Submitter No.	283	Issue Reference:	4040
Submitter Type	NGO	TOR Category	Decommissioning & Rehabilitation
Name	Capricorn Conservation Council	Relevant EIS Section	3.5.4.1

DETAILS OF THE ISSUE

Little evidence and minimal research into restoring mine disturbed land in QLD to "stable and non-polluting condition".

Evidence of successful rehabilitation of open-cut mines needs to be evaluated and presented for peer review.

PROPONENT RESPONSE

Specific measures for decommissioning and rehabilitation will be identified in the Environmental Authority, the EM Plan and the Rehabilitation and Decommissioning Plan.

The *Draft Mine EM Plan* includes a section on rehabilitation and decommissioning – refer to section 9.6.3 – 9.9. The *Draft Mine EM Plan* is contained in the *Appendices – Volume 2* of this SEIS.

The following resources will be used to assist in the development of the final Rehabilitation and Decommissioning Plan:

- DERM Guideline: Rehabilitation requirements for mining projects[1], and
- Leading practice sustainable development program for the mining industry: mine rehabilitation[2].

These documents have been prepared based on a number of case studies and experience across Australia and in Queensland specifically and represent best practice mine rehabilitation activities. Specifically, with respect to rehabilitation of Queensland open pit operations, the leading practice document uses Gregory Crinum coal mine as a case study of best practice rehabilitation. Other relevant case studies used in this document include Kidston Gold Mine in Queensland and Mt Owen open pit coal mine in New South Wales.

The use of these documents, as well as others such as the leading practice sustainable development program for the mining industry: mine closure and completion[3] and the experience of site personnel, their colleagues, DERM and specialist consultants commissioned with providing rehabilitation and closure related advice will ensure that the proposed rehabilitation will result in a stable and non-polluting site.

Additional to the Rehabilitation and Decommissioning Plan for the site, which will be based on best practice, experience and case studies, the completion criteria developed for each aspect of the mine closure and rehabilitation will be used to define successful rehabilitation. The rehabilitation indicators and completion criteria will be determined based on critical assessment of the likely final land uses for each closure domain across the site and targeted to achievement of the outcomes identified throughout Section 1.3 (of the existing Galilee Coal Project EIS).These criteria will be measured against and where the monitoring results are not trending towards successful closure, contingency measures will be identified and adaptive management applied.

Waratah Coal commits to returning the land to a post-mine land use that will be stable, self-sustaining and require minimal maintenance. It also identifies the requirement for stakeholder consultation and agreement to appropriately define a biodiversity offset strategy and rehabilitation and closure plan. The site will not be relinquished back to the government until such time as agreed completion criteria are met and prove that the land is available for the agreed final land use.

1 DERM (2011) *Guideline: Rehabilitation requirements for mining projects*. Department of Environment and Resource Management. 2011.

2 *Leading Practice Sustainable Development Program for the Mining Industry: Mine Rehabilitation.* Department of Industry, Tourism and Resources, October 2006.

3 *Leading Practice Sustainable Development Program for the Mining Industry: Mine Closure and Completion.* Department of Industry, Tourism and Resources, October 2006

Mine site landform impacts rehabilitation and management are further discussed in Sections 5.1 and 5.2 of the *Soils and Land Suitability SEIS Report* and the *Rehabilitation and Decommissioning Position* section of the *Draft EM Plan (*contained in *Appendices – Volume 2* of this SEIS).

Submitter No.	**415**	Issue Reference:	**4041**
Submitter Type	Individual	TOR Category	**Decommissioning & Rehabilitation**
Name	**Name withheld**	Relevant EIS Section	

DETAILS OF THE ISSUE

"Decommissioning and Rehabilitation" is inadequate, no mention of rehabilitating coal dependent communties; none of upcycling or recycling of construction materials, nor of ongoing cost of rehabilitating destroyed environments.

PROPONENT RESPONSE

With respect to the cost of mine closure, including decommissioning and rehabilitation or project-related disturbance areas, there is a requirement under Queensland legislation for the company to provide financial assurance, calculated in accordance with regulatory guidelines, for the project. This amount is not required to be disclosed in the EIS or Plan of Operations. This financial assurance is reviewed annually. Given that this money is not available to the company until rehabilitation is conducted, additional financial provision will be made within the company to ensure that there are funds available for progressive rehabilitation work throughout the life of mine and on closure.

The *Draft Mine EM Plan* includes a section on rehabilitation and decommissioning – refer to section 9.6.3 – 9.9 and the management of waste – refer to section 7. The *Draft Mine EM Plan* is contained in the *Appendices – Volume 2* of this SEIS.

Submitter No.	**776**	Issue Reference:	**4042**
Submitter Type	Individual	TOR Category	**Decommissioning & Rehabilitation**
Name	**Name withheld**	Relevant EIS Section	Chpt 1, Section 1.3; App 27

DETAILS OF THE ISSUE

This submission provided a critical assessment of the rehabilitation section of the EIS and suggested that Waratah Coal use the 2011 WA Mine Rehabilitation Guidleines, various research journals and the Australian Centre for Geomechanics Mineclosure Books for research and examples in combination with the Qld and Minerals Council Guides.

PROPONENT RESPONSE

The *Draft Mine EM Plan* contains a section on rehabilitation and decommissioning – refer to section 9.6.3 – 9.9. The *Guideline: Rehabilitation Requirements for Mining Projects* (DERM 2011)[4] has guided the rehabilitation and decommissioning strategies for the mine. The *Draft Mine EM Plan* is contained in the *Appendices – Volume 2* of this SEIS.

4 DERM (2011) *Guideline: Rehabilitation requirements for mining projects*. Department of Environment and Resource Management. 2011.

Submitter No.	419	Issue Reference:	4043
Submitter Type	Government	TOR Category	Decommissioning & Rehabilitation
Name	DERM	Relevant EIS Section	Volume 2, Mine – Section 3.5.9, Decommissioning and Rehabilitation Phase (p136)

DETAILS OF THE ISSUE

This section is poorly worded. It is unclear what Waratah Coal will facilitate.

PROPONENT RESPONSE

The *Draft Mine EM Plan* has been completely rewritten and includes a section on rehabilitation and decommissioning – refer to section 9.6.3 – 9.9. The *Draft Mine EM Plan* is contained in the *Appendices – Volume 2* of this SEIS.

Submitter No.	419	Issue Reference:	4044 / 19003
Submitter Type	Government	TOR Category	Decommissioning & Rehabilitation
Name	DERM	Relevant EIS Section	Chapter 7 – Environmental Management Plan: Mine, Section 7.8.18 Element 18 – Land Rehabilitation

DETAILS OF THE ISSUE

The rehabilitation objectives do not provide a clear description of proposed rehabilitation outcomes within the individual domains of the mine site.

The EM plan is required to describe the proposed rehabilitation of the mining disturbance and how it will control future environmental harm to an acceptable level.

The EIS and EM plan should detail the rehabilitation outcomes for the Galilee Coal Project. The EM plan should be developed considering the departmental guideline 'Rehabilitation requirements for mining projects'.

PROPONENT RESPONSE

As detailed in response to Issue Reference 4040 (in this chapter), the DERM Guideline: "*Rehabilitation Requirements for Mining Projects*"[5] has been used to assist in the development of the Rehabilitation and Decommissioning section, contained within the *Draft Mine EM Plan* in *Appendices – Volume 2* of this SEIS – refer to section 9.6.3 – 9.9 of the *Draft Mine EM Plan*.

5 DERM (2011) *Guideline: Rehabilitation requirements for mining projects*. Department of Environment and Resource Management. 2011.

Submitter No.	**419**	Issue Reference:	**4045**
Submitter Type	Government	TOR Category	**Decommissioning & Rehabilitation** / Nature Conservation (Terrestrial)
Name	**DERM**	Relevant EIS Section	Volume 2 Terrestrial Ecology, Commitments, Section 6.7.2

DETAILS OF THE ISSUE

The EIS commits to developing and implementing a mine recovery, remediation, rehabilitation plan and monitoring plan.

PROPONENT RESPONSE

Commitments with reference to these issues are contained within the *Rehabilitation and Decommissioning* section of the *Draft Mine EM Plan* (contained in *Appendices – Volume 2* of this SEIS) – refer to section 9.6.3 – 9.9.

Submitter No.	**664**	Issue Reference:	**4046**
Submitter Type	Council	TOR Category	**Decommissioning & Rehabilitation**
Name	**Whitsunday Regional Council**	Relevant EIS Section	

DETAILS OF THE ISSUE

The EIS outlines that at the completion of the construction phase, temporary facilities will be decommissioned and rehabilitated. Further detail will be required regarding this process when each of the sites for these temporary facilities has been decided. Information regarding revegetation, erosion and sediment control measures and weed management will be required.

PROPONENT RESPONSE

When the locations for the temporary facilities have been identified, a construction environmental management plan (CEMP) will be prepared and provided to the regulator for review. The CEMP will include rehabilitation requirements, erosion and sediment control measures and weed management strategies during construction. This plan will be provided prior to the commencement of construction.

When the locations for the temporary facilities, hence existing land uses and environmental values, have been identified, a closure plan will be prepared for the temporary facilities and provided to the regulator for review. This plan will be provided prior to the commencement of construction.

A *Rehabilitation and Decommissioning* section is contained within the *Draft Mine EM Plan* contained in *Appendices – Volume 2* of this SEIS – refer to section 9.6.3 – 9.9 of the *Draft Mine EM Plan.*

Submitter No.	**1840**	Issue Reference:	**4047**
Submitter Type	Council	TOR Category	**Decommissioning & Rehabilitation**
Name	**Barcaldine Regional Council**	Relevant EIS Section	3.1.3.2

DETAILS OF THE ISSUE

How long before progressive rehabilitation will occur?

PROPONENT RESPONSE

Refer to Issue Reference 4040 (in this chapter).

The Plan of Operations to be prepared for the project will include a schedule of rehabilitation activities that are scheduled within the life of the Plan of Operations (Section 1.3.5.2.1, of the EIS).

Rehabilitation will typically be undertaken on areas that cease to be used for mining or mine-related activities within two years of becoming available. This will reduce the amount of disturbed land at any one time. Results of progressive rehabilitation and vegetation trials (if appropriate) will be used to refine rehabilitation methods for future application such as the selection of appropriate drainage measures and plant species for re-establishment. Areas available for progressive rehabilitation and the types of disturbance at those sites will be detailed in the Plan of Operations.

A *Rehabilitation and Decommissioning* section within the *Draft Mine EM Plan* is contained in *Appendices – Volume 2* of this SEIS – refer to section 9.6.3 – 9.9.

Submitter No.	**417**	Issue Reference:	4048
Submitter Type	Council	TOR Category	**Decommissioning & Rehabilitation**
Name	**Isaac Regional Council**	Relevant EIS Section	

DETAILS OF THE ISSUE

All disturbed mining and rehabilitation areas shall be rapidly vegetated and stabilised to prevent dust and surface water pollution from the site exceeding the pre-development levels at the property boundary. Council views a maximum period of 3 months for all non active disturbed surfaces to be left exposed prior to vegetation and stabilisation being implemented as a minimum standard to protect local ecological amenity and ecological integrity of rehabilitation areas.

PROPONENT RESPONSE

Revegetation and stabilisation specifics will be set out in the Environmental Authority (EA), the EM Plan and the Rehabilitation and Decommissioning Plan. These management plans will identify ways in which disturbed areas will be stabilised and mitigation measures that will be implemented to prevent dust and surface water pollution from the site exceeding agreed criteria. Practical factors such as compaction of spoil heaps to a level to safely allow access and the distance to the advancing edge of the spoil heap will influence the timing of revegetation works. Stabilisation methods will be applicable and relevant to the area in question and the potential impact from that area, and may not include revegetation. Monitoring will also be conducted to ensure that the realised impact of the project is quantified and adaptive management and mitigation measures can be implemented as required.

Rehabilitation will typically be undertaken on areas that cease to be used for mining or mine-related activities within two years of becoming available. This will reduce the amount of disturbed land at any one time. Results of progressive rehabilitation and vegetation trials (if appropriate) will be used to refine rehabilitation methods for future application such as the selection of appropriate drainage measures and plant species for re-establishment. Areas available for progressive rehabilitation and the types of disturbance at those sites will be detailed in the Plan of Operations.

As mentioned in response to Issue Reference 4040 (in this chapter), Waratah Coal will consider Queensland and Australian guidelines for mining rehabilitation, as well as other leading practice guidelines to assist them in the preparation of the EA, the EM Plan and the Rehabilitation and Decommissioning Plan. The mitigation and

management actions required by these plans will be implemented from initial disturbance of the area until such time as the non-active disturbed area is rehabilitated in accordance with the requirements of the final land use.

A *Rehabilitation and Decommissioning* section within the *Draft Mine EM Plan* is contained in *Appendices – Volume 2* of this SEIS – refer to section 9.6.3 – 9.9 and also to section 10 for the protection of water resources.

Submitter No.	**758**	Issue Reference:	**4114**
Submitter Type	Individual	TOR Category	**Decommissioning & Rehabilitation**
Name	**Name WIthheld**	Relevant EIS Section	Vol 2 Chap 1, 1.3.3 – 1.3.5

DETAILS OF THE ISSUE

Aims and objectives for rehabilitation are confusing with many possible outcomes and suggestions which are not clearly matched in the following sections. Makes it difficult to understand what the aim (end point) of rehabilitation is, and what the matching objectives, indicators, actions plans are.

PROPONENT RESPONSE

Waratah Coal commits to returning the land to a post-mine land use that will be stable, self-sustaining and require minimal maintenance. It also identifies the requirement for stakeholder consultation and agreement to appropriately define a biodiversity offset strategy and rehabilitation and closure plan. The site will not be relinquished back to the government until such time as agreed completion criteria are met and prove that the land is available for the agreed final land use.

The rehabilitation plan will be prepared and integrated into the overall mine plan and EM Plan for the mine to assist with setting conditions for the EA. The plan, commitments and proposed outcomes will be consistent across all documentation.

The *Rehabilitation and Decommissioning* section within the *Draft Mine EM Plan* provides details and is contained in *Appendices – Volume 2* of this SEIS – refer to section 9.6.3 – 9.9.

Submitter No.	**1840**	Issue Reference:	**4115**
Submitter Type	Council	TOR Category	**Decommissioning & Rehabilitation**
Name	**Barcaldine Regional Council**	Relevant EIS Section	6.5.1

DETAILS OF THE ISSUE

There is no description as to the final proposed landform or use. How will the post mine land achieve stability, become self-sustaining and require minimal maintenance?

What landforms will deliver stability, what are the current rates of erosion? Are the current rates of pre-mine erosion acceptable?

The current soil and overburden characteristics should be able to provide some insight into what is likely to be achieved.

How can BRC make assessments on adequate post-mining landform without a detailed description and a likelihood of its success?

Please provide a more detailed plan based on soil assessments.

PROPONENT RESPONSE

See the *Soils and Land Suitability SEIS Report* and the *Rehabilitation and Decommissioning* section within the *Draft Mine EM Plan*. Both are contained in the *Appendices – Volume 2* of this SEIS.

Submitter No.	**419**	Issue Reference:	**6085**
Submitter Type	Government	TOR Category	Water Resources (Surface Water) / **Decommissioning & Rehabilitation**
Name	**DERM**	Relevant EIS Section	Chapter 1 Project Description, Section 1.3.5.1, Rehabilitation Action Plan, Table 7 (p66)

DETAILS OF THE ISSUE

The draft performance indicators for the decommissioning and rehabilitation program do not address the diversion of Tallarenha Creek or any other proposed diversions.

PROPONENT RESPONSE

The decommissioning and rehabilitation of the proposed creek diversions will be undertaken in accordance with the Bowen Basin River Diversions, Design and Rehabilitation Criteria[6]. The *Mine Site Creek Diversion and Flooding* report (contained in *Appendices – Volume 2* of this SEIS) includes a monitoring program for all stages of the diversion including baseline, construction, operation and relinquishment monitoring. As a part of this monitoring progam key performance indictors to demonstrate that the diversion is operating as a watercourse in equilibrium with adjoining reaches are provided.

The *Draft Mine EM Plan* has been amended to address rehabilitation and decommissioning requirements – refer to section 9.6 – 9.9. The *Draft Mine EM Plan* is contained in the *Appendices – Volume 2* of this SEIS.

6 ACARP (2002) *Bowen Basin River Diversions, Design and Rehabilitation Criteria,* Australian Coal Association Research Program.

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