

MARDIE OPTIMISATION PROJECT

MARDIE MINERALS PTY LTD

PROPOSAL CONTENT DOCUMENT

Table 1: General Proposal Content Description

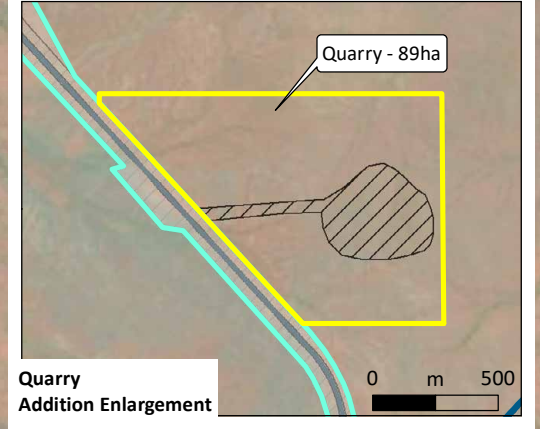
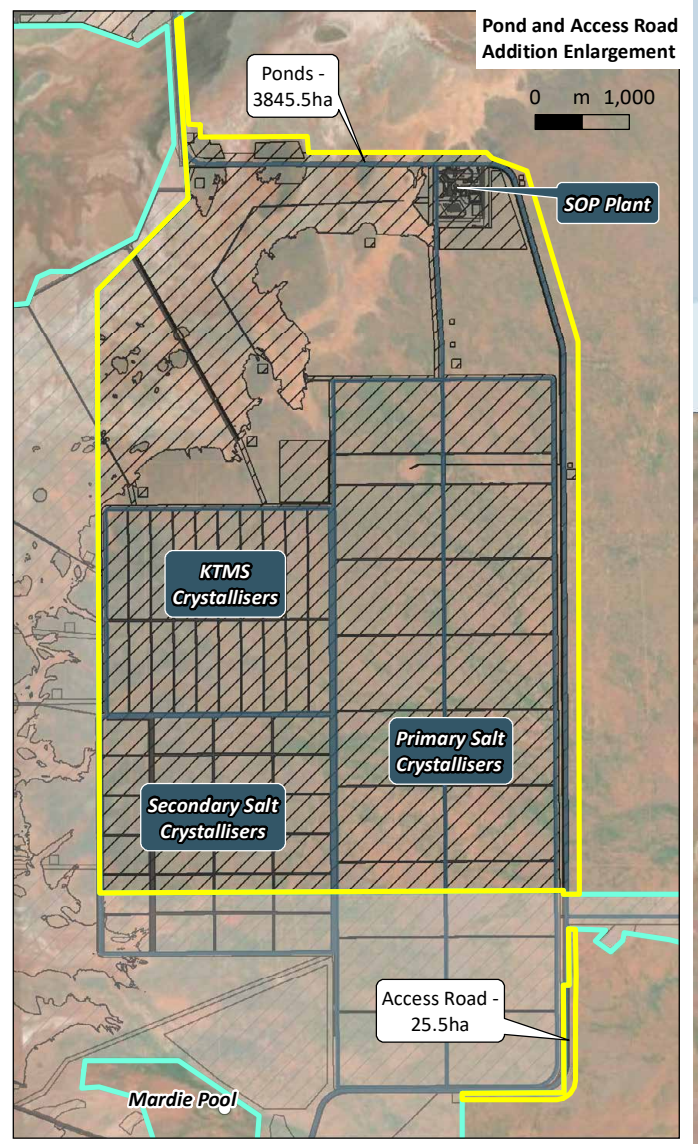
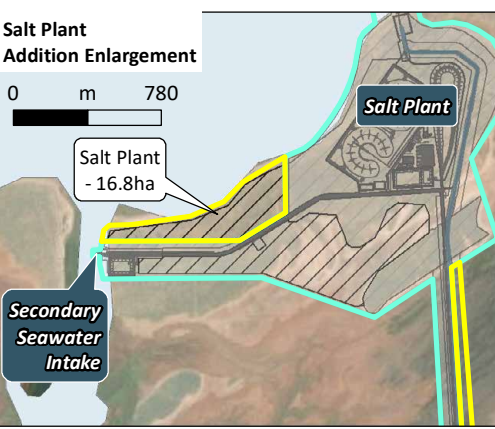
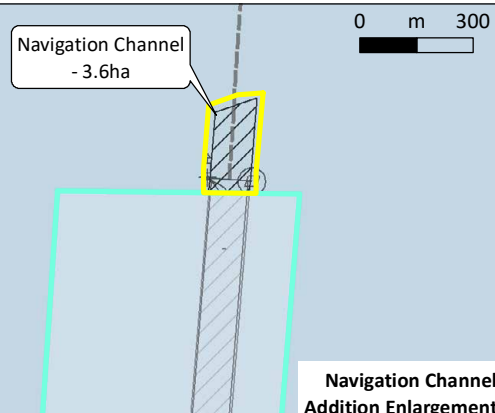
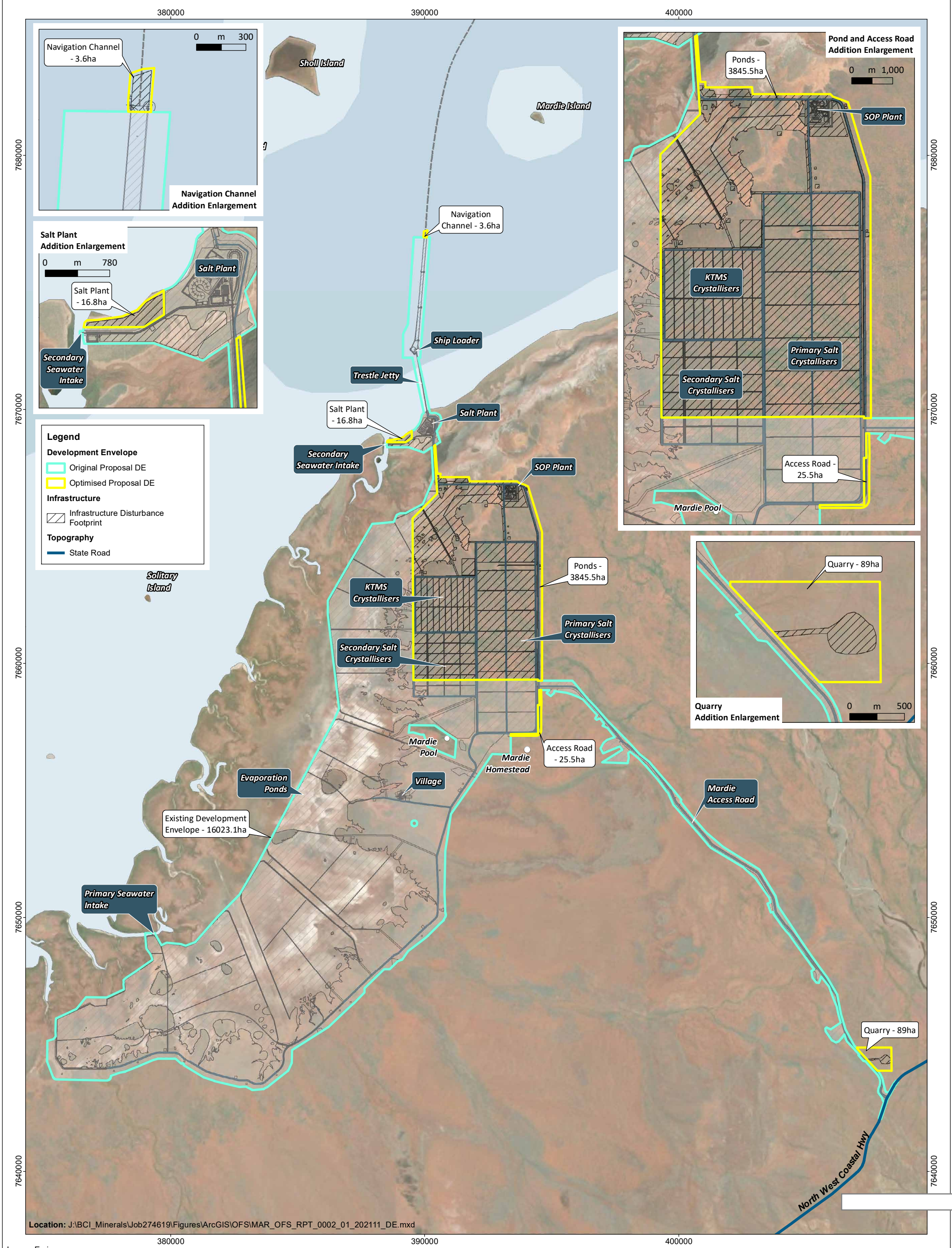
Proposal Title	Optimised Mardie Project
Proponent Name	Mardie Minerals Pty Ltd
Short Description	<p>Mardie Minerals Pty Ltd has approval to develop a greenfield high-quality salt and Sulphate of Potash (SoP) project and associated export facility at Mardie, approximately 80 km south-west of Karratha, in the Pilbara region of WA. The proposal will produce a high purity salt product, SoP and other products that can be derived from sea water.</p> <p>The Optimised Proposal includes the expansion of concentrator and crystalliser ponds, an increased salt and SoP production rate, new secondary seawater intake option, changes to drainage at Mardie Road, a port facility laydown area, access road widening, a quarry and minor changes to the dredge channel.</p>

Table 2: Proposal Content Elements (changed elements in blue)

Element	Location	Existing Proposal extent, capacity or range	Proposed amendment	Combined extent, capacity or range
Physical Elements				
Terrestrial Development Envelope	Figure 1	15,667 hectares (ha)	Additional 3,978 ha	19,645 ha
Clearing of vegetation in good-to-excellent condition	Figure 1	No more than 2,319 ha within the 15,667 ha terrestrial development envelope.	Additional 695 ha within a larger terrestrial development envelope	No more than 3,014 ha within the 19,645 ha terrestrial development envelope.
Direct and indirect impacts to Horseflat PEC	Figure 1	No more than 145 ha direct impacts and 20 ha indirect impacts within the 15,667 ha terrestrial development envelope.	No change	No more than 145 ha direct impacts and 20 ha indirect impacts within the 19,645 ha terrestrial development envelope.
Clearing of landward samphire	Figure 1	No more than 854 ha within the 15,667 ha terrestrial development envelope, subject to the requirements of condition 5-1(4).	Additional 9 ha within a larger terrestrial development envelope	No more than 863 ha within the 19,645 ha terrestrial development envelope, subject to the requirements of condition 5-1(4).
Direct impacts to coastal samphire	Figure 1	No more than 296 ha within the 15,667 ha terrestrial development envelope.	Additional 34 ha within a larger terrestrial development envelope	No more than 330 ha within the 19,645 ha terrestrial development envelope.
Direct impacts to of algal mat	Figure 1	No more than 880 ha within the 15,667 ha terrestrial development envelope.	No change	No more than 880 ha within the 19,645 ha terrestrial development envelope.
Direct disturbance to	Figure 1	No more than 13 ha within the 15,667 ha	No change	No more than 13 ha within the 19,645 ha

Element	Location	Existing Proposal extent, capacity or range	Proposed amendment	Combined extent, capacity or range
of mangrove habitat outside of the Robe River Delta Mangrove Management Area (RRDMMA)		terrestrial development envelope.		terrestrial development envelope.
Direct Disturbance to mangrove habitat inside the RRDMMA	Figure 1	No more than 4 ha of clearing within the RRDMMA, subject to the requirements of condition 2.	No change	No more than 4 ha of clearing within the RRDMMA, subject to the requirements of condition 2.
Dredge Development Envelope	Figure 1	304 ha	Additional 3.5 ha	307.5 ha
Dredging	Figure 1	No more than 800,000 m ³ , disturbing no more than 55 ha within the 304 ha dredge development envelope.	No change to dredge volume Additional 10 ha of disturbance within larger development envelope	No more than 800,000 m ³ , disturbing no more than 65 ha within the 307.5 ha dredge development envelope.
Drainage corridors to maintain surface water flows.	Figure 1	Minimum of two drainage corridors of a minimum 200 m wide, aligned with existing natural drainage lines.	No change	No change
Clearing of foraging habitat for the Pilbara leaf-nosed bat	Figure 1	No more than 2,562 ha within the 15,667 ha terrestrial development envelope.	Additional 692 ha within a larger terrestrial development envelope	No more than 3,254 ha within the 19,645 ha terrestrial development envelope.
Clearing of foraging habitat for the Northern coastal free-tailed bat	Figure 1	No more than 1,132 ha within the 15,667 ha terrestrial development envelope.	Additional 54 ha within a larger terrestrial development envelope	No more than 1,186 ha within the 19,645 ha terrestrial development envelope.
Clearing of habitat for the Pilbara Olive Python	Figure 1	No more than 6 ha within the 15,667 ha terrestrial development envelope.	No change	No more than 6 ha within the 19,645 ha terrestrial development envelope.
Clearing of foraging habitat for the Northern Quoll	Figure 1	No more than 64.5 ha within the 15,667 ha terrestrial development envelope.	Additional 15.5 ha within a larger terrestrial development envelope	No more than 80 ha within the 19,645 ha terrestrial development envelope.
Operational Elements				
Discharge of bitterns, including desalination plant bitterns	Figure 1	No greater than 3.6 gigalitres per annum (GL/a) with a specific gravity no more than 1.25 via diffuser into the designated LEPA shown on Figure 1.	Additional 1.9 GL/a within a revised LEPA boundary	No greater than 5.5 GL/a with a specific gravity no more than 1.25 via diffuser into the designated LEPA shown on Figure 1.
Seawater intake	Figure 1	Seawater intake not exceeding 0.15 m/s through intake pipes	No change	No change

Element	Location	Existing Proposal extent, capacity or range	Proposed amendment	Combined extent, capacity or range
		fitted with four-side screens.		
Groundwater	N/A	No dewatering of groundwater for any reason except to meet the requirements of condition 3-6.	No change	No change
Greenhouse gas emissions				
Construction				
Scope 1	N/A	45,760 tCO2-e per year	12,087 tCO2-e per year (estimate)	57,847 tCO2-e per year
Scope 2	N/A	None	No change	None
Scope 3	N/A	Unlikely to be significant	No change	Unlikely to be significant
Operation				
Scope 1	N/A	53,292 tCO2-e per year	Additional 11,506 tCO2-e per year (conservative estimate)	64,798 tCO2-e per year
Scope 2	N/A	None	No change	None
Scope 3	N/A	Unlikely to be significant	No change	Unlikely to be significant
Rehabilitation and closure				
Proposal infrastructure to be removed within 3 years of closure Construction disturbance that is not required for operations is to be rehabilitated				
Timing Elements				
Mine life	N/A	Up to 63 years from issue of this statement (MS 1175).	No change	No change



Legend

Development Envelope

- Original Proposal DE
- Optimised Proposal DE

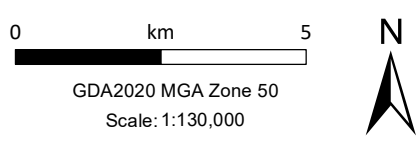
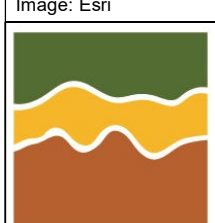
Infrastructure

- Infrastructure Disturbance Footprint

Topography

- State Road

Location: J:\BCI_Minerals\Job274619\Figures\ArcGIS\OFS\IMAR_OFS_RPT_0002_01_202111_DE.mxd



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Mardie Project Optimised Proposal Development Envelopes and Indicative Disturbance Footprint

Figure:
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