

Amalgamating Tronox Cooljarloo's Ministerial Conditions

Tronox Management Pty Ltd (Tronox) currently operates a mineral sands mine at Cooljarloo located 175 km north of Perth. The operation produces a mineral sands concentrate that is transported offsite for separations into its constituent minerals, predominantly titanium and zircon bearing ores, and for further processing and sale.

Tronox proposes to divert the current mine path from the existing Cooljarloo Mine to the Cooljarloo West lease. The Cooljarloo West Titanium Minerals Mine (the Proposal) involves dredge mining of the Kestrel, Harrier and Woolka ore bodies. The mined concentrate produced will be transported offsite for processing and separation.

The Proposal to expand operations within the Cooljarloo West lease was referred to the Environmental Protection Authority (EPA) on 15 May 2013 for consideration in accordance with Part IV of the Environmental Protection Act 1986 (EP Act). The EPA determined that the Proposal should be assessed at a Public Environmental Review (PER) level of assessment with a four week public review period.

The Scoping Document for the Cooljarloo West Project PER states EPA's preference to replace the three existing Ministerial Statements (M37, M557 and M790) with a single statement. This would both authorise the Cooljarloo West Titanium Minerals Project as well as amalgamate the existing three statements in force for the existing Cooljarloo Mine.

The scoping document states:

The proposal that is the subject of this assessment is Tronox Management Pty Ltd proposed Cooljarloo West Titanium Minerals Project. The proposal is for an expansion of current operations at the Cooljarloo mineral sands mine. The EPA reported on the existing operations (EPA Report 330) and the proposal is subject to the requirements of Ministerial Statement 37, 557 and 790.

In view of the above this proposal is a revised proposal which would allow the existing conditions and proponent commitments, (Statement 37, 557 and 790) to be updated into a single Ministerial Statement that is consistent with current practice that would apply across all the mining operations at the Cooljarloo mine.

EPA 2013: *Environmental Scoping Document Cooljarloo West Titanium Minerals Project Assessment No. 1974.*

PURPOSE OF THIS DOCUMENT

The purpose of this document is to:

- provide an overview of the *Environmental Protection Act 1986* (EP Act) approval requirements applicable to the existing Cooljarloo mine operations
- propose a strategy for consolidating the approval statements relating to operations at the existing Cooljarloo mine.

STATUTORY CONTEXT FOR REVISED PROPOSALS

Section 45B of the EP Act provides that, if a proposal is revised after implementation conditions have been agreed or decided, those conditions continue to apply unless:

- they are changed under s 46 (change to conditions); or
- revised conditions or procedures being agreed or decided under s 45 in relation to the revised proposal after the revised proposal has been referred to the Authority and assessed.

EPA GUIDANCE ON ENVIRONMENTAL CONDITIONS

ENVIRONMENTAL ASSESSMENT GUIDELINE 11: EPA APPROACH TO RECOMMENDING ENVIRONMENTAL CONDITIONS

EAG 11 describes EPA's approach to recommending conditions to the Minister for Environment regarding how a project is to be implemented in order to achieve EPA's objectives for key environmental factors. EAG 11:

1. describes the EPA's approach to preparing recommended proposal implementation conditions;
2. provides guidance to proponents on the types of conditions that may be applied to their proposal; and
3. reaffirms the importance of the assessment process in providing the EPA confidence that its objectives will be met and, in providing this confidence, also providing for concise outcome-based conditions.

This guideline was developed to ensure that proposal implementation conditions recommended by the EPA are: relevant to and effective in meeting the EPA's environmental objectives; consistent in form and language; readily assessed for compliance; enforceable; and improved from lessons learned over time.

ENVIRONMENTAL ASSESSMENT GUIDELINE 1: DEFINING THE KEY CHARACTERISTICS OF A PROPOSAL

This Guideline focuses on how to define the Key Proposal Characteristics of proposals for the purposes of assessing the proposal and incorporation in the Ministerial Approval Statement. The objective of this Guideline is to assist proponents to identify and provide the Key Proposal

Characteristics that capture all key features of the proposal relevant to the *Environmental Protection Act 1986*.

The Guideline provide the context within the Key Proposal Characteristics, commonly set out within Schedule 1 of the Ministerial Statement, are defined.

APPROACH TO REVIEW

This review by Tronox consider two main aspects:

- The status and relevance of existing conditions from M37, M557, M790/953.
- Additional conditions required for additional key factors relevant to the Cooljarloo West Project

Where changes to conditions can be made that clarify or even improve environmental outcomes, without modifying the scope of the approved projects, these have been identified and proposed.

EXISTING APPROVALS

An overview of the approved proposals and applicable conditions is provided in Table 1. Figure 1 depicts the mining areas subject to each Statement.

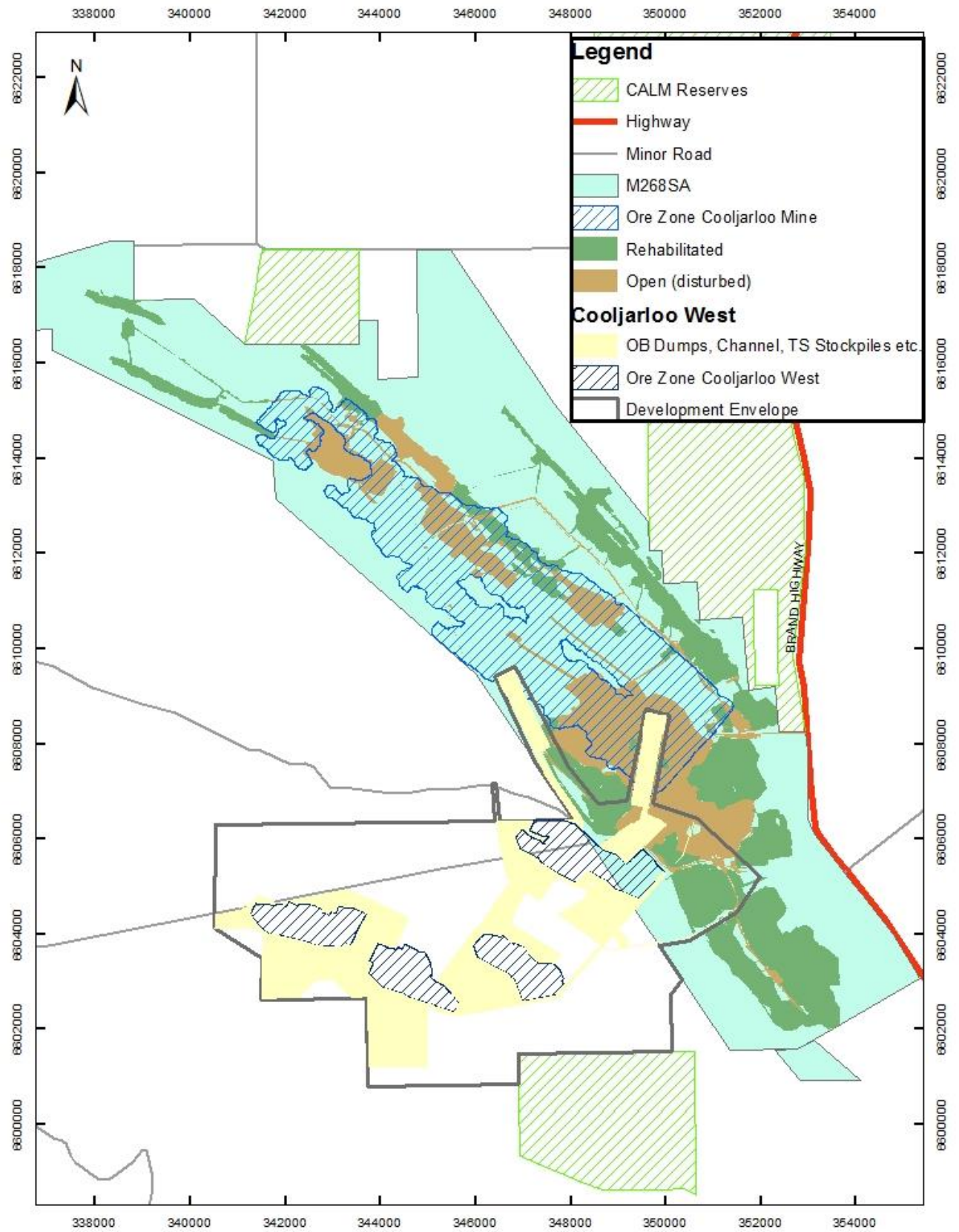
The existing Cooljarloo Mine was initially approved under the EP Act in 1988 (Statement 37). Two expansion proposals since have been referred to and assessed by the EPA (Statements 557 and 790).

Table 1 Overview of approval requirements for existing operations

Statement Number	Proposal overview	Approval conditions	Proponent commitments
037	Original proposal to establish a heavy mineral sand mining and processing operation at Cooljarloo near Cataby, approximately 170km north of Perth (excluding the dry processing plant at Muchea) within mining lease M268SA. Status Activities commenced in approximately 1989 and are anticipated to continue to approximately 2031.	1. Implementation	Proponent commitments attached to Statement.
		2. Dieback survey	
		3. Management of dieback unaffected areas	
		4. Dieback research program	
		5. Commencement of mining in Badgingarra National Park	
		6. Groundwater and surface water monitoring program	
		7. Environmental Management Program	
		8. Reporting	
		9. Referral of proposed expansions	
557	Expansion of mining of minerals from orebodies 27 200 and 28 000, adjacent to the southern mining operations for the existing Cooljarloo Mineral Sands Mine within mining lease M268SA. Status: Mining of the 27200 orebody concluded in approximately 2003 and the area has been rehabilitated.	1. Implementation	Proponent commitments provided in Schedule 2.
		2. Proponent commitments	
		3. Proponent	
		4. Commencement	
		5. Compliance auditing	
		6. Environmental Management System	
		7. Surface and groundwater management plan	
		8. Rare Flora Management Plan	

Statement Number	Proposal overview	Approval conditions	Proponent commitments
	The 28000 orebody has not been mined and does not form part of the current mine plan.	9. Integrated mining and rehabilitation plan 10. Performance Review	
790	The extension of mining adjacent to existing operations within 25 000 and Lone deposits (located within the State Agreement Act mine tenement M268SA). Note: A s 45C change to Statement 790 approved on 5 August 2009 to change a typographical error of ore extracted from 3.1 million tonnes to 7.4 million tonnes. Minor changes also made to the clearing footprint. Status Mining of the 25000 and Lone orebodies commenced in approximately 2009 and concluded in 2011. The area has been rehabilitated.	1. Proposal implementation 2. Proponent nomination and contact details 3. Time limit of Authorisation 4. Compliance Reporting 5. Performance Review and Reporting 6. Flora and vegetation 7. Groundwater drawdown	Not applicable.

Figure 1 Cooljarloo mining operations (existing and proposed)



ENVIRONMENTAL FACTORS

EXISTING OPERATIONS

The environmental factors identified through the existing environmental approvals are outlined in Table 2.

Table 2 Environmental Factors from existing approvals.

Factors	EPA Report 330	EPA Report 990	EPA Report 1299
Dieback	√		
Vegetation and Flora	√	√	√
Fauna	√		
Hydrological processes - Groundwater	√	√	√
Inland water quality/surface water	√	√	
Rehabilitation and closure	√	√	√

PRELIMINARY ENVIRONMENTAL FACTORS (CONSOLIDATED STATEMENT)

The preliminary environmental factors identified for the combined Cooljarloo operations have been aligned with Environmental Assessment Guidelines for Environmental factors and objectives (EAG 8) and are presented in Table 3.

Table 3 Environmental Factors and objectives – Cooljarloo Mine operation

Theme	Factor	Objective
Land	Flora and vegetation	To maintain representation, diversity, viability and ecological function at the species, population and community level
	Terrestrial fauna	To maintain representation, diversity, viability and ecological function at the species, population and assemblage level.
Water	Hydrological processes	To maintain the hydrological regimes of groundwater and surface water so that existing and potential uses, including ecosystem maintenance, are protected
	Inland Waters Environmental Quality	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected
Integrating factors	Offsets	To counterbalance any significant residual environmental impacts or uncertainty through the application of offsets
	Rehabilitation and closure	To ensure that premises are closed, decommissioned and rehabilitated in an ecologically sustainable manner, consistent with agreed outcomes and land uses, and without unacceptable liability to the State

BROADER REGULATORY FRAMEWORK FOR ENVIRONMENTAL MATTERS

Tronox's activities at Cooljarloo and Cooljarloo West are subject to a number of legislative controls. Table 1 summarises the key regulation and responsible agencies in relation to environmental factors

relevant to the project, that are additional to those in place via Part IV of the Environmental Protection Act 1986 Ministerial Conditions.

Table 4 Summary of Regulation relevant to the Cooljarloo Mine and Cooljarloo West Project additional to Part IV EP Act conditions (Environmental Factors in bold have been identified as preliminary key environmental factors for the project)

Factor	Topic	Cooljarloo State Agreement (Agreement and tenement conditions)	EP Act Part V (Works Approval/ Licence)	Statement Conditions (EP Act Part IV) -	Other relevant legislation and regulations	EMP
Environmental factors						
Hydrological Processes – Potential changes to surface and groundwater processes, quality and flows	Process waste disposal	✓	✓		✓ Licence under RIWI Act Contaminated Sites Act	✓
	Groundwater abstraction and below water table mining	✓		✓	✓ Licence under RIWI Act	✓
	Potential acid sulphate soils		✓	✓		
	Alteration of surface water flow and quality	✓	✓	✓		
Flora and vegetation	Clearing Mgmt of threatened flora Changes to hydrology Phytophthora Dieback	✓		✓	Wildlife Conservation Act	✓
Terrestrial Fauna	Habitat (clearing) generally and of threatened fauna (e.g. Carnaby's cockatoo)			✓		✓
Offsets	Threatened fauna habitat			✓		
Rehabilitation and Decommissioning	Rehabilitation of ecological systems post mining	✓		✓	✓ Mining Act	✓
Other Factors						
Air Quality	Fugitive dust		✓			✓
Greenhouse	Emissions reduction and Reporting				✓ NGER / Clean Energy Act	✓
Radiation	Radiation emissions	✓			✓ Mining Act	✓
Indigenous heritage	Disturbance of indigenous heritage sites	✓			✓ Aboriginal Heritage Act	✓
People	Amenity (visual and noise)				Env Protection (Environmental Noise) Regulations	
	Heritage	✓			Heritage Act	

REVIEW OF EXISTING CONDITIONS (STATEMENTS 37, 557 AND 790)

Review of the existing ministerial conditions has been undertaken to identify how applicable these may be to an amalgamated statement. Table 4 summarises the outcomes of the review. Further detail is provided in tables 5 to table 7. These, in combination with conditions anticipated to arise from the for the Cooljarloo West assessment (should this be approved) form the context for the amalgamated statement.

Table 5 Review of existing and potential conditions

Issue factor	Statement 037	Statement 557	Statement 790	Expected outcome with consolidation of conditions
Administrative				
Proposal implementation	Proposal to be implemented in accordance with that assessed by EPA and Proponent commitments made in the Environmental Review and Monitoring Program	Proposal to be implemented as documented in Schedule 1 and conditions and procedures contained in Statement.	Proposal to be implemented as documented in Schedule 1 and conditions and procedures contained in Statement.	Proposal implementation is a 'standard' condition of new statements. The scope of the combined operations would be described within Schedule 1 of the consolidated statement. This would require delineation of a development envelope across the Cooljarloo Mine and a maximum clearing / disturbance extent.
Proponent	Not applicable	Condition 3	Condition 2	Proponent nomination is a 'standard' condition of new statements.
Time limit of authorisation	Not applicable	Condition 3 – substantial commencement within 5 years of Statement.	Condition 3 – substantial commencement within 5 years of Statement.	Remove. The project is currently operating which renders this clause redundant. The Cooljarloo West ore is to be combined with the existing approved ore as one combined project.
Compliance reporting	Condition 8 requires annual and triennial reports to be submitted to Department of Mines who will seek advice from the EPA.	Condition 5 requires compliance reports to be submitted in accordance with an agreed audit program Condition 10 requires Performance Review report to be submitted every six years.	Condition 4 requires annual compliance reporting Condition 5 requires Performance Review and Reporting two and four years following commencement of mining and then at intervals agreed by the CEO.	Compliance reporting currently required across all statements. Reporting would continue against conditions of the new consolidated statement. Wording to be aligned with contemporary approach of Compliance Assessment Plan and Compliance Assessment Reporting.
Public availability of data	Not applicable	Not applicable	Not applicable	Public availability of data is a 'standard' condition of new statements.
Environmental Management System (EMS)	Condition 7 requires the preparation and implementation of an Environmental Management Programme.	Condition 6 required the proponent to demonstrate that an EMS is in place.	Not applicable	Remove A condition requiring an EMS is not necessary nor aligned with EAG11. Similarly, conditions relating to plans and management programmes should target specific outcomes for the management of particular factors.
Environmental factors				
Flora and vegetation	Commitments 1, 5 relate to vegetation monitoring	Rare Flora Management Plan required by condition 8 Baseline vegetation survey required by condition 9-1. Commitments 3, 4 and 5 relate to minimising impacts on native vegetation and Priority flora	Condition 6 related to flora and vegetation. The condition includes requirements relating to translocation of DRF, vegetation condition monitoring outside of cleared areas.	Monitoring and management of conservation significant flora is a component of the existing and proposed operations. Key topics for conditioning include minimising clearing of individuals, which can be addressed through limiting the extent of clearing permitted (hectares and location within which clearing may be undertaken), and return in post mining rehabilitation, which may be addressed in mine closure conditions.

Issue factor	Statement 037	Statement 557	Statement 790	Expected outcome with consolidation of conditions
Dieback	Conditions 2, 3 and 4 and commitments 9, 10, 11, 12, 13, 14, 15 relate to monitoring, management and research on dieback.	Dieback management required as part of Integrated Mining and Rehabilitation Plan	Not applicable	Dieback and weed management is presently managed via a Dieback Management Plan. As a key factor in previous assessments conditions relating to dieback management are expected to be retained.
Hydrological processes	Develop and implement groundwater and surface water monitoring plan (condition 6).	Condition 7 requires the preparation of a groundwater and surface water management plan	Condition 7 relates to groundwater drawdown. A number of objectives are specified with prescribed management action trigger levels (Table 3).	Groundwater management is likely to be a key factor for the Cooljarloo mine operations, primarily related to impacts on groundwater dependent vegetation (GDE). Drawdown conditions arising from M790 are no longer relevant as mining operations have ceased in this area. Conditions arising from M37 and 557 requiring a groundwater management plan should be retained. The objective of the management should be to minimise drawdown, monitor the extent and effects on groundwater dependant vegetation and prevent impacts arising in adjacent Nature Reserves.
Inland Waters	Develop and implement groundwater and surface water monitoring plan (condition 6).	Condition 7 requires the preparation of a groundwater and surface water management plan.	Not applicable	The key impact of the proposal on inland waters relates to the disturbance of potential acid sulphate soils can result in the release of acid water and metals. This factor is considered to be able to be addressed via conditions relating to mine closure and rehabilitation.
Closure and rehabilitation	Condition 9 relates to Mining and Rehabilitation. The condition requires the development of a Plan.	Commitments 1, 2 and 16 relate to mine rehabilitation.	Condition 8 relates to closure and rehabilitation including collection of baseline information, translocation of DRF and completion criteria for rehabilitation areas.	M268SA is the subject of a State Agreement Act and therefore the <i>Mining Act 1978</i> does not apply. A mine closure plan has been developed in accordance with Mine Closure Guidelines and signed off by DSD and OEPA. Retaining conditions requiring a Mine Closure plan is appropriate.
Terrestrial fauna	Not applicable	Not applicable	Not applicable	Conditions relating to fauna are not considered necessary. The loss of habitat, including for conservation significant fauna such as Carnaby's Cockatoo are addressed via conditions relating to minimising clearing, closure and rehabilitation and offsets.
Subterranean fauna	Not applicable	Not applicable	Not applicable	This factor has been identified as a Preliminary environmental factor for the Cooljarloo West project. Outcomes of survey work conducted for the PER demonstrate that this is not a key environmental factor.
Offsets	Not applicable	Not applicable	Not applicable	Conditions are considered likely to be required that address the mitigation of any significant residual impacts associated with the Cooljarloo West Proposal. However, these should only relate to the Cooljarloo West project, i.e. not the existing projects.

Table 6 Ministerial Statement M37

Key: C = Compliant, CLD = Completed, NR: Not Required

Audit Code:	Subject:	Condition or Commitment	Status:	Recommendation
37:M1	Implementation	The proponent shall adhere to the proposal (excluding the dry processing plant at Muchea) as assessed by the Environmental Protection Authority and shall fulfil the commitments made in the Environmental Review and Management Programme with the exception of those commitments relating to the proposed dry processing plant (copy of commitments attached)	C	Replace with current implementation Condition linking to project scope as described in Schedule 1. This will require creation of Schedule 1 for the existing operations and then an amalgamated schedule for the combined operations.
37:M2	Dieback	Prior to commencement of mining, the proponent shall undertake a detailed dieback survey, to the satisfaction of the Environmental Protection Authority following advice from the Department of Conservation and Land Management, in the proposed mining areas, in order to identify any occurrences of Phytophthora ssp. within these areas.	CLD	Delete This condition was cleared in 1989.
37:M3	Dieback	The proponent shall restrict mining and related activities to areas that are proven to be uninfected by Phytophthora pathogens as a result of the survey required in condition 2, until detailed dieback isolation and treatment programmes are developed to the satisfaction of the Environmental Protection Authority following advice from the Department of Conservation and Land Management.	CLD	Replace with condition addressing phytophthora dieback management. This is to address prevention of spread and management of existing infestations.
37:M4	Dieback	The proponent shall fund research programmes with the objectives of developing: 1. An understanding of the epidemiology of Phytophthora ssp. pathogens on northern sandplain vegetation types, and effective disease management and control strategies; and 2. Cost-efficient methods of sterilisation treatment of localised disease infections in the field and in industrial process water bodies where appropriate. The results of the research programmes shall be forwarded to the Environmental Protection Authority and the Department of Conservation and Land Management.	C	Condition not aligned with EAG11. Replace with condition addressing phytophthora dieback management. This is to address prevention of spread and management of existing infestations.
37:M5	Land clearing	The proponent shall not undertake productive mining activities in the area subject to the Environmental Protection Authority's 'Red Book' Recommendations for Badgingarra National Park (5.22) until: 1. A review of the recommendations for this area has been carried out by the task force established for this purpose in accordance with Government initiatives relating to mining in national parks and nature conservation reserves; 2. Implementation of the resulting recommendation has been fully approved by Government, and Access has been approved through either the revised recommendation or procedures outlined in the Government's policy for mining in national parks and nature conservation reserves.	CLD	Delete – Cleared.
37:M6	Groundwater and surface water	Prior to the commencement of mining activities, the proponent shall develop and implement, to the satisfaction of the Water Authority of Western Australia, a groundwater and surface water monitoring programme, including regular reporting of monitoring results, with the objective of conserving and minimising impact on water resources.	C	Delete. Replaced by Groundwater Operating Strategy governed by Rights in Water and Irrigation Act 1951 abstraction licences.
37:M7	Environmental Management Program	Prior to the commencement of productive mining, the proponent shall prepare and implement an environmental management programme relating to all aspects of environmental monitoring and management requirements for mining operations described in the ERMP, to the satisfaction of the Department of Mines and the Environmental Protection Authority.	CLD	The EMP was most recently endorsed in 2014. Replace with conditions which address specific management outcomes for key environmental factors.

Audit Code:	Subject:	Condition or Commitment	Status:	Recommendation
37:M8	Reporting	The proponent shall submit brief annual and comprehensive triennial reports to the Department of Mines (and hence to the Environmental Protection Authority) discussing various aspects of the Environmental Management Programme and monitoring of the project, including rehabilitation programmes and other aspects detailed in the Environmental Management Programme. The Environmental Protection Authority will advise the Department of Mines as to the acceptability of these reports and the programme performance.	C	Review to align with CAR and triennial performance review.
37:M9	Extending mining	Prior to an application for extension of mining activities beyond those described in the Environmental Review and Management Programme, the proponent shall refer the proposed extension to the Environmental Protection Authority (EPA) for its assessment.	C	Delete Condition unnecessary. The authorisation is limited to the described activities.
37:P1	Rehabilitation	TiO2 Corporation NL is committed to achieve a very high standard of mine-site rehabilitation and in particular to: <ul style="list-style-type: none"> Carry out detailed soil profile analyses, and flora and vegetation studies in front of the mine path to provide site specific information for rehabilitation planning; Supplement rehabilitation measures by seeding and planting using local indigenous species; Consult closely with Government agencies and especially the Rehabilitation Section of the Department of Mines; Establish long-term monitoring studies to assess revegetation and recolonisation by fauna; and Encourage independent research programmes into rehabilitation methods 	C	Replace with Mine Closure Plan Condition. Mine Closure Plan was endorsed in 2014.
37:P2	Fire	TiO2 Corporation NL will develop, in consultation with the Department of Conservation and Land Management and the Central West Coast Fire Protection Committee, a comprehensive fire management plan for the Cooljarloo tenements. This will have the objectives of providing protection to rehabilitation and of encouraging ecological diversity and vigour generally. A fully equipped fire truck and trained personnel will be maintained on site for this purpose.	C	Delete – addressed by obligations for fire management stemming from other legislation.
37:P3	Groundwater	A commitment is also made to maintain groundwater levels at Cooljarloo within naturally occurring seasonal levels so as to reduce risks of adverse impact on vegetation due to drawdown. Should monitoring detect indications of drawdown, the proponents will take action to restore groundwater levels.	C	Addressed by Groundwater Operating Strategy and EMP. Replace with condition addressing the management of drawdown related impact on vegetation.
		Surface hydrological features will also be maintained by the reconstruction of Mullering Brook after mining and by incorporating wet depressions in the rehabilitation in appropriate places.	C	Incorporate into Mine Closure Condition
37:P4	Groundwater	Install water table monitoring bores at the Cooljarloo site. Results of drilling, tests and monitoring will be submitted to the EPA and Water Authority.	C	Monitoring of groundwater addressed by Groundwater Operating Strategy and EMP. Replace with condition addressing the management of drawdown related impact on vegetation.
37:P5	Vegetation	TiO2 Corporation NL will assess changes in vegetation in the vicinity of the minesite with respect to variations in the water table.	C	Replace with condition addressing the management of drawdown related impact on vegetation.
37:P6:1	Radiation	As monazite is radioactive, strict adherence to all Western Australian regulations and the Commonwealth Code of Practice relating to radiation protection will be adopted as described in Section 7.4. This will include specifically: <ul style="list-style-type: none"> A comprehensive radiation level monitoring programme at the minesite and environs and of monazite transport units; Comprehensive dust suppression measures; and Specific precautions in the handling, storage and transport of monazite product. 	C	Remove condition. Radiation is regulated by DMP. Approved RMP is in force.

Audit Code:	Subject:	Condition or Commitment	Status:	Recommendation
37:P7	Environmental Management	TiO2 Corporation NL is committed to a high level of environmental management and monitoring as an integral part of the Cooljarloo project. It intends to conduct its operations with the highest level of corporate social responsibility and is firmly committed to the principle that mining should involve a transient impact on the environment.	C	Delete Non-specific / not enforceable commitment
37:P8	Dieback	Liaise with the Department of Conservation and Land Management on matters relating to the prevention of dieback spread.	C	Incorporate into conditions addressing phytophthora dieback management.
37:P9	Dieback	Conduct a survey of dieback infested areas occurring within the mining tenements.	CLD	Delete- Complete. Ongoing monitoring to be addressed in conditions addressing phytophthora dieback management.
37:P10	Dieback	Develop and implement, as part of a staff education programme, precautions to avoid the spread of dieback	C	Incorporate into conditions addressing phytophthora dieback management. in EMP condition
37:P11	Dieback	Commission a study to determine a cost effective mechanism of sterilising spots of dieback infection and apply the resulting procedures to treat dieback infections in the mining path and others which may affect the mining operation.	CLD	Duplicates Condition M4. Incorporate management of infestations into conditions addressing phytophthora dieback management
37:P12	Dieback	Material sources, especially sand and gravel sources, will be checked for dieback infection prior to any cartage to the Cooljarloo site. Infected sources will be rejected.	C	Incorporate into conditions addressing phytophthora dieback management
37:P13	Dieback	The Company will routinely monitor industrial waters for dieback infection and will develop a contingency plan in association with the Department of Conservation and Land Management to prevent the spread of dieback if there is an infection and to return the waters to a dieback free condition in line with their recommended solution.	C	Incorporate hygiene requirements in EMP condition
37:P14	Dieback	TiO2 Corporation NL will install an access road to Cooljarloo along which all vehicles entering the tenement on lawful business will be required to travel. This will have a dieback control facility through which all vehicles will be required to pass. Earthmoving equipment entering or re-entering the site will be subject to stringent cleaning for dieback control. TiO2 will discuss the possibility of closing off all other tracks which enter the tenement area.	C	Incorporate hygiene requirements in EMP condition as appropriate,
37:P15	Dieback	A disease free nursery, using local sources of seed, will be established near Cooljarloo to provide plants for rehabilitation.	NR	Delete - On site rehabilitation outcomes are not dependant on tube stock nor is an on-site nursery the most appropriate approach for the provision of these. Tronox do not maintain a disease free nursery
37:P16	Rehabilitation	TiO2 Corporation NL will be undertaking and promoting research into the propagation and establishment of those native species which grown on the tenement. TiO2 Corporation NL will report its mining and rehabilitation plans, and the results of its rehabilitation research to the State Mining Engineer on an annual and triennial basis as requested.	C	Delete Non-specific/unenforceable commitment. Address in Mine Closure condition as appropriate.
37:P17	Radiation	TiO2 Corporation NL recognises the operations areas which are subject to regulation under the Radiation Safety Act, and will abide by the requirements of the Act or any amendments made to that Act.	C	Delete Unnecessary commitment to comply with legal requirements.
37:P18	Radiation	TiO2 Corporation NL has undertaken to abide by the Commonwealth Code of Practice. Referring to the Radiation Safety Officer, that Code requires that person to have "qualifications and experience acceptable to the appropriate authority". (Clause 9(19))	C	Delete Radiation management is the responsibility of DMP under the Radiation Management Act
37:P19	Radiation	Wastes containing radioactive residues will be disposed of to standards approved by the appropriate authority.	C	Remove Waste disposal governed by Department of Environmental Regulation in accordance with Part V of the EP Act.

Audit Code:	Subject:	Condition or Commitment	Status:	Recommendation
37:P20	Radiation	Recognising that the inhalation of radioactivity as airborne dust presents the most severe operating restriction in terms of occupational and public health considerations, TiO2 Corporation NL to maintain compliance with statutory requirements will wash concentrates free of dust material prior to transport.	C	Remove Radiation management is the responsibility of DMP under the Radiation Management Act.
37:P21	Environmental Management Program	Submit an Environmental Management Programme for Phase II of the mining project, which involves mining in vacant Crown Land.	CLD	Delete – Cleared

Table 7 Ministerial Statement M557

Key: C = Compliant, CLD = Completed, NR: Not Required

Audit Code:	Subject:	Requirement:	Status:	Recommendation
557:M1	Implementation	1-1 Subject to these conditions and procedures, the proponent shall implement the proposal as documented in schedule 1 of this statement.	C	Replace with current implementation Condition linking to project scope as described in Schedule 1.
557:M1	Implementation	1-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.	C	Replace or remove based on modern approach.
557:M1	Implementation	1-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is not substantial, those changes may be effected.	C	Replace or remove based on modern approach.
557:M2	Implementation	2-1 The proponent shall implement the consolidated environmental management commitments documented in schedule 2 of this statement.	C	Replace or remove based on modern approach.
557:M2	Implementation	2-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of the fulfilment of conditions and procedures in this statement.	C	Replace or remove based on modern approach.
557:M3	Proponent	3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the Environmental Protection Act 1986 is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person in respect of the proposal.	C	Replace or remove based on modern approach.
557:M3	Proponent	3-2 Any request for the exercise of that power of the Minister referred to in condition 3-1 shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the proposal in accordance with the conditions and procedures set out in the statement.	C	Replace or remove based on modern approach.
557:M3	Proponent	3-3 The proponent shall notify the Department of Environmental Protection of any change of proponent contact name and address within 30 days of such change.	C	Replace or remove based on modern approach.

Audit Code:	Subject:	Requirement:	Status:	Recommendation
557:M4	Commencement	4-1 The proponent shall provide evidence to the Minister for the Environment within five years of the date of this statement that the proposal has been substantially commenced.	CLD	Delete – cleared – project commenced in 2001.
557:M4	Commencement	4-2 Where the proposal has not been substantially commenced within five years of the date of this statement, the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment will determine any question as to whether the proposal has been substantially commenced.	CLD	Delete – cleared – project commenced in 2001.
557:M4	Commencement	4-3 The proponent shall make application to the Minister for the Environment for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement at least six months prior to the expiration of the five year period referred to in conditions 4-1 and 4-2.	CLD	Delete – cleared – project commenced in 2001.
557:M4	Commencement	4-4 Where the proponent demonstrates to the requirements of the Minister for the Environment on advice the Environmental Protection Authority that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years for the substantial commencement of the proposal.	CLD	Delete – cleared – project commenced in 2001.
557:M5	Reporting	5-1 The proponent shall submit periodic Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.	C	Retain and align with current approach.
557:M5	Reporting	5-2 Unless otherwise specified, the Chief Executive Officer of the Department of Environmental Protection is responsible for assessing compliance with the conditions, procedures and commitments contained in this statement and for issuing formal, written advice that the requirements have been met.	C	Retain and align with current approach.
557:M5	Reporting	5-3 Where compliance with any condition, procedure or commitment is in dispute, the matter will be determined by the Minister for the Environment.	C	Retain and align with current approach.
557:M6	Environmental Management System	<p>6-1 In order to manage the environmental impacts of the project, and to fulfil the requirements of the conditions and procedures in this statement, prior to ground-disturbing activity, the proponent shall demonstrate to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection that there is in place an environmental management system which includes the following elements:</p> <ol style="list-style-type: none"> 1 An environmental policy and corporate commitment to it 2 Mechanisms and processes to ensure: <ol style="list-style-type: none"> 1) Planning to meet environmental requirements; 2) Implementation and operation of actions to meet environmental requirements; and 3) Measurement and evaluation of environmental performance, 4) Review and improvement of environmental outcomes 	C	Delete – not aligned with EAG11.

Audit Code:	Subject:	Requirement:	Status:	Recommendation
557:M6	Environmental Management System	6-2 The proponent shall implement the environmental management system referred to in condition 6-1.	C	Delete – not aligned with EAG11.
557:M7	Surface water and groundwater	<p>7-1 Prior to commencement of ground-disturbing activities, the proponent shall develop a Surface Water and Groundwater Management Plan to the requirements of the Environmental Protection Authority on advice of the Water and Rivers Commission and the Department of Environmental protection.</p> <p>This Plan shall address;</p> <ol style="list-style-type: none"> 1 Offsite movement of dieback, sediment and pollutants in surface waters; 2 Recovery if spillage or leakage of an environmentally hazardous substance occurs; 3 The potential impacts of dredge mining and groundwater abstraction on vegetation, and the management of these impacts, and assess the relationship between the perched, superficial and Yarragadee aquifers; 4 The installation of groundwater monitoring bores to determine the effect of the proposal on seasonal and permanent wetlands; 5 Assessment of the depth to groundwater for vegetation in the proposal area; 6 Gaining an understanding of the extent to which wetlands in the proposal area are sustained by perched aquifers by the drilling of shallow bores; and 7 The provision for contingency plans if the monitoring indicates vegetation or wetland impacts. 	C	<p>Incorporate into conditions relating to specific factors as appropriate.</p> <p>Note groundwater management addressed via groundwater operating strategy as required under licences held pursuant to the RIWI Act.</p>
		7-2 The proponent shall implement the Surface Water and Groundwater Management Plan required by condition 7-1.	C	Remove/reword as necessary
		7-3 The proponent shall make the Surface Water and Groundwater Management Plan required by condition 7-1 publicly available, to the requirements of the Environmental Protection Authority.	C	Remove/reword as necessary

Audit Code:	Subject:	Requirement:	Status:	Recommendation
557:M8	Rare Flora	<p>8-1 Prior to ground-disturbing activities and in consultation with the Department of Conservation and Land Management, the proponent shall prepare a Rare Flora Management Plan to the requirements of the Environmental Protection Authority on advise of the Department of Environmental Protection and the Department of Conservation and Land Management.</p> <p>This plan shall address:</p> <ol style="list-style-type: none"> 1 the impacts on Declared Rare and Priority flora within the project area; 2 reporting of flora survey results to the Department of Conservation and Land Management; 3 offsite surveys to prove up numbers and extent of rare flora species; 4 planning to avoid any disturbance to rare flora where possible; 5 immediate fencing of rare flora populations to be protected; 6 consideration of relocating rare flora species; 7 the propagation and return of rare flora into rehabilitation areas; and 8 the process for applying to 'take' Declared Rare Flora under the provisions of the Wildlife Conservation Act 1950 	C	<p>Actions relating to specific populations of Rare flora within the areas covered by this Ministerial Statement have been completed.</p> <p>As such this conditions is redundant. However conditions relating the management of rare flora more generally (i.e. on future mine path) should incorporate some of these measures, following rewording to align with EAG11.</p>
557:M8	Rare Flora	8-2 The proponent shall implement the Rare Flora Management Plan required by condition 8-1	C	Remove/reword as necessary
557:M8	Rare Flora	8-3 The proponent shall make the Rare Flora Management Plan required by condition 8-1 publicly available, to the requirements of the Environmental Protection Authority.	C	Remove/reword as necessary

Audit Code:	Subject:	Requirement:	Status:	Recommendation
557:M9	Integrated Mining and Rehabilitation Plan	<p>9-1 To ensure that rehabilitation is optimised, prior to ground-disturbing activities, the proponent shall develop an Integrated Mining and Rehabilitation Plan, to the requirements of the Environmental Protection Authority (including any requirement of the Environmental Protection Authority for independent expert advice) on advice of the Department of Environmental Protection, the Department of Minerals and Energy, and the Department of Conservation and Land Management.</p> <p>This plan shall address:</p> <ol style="list-style-type: none"> 1 baseline vegetation survey; 2 optimal clearing techniques; 3 a mining strategy integrating the mining and rehabilitation schedules, including a reconciliation of voids, tailings and overburden; promptly re-establishing the soil profile; and systematically reducing the area of land awaiting rehabilitation; 4 achievement of “best practice” rehabilitation; 5 comparison with industry benchmarking study, should such data be available; 6 reporting of clearing and rehabilitation rates; 7 weed management; 8 dieback management; 9 propagation strategy, including seed collection, maximising the direct return of topsoil, direct seeding, planting of seedlings, smoke treatment and translocation; 10 development of specific rehabilitation performance criteria; 11 a monitoring programme to determine rehabilitation success; 12 contingency plans in the event that rehabilitation is not likely to meet, or does not meet performance criteria; 13 decommissioning of the mining areas and final voids, and removal of any mine infrastructure; and 14 allocation of resources (equipment, appropriately trained and experienced personnel and independent expert advice). <p>Components 1 to 9 of this Plan shall be prepared prior to ground-disturbing activities. The remaining components shall be prepared within 12 months following commencement of ground-disturbing activities.</p>	C	Incorporate into MCP condition
557:M9	Integrated Mining and Rehabilitation Plan	<p>9-2 The proponent shall implement the Integrated Mining Rehabilitation Plan required by condition 9-1 to achieve the rehabilitation performance criteria referred to in condition 9-1 (10) to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.</p>	C	Incorporate into MCP condition

Audit Code:	Subject:	Requirement:	Status:	Recommendation
557:M9	Integrated Mining and Rehabilitation Plan	9-3 The proponent shall make the Integrated Mining and Rehabilitation Plan, required by condition 9-1, publically available to the requirements of the Environmental Protection Authority.		Incorporate into MCP condition
557:M10	Performance review	<p>10-1 Each six years following the commencement of construction, the proponent shall submit a Performance Review Report to the Department of Environmental Protection:</p> <ul style="list-style-type: none"> • to document the outcomes, beneficial or otherwise; • to review the success of goals, objectives and targets; and • to evaluate the environmental performance over the six years; <p>Relevant to the following;</p> <ol style="list-style-type: none"> 1 environmental objectives reported on in Environmental Protection Authority Bulletin 990; 2 proponent's consolidated environmental management commitments documented in schedule 2 of this statement and those arising from the fulfilment of conditions and procedures in this statement; 3 environmental management system environmental performance targets; 4 environmental management programs and plans; and/or 5 environmental performance indicators <p>to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.</p> <p>Note: The Environmental Protection Authority may recommend changes and actions to the Minister for the Environment following consideration of the Performance Review Report.</p>	C	Incorporate as appropriate in alignment with EAG11 and broader approaches for compliance and performance reporting.
557:P1	Environmental Management Program	Apply the existing Environmental Management Plan (EMP) to the mining of the 27200 and 28000 ore-bodies as defined in the EMP and the Cooljarloo Environmental Procedures Manual.	C	Delete
557:P2	Environmental Management Program	Review the Cooljarloo Environmental Management Plan and update as required.	C	Delete
557:P3	Native vegetation	Limit clearing of native vegetation associated with mining the 27200 and 28000 ore bodies to 220 hectares.	C	Amalgamate into definition
557:P4	Native vegetation	Undertake specific surveys for Priority species (listed in Appendix C of the Public Environmental Review for the proposal to mine the 27200 and 28000 at Cooljarloo Mine) in conservation reserves adjacent to tenement M268SA and ML 70/1010.	CLD	Cleared - Delete

Audit Code:	Subject:	Requirement:	Status:	Recommendation
557:P5	Native vegetation	Develop specific management measures for particular Priority species in consultation with CALM as the results of flora surveys warrant.	CLD	Revise and include in conditions relating to management of conservation significant flora.
557:P6	Emu Lakes Wetlands	Undertake flora, fauna and hydrological monitoring of the "Emu Lakes" wetlands located on private land immediately south-west of tenement M268SA (subject to the agreement of the landholder).	C	Cleared - Delete
557:P7	Surface water	Direct turbid runoff from areas disturbed by mining activity through retention/settling basins and/or to the dredge pond to minimise any impact on wetlands and drainage systems.	CLD	Delete - Backfill and rehabilitation complete of the area is complete.
557:P8	Native vegetation	Adjust the depth and distribution of abstraction in the event of identifying adverse trends in vegetation health.	C	Delete - Mining complete. All abstraction is undertaken in association with the implementation of MS37. Groundwater management incorporated into Groundwater Operating Strategy
557:P9	Rehabilitation	Maintain current practice of making full financial provision for the rehabilitation of disturbed areas.	C	Delete – addressed via mine closure planning.

Table 8 Ministerial Statement 790 and 977.

Key: C = Completed, NR = Not Required, CLD = Completed

Audit Code:	Subject:	Condition	Status:	Recommendation
790:M1.1	Proposal Implementation	The proponent shall implement the proposal as assessed by the Environmental Protection Authority and described in schedule 1 of this statement subject to the conditions and procedures of this statement.	C	Replace with current implementation Condition linking to project scope as described in Schedule 1.
790:M2.1	Proponent Nomination and Contact Details	The proponent for the time being nominated by the Minister for Environment under sections 38(6) or 38(7) of the <i>Environmental Protection Act 1986</i> is responsible for the implementation of the proposal.	C	Retain with new wording as appropriate
790:M2.2	Proponent Nomination and Contact Details	The proponent shall notify the Chief Executive Officer (CEO) of the Department of Environment and Conservation of any change of the name and address of the proponent for the serving of notices or other correspondence within 30 days of such change.	NR	Retain with new wording as appropriate
790:M3.1	Time Limit of Authorisation	The authorisation to implement the proposal provided for in this statement shall lapse and be void within five years after the date of this statement if the proposal to which this statement relates is not substantially commenced.	CLD	Delete – project has commenced and mining activities are complete.
790:M3.2	Time Limit of Authorisation	The proponent shall provide the CEO of the Department of Environment and Conservation with written evidence which demonstrates that the proposal has substantially commenced on or before the expiration of five years from the date of this statement	CLD.	Delete - cleared
790:M4.1	Compliance Reporting	The proponent shall submit to the CEO of the Department of Environment and Conservation environmental compliance reports annually reporting on the previous twelve-month period, unless required by the CEO of the Department of Environment and Conservation to report more frequently.	C	Retain with new wording as appropriate
790:M4.2	Compliance Reporting	The environmental compliance reports shall address each element of an audit program approved by the CEO of the Department of Environment and Conservation and shall be prepared and submitted in a format acceptable to the CEO of the Department of Environment and Conservation.	C	Retain with new wording as appropriate
790:M4.3	Compliance Reporting	Submission of Environmental Compliance Reports.	C	Retain with new wording as appropriate
790:M4.4	Compliance Reporting	The proponent shall make the environmental compliance reports required by condition 4-1 publicly available in a manner approved by the CEO of the Department of Environment and Conservation.	C	Retain with new wording as appropriate

Audit Code:	Subject:	Condition	Status:	Recommendation
790:M5.1	Performance Review and Reporting	The proponent shall submit to the CEO of the Department of Environment and Conservation Performance Review Reports at the conclusion of the second and fourth years after the start of productive mining and then, at such intervals as the CEO of the Department of Environment and Conservation may regard as reasonable	C	Retain with new wording as appropriate
790:M5.2	Performance Review and Reporting	The proponent shall make the performance review reports required by condition 5-1 publicly available in a manner approved by the CEO of the Department of Environment and Conservation.	C	Retain with new wording as appropriate
790:M6.1	Flora and Vegetation	Prior to clearing, the proponent shall, subject to the requirements of the <i>Wildlife Conservation Act 1950</i> , translocate Declared Rare Flora growing within areas required for clearing to suitable temporary locations for retention for rehabilitation following completion of mining.	C	Delete – completed
790:M6.2	Flora and Vegetation	Notwithstanding the requirements of condition 6-1, the proponent shall implement the proposal to avoid disturbance of Declared Rare Flora populations C, D, E, and G shown in Fig 3 (attached) and delineated by AMG coordinates listed in schedule 2 – Table 1, and to avoid Declared Rare Flora and Priority flora generally within the proposal area and outside the areas to be cleared.	C	Delete – mining completed no further disturbance is planned Note conditions relating to management of rare flora will be included in the amalgamated statement
790:M6.3	Flora and Vegetation	The proponent shall monitor the health and abundance of native vegetation (including Declared Rare Flora and Priority flora species) outside the areas to be cleared to ensure that there is no decline in the health or abundance of such vegetation through the implementation of the proposal. This monitoring is to be carried out to the satisfaction of the CEO of the Department of Environment and Conservation.	C	Delete – mining and rehabilitation activities have concluded. Monitoring has not indicated any decline in the health or abundance of vegetation. Note condition/s relating to management of drawdown are likely to be included in the amalgamated statement.
790:M6.4	Flora and Vegetation	The proponent shall submit the results of monitoring required by condition 6-3 to the CEO of the Department of Environment and Conservation annually.	C	Delete – no further reporting of monitoring is considered necessary for the Falcon area. Note condition/s relating to management of drawdown are likely to be included in the amalgamated statement.
790:M6.5	Flora and Vegetation	In the event that monitoring required by condition 6-3 indicates a decline in the health or abundance of native vegetation outside the areas to be cleared, the proponent shall report such findings to the CEO within 21 days of the decline being identified, and shall state the actions the proponent shall take remediate the decline.	C	Delete –as mining has concluded there is no mechanism by which drawdown arising from mining can impact vegetation within the area governed by the Ministerial Statement
790:M6.6	Flora and Vegetation	The proponent shall make the monitoring reports required by condition 6-4 publicly available in a manner approved by the CEO of the Department of Environment and Conservation.	C	

Audit Code:	Subject:	Condition	Status:	Recommendation
790:M7.1	Groundwater Drawdown	At all times, the proponent shall ensure that groundwater drawdown in the proposal area and in the vicinity of the proposal area does not exceed the absolute minimum magnitude and absolute minimum rate trigger levels defined in schedule 2 – Table 3	NR	Condition 7 replaced by M977. This no longer relevant.
977:M7.1	Groundwater Drawdown	At all times, the proponent shall ensure that the limit of groundwater drawdown in the proposal area and in the vicinity of the proposal area does not approach the potentially acid-forming substrate to the extent that acidic waters are generated and/or released.	C	Delete - No longer relevant (mining is completed and area backfilled).
977:M7.2	Groundwater Drawdown	At all times, the proponent shall ensure that groundwater drawdown from mining does not impact on the hydrology of the Mount Jetty Creek system	C	Delete - No longer relevant (mining is completed and area backfilled).
977:M7.3	Groundwater Drawdown	The proponent shall monitor groundwater from bores indicated in Figure 4 (attached to 790) to facilitate determination of whether the requirements of conditions 7-1 and 7-2 are being met. This monitoring is to be carried out to the satisfaction of the CEO of the Department of Environment and Conservation.	C	Delete – no further monitoring of groundwater is considered necessary for the Falcon area. Note condition/s relating to management of drawdown are likely to be included in the amalgamated statement.
977:M7.4	Groundwater Drawdown	The proponent shall submit annually the results of the monitoring of groundwater required by condition 7-3 to the CEO of the Department of Environment and Conservation.	C	Delete – no further reporting of monitoring is considered necessary for the Falcon area. Note condition/s relating to management of drawdown are likely to be included in the amalgamated statement.
977:M7.5	Groundwater Drawdown	The proponent shall provide proposed management measures to the CEO of the Department of Environment and Conservation in the event that the requirements of conditions 7-1 and 7-2 are not met or are not likely to be met.	NR	Delete - Note condition/s relating to management of drawdown are likely to be included in the amalgamated statement.
977:M7.6	Groundwater Drawdown	To avoid doubt, nothing in this approval is taken to approve the generation or exposure of acid sulphate soils or the discharge of acidic waters to the environment.	NR	Delete - No longer relevant (mining is completed and area backfilled).
790:M8.1	Closure and Rehabilitation	Prior to commencement of productive mining, the proponent shall conduct surveys of the proposal area to collect baseline information.	CLD	Delete – cleared
790:M8.2	Closure and Rehabilitation	Within 12 months following cessation of productive mining, the proponent shall, subject to the requirements of the <i>Wildlife Conservation Act 1950</i> , translocate the Declared Rare Flora plants referred to in condition 6-1 from their temporary locations back into their original areas.	C	Delete – completed – cleared
790:M8.3	Closure and Rehabilitation	As mining progresses, the proponent shall commence rehabilitation of the mined area.	C	Delete - Rehabilitation works are complete. Note that condition/s regarding mine closure and rehabilitation outcomes will be included in the amalgamated statement

Audit Code:	Subject:	Condition	Status:	Recommendation
790:M8.4	Closure and Rehabilitation	In liaison with the Department of Environment and Conservation, the proponent shall monitor progressively the performance of rehabilitation against the criteria in condition 8-3 based on annual monitoring in spring.	C	Retain - incorporate into Mine Closure condition
790:M8.5	Closure and Rehabilitation	The proponent shall submit annually a report of the rehabilitation performance monitoring required by condition 8-4 to the CEO of the Department of Environment and Conservation.	C	Retain - incorporate into Mine Closure condition
790:M8.6	Closure and Rehabilitation	The proponent shall report the findings of the Nicholls-Woodman review of rehabilitation practices and standards to the CEO of the Department of Environment and Conservation. If findings indicate that rehabilitation criteria defined in condition 8-3 can be improved, then the new criteria defined in the findings shall be used.	CLD	Delete - cleared