



Appendix 1

Updated Project Description

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Table A1.1
Dubbo Project (MOD 1) – Updated Project Description

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Component	Project Description – MOD 1 (this Modification Report)																								
Project Life	<ul style="list-style-type: none"> • Mining operations until December 2045, including: <ul style="list-style-type: none"> – a two to three year construction and site establishment phase; and – a 20 year operational phase (i.e. mining and processing). 																								
Operational Hours	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th data-bbox="427 475 869 512">Activity</th> <th data-bbox="869 475 1133 512">Monday to Friday</th> <th data-bbox="1133 475 1397 512">Saturday</th> <th data-bbox="1397 475 1697 512">Sunday and Public Holidays</th> </tr> </thead> <tbody> <tr> <td data-bbox="427 512 869 549">Mining</td> <td data-bbox="869 512 1133 549">7:00am – 6:00pm</td> <td data-bbox="1133 512 1397 549">8:00am to 5:00pm</td> <td data-bbox="1397 512 1697 549">nil</td> </tr> <tr> <td data-bbox="427 549 869 585">Processing and receipt of reagents</td> <td colspan="3" data-bbox="869 549 1697 585">24-hours per day, 7 days per week</td> </tr> <tr> <td data-bbox="427 585 869 622">Construction – linear infrastructure</td> <td data-bbox="869 585 1133 622">7:00am – 6:00pm</td> <td data-bbox="1133 585 1397 622">8:00am to 1:00pm</td> <td data-bbox="1397 585 1697 622">nil</td> </tr> <tr> <td data-bbox="427 622 869 659">Construction – other</td> <td colspan="3" data-bbox="869 622 1697 659">24-hours per day, 7 days per week</td> </tr> <tr> <td data-bbox="427 659 869 695">Dispatch of products & receipt of limestone</td> <td data-bbox="869 659 1133 695">6:00am – 10:00pm</td> <td data-bbox="1133 659 1397 695">8:00am to 5:00pm</td> <td data-bbox="1397 659 1697 695">nil</td> </tr> </tbody> </table>	Activity	Monday to Friday	Saturday	Sunday and Public Holidays	Mining	7:00am – 6:00pm	8:00am to 5:00pm	nil	Processing and receipt of reagents	24-hours per day, 7 days per week			Construction – linear infrastructure	7:00am – 6:00pm	8:00am to 1:00pm	nil	Construction – other	24-hours per day, 7 days per week			Dispatch of products & receipt of limestone	6:00am – 10:00pm	8:00am to 5:00pm	nil
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Site Layout and Disturbance	<ul style="list-style-type: none"> • Schedule of land as per Figure A1.1 and Table A1.2. • Project Site as per: <ul style="list-style-type: none"> – Figure 5 (Biodiversity Offset Area) of this Modification Report; – Figure 7 (Modified Project Site Layout) of this Modification Report; and – Figure 8 (Modified Processing Plant and Administration Area) of this Modification Report. • Disturbance footprint of approximately 780.75ha (including Approved Disturbance Areas Retained for Future Use). • Clearing of approximately 415.3ha of native vegetation (including Approved Disturbance Areas Retained for Future Use). 																								
Mining	<ul style="list-style-type: none"> • Development of a single Open Cut to a maximum depth of 360m AHD. • Extraction and processing of up to 1 million tonnes of ore per calendar year. • Standard drill, blast and haul methods. 																								
Waste Rock Management	<ul style="list-style-type: none"> • Construction of a single Waste Rock Emplacement to a maximum height of 42m above existing ground level. 																								
Processing Operations	<ul style="list-style-type: none"> • Ore stockpiling at the ROM Pad. • Crushing and grinding circuit. • Sulphuric acid production. • Roasting circuit. • Solvent extraction circuit. 																								



Table A1.1 (Cont'd)
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Component	Project Description – MOD 1 (this Modification Report)
Processing Operations (Cont'd)	<ul style="list-style-type: none"> Limited refining. Construction and operation of a Chlor-alkali Plant for the production of hydrochloric acid and sodium hydroxide. Construction and operation of a brine concentrator.
Solid Residue Management	<ul style="list-style-type: none"> Construction of a Solid Residue Storage Facility to a maximum height of 368.5m AHD or up to 35m above the natural surface (plus approximately 2m of capping material to be applied during rehabilitation). Solid residue as slurry (neutral pH) pumped to the Solid Residue Storage Facility for drying and consolidation. 22.3Mm³ of solid residue waste generated over the life of the Project.
Liquid Residue & Salt Management	<ul style="list-style-type: none"> One Liquid Residue Storage Facility and Salt Encapsulation Cells. Liquid residue processed using the brine concentrator to produce crystallised salt. Residual liquid residue pumped to Liquid Residue Storage Facility for evaporation. Crystallised salts conveyed and/or trucked to the Salt Encapsulation Cells. Between 6Mt and 7Mt of salt waste generated over the life of the Project.
Water Management	<ul style="list-style-type: none"> Use of up to 2GLpa of water sourced from licenced sources within the Macquarie River and the Upper Macquarie Alluvial Aquifer. Construction and operation of the Macquarie River Water Supply Pipeline and licenced groundwater bores. Re-use of water from the proposed Brine Concentrator.
Transportation Operations	<ul style="list-style-type: none"> Site access via Toongi Road. Combination of rail and road transportation operations. Road – up to 75 laden truck movements per day or 16 per hour. Rail – up to 3 trains per week.
Linear Infrastructure	<ul style="list-style-type: none"> Construction and use of a water pipeline from the Macquarie River and approved “Sweet Water” supply bore to the Project Site. Upgrading of a 27km section of the disused Dubbo-Molong Rail Line. Upgrading of selected sections of Obley and Toongi Roads between the Newell Highway and the Project Site and construction of the site entrance and access road. Implementation of noise mitigation measures, in consultation with the Taronga Western Plains Zoo, to achieve a road noise reduction in the vicinity of Taronga Western Plains Zoo equivalent to that provided by a road noise barrier (i.e. 5dB to 10dB). Construction and use of a gas pipeline with the rail corridor for the Dubbo – Molong Railway is no longer proposed, with separate approval to be sought for a new alignment.



Table A1.1 (Cont'd)
Dubbo Project (MOD 1) – Updated Project Description

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Component	Project Description – MOD 1 (this Modification Report)
Employment	<ul style="list-style-type: none"> • Employment: <ul style="list-style-type: none"> – Construction and site establishment phase: average of 625 positions, with a peak of up to 1 000 positions. – Operational phase: 274 positions.
Final Landform and Land Use	<ul style="list-style-type: none"> • Final landform as per Figure 15 of this Modification Report. • Final land uses as per Figure 17 of this Modification Report, including the following. <ul style="list-style-type: none"> – Vegetation and habitat conservation and enhancement (managed as part of the Biodiversity Offset Site). – Agricultural land uses. – Biodiversity conservation. – Potential future industrial land uses (subject to separate approval).

Table A1.2
Dubbo Project (MOD 1) – Schedule of Lands

Project Site		Macquarie River Water Pipeline	Toongi–Dubbo Rail
Part Lot 311 DP595631	Lot 271 DP593668	Lot 311 DP595631	Toongi – Dubbo Rail Reserve
Part Lot 35 DP753220	Part Lot 1 DP133581	Lot 27 DP753220	Purvis Lane Reserve
Part Lot 18 DP753252	Lot A & B DP439352	Lot 62-63 DP753220	Public Road Network
Lot 19 DP 753252	Lot A DP391069	Lot 1, 2, 3, 5 and Lot 30 DP753220	Toongi Road Reserve
Lot 55 DP 753252	Lot B DP 391069	Lots 1 to 4 DP753226	Obley Road Reserve
		Lot 43 DP754331	
Lots 1-8 DP1201149	Lot 50 DP 753252	Road Reserves of:	
Lot 7300 DP1149010	Lot X DP 405495	<ul style="list-style-type: none"> • Toongi Road (as it traverses Lot 311 DP595631); and • Benolong Road (between Lot 63 and 30 DP753220). 	
Part Lot 3 DP 841752	Lot 1 DP818802	Unformed crown road reserves:	
Part Lot 5223 DP1242581		<ul style="list-style-type: none"> • between Lots 27 and 62 of DP753220; • between Lots 1 and 30 of DP753320; and • between Lots 3 and 5 of DP753320. 	
Road Reserve of Eulandool Road			



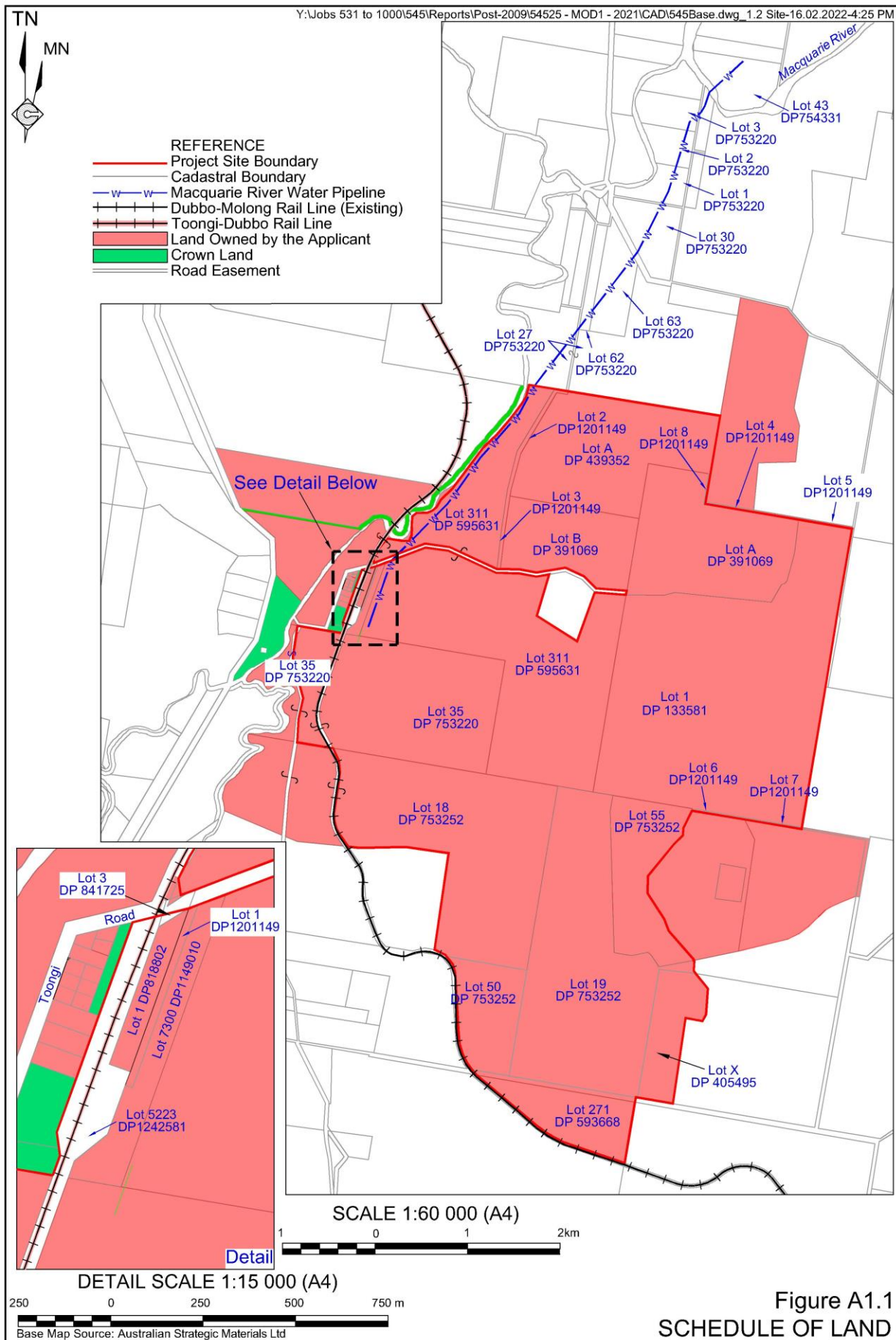
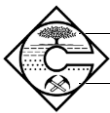


Figure A1.1
SCHEDULE OF LAND