	4	13m @ 13.52% Mn
BBAC00086	774649.56	7297946.39	625.36	-90	40	3	11m @ 12.49% Mn
BBAC00087	774650.98	7297898.6	625.89	-90	36	0	11m @ 12.47% Mn
BBAC00088	774648.58	7297848.18	625.68	-90	40	2	6m @ 11.99% Mn
BBAC00088	774648.58	7297848.18	625.68	-90	40	13	4m @ 12.12% Mn
BBAC00089	774648.97	7297798.57	625.48	-90	42	0	17m @ 11.65% Mn
BBAC00090	774649.43	7297749.9	626.44	-90	36	0	16m @ 11.3% Mn
BBAC00091	774699.61	7297751.63	625.74	-90	25	0	17m @ 11.6% Mn
BBAC00092	774695.25	7297950.84	624.61	-90	24	1	11m @ 15.3% Mn
BBAC00093	774753.64	7297945.44	623.88	-90	20	1	13m @ 11.75% Mn
BBAC00094	774751.7	7297901.85	623.69	-90	30	1	6m @ 11.66% Mn
BBAC00095	774760	7297839.73	623.49	-90	40	2	10m @ 11.62% Mn
BBAC00096	774759.99	7297790.39	624.15	-90	36	3	12m @ 13.72% Mn
BBAC00097	774751.66	7297746.02	625.23	-90	27	1	15m @ 12.34% Mn
BBAC00098	774800.5	7297745.83	624.39	-90	24	0	14m @ 12.74% Mn

Hole ID	Easting (GDA94)	Northing (GDA94)	RL	Dip	Total Depth	Depth From	Significant Intercept
BBAC00099	774801.91	7297852.34	622.54	-90	32	1	15m @ 11.89% Mn
BBAC00100	774803.43	7297944.17	622.65	-90	24	1	11m @ 12.06% Mn
BBAC00101	774849.77	7297900.12	621.96	-90	36	8	10m @ 11.38% Mn
BBAC00102	774848.86	7297850.28	621.87	-90	36	0	23m @ 12.9% Mn
BBAC00103	774848.22	7297800.12	622.7	-90	30	3	12m @ 11.66% Mn
BBAC00104	774850.1	7297749.04	623.62	-90	30	0	11m @ 12.77% Mn
BBAC00108	774200.38	7297699.08	632.76	-90	30	13	2m @ 10.6% Mn
BBAC00109	774401.84	7297597.47	624.47	-90	22	4	3m @ 12.33% Mn
BBAC00114	775003.55	7298097.85	618.44	-90	13	0	3m @ 14.2% Mn
BBAC00115	775005.36	7298004.4	618.98	-90	20	0	18m @ 12.82% Mn
BBAC00116	775002.49	7297898.28	619.6	-90	16	0	2m @ 19.4% Mn
BBAC00116	775002.49	7297898.28	619.6	-90	16	12	3m @ 11.2% Mn
BBAC00117	774999.08	7297796.69	619.68	-90	24	1	15m @ 10.17% Mn
BBAC00121	775200.45	7297703.57	615.62	-90	26	0	7m @ 11.43% Mn
BBAC00122	775200.09	7297797.39	616.24	-90	22	6	14m @ 12.59% Mn
BBAC00123	775201.57	7297900.13	616.6	-90	17	13	3m @ 11.8% Mn
BBAC00125	775201.49	7298100.48	616.02	-90	26	19	5m @ 11.94% Mn
BBAC00129	775399.24	7297901.18	613.93	-90	20	13	5m @ 12.92% Mn
BBAC00130	775401.04	7297801.07	613.9	-90	16	4	12m @ 10.58% Mn
BBAC00131	775396.96	7297693.9	613.47	-90	17	1	13m @ 11.56% Mn
BBAC00134	775496.78	7297700.9	612.95	-90	14	1	13m @ 11.4% Mn
BBAC00135	775503.39	7297802.82	613.25	-90	17	0	17m @ 10.24% Mn
BBAC00136	775501.03	7297898.63	613.19	-90	16	11	2m @ 11.9% Mn
BBAC00137	775500.3	7298001.18	613.04	-90	14	1	2m @ 13.75% Mn
BBAC00139	775600.68	7298201.01	612.74	-90	15	13	2m @ 13.7% Mn
BBAC00141	775597.84	7298000.03	612.27	-90	15	12	3m @ 10.69% Mn
BBAC00142	775602.3	7297897.22	612.23	-90	13	1	12m @ 13.03% Mn
BBAC00143	775599.45	7297797.82	612.25	-90	12	3	9m @ 11.13% Mn
BBAC00144	775604.98	7297699.7	612.34	-90	14	0	10m @ 13.15% Mn
BBAC00147	775798.69	7297703.83	610.58	-90	16	0	2m @ 15% Mn
BBAC00148	775803.24	7297798.47	610.73	-90	15	2	2m @ 12.05% Mn
BBAC00149	775804	7297900.34	611.04	-90	17	1	13m @ 13.86% Mn
BBAC00150	775799.78	7298004.89	611.54	-90	19	8	10m @ 13.22% Mn
BBAC00151	775801.62	7298098.8	611.65	-90	20	4	5m @ 11.2% Mn
BBAC00154	775896.45	7298200.13	612.02	-90	20	15	5m @ 11.01% Mn
BBAC00155	775896.28	7298099.34	611.64	-90	20	7	3m @ 10.9% Mn
BBAC00155	775896.28	7298099.34	611.64	-90	20	16	4m @ 11.13% Mn

Hole ID	Easting (GDA94)	Northing (GDA94)	RL	Dip	Total Depth	Depth From	Significant Intercept
BBAC00156	775897.06	7297998.7	611.49	-90	16	4	11m @ 11.29% Mn
BBAC00157	775895.54	7297897.3	611.06	-90	14	4	6m @ 11.31% Mn
BBAC00162	775994.19	7297901.12	613.94	-90	14	4	2m @ 10.3% Mn
BBAC00163	775997.37	7298001.15	611.37	-90	30	0	15m @ 12.08% Mn
BBAC00164	775993.64	7298097.62	611.61	-90	20	5	2m @ 12% Mn
BBAC00164	775993.64	7298097.62	611.61	-90	20	12	8m @ 13.85% Mn
BBAC00165	775997.09	7298201	611.77	-90	23	13	9m @ 11.28% Mn
BBAC00166	776000.83	7298297.33	612.12	-90	40	20	9m @ 10.19% Mn
BBAC00166	776000.83	7298297.33	612.12	-90	40	34	6m @ 10.92% Mn
BBAC00170	774797.03	7298199.95	620.37	-90	20	0	20m @ 11.19% Mn
BBAC00171	774802.1	7298308.96	619.26	-90	24	6	18m @ 10.78% Mn
BBAC00173	774803.76	7298424.33	618.52	-90	24	15	9m @ 10.62% Mn
BBAC00174	774796.76	7298599	618.03	-90	28	19	2m @ 10.75% Mn
BBAC00178	774199.62	7297962.53	634.39	-90	33	5	12m @ 12.94% Mn
BBAC00179	774298.51	7297937.26	633.54	-90	34	0	15m @ 14.16% Mn
BBAC00180	774599.13	7298500.67	620.77	-90	24	13	2m @ 12.05% Mn
BBAC00181	774601.88	7298404.13	621.32	-90	38	6	9m @ 11.45% Mn
BBAC00181	774601.88	7298404.13	621.32	-90	38	18	14m @ 11.07% Mn
BBAC00182	774592.8	7298298.41	622.14	-90	40	6	22m @ 15.23% Mn
BBAC00184	774391.83	7298507.33	622.12	-90	26	3	2m @ 11.9% Mn
BBAC00184	774391.83	7298507.33	622.12	-90	26	18	2m @ 13.35% Mn
BBAC00186	774400.81	7298301.64	624.36	-90	27	0	10m @ 10.12% Mn
BBAC00186	774400.81	7298301.64	624.36	-90	27	12	15m @ 11.64% Mn
BBAC00190	774199.84	7298398.4	624.3	-90	27	3	2m @ 10.8% Mn
BBAC00190	774199.84	7298398.4	624.3	-90	27	19	3m @ 16.27% Mn
BBAC00191	774201.6	7298305.78	625.13	-90	26	11	11m @ 10.75% Mn

Competent Persons Statement

The information in this report that relates to Exploration Results, Exploration Targets, Mineral Resources and Mineral Reserves 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, Exploration Targets, Mineral Resources and Mineral Reserves 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

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 12 October 2017. 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.

Classification	Tonnes (t)	Grade Mn (%)
Indicated	22.5	12.0
Inferred	158.3	10.6
TOTAL	180.8	10.8

Notes:

- Reported at 8% Mn cut-off
- All figures rounded to reflect the appropriate level of confidence (apparent differences may occur due to rounding)

JORC Code, 2012 Edition – Table 1 – Butcherbird Project Hydrometallurgical Test Work

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. 	<ul style="list-style-type: none"> Aircore blade and percussion drill chips are collected through a cyclone and cone splitter at 1m intervals. The spitter is cleaned at regular intervals during drilling. The splitter is cleaned and levelled at the end of each hole. Geological logs are collected during drilling. Mineralisation is determined quantitatively via assay Samples are pulverized to 75 µm, with elements determined by whole rock XRF Fusion
Drilling techniques	<ul style="list-style-type: none"> Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> An X350 Aircore Drill Rig mounted on a VD3000 Morooka track base was used with a 3 ½” drill string and a combination of blade and percussion hammer.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> Recoveries are noted at the time of drilling and recorded in the MZM database. Recoveries are noted at the time of drilling and recorded in the MZM database. The sample splitter is cleaned at the end of each rod. Wet samples due to excess ground water are noted where present. No relationship between grade and recovery has yet been established.
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> All samples have been logged to a level of detail to support mineral resource estimations including lithology, alteration and mineralisation. The entire length of the hole is geologically logged. Chip samples are collected in chip trays for each 1m interval.

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Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> • Aircore chips are cone split and sampled dry where possible, and wet when excess ground water could not be prevented. • Sample condition (wet, dry or damp) is recorded at the time of logging. • Each 1m sample (approx. 2-3kg) is dried and pulverised to 85% passing 75µm in the laboratory. • Field duplicates are collected at a minimum spacing of every 50m, and additionally where required. • Sample sizes are considered appropriate for the nature of the targeted mineralisation. • Samples are routinely assayed for Al, As, Ca, Cl, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, P, Pb, S, Si, Ti, V, Zn, LOI.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	<ul style="list-style-type: none"> • QAQC sampling procedures are used and include the use of duplicates (every 50m), standards and blanks. • The samples were assayed by whole rock XRF fusion. • The samples have been assayed for Al, As, Ca, Cl, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, P, Pb, S, Si, Ti, V, Zn, LOI.
Verification of sampling and assaying	<ul style="list-style-type: none"> • The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. 	<ul style="list-style-type: none"> • All data has been checked internally for accuracy by senior MZM geological staff. • All data is collected via Geobank Mobile software and uploaded into the MZM Geobank Database following validation. • No adjustments have been made to assay data.
Location of data points	<ul style="list-style-type: none"> • Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> • All collar coordinates were collected using differential GPS in MGA 94 – Zone 51.
Data spacing and distribution	<ul style="list-style-type: none"> • Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. 	<ul style="list-style-type: none"> • Drill hole collars are spaced at regular intervals, to three drill densities, 100m X 100m, 50m X 50m or 25m X 25m. • The different drilling densities were designed to support different resource categories.

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	<ul style="list-style-type: none"> Whether sample compositing has been applied. 	<ul style="list-style-type: none"> Hole spacing is appropriate to support the recalculation of the mineral resource estimate to Indicated and Measured classifications. No sample compositing has been applied.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> All drill holes are drilled vertically as the stratigraphy is generally sub-horizontal. There is no known sample biasing.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Chain of custody of the samples is managed by company representatives and is considered appropriate. All samples are bagged in a tied numbered calico bag, grouped into larger polyweave bags and cable tied. Polyweave bags are placed into larger bulky bags with a sample submission sheet and sealed. The bags are delivered directly to SGS laboratories in Perth.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> The data and sampling techniques are reviewed internally.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. 	<ul style="list-style-type: none"> The Butcherbird Project consists of granted exploration license E52/2350 and Mining Lease Application M52/1074. The tenure is 100% owned by Element 25 Ltd.

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land tenure status	<ul style="list-style-type: none"> The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> The historical exploration data has been collected by Element 25 Limited and has been reported to high standards. The methods of exploration and techniques used are considered appropriate for the deposit types sought (Mn)
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> Butcherbird is a stratiform sedimentary manganese deposit. The deposits are hosted within the Ilgarari Formation which is generally flat lying with gentle open folding in places. The manganese mineralisation within the ore zones is divided into three distinctive units – a high grade manganiferous cap, supergene enriched manganiferous laterite and basal shale.
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. 	<ul style="list-style-type: none"> See historical ASX releases regarding the Butcherbird Mineral Resources.
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> Data have been aggregated based on an 8% Mn cut, with up to 4m of contiguous material below this threshold.

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Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	<ul style="list-style-type: none"> The mineralisation is flat lying, the drilling is vertical and the intersections are true width.
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> NA
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> NA
Other substantive exploration data	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> NA
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> The next phase of work will focus on a recalculation of the mineral resource estimate for the Yanneri Ridge manganese deposit.