

**Ausrocks Pty Ltd**

ABN 64 056 939 014

Unit 3/50 Northlink PI, Virginia QLD 4014

PO Box 359, Virginia BC QLD 4014

(07) 3161 4108

[www.ausrocks.com.au](http://www.ausrocks.com.au)



7 February 2024

Permit and Licence Management  
Department of Environment, Science and Innovation  
via email: [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

**APPLICATION TO AMEND ENVIRONMENTAL AUTHORITY (EPML00382513)**

Dear PALM,

Ausrocks Resource Consultants (ARC) on behalf of Terrequip Miles Pty Ltd (Terrequip) are applying to amend Environmental Authority (EA) EPML00382513. The reason for application is to amend the following items:

- '*Schedule C – Table 4 (Storage Design)*' – amend the number of allowable sediment dams on ML5902 and ML5909, and extend the location of allowable sediment dams to all mining leases on the EA;
- '*Schedule F – Table 1 (Final Land Use and Rehabilitation Approval Schedule)*' – update the post-mine land description for active pits to include both marginal grazing and water storage post-mine land use options; and
- '*Schedule F – Table 1 (Final Land Use and Rehabilitation Approval Schedule)*' – extend the approval schedule to all mining leases on the EA.

Justification for the proposed amendments are further described in the enclosed attachments.

If you have any questions, please do not hesitate to contact us.

Sincerely,

A handwritten signature in black ink, appearing to read 'Carl Morandy', is positioned above the printed name.

Carl Morandy

Managing Director

**Encl-**

**Attachment 1. Site Layout Plans**

**Attachment 2. Section 12. Seek to Vary Conditions**

**Attachment 3. Section 13. Describe the Proposed Amendment**

**Attachment 4. Section 14 – Description of the Land Affected by the Proposed Amendment**

**Attachment 5. Section 22 – Environmental Values**

**Attachment 6. Section 23 – Waste**



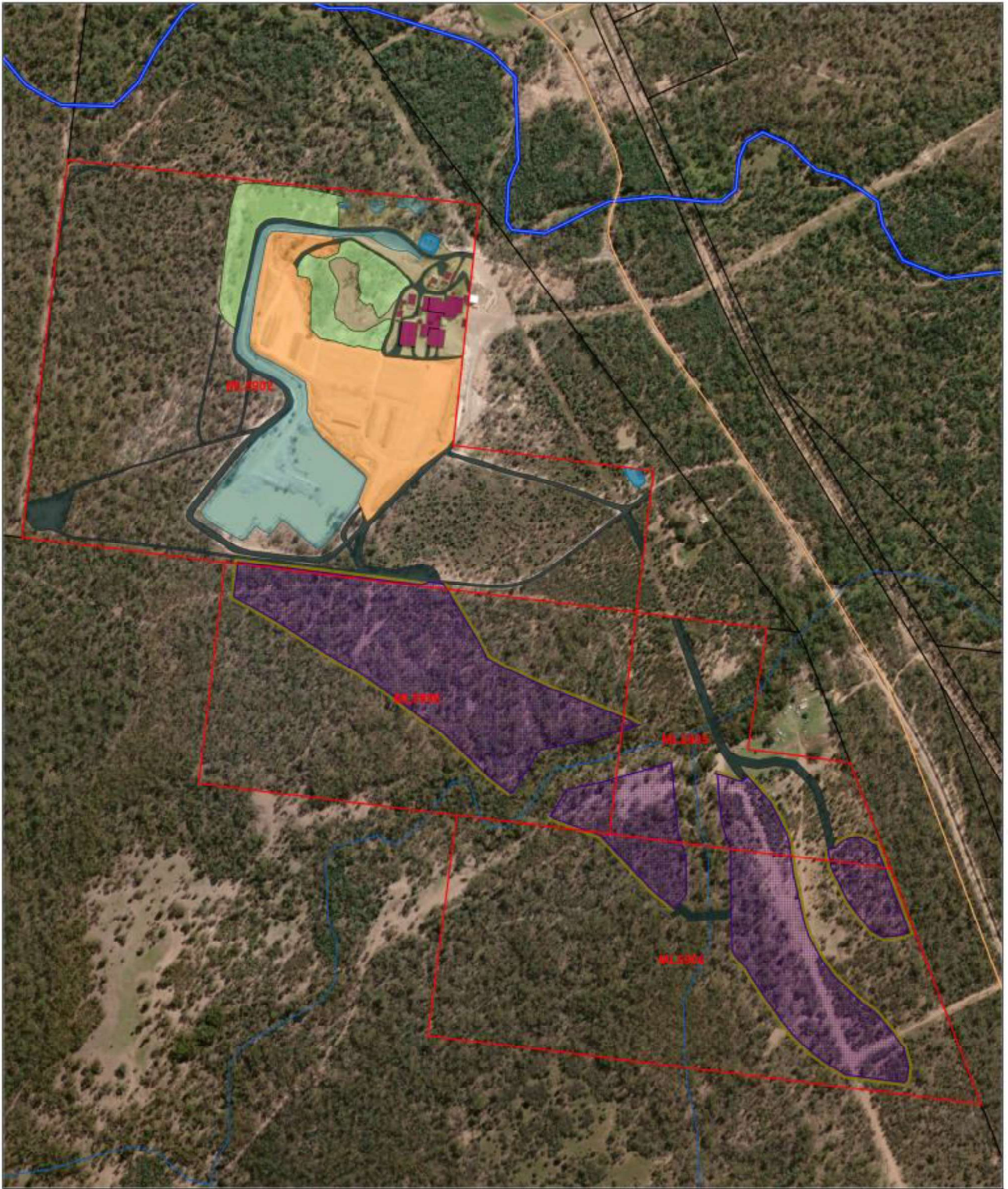


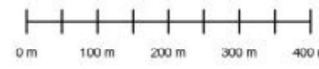
# Attachment 1

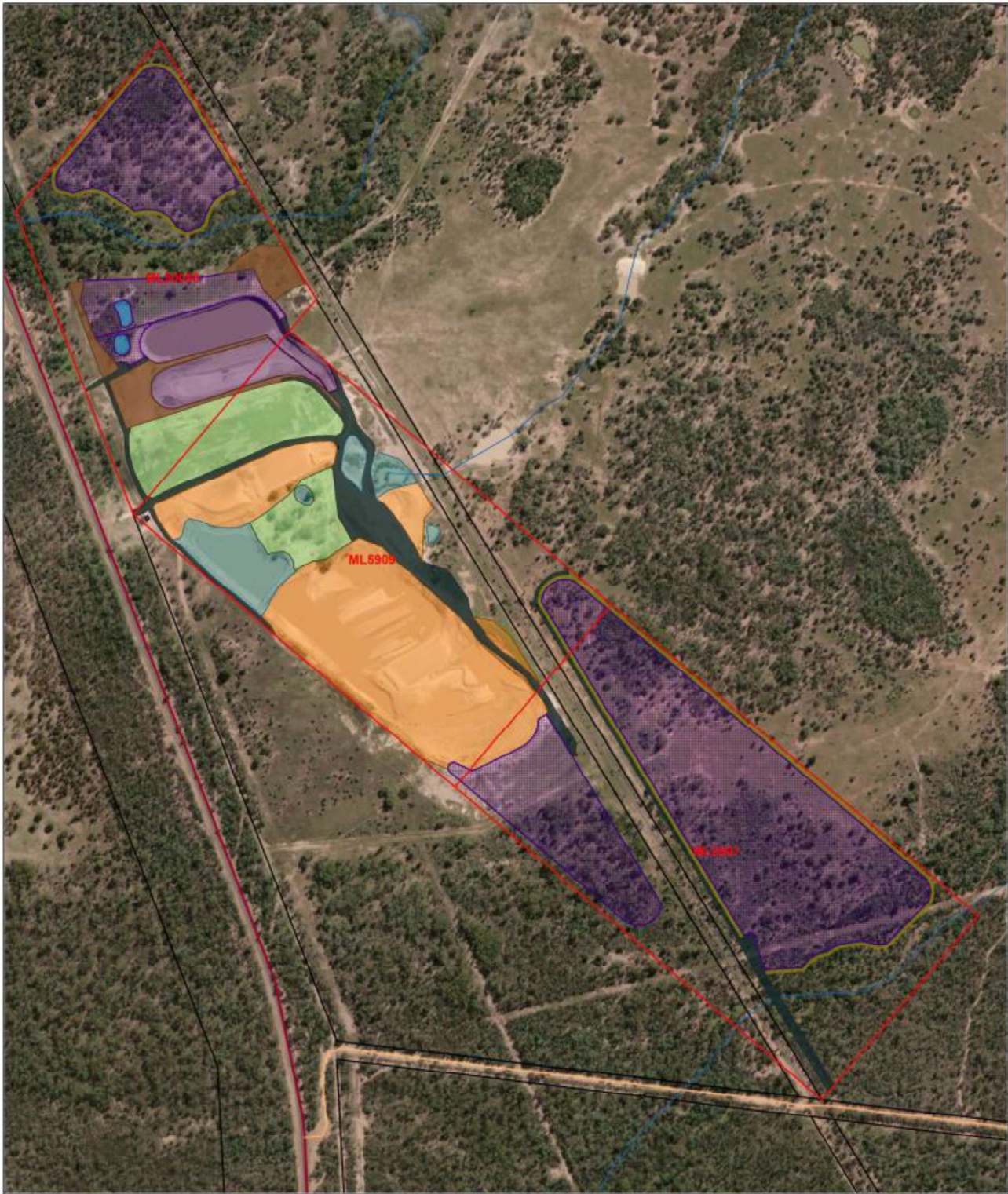
## Site Layout Plans<sup>1</sup>




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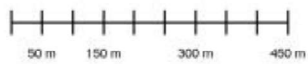
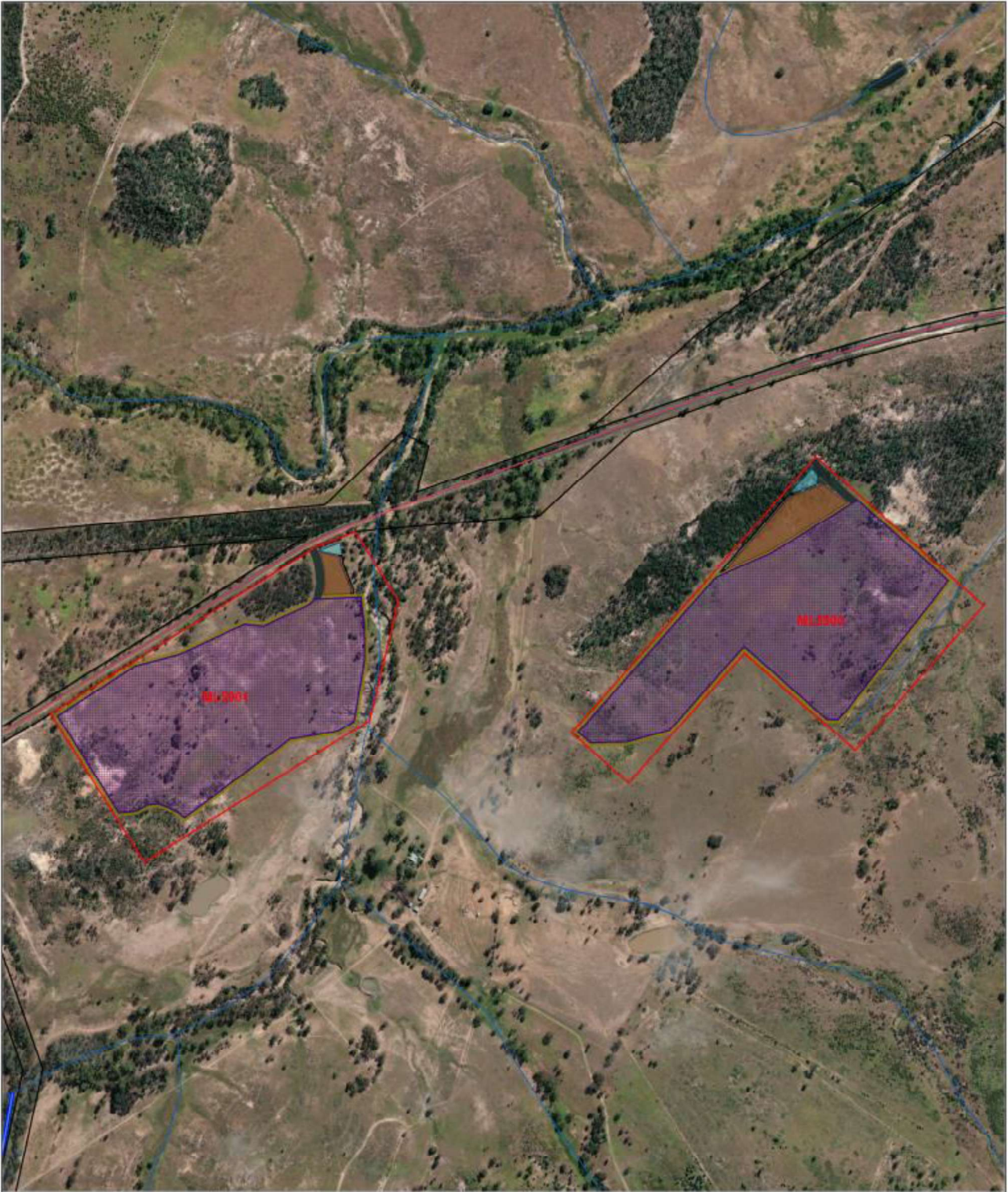
<sup>1</sup> The following plans relate to information provided in the proposed Transitional Progressive Rehabilitation and Closure plan submitted to the department 19 January 2024.



				<b>Legend</b> <ul style="list-style-type: none"> <li> Bund</li> <li> Cadastral Boundary</li> <li> Infrastructure</li> <li> Laydown Yard</li> <li> Mining Lease Boundary</li> <li> Pit Area (Proposed/Planned)</li> <li> Rehabilitation Area (in progress)</li> <li> Road</li> <li> ROM Pad</li> <li> Sediment Dams</li> <li> Water Storage</li> <li> Creek</li> <li> Local Road</li> <li> Watercourse</li> </ul>
	Ausrocks Pty Ltd PO Box 359 Virginia BC QLD 4014			
<b>Title</b> Terrequip Miles Bentonite Mine Primary Mine Features - Gurulmundi Leases		<b>Project No.</b> AUQ00238F <b>Drawing No.</b> MIL003		
<b>Scale</b> 1:6,500	<b>Datum</b> GDA2020	<b>Date</b> 19/01/2024		
<b>Drawn</b> RM	<b>Checked</b> CM	<b>Status</b> 1.2		



 <p><b>AUSROCKS RESOURCE CONSULTANTS</b></p>			<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> Bund</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Cadastral Boundary</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Infrastructure</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px dashed red; margin-right: 5px;"></span> Mining Lease Boundary</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #800080; border: 1px solid black; margin-right: 5px;"></span> Pit Area</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #800080; border: 1px dashed red; margin-right: 5px;"></span> Pit Area (Proposed/Planned)</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> Rehabilitation Area (in progress)</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #000000; border: 1px solid black; margin-right: 5px;"></span> Road</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #FFD700; border: 1px solid black; margin-right: 5px;"></span> ROM Pad</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #ADD8E6; border: 1px solid black; margin-right: 5px;"></span> Sediment Dams</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #8B4513; border: 1px solid black; margin-right: 5px;"></span> Topsoil Stockpile</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #00B0F0; border: 1px solid black; margin-right: 5px;"></span> Water Storage</li> <li><span style="display: inline-block; width: 10px; height: 10px; border-bottom: 2px solid red; margin-right: 5px;"></span> Highway</li> <li><span style="display: inline-block; width: 10px; height: 10px; border-bottom: 2px solid orange; margin-right: 5px;"></span> Local Road</li> <li><span style="display: inline-block; width: 10px; height: 10px; border-bottom: 2px solid blue; margin-right: 5px;"></span> Watercourse</li> </ul>
	<p>Ausrocks Pty Ltd</p> <p>PO Box 359 Virginia BC QLD 4014</p> <p>(07) 3161 4108 www.ausrocks.com.au 64 056 939 014</p>		
<p>Title <b>Terrequip Miles Bentonite Mine Primary Mine Features - Ausben Leases</b></p>		<p>Project No. <b>AUQ00238F</b></p>	
<p>Scale <b>1:6,000</b></p>		<p>Drawing No. <b>MIL004</b></p>	
<p>Drawn <b>RM</b></p>	<p>Datum <b>GDA2020</b></p>	<p>Date <b>18/01/2024</b></p>	
<p>Checked <b>CM</b></p>	<p>Status <b>1.2</b></p>		



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Virginia BC  
QLD 4014

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**Legend**

- Basin
- Bund
- Cadastral Boundary
- Drain
- Mining Lease Boundary
- Pit Area (Proposed/Planned)
- Road
- Topsoil Stockpile
- Creek
- Secondary Road
- Watercourse

<b>Title</b> Terrequip Miles Bentonite Mine Primary Mine Features - Woleebee Leases (planned disturbance)		<b>Project No.</b> AUQ00238F
		<b>Drawing No.</b> MIL005
<b>Scale</b> 1:7,500	<b>Datum</b> GDA2020	<b>Date</b> 18/01/2024
<b>Drawn</b> RM	<b>Checked</b> CM	<b>Status</b> 1.2



# **Attachment 2**

**Section 12 – Seek to Vary Conditions**

The following details information required by 'Section 12 – Seek to vary conditions' of *Application Form – Application to amend an environmental authority (ESR/2015/1733)*

**Condition C5-1 (sediment dams)**

**(a) Condition number:**

The condition seeking variation is Schedule C (C5-1) pictured below:

**Sediment Dams**

(C5-1) Storage capacity equal to the Design Storage Allowance must be available in the storage on 1st November of each year for sediment dam/s. The Design Storage Allowance must be equivalent to the run-off from the critical wet season in Schedule C - Table 4.

**Schedule C - Table 4 (Storage Design)**

Storage Type	Design Wet Period Storage	Spillway Critical Design Storm*
Voids	>1:100	>1:100
Sediment Dams (Four (4) on ML 5902) (Two (2) on ML5909)	1:10	1:20

\* the critical storm has a duration that produces the peak discharge for the catchment

\*\*\* refers to volume below the spillway crest, either the ARI 72 hour storm or the ARI wave allowance, whichever is lower.

**(b) Proposed change:**

The proposed change seeks a variation to the number of allowable sediment dams and, the allowable location of sediment dams described in '*Schedule C – Table 4 (Storage Design)*'. The proposed change will not put any restrictions on the number of sediment basins allowed, which will allow for better management of site water and ensure mine water / storm water is appropriately contained.

In addition the Design Wet Period Storage and Spillway Critical Design Storm have been updated to reflect more reasonable volume requirements. The voids and water storage structures are not high hazard dams and are in-ground excavations which do no put human life at risk for wall failures. Therefore it is considered reasonable to maintain a 1:20yr storage volume and 1:50yr spillway.

The proposed changes to the condition are as follows:



(C5-1) Storage capacity equal to the Design Storage Allowance must be available in the storage on 1st November of each year for sediment dam/s. the Design Storage Allowance must be equivalent to the run-off from the critical wet season in Schedule C – Table 4.

**Schedule C - Table 4 (Storage Design - all mining leases unless specified otherwise)**

Storage Type	Design Wet Period Storage	Spillway Critical Design Storm*
Voids	1:20	1:50
Sediment Dams	1:10	1:20
Water Supply Dams	1:20	1:50

\* the critical storm has a duration that produces the peak discharge for the catchment

\*\*\* refers to the volume below the spillway crest, either the ARI 72 hour storm or the ARI wave allowance, whichever is lower

**(c) Justification for the change:**

The current layout of the site (**Attachment 1**) shows a total of 9 sediment dams and 4 water supply dams, and an additional 2 proposed sediment dams proposed within the mining lease boundaries of the site:

- ML5902 – 4 sediment dams and 2 water supply dams;
- ML5909 – 5 sediment dams;
- ML50058 – 2 water supply dams (will be removed following the development of the proposed pit);
- ML5900 – 1 sediment dam (proposed); and
- ML5901 – 1 sediment dam (proposed).

The Code of Environmental Compliance<sup>2</sup> for mining lease projects states EA holders must design, install and maintain adequate erosion and sediment control structures wherever necessary to prevent or minimise erosion of disturbed areas and the sedimentation of any watercourse, waterway, wetland or lake. 'Schedule C – Table 4' of the EA limits the number of sediment dams allowed to six (6) total and dictates that these sediment dams are located only on ML5902 (four (4) sediment dams allowed) and on ML5909 (two (2) sediment dams allowed).

Note, there is one (1) raw water storage structure located outside the boundary of ML5909 to the east, and two (2) water supply dams located outside the boundary of ML5902. These are not included as disturbance under the proposed amendment and do not fall under the ambit of the EA. Historical aerial imagery suggests these structures have existed around the mine prior to Terrequip's operation of the site.

<sup>2</sup> Department of Environment and Heritage Protection (2001). Code of environmental compliance for mining lease projects. Version 1.1 (EM588).

**Condition F3-2 (rehabilitation landform criteria)**

**(a) Condition number:**

The condition seeking variation is Schedule F (F3-2) pictured below:

(F3-2) All areas significantly disturbed by mining activities must be rehabilitated to the final land description as defined in Schedule F - Table 1.

**Schedule F - Table 1 (Final Land Use and Rehabilitation Approval Schedule)**

Tenure ID	Disturbance type	Projective surface area (ha)	Post-mine land description	Post mine land <capability/ suitability > classification
ML 5902, ML5909	Infrastructure	15.0	Marginal Grazing	vii
	Haul Roads	2.0	Marginal Grazing	vii
	Topsoil Stripped	0.5	Marginal Grazing	vii
	Active Pit (final void)	2.0	Marginal Grazing	viii

# "land capability" as defined in the DME 1995 Technical Guideline for the Environmental management of Exploration and Mining in Queensland .

**(b) Proposed change:**

The proposed change seeks a variation to include a secondary post-mine land use of water storage for land disturbed by active pits (final voids) and, describe a final land use for all mining leases under the EA. The proposed change will ensure land disturbed by mining activities described in 'Schedule F – Table 1 (Final Land Use and Rehabilitation Approval Schedule)' will be rehabilitated to an appropriate land use suitable for the pre-mine and surrounding area, and for the landholders (per current Landholder Agreement for Landowner Info Landowner Info for leases ML5902, ML5907, ML5909 and ML50058). Note, compensation agreements exist for mining leases currently undisturbed; agreements will be organised prior to the commencement of disturbance/mining activities in ML5898, ML5905, ML5906, ML5900 and ML5901.

The proposed change to the condition is as follows:

(F3-2) In carrying out the mining activity authorised by this environmental authority, the holder of this environmental authority must comply with the authorised disturbance areas listed in **Schedule F – Table 1A (Authorised Disturbance)** and rehabilitate all areas significantly disturbed by mining activities to the final land description as defined in **Schedule F -Table 1B (Final Land Use and Rehabilitation Approval Schedule)**.

**Schedule F - Table 1A (Authorised Disturbance)**

Mine Feature Name	Location (Lot Plan)	Maximum Disturbance (ha)	Description / Purpose
ML5898	59 AU55	12.15	Extraction area, topsoil and overburden stockpiles
ML5900	23 FT946	19.68	Extraction area, topsoil and overburden stockpiles
ML5901	23 FT946	18.24	Extraction area, topsoil and overburden stockpiles
ML5902	72 AU177	21.44	Processing and infrastructure area for ancillary mine activities
ML5905	59 AU55	3.24	Extraction area, topsoil and overburden stockpiles
ML5906	59 AU55	8.99	Extraction area, topsoil and overburden stockpiles
ML5907	38 AU184	19.44	Extraction area, topsoil and overburden stockpiles
ML5909	38 AU184	19.91	Extraction area, topsoil and overburden stockpiles
ML50058	38 AU184	13.02	Extraction area, topsoil and overburden stockpiles
Haul Roads	-	10.21	Access on site (haul roads and access tracks)
<b>Total</b>	<b>-</b>	<b>146.31</b>	<b>-</b>

**Schedule F - Table 1B (Final Land Use and Rehabilitation Approval Schedule)**

Disturbance type	Post-mine land description	Post mine land (capability / suitability) classification <sup>#</sup>
Infrastructure	Marginal Grazing	vii
ROM Pad and Stockpiles	Marginal Grazing	vii
Haul Roads	Marginal Grazing	vii
Topsoil	Marginal Grazing	vii
Pits	Marginal Grazing	viii
ML50058 Pit	Water Storage	n/a
ML5909 & ML5907 ROM Pad	Water Storage	n/a
Sediment Dams and Stormwater Controls	Water Storage	n/a

# "land capability" as defined in the DME 1995 Technical Guideline for the Environmental Management of Exploration and Mining in Queensland

**(c) Justification for the change:**

Final land use and rehabilitation outcomes aim to return the land to a condition that is safe for humans and wildlife, non-polluting, stable, able to sustain the post-mining land use, is appropriately revegetated (where required), and is free from pests and weeds. The proposed amendment to Schedule F – Table 1 will help to ensure the site will be appropriately rehabilitated and will support transitional provisions to the Progressive Rehabilitation and Closure Plan (PRC plan) framework and achieve desired outcomes of the landholder

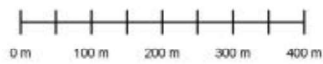
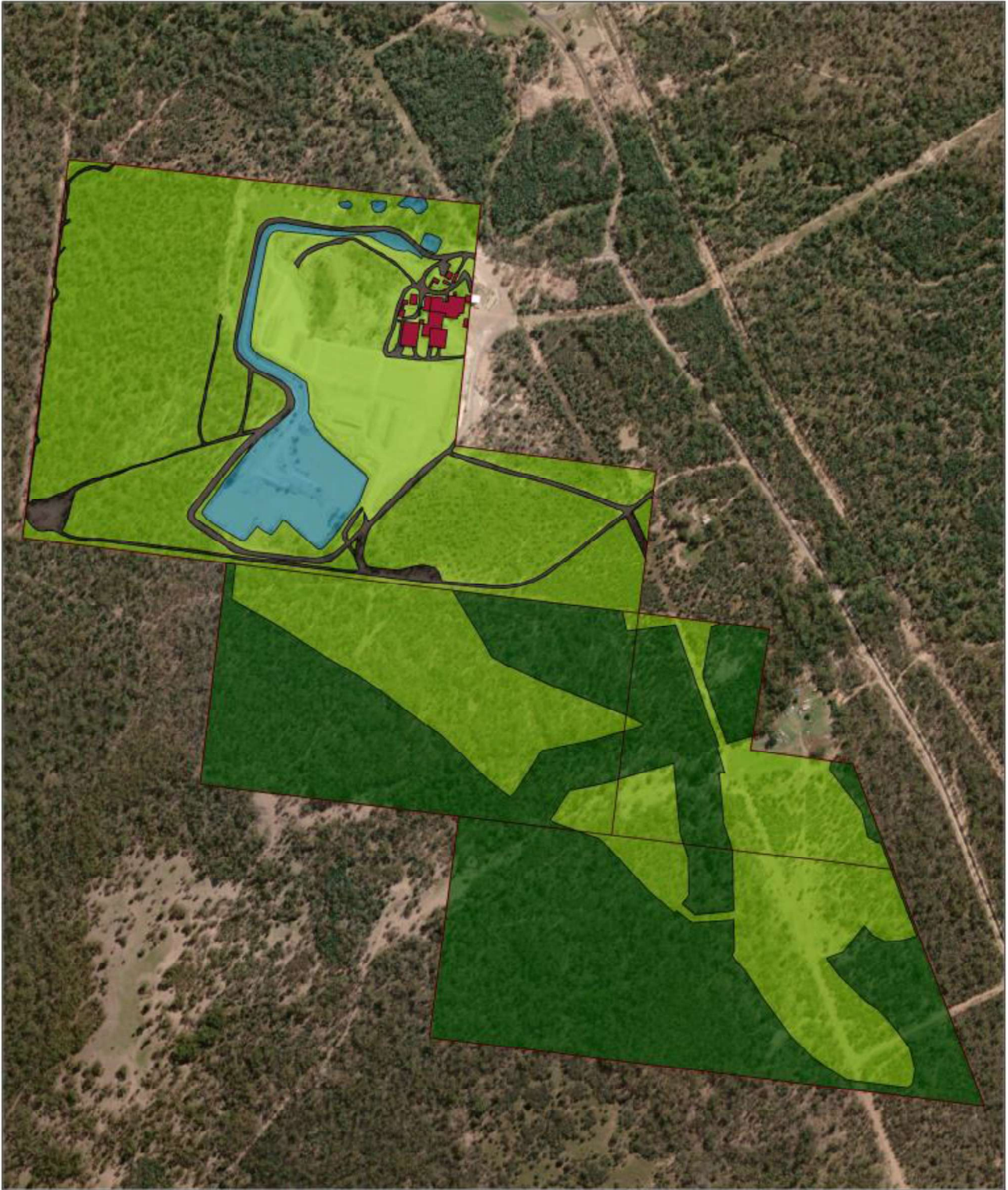
Landowner Info

Landowner Info

for leases ML5902, ML5907, ML5909 and ML50058.

The inclusion of all mining lease tenures in the table allows appropriate management of disturbance and rehabilitation under the EA. Lastly, the addition of water storage as a post-mine land use option for pit voids provides an opportunity for landholders to utilise pit voids for stock water to support grazing activities. The following figures depict post-mining land uses aligned to the proposed amendment to Schedule F – Table 1 and the proposed transitional PRC plan.



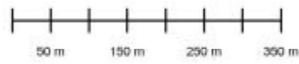
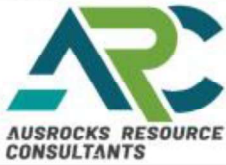


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 www.ausrocks.com.au  
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**Legend**

- ML Boundaries
- PMLU - Grazing
- PMLU - Infrastructure
- PMLU - Native Ecosystem
- PMLU - Road
- PMLU - Water Storage

<b>Title</b> Terrequip Miles Bentonite Mine Final Site Design - Gurulmundi Leases		<b>Project No.</b> AUQ00238F
		<b>Drawing No.</b> MIL008
<b>Scale</b> 1:6,500	<b>Datum</b> GDA2020	<b>Date</b> 19/01/2024
<b>Drawn</b> RM	<b>Checked</b> CM	<b>Status</b> v1.0

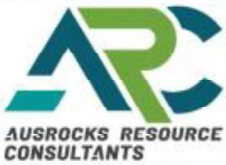


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 64 056 939 014

**Legend**

- ML Boundaries
- PMLU - Abandoned Rail Line
- PMLU - Grazing
- PMLU - Infrastructure
- PMLU - Native Ecosystem
- PMLU - Road
- PMLU - Water Storage

<b>Title</b> Terrequip Miles Bentonite Mine Final Site Design - Ausben Leases		<b>Project No.</b> AUQ00238F
		<b>Drawing No.</b> MIL009
<b>Scale</b> 1:6,000	<b>Datum</b> GDA2020	<b>Date</b> 19/01/2024
<b>Drawn</b> RM	<b>Checked</b> CM	<b>Status</b> v1.0



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**Legend**

- ML Boundaries
- PMLU - Grazing
- PMLLI - Water Storage

<b>Title</b> Terrequip Miles Bentonite Mine Final Site Design - Woleebee Leases		<b>Project No.</b> AUQ00238F
		<b>Drawing No.</b> MIL010
<b>Scale</b> 1:7,500	<b>Datum</b> GDA2020	<b>Date</b> 19/01/2024
<b>Drawn</b> RM	<b>Checked</b> CM	<b>Status</b> v1.0



# **Attachment 3**

**Section 13 – Describe the Proposed  
Amendment**



**The following details information required by ‘Section 13 – Describe the Proposed Amendment’ of  
Application Form – Application to amend an environmental authority (ESR/2015/1733)**

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**Condition C5-1 (sediment dams)**

The current layout of the site (**Attachment 1**) shows a total of 9 sediment dams and 4 water supply dams, and an additional 2 proposed sediment dams proposed within the mining lease boundaries of the site.

The EA currently authorises sediment dams on ML5902 and ML5909 and limit these to a total number of 4 and 2 at any one time, respectively. Current site activities exceed this with a total of 9 sediment dams and four 4 supply dams within these leases, and a proposed 2 additional sediment dams:

- ML5902 – 4 sediment dams and 2 water supply dams;
- ML5909 – 5 sediment dams;
- ML50058 – 2 water supply dams (will be removed following the development of the proposed pit);
- ML5900 – 1 sediment dam (proposed); and
- ML5901 – 1 sediment dam (proposed).

To ensure the EA holder maintains adequate erosion and sediment control structures wherever necessary to prevent or minimise the erosion of disturbed areas and the sedimentation of any waters, it is necessary that the imposed limit on the quantity and location of sediment dams is removed. Furthermore, as the mine progresses, the creation and retirement of sediment dams (and water supply dams) will occur where required and as necessary to protect the environmental values of waters during mining operations.

**Condition F3-2 (rehabilitation landform criteria)**

The total maximum disturbance area across all mine features listed in the current ‘Schedule F – Table 1 (Final Land Use and Rehabilitation Approval Schedule)’ is 19.50ha across ML5902 and ML5909 only. Whereas previous approved Plan of Operations (2009-2014) have shown short term planned disturbance areas exceeding 38ha over ML5902, 5989, 5905, 5906, 50058 and 5907. Additionally, previous approved Final Land Use and Rehabilitation Plan (Unimin Australia Ltd 2011) described “unrestricted” maximum disturbance at any one time for all mining leases under the EA. Original mining lease application details are not known for the site, and therefore the original intended maximum disturbance footprint is unable to be determined.

The change in total maximum disturbance to 146.31ha is relatively large compared to the limited disturbance figures included in the current EA (19.50ha), however it is considered that the proposed value incorporates disturbance limits that previously were not recorded in the EA. As there are no maximum disturbance limits known for the remainder of the leases, it is not possible to determine the extent of the increase and whether it is >10% or <10% to trigger a major or minor change.

The proposed amendment aims to delineate maximum disturbance per mining lease area rather than by disturbance type (**Table 1**). Proposed maximum disturbance values are determined based on current and planned disturbance information provided in the proposed transitional PRC plan (submitted to the department 19 January 2024) and represent the maximum disturbance area (ha) at any one time for each mining lease. Haul roads are not included in the mining lease disturbance and are instead delineated as a separate maximum disturbance area across all mining leases.

**Table 1: Comparison of EA approved projective surface area and proposed maximum disturbance**

Mine feature name	Project surface area (ha) per 'Schedule F – Table 1A'	Proposed maximum disturbance (ha) <sup>1</sup>
ML5902	Projective surface area (ha) is as follows:	21.44
ML5909	<ul style="list-style-type: none"> <li>• 15.0 ha – Infrastructure</li> <li>• 2.0 ha – Haul Roads</li> <li>• 0.5 ha – Topsoil Stripped</li> <li>• 2.0 ha – Active Pit (final void)</li> </ul>	19.91
ML5898	Not specified in EA	12.15
ML5900	Not specified in EA	19.68
ML5901	Not specified in EA	18.24
ML5905	Not specified in EA	3.24
ML5906	Not specified in EA	8.99
ML5907	Not specified in EA	19.44
ML50058	Not specified in EA	13.02
Haul Roads	Only as listed for ML5902 and ML5909 projective surface area (i.e. 2.0ha)	10.21
<b>TOTAL</b>	<b>19.50</b>	<b>146.31</b>

<sup>1</sup> maximum disturbance areas (ha) accounts for all disturbance created by mining activities within the mine feature name



# **Attachment 4**

**Section 14 – Description of Land Affected by  
the Proposed Amendment**

**The following details information required by 'Section 14 – Describe the land that will be affected by the proposed amendment' of *Application Form – Application to amend an environmental authority* (ESR/2015/1733)**

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Terrequip Miles Pty Ltd (Terrequip) owns and operates the Miles Bentonite mine and processing facility approved under Environmental Authority (EA) EPML00382513 for environmentally relevant activities (ERA) 'Clay pit mining, dimension stone mining or mining gemstones – item 20(b)' under the *Environmental Protection Act 1994*. Terrequip carries out the described ERA on mining leases ML50058, ML5898, ML5900, ML5901, ML5902, ML5905, ML5906, ML5907, and ML5909.

The proposed amendments do not result in activity outside the existing designated areas described in the EA.





# **Attachment 5**

## **Section 22 – Environmental Values**

**The following details information required by 'Section 22 – Environmental Values' of *Application Form – Application to amend an environmental authority (ESR/2015/1733)***

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The requirements for amendment applications for environmental authorities as described under Section 226A(1)(f) of the *Environmental Protection Act 1994* and must include an assessment of the likely impact of the proposed amendment on the environmental values, including:

- A description of the environmental values likely to be affected by the proposed amendment;
- Details of any emissions or releases likely to be generated by the proposed amendment
- A description of the risk and likely magnitude of impacts on the environmental values;
- Details of the management practices proposed to be implemented to prevent or minimise adverse impacts; and
- If a PRCP schedule does not apply for each relevant activity – details of how the land the subject of the application will be rehabilitated after each relevant activity ends.

The following environmental values have been considered:

- Water;
- Groundwater;
- Wetlands;
- Land;
- Land use ;
- Air;
- Acoustic;
- Waste; and
- Matters of State Environmental Significance.













## Water

Per the site EA 'waters' includes a river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, bed and bank or any waters, dams, non-tidal or tidal waters (including the sea) or any part thereof.

The EVs relevant to water surrounding the site are defined in the *Environmental Protection (Water and Wetland Biodiversity) Policy 2019*, the 'Maranoa-Balonne Rivers Basin Environmental Values and Water Quality Objectives' for the Gurulmundi and Ausben leases, and the 'Dawson River Sub-basin Environmental Values and Water Quality Objectives' for the Woleebee leases.

Unnamed tributaries of Little Tree Creek flow around Gurulmundi and Ausben leases site boundaries and are a part of Dogwood Creek waters. **Figure 1** shows the EVs for the waters of Dogwood Creek and **Figure 2** a map of the WQ4222 – Maranoa-Balonne Rivers Basin. Unnamed tributaries of Appletree Creek and Ramyard Creek (part of Woleebee Creek and Juandah Creek waters) intersect the Woleebee leases. **Figure 3** shows the EVs for the waters of the Upper Dawson – Taroom area and **Figure 4** a map of the WQ1308 – Upper Dawson River Sub-basin.

**Figure 1: Environmental values for Maranoa and Balonne Rivers Basin surface waters (Dogwood Creek)**

Maranoa and Balonne Rivers Basin	Environmental Values <sup>1-6</sup>												
	Aquatic ecosystem	Irrigation	Farm supply/use	Stock water	Aquaculture	Human consumer	Primary recreation	Secondary recreation	Visual recreation	Drinking water	Industrial use	Cultural, spiritual and ceremonial values	
Water													
<b>SURFACE FRESH WATERS (rivers, creeks, streams) (refer to plan WQ4222)</b>													
Balonne River (Waterway Only)	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	
Lake Kajarabie (E.J. Beardmore Dam)	✓	✓	✓	✓		✓	✓	✓	✓			✓	
Bungil Creek	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Carnarvon Sandstones	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	
Dogwood Creek	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	
Lower Balonne Floodplain	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	
Lower Maranoa River	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	
Yuleba Creek	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	

Adapted from: DES 2019. Healthy Waters Management Plan: Queensland Maranoa and Balonne River Basin. Brisbane: Department of Environment and Science, Queensland Government.













### Notes:

1. Refer to the accompanying plan WQ4222 for locations of EVs.
2. ✓ means the environmental value is selected for protection. Blank indicates that the environmental value is not selected for protection.
3. Refer to dictionary for further explanation of EVs.
4. Refer to Sections 3 and 4 for WQOs applying to the EVs in this table.
5. The selection of human use EVs for waters does not mean that these waters are free of dangerous aquatic organisms. Direct contact with dangerous aquatic organisms should be avoided. Access restrictions may apply in certain locations (e.g. defence, Traditional Owner lands), or at certain times of the year. Restrictions on certain activities (e.g. fishing, camping) may also apply in particular areas. Check with relevant authorities.
6. The selection of EVs for waters does not mean that these are currently free of toxicants (including bio accumulative toxicants). Information about contaminated land can be accessed by searching the [Environmental Management and Contaminated Land Registers](#). For information on per and poly-fluoroalkyl substances (PFAS), including alert areas and links to further health advice on water use in such areas, refer to [PFAS in Queensland](#).





Figure 3: Environmental values for Dawson River Sub-basin (Upper Dawson–Taroom area)

	Environmental values <sup>1, 2, 3, 4</sup>												
	Aquatic ecosystems	Irrigation	Farm supply/use	Stock water	Aquaculture	Human consumer	Primary recreation	Secondary recreation	Visual recreation	Drinking water	Industrial use	Cultural and spiritual values	
Water													
<b>Upper Dawson–Taroom area (WQ1308)</b>													
Upper Dawson main channel (downstream of Hutton Creek junction)—developed areas, including Glebe Weir	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	
Northern upland tributaries—developed areas	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	
Central tributaries—developed areas	✓		✓	✓		✓	✓	✓	✓	✓		✓	
Southern tributaries—developed areas	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	
Groundwaters	✓	✓	✓	✓			✓		✓	✓	✓	✓	
Undeveloped areas	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	

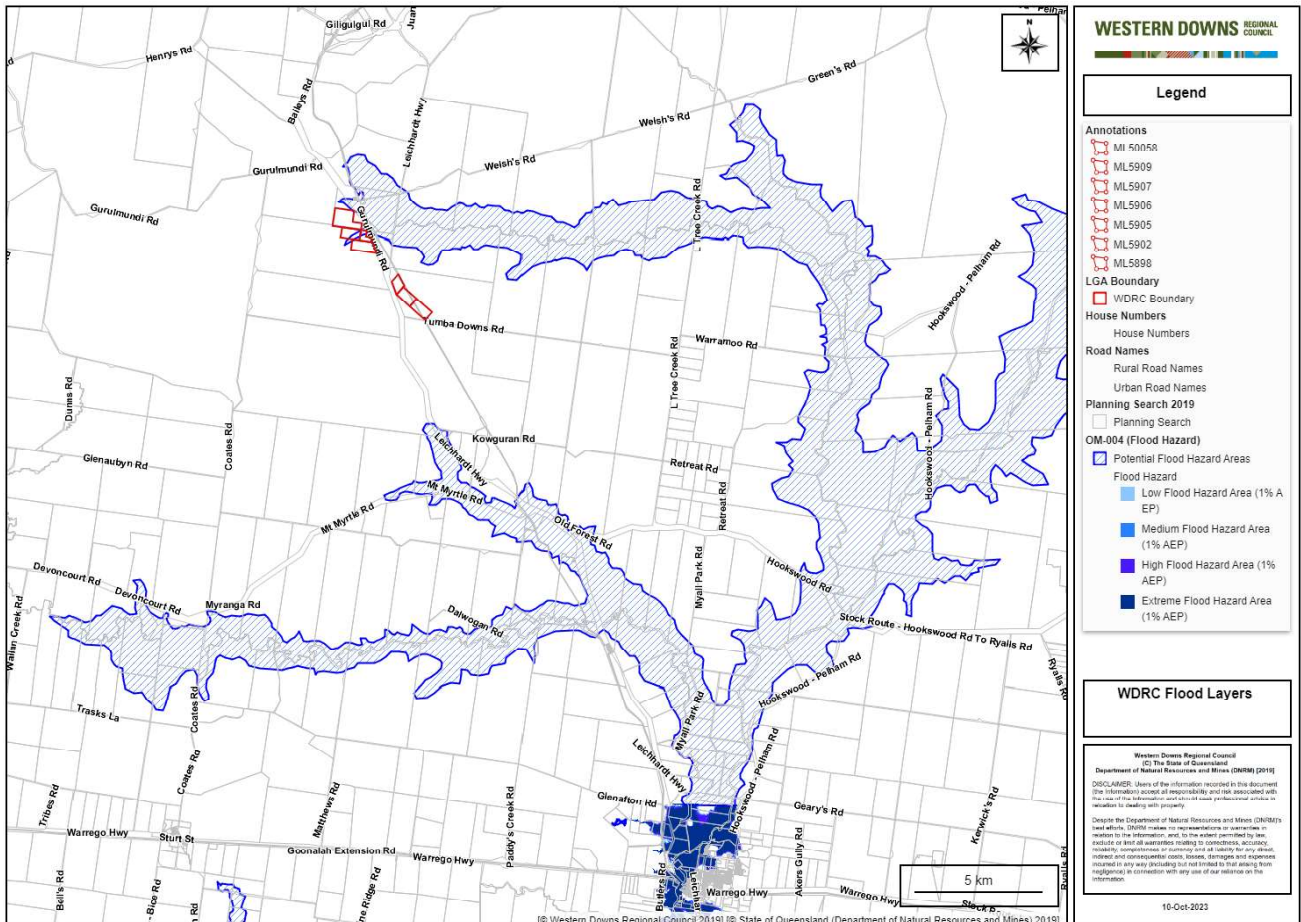
**Notes:**

1. Refer to the accompanying plans WQ1308, WQ1309 for locations of EVs.
2. ✓ means the EV is selected for protection. Blank indicates that the EV is not chosen for protection.
3. Refer to the dictionary for further explanation of EVs.
4. Refer to section 3 for WQOs applying to the EVs in this table.



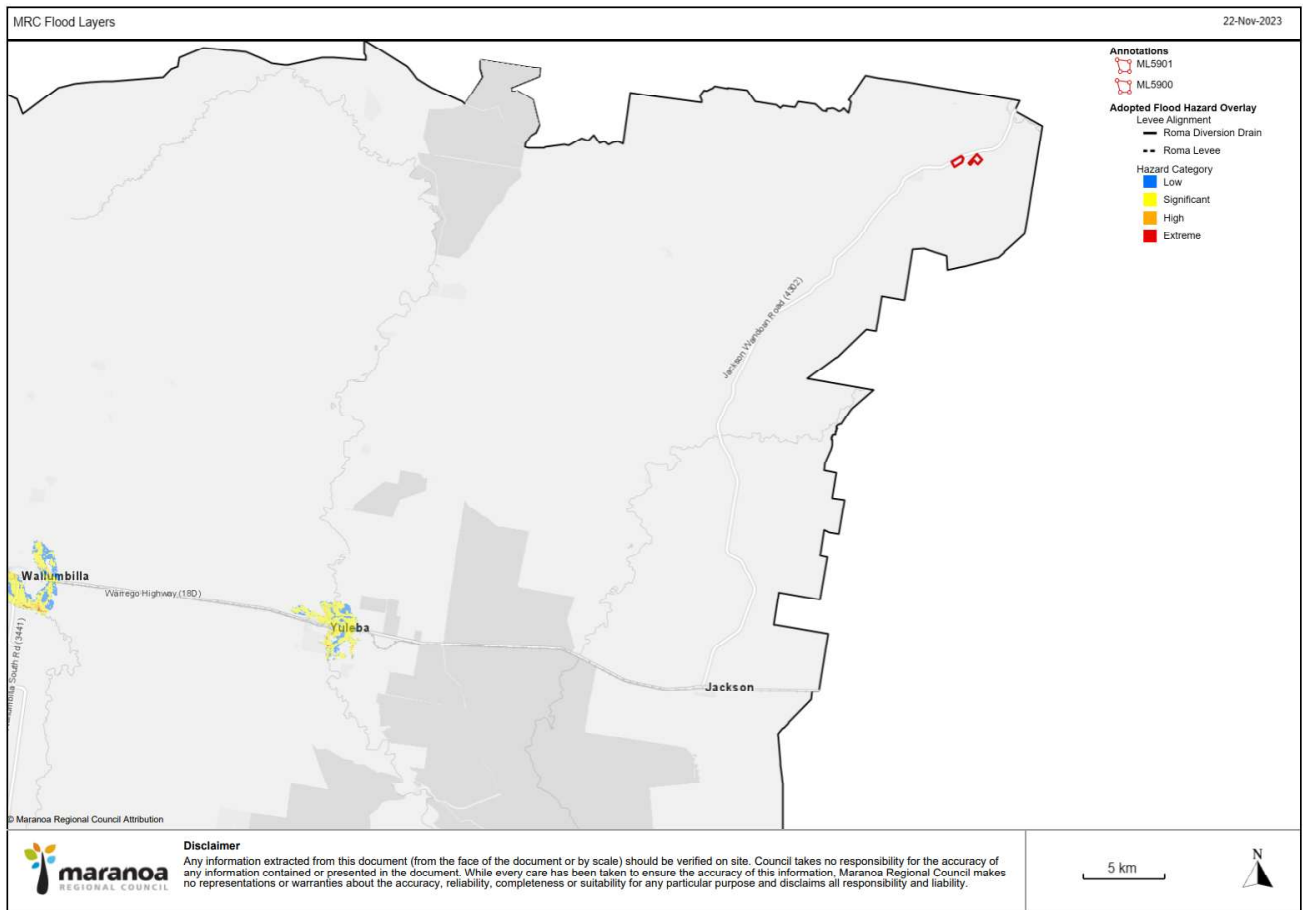
Figure 4: WQ1308 – Upper Dawson River Sub-basin

The proposed amendments are unlikely to result in any significant impact to waters. **Figure 5** shows flood mapping overlays per the Western Downs Regional Council Planning Scheme 2019. Although the proposed amendments include the provision of water storage as a post-mining land use (PMLU) option for active pit (final voids), it is not likely that they will influence mapped potential flood hazard areas. Areas that will be planned for a water storage PMLU are intended for use as stock water to support grazing land uses.



**Figure 5: Western Downs Regional Council Planning Scheme 2019 Flood Layers (accessed October 2023)**

Currently, there are no activities conducted in the Woleebee leases. Maranoa Regional Council flood mapping overlays shows the Woleebee leases are not mapped in a flood hazard area (**Figure 6**).



**Figure 6: Western Downs Regional Council Planning Scheme 2019 Flood Layers (accessed October 2023)**

The following tables summarise the level of impact of the proposed amendments to the EVs of water.

**Table 2: Environmental values for Balonne River Sub-basin**

Environmental values to be enhanced or protected under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019	Level of Impact
<p>For water mentioned in schedule 1, column 1– the environmental values stated in the document opposite the water in schedule 1, column 2; or</p> <p>Column 1 (Water)–            “Maranoa-Balonne Rivers basin, including all surface waters of the basin”</p> <p>Column 2 (Document)–            “Maranoa-Balonne Rivers Basin Environmental Values and Water Quality Objectives, published by the department in October 2020”</p>	Low
<p>For other water– the environmental values stated in subsection (2):</p> <p>(a) for high ecological value waters– the biological integrity of an aquatic ecosystem that is effectively unmodified or highly valued; or</p>	Low

Environmental values to be enhanced or protected under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019	Level of Impact
(b) for slightly disturbed waters– the biological integrity of an aquatic ecosystem that has effectively unmodified biological indicators, but slightly modified physical, chemical or other indicators; or	Low
(c) for moderately disturbed waters– the biological integrity of an aquatic ecosystem that is adversely affected by human activity to a relatively small but measurable degree; or	Low
(d) for disturbed waters– the biological integrity of an aquatic ecosystem that is measurably degraded and of lower ecological value than waters mentioned in paragraph (a) to (c); or	Low
(e) for waters from which aquatic foods intended for human consumption are taken– the suitability of the water for producing the foods for human consumption; or	Low
(f) for waters that may be used for aquaculture– the suitability of the water for aquaculture use; or	Low
(g) for waters that may be used for agricultural purposes– the suitability of the water for agricultural use; or	Low
(h) for waters that may be used for recreation or aesthetic purposes– the suitability of the water for– (i) primary recreation use; or (ii) secondary recreational use; or (iii) visual recreational use; or	Low
(i) for waters that may be used for industrial purposes– the suitability of the water for industrial use; or	Low
(j) the cultural and spiritual values of the water.	Low

**Table 3: Environmental values for Dawson River Sub-basin**

Environmental values to be enhanced or protected under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019	Level of Impact
<p>For water mentioned in schedule 1, column 1– the environmental values stated in the document opposite the water in schedule 1, column 2; or</p> <p>Column 1 (Water)– “Dawson River, including all waters of the Dawson River sub-basin other than the Callide Creek catchment”</p> <p>Column 2 (Document)– “Dawson River Sub-basin Environmental Values and Water Quality Objectives”</p>	Low

Environmental values to be enhanced or protected under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019	Level of Impact
For other water– the environmental values stated in subsection (2):	
(k) for high ecological value waters– the biological integrity of an aquatic ecosystem that is effectively unmodified or highly valued; or	Low
(l) for slightly disturbed waters– the biological integrity of an aquatic ecosystem that has effectively unmodified biological indicators, but slightly modified physical, chemical or other indicators; or	Low
(m) for moderately disturbed waters– the biological integrity of an aquatic ecosystem that is adversely affected by human activity to a relatively small but measurable degree; or	Low
(n) for disturbed waters– the biological integrity of an aquatic ecosystem that is measurably degraded and of lower ecological value than waters mentioned in paragraph (a) to (c); or	Low
(o) for waters from which aquatic foods intended for human consumption are taken– the suitability of the water for producing the foods for human consumption; or	Low
(p) for waters that may be used for aquaculture– the suitability of the water for aquaculture use; or	Low
(q) for waters that may be used for agricultural purposes– the suitability of the water for agricultural use; or	Low
(r) for waters that may be used for recreation or aesthetic purposes– the suitability of the water for– (iv) primary recreation use; or (v) secondary recreational use; or (vi) visual recreational use; or	Low
(s) for waters that may be used for industrial purposes– the suitability of the water for industrial use; or	Low
(t) the cultural and spiritual values of the water.	Low

## Groundwater

The proposed amendments are unlikely to result in any significant impact to groundwater. Queensland Globe groundwater bore overlay mapping (accessed October 2023) show nine (9) groundwater bores within a 5km radius of Gurulmundi and Ausben leases; two (2) bores are abandoned and destroyed, and the remaining 7 bores are existing. Despite the proposed amendments, there will be no change to current operations and a significant impact to the EVs of groundwater is unlikely. Furthermore, current activities have had no interaction with groundwater.

Within a 5km radius of the Woleebee leases, 27 groundwater bores were identified – only one (1) of these bores is abandoned and destroyed. Currently, no activities are undertaken at these leases and therefore, no interaction with groundwater.

Current EA conditions (C6) pertaining to groundwater will continue to be adhered to.

### Wetlands

The proposed amendment will not result in any impact to wetlands. Queensland Globe wetlands mapping overlay (accessed October 2023) shows wetland drainage lines surrounding the site however, these are all minor and non-perennial. A mapped wetland drainage line is shown to intersect sediment dam (SD2) in ML5909, and a raw water storage (RW1) located outside of the mining lease. An attribute reliability of January 2003 is provided for this wetland drainage line and based on aerial imagery, it appears that the mapped drainage line may be extended past its true end point (using vegetation placement and density as an indicator for the location of the watercourse).

There are no wetlands in the vicinity of the site mining leases. The EVs relevant to wetlands are defined in the *Environmental Protection (Water and Wetland Biodiversity) Policy 2019*. The table below summarises the level of impact of the proposed amendments on these EVs.

**Table 4: Proposed amendment level of impact to the environmental values of air**

Environmental values to be enhanced or protected under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019	Level of Impact
The health of the wetland's ecosystems;	Low
The presence of distinct or unique features, endemic plants or animals and their habitats, including threatened wildlife and near threatened wildlife under the <i>Nature Conservation Act 1992</i> ;	Low
The wetland's natural hydrological cycle; and	Low
The natural interaction of the wetland with other ecosystems, including other wetlands.	Low

### Land & Land Use

The EVs of land include the current and future potential benefit provided by the land and land use or environment it can support.

The proposed amendment relating to sediment dams (condition C5-1), seeks to remove the limit on the number of sediment dams allowed to exist at any one time on leases ML5902 and ML5909. Allowing any number of sediment dams (and other suitable water control structures) to exist at any one time, within reason and to support current activities, ensures that the EVs of surrounding undisturbed land is protected from unnecessary sedimentation or other impacts from site.

The proposed amendment relating to rehabilitation landform criteria (condition F3-2) seeks to include an alternative final land use option of water storage for active pit (final voids). Rehabilitating pit voids into a water storage structure suitable for use as stock water are not considered to have any additional impacts to the EVs of land. The provision of a water storage structure post-mining can support existing grazing land uses undertaken by the landowner in the surrounding environment. All other conditions in Schedule F – Land will continue to be adhered to.

## Air

The proposed amendments are unlikely to result in any significant change to current mine planning and therefore, is not considered to have any additional impacts to the EVs of air. The EVs relevant to air are defined in the *Environmental Protection (Air) Policy 2019*. The table below summarises the level of impact of the proposed amendment on these EVs.

**Table 5: Proposed amendment level of impact to the environmental values of air**

Environmental values to be enhanced or protected under the <i>Environmental Protection (Air) Policy 2019</i>	Level of Impact
The qualities of the air environment that are conducive to the health and biodiversity of the ecosystems;	Low
The qualities of the air environment that are conducive to human health and wellbeing;	Low
The qualities of the air environment that are conducive to protecting the aesthetics of the environment including the appearance of buildings, structures, and other property; and	Low
The qualities of the air environment that are conducive to protecting agricultural use of the environment.	Low



## Acoustic

Current conditions described in EA ‘Schedule D – Noise’ will continue to be adhered to. Sensitive receptors (residential) surrounding the Miles Bentonite mine and processing facility are located between 500m to 2km from mining lease boundaries. The EVs relevant to acoustics are defined in the *Environmental Protection (Noise) Policy 2019*. No activities are currently undertaken in the Woleebee leases, and no sensitive receptors are identified to be in close proximity of this area. The table below summarises the level of impact of the proposed amendments on these EVs.

**Table 6: Proposed amendment level of impact to the environmental values of acoustics**

Environmental values to be enhanced or protected under the <i>Environmental Protection (Noise) Policy 2019</i>	Level of Impact
The qualities of the acoustic environment that are conducive to protecting the health and biodiversity of ecosystems;	Low
The qualities of the acoustic environment that are conducive to human health and wellbeing, including by ensuring a suitable acoustic environment for individuals to do any of the following–  (i) sleep; (ii) study or learn; (iii) be involved in recreation, including relaxation and conversation; and	Low
The qualities of the acoustic environment that are conducive to protecting the amenity of the community.	Low

## Waste

The proposed amendments are unlikely to impact on the EVs of waste and waste management. It is anticipated that no additional general waste, greater than what is already generated, will result due to the proposed amendment. The site will continue to implement appropriate waste management per the *Waste Reduction and Recycling Act 2011* by following the hierarchy of ‘reduce, re-use, recycle, treat and dispose’. The EVs relevant to waste are defined in the *Environmental Protection (Waste) Policy 2000*. The table below summarise the level of impact of the proposed amendment on these EVs.

**Table 7: Proposed amendment level of impact to the environmental values of waste**

Environmental values to be enhanced or protected under the <i>Environmental Protection (Waste Management) Policy 2000</i>	Level of Impact
The life, health and wellbeing of people;	Low
The diversity of ecological processes and associated ecosystems; and	Low
Land use capability, having regard to economic considerations.	Low

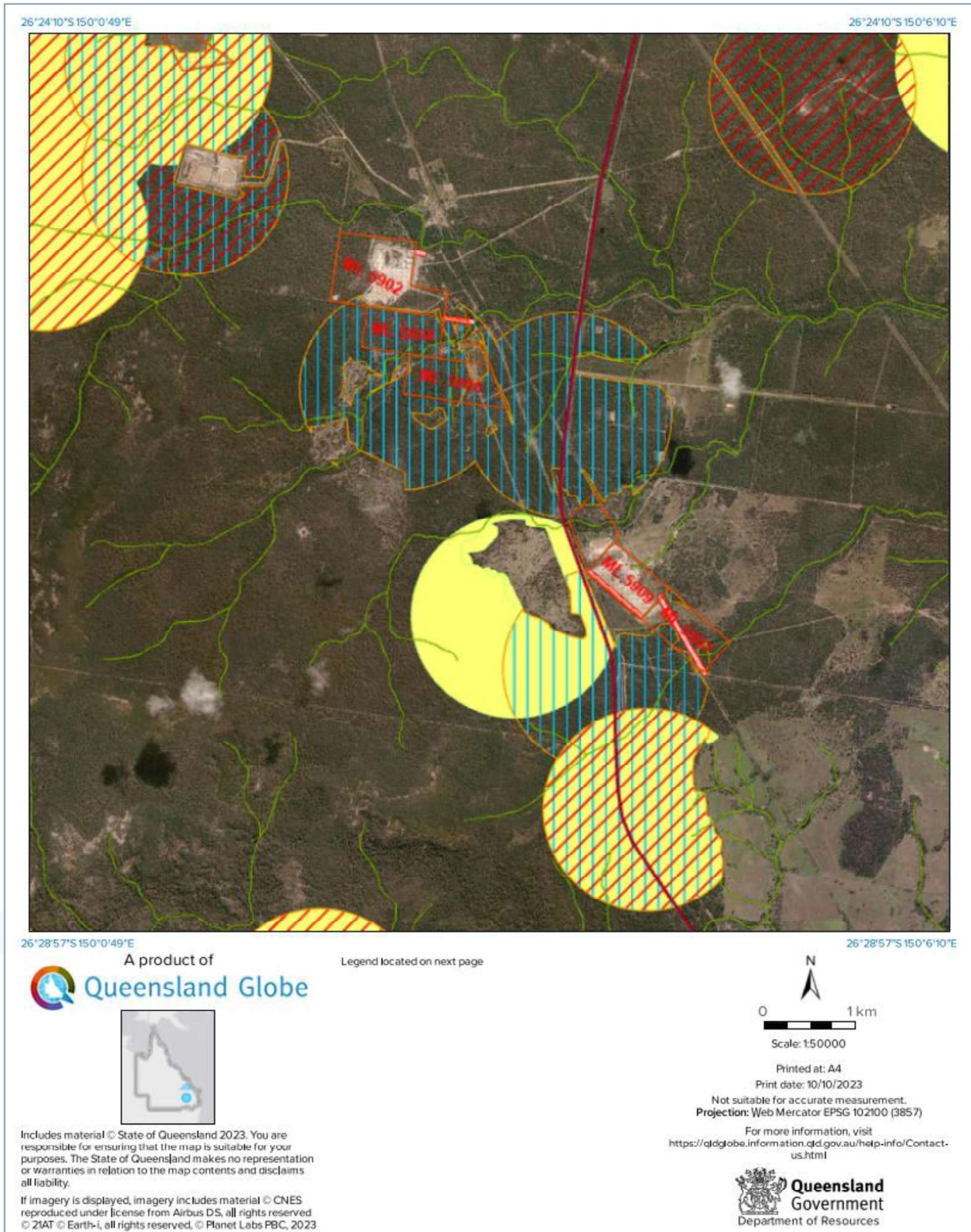
### **Matters of State Environmental Significance**

The proposed amendments are unlikely to result in an increased impact to Matters of State Environmental Significance (MSES) based on current site activities. The following figures illustrate MSES mapping per Queensland Globe layers (accessed October 2023). Note, there is an unnamed watercourse mapped as MSES regulated vegetation (defined watercourse) which intersects a raw water storage and sediment dam on the eastern side of ML5909. There are three (3) water monitoring locations positioned in these areas to monitor the quality of water in the event of a release or overflow to waters per EA condition C1-2, Schedule C – Table 2 (End of pipe monitoring locations and frequency).

Mining leases which are currently undisturbed (ML5898, ML5905 and ML5906) are within an area of mapped MSES wildlife habitat (special least concern) for the “presence of one or more special least concern taxa recorded in locality”. The record of special least concern animal species relates to the short-beaked echidna (*Tachyglossus aculeatus*)<sup>3</sup>. Although no new activities are planned in these areas in the next 12-month period, prior to their commencement, an ecological survey will be undertaken by a suitably qualified and experienced person to determine whether the area has evidence of habitat and/or presence of endangered, vulnerable or special least concern animals, including evidence of the short-beaked echidna (*Tachyglossus aculeatus*).<sup>4</sup>

<sup>3</sup> Department of Environment and Science (2023). Environmental Reports Matters of State Environmental Significance for the selected area of interest ml: 5898. Report Issued 22/11/2023 14:23:37.

<sup>4</sup> Department of Environment and Science (2020). Resources for matters of state environmental significance information sheet. Version 1.01 (CSS/2018/4279).



MSES regulated vegetation  
[defined watercourse]



MSES regulated vegetation  
[essential habitat]



MSES wildlife habitat  
[endangered or vulnerable]



MSES wildlife habitat [special  
least concern animal]



Figure 7: Matters of State Environmental Significance Queensland Globe layers



Figure 8: Matters of State Environmental Significance Queensland Globe layers (Gurulmundi Leases)

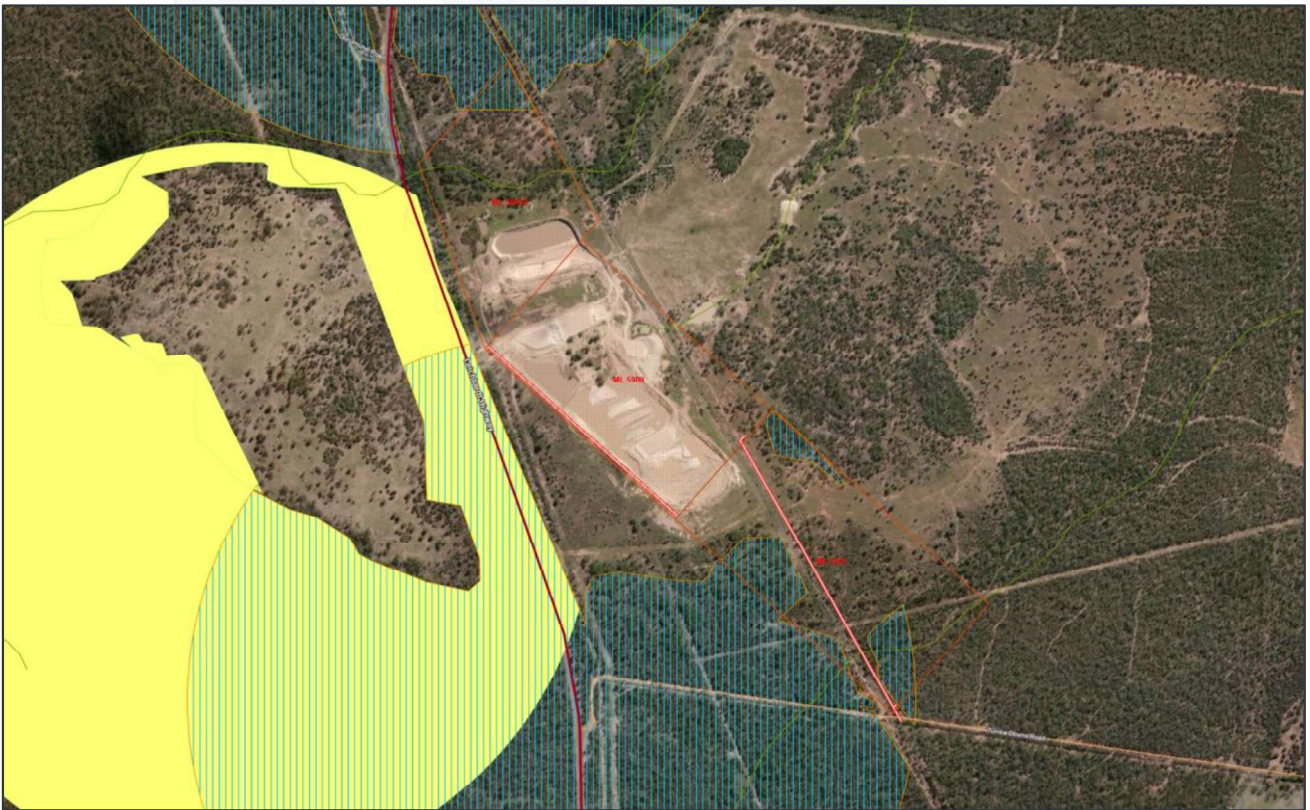
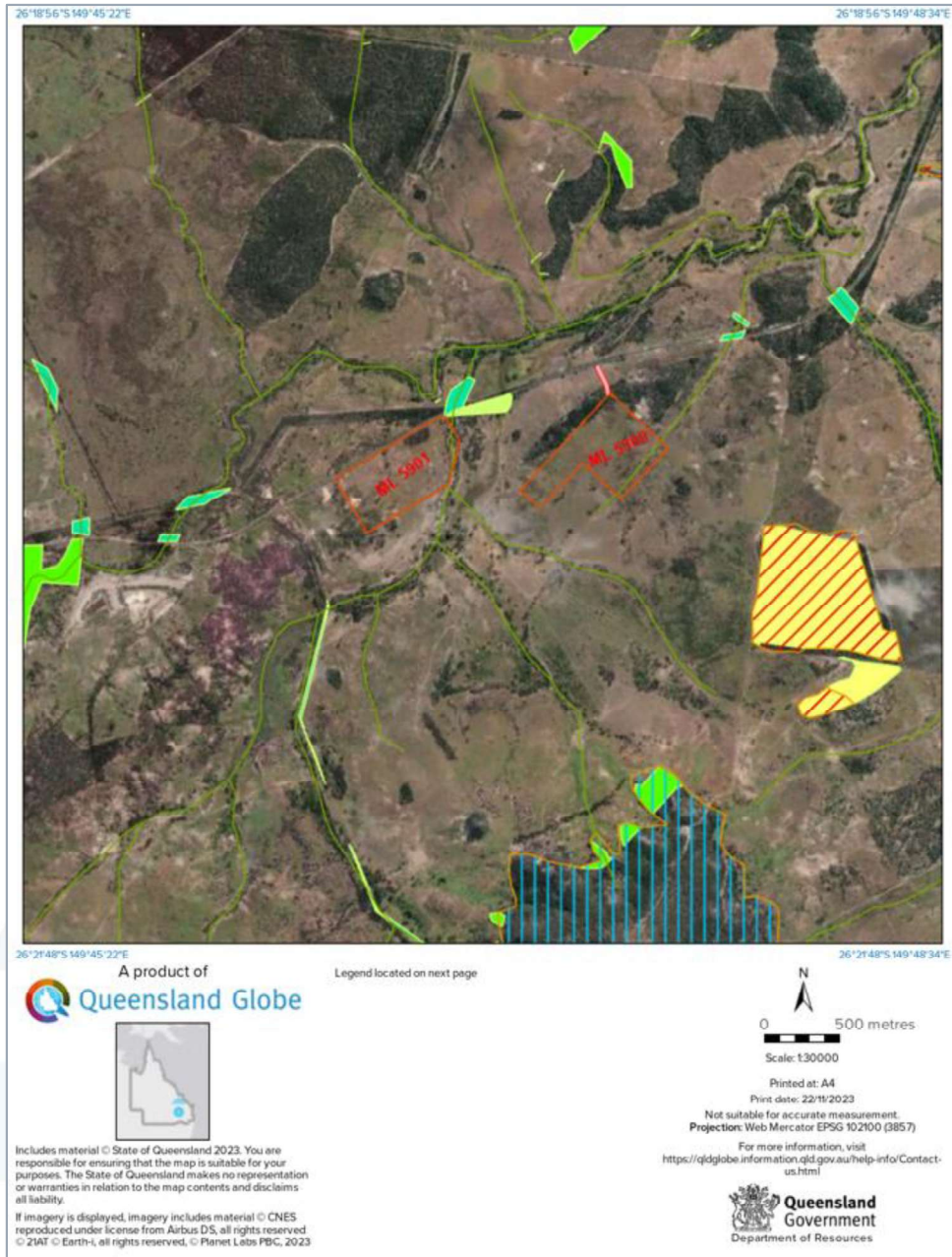


Figure 9: Matters of State Environmental Significance Queensland Globe layers (Ausben Leases)



ML permit application ---	MSES regulated vegetation [defined watercourse] —	MSES regulated vegetation [essential habitat] ■	MSES wildlife habitat [SEQ koala habitat - core] ▣
ML surface area application ■	MSES regulated vegetation [category B - endangered or of concern] ■	MSES regulated vegetation [100m from wetland] ■	MSES wildlife habitat [SEQ koala habitat - locally refined] ▣
ML access application —	MSES regulated vegetation [category C - endangered or of concern] ■	MSES wildlife habitat [endangered or vulnerable] ▣	MSES wildlife habitat [sea turtle nesting areas] —
ML permit granted □	MSES regulated vegetation [category R - GBR riverine] ■	MSES wildlife habitat [special least concern animal] ▣	Cities and Towns ○
ML surface area granted ■			
ML access granted —			

Figure 10: Matters of State Environmental Significance Queensland Globe layers



# **Attachment 6**

**Section 23 – Waste**

**The following details information required by ‘Section 23 – Waste’ of *Application Form – Application to amend an environmental authority* (ESR/2015/1733)**

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Below information pertaining to waste is extracted from the site’s Plan of Operations June 2014 (pp. 27-29). Additionally, an updated Waste Management Plan is provided as an appendix to the updated Site Based Management Plan.



### 3.5 Schedule E – Waste

No.	EA Condition	Control Strategy	Action Program
(E1-1)	Storage of Tyres: Tyres stored awaiting disposal or transport for take-back, and, recycling, or waste-to-energy options – should be stockpiled in volumes less than 3m in height and 200 sqm in area and at least 10m from any other tyres storage area.	Comply with the <i>Environmental Protection (Waste Management) Regulation 2000</i> and have all tyres stored before disposal in volumes less than 3m in height and 200 sqm in any area and at least 10m from any other tyre storage area.	Tyres to be stockpiled in accordance with condition (E1-1) prior to removal from the stie (as per EMOS 9.2.3).
(E1-2)	All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a 10m radius of the scrap tyre storage area.	Implement fire prevention measures within a 10m radius of the scrap tyre storage area.	Remove all the scrap tyres from the site prior to the final site rehabilitation.
(E1-3)	All scrap tyres shall be removed from site prior to final rehabilitation.	Remove all the scrap tyres from the site prior to the final site rehabilitation.	Remove all the scrap tyres from the site prior to the final site rehabilitation.
(E2-1)	Waste Handling and Management: The holder of this environmental authority must undertake waste management practices to ensure that wastes are minimised, recycled, stored, handled and transferred, etc. in a proper and efficient manner in accordance with the Waste Management Hierarchy; waste avoidance e.g. minimising waste through cleaner production; waste reuse; waste recycling e.g. mulching green waste for re-vegetation; energy recovery from waste; and waste disposal.	Identify and explore waste efficiencies incorporating company strategies for plant improvement, efficient use of resources and recycling. Develop and implement Waste Management Plan incorporating the principles outlined in (E2-1).	Document capital expenditures and continuous improvement projects in the areas of recycling, environmental improvement and energy efficiency. Develop and implement Waste Management Plan incorporating the principles outlined in (E2-1).



No.	EA Condition	Control Strategy	Action Program
(E3-1)	<p>Notification of Improper Disposal of Regulated Waste:</p> <p>If the holder of this environmental authority becomes aware that a person has removed waste from the licensed place and disposed of the waste in a manner which is not authorised by this environmental authority or is improper or unlawful, then the holder of the environmental authority must, as soon as practicable, notify the administering authority of all relevant facts, matters and circumstances known concerning the disposal.</p>	<p>Notify administering authority in accordance with condition (E3-1).</p>	<p>Include condition (E3-1) together with the relevant contact details for the environmental authority in the emergency response / contingency plan.</p>
(E5-1)	<p>Emergency Response / Contingency Plan: The holder of this environmental authority must develop and implement an Emergency Response / Contingency Plan to manage the environmental impacts of uncontrolled release of contaminants to the environment.</p>	<p>Comply with conditions (E5-1) to (E5-3) through the emergency response plan.</p>	<p>Amend the current Site emergency / contingency plan to fully comply with conditions (E5-1) to (E5-3).</p>
(E5-2_)	<p>The Emergency Response / Contingency Plan must address at least the following matters:</p> <ul style="list-style-type: none"> <li>response procedures to be implemented to reduce the likelihood of any release of contaminants to the environment;</li> <li>response procedures to prevent any further release or if such is not practicable, minimise the extent and duration of any release to the greatest practicable extent;</li> <li>the practices and procedures to be employed to restore the environment, or if such is not practicable, mitigate any environmental impacts of the release;</li> <li>a description of the resources to be used in response to a release;</li> <li>the training of staff that will be called upon to respond to a release;</li> <li>procedures to investigate the cause of any release, and where necessary, implement</li> </ul>	<p>Develop and implement the site Emergency Response / Contingency Plan in accordance with (E5-2).</p>	<p>Carry out regular tests of the plan to check for effectiveness, review the outcomes of the tests and use these to drive updates and improvements to the plan. Regularly update and keep current the site Emergency Response / Contingency Plan in accordance with (E5-2).</p>

No.	EA Condition	Control Strategy	Action Program
	remedial actions to reduce the likelihood of recurrence of a similar event; the provision and availability of documented procedures to staff attending any release to enable them to effectively respond; and timely and accurate reporting of the circumstance and nature of release events to the administering authority.		
(E5-3)	A copy of the Emergency Response / Contingency Plan and any subsequent amendment of the Emergency Response / Contingency Plan must be kept at the place to which this environmental relevant activity relates and be available for examination by emergency Services Personnel or an authorised person in request.	Incorporate a copy of the Emergency Response / Contingency Plan into existing site administration.	Supply upon request.