Permit

Environmental Protection Act 1994

Environmental authority EPML00449313

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Environmental authority number: EPML00449313

Environmental authority takes effect on 05 April 2018

Environmental authority holder(s)

Name(s)	Registered address
Mt Coolon Gold Mines Pty Ltd	Endeavour Corporate, Suite 8 7 The Esplanade MOUNT PLEASANT WA 6153

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Resource Activity, Schedule 2A, 16: Mining gold ore	ML1029
Resource Activity, Schedule 2A, 16: Mining gold ore	ML10227
Resource Activity, Schedule 2A, 16: Mining gold ore	ML1085
Resource Activity, Schedule 2A, 16: Mining gold ore	ML1086

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the Environmental Protection Act 1994 (EP Act).

Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days);

that is causing, or is reasonably likely to cause, serious or material environmental harm.

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For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority-on the nominated day; or
b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or
c) otherwise-on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the Sustainable Planning Act 2009 or an SDA Approval under the State Development and Public Works Organisation Act 1971), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.

Filiz Tansley
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

Date issued: 06 April 2018

Enquiries:
Minerals Business Centre
Department of Environment and Heritage Protection
Phone: 07 4222 5352
Email: ESCairns@ehp.qld.gov.au

Legislative Requirements and Conditions of Environmental Authority

Condition

General

G1-1 **Financial Assurance**

Financial assurance must be lodged with the administering authority in the amount, the form and within the time required by the administering authority.

G2-1 **Maintenance of measures and plant equipment**

The environmental authority holder must ensure:

- That all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority are installed; and
- That such measures, plant and equipment are maintained in a proper condition; and
- That such measures, plant and equipment are operated in a proper manner.

G3-1 **Monitoring**

Record, compile and keep for a minimum of five years all monitoring results required by this environmental authority and make available for inspection all or any of these records upon request by the administering authority.

G3-2 Where monitoring is a requirement of this environmental authority, ensure that a competent person(s) conducts all monitoring.

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G4-1 **Storage and Handling of flammable and combustible liquids**

Spillage of all flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm (other than trivial harm) and maintained in accordance with section 5.9 of AS 1940 — Storage and Handling of Flammable and Combustible Liquids of 1993.

G5-1 **Definitions**

Words and phrases used throughout this EA are defined in the definitions section of the authority. Where a definition for a term used in this EA is sought and the term is not defined within this EA, the definitions in the Environmental Protection Act 1994, its Regulations and Environmental Protection Policies must be used.

G6-1 **Complaint response**

All complaints received must be recorded including details of complainant, reasons for the complaint, investigations undertaken, conclusions formed and actions taken. This information must be made available for inspection by the administering authority on request.

G7-1 **Authorised mining activities**

In carrying out the mining activity authorised by this environmental authority, the environmental authority holder must comply with Schedule 2—Table 2 (Authorised mining activities and locations) and the plan provided in Schedule 3—Figure 1 (Project infrastructure layout - Koala) and Schedule 3—Figure 2 (Project infrastructure layout – Glen Eva).

G8-1 **Notification**

The environmental authority holder must notify the administering authority by verbal and written notification within 24 hours after becoming aware of any emergency, incident or event which does or may contravene a condition of this environmental authority.

G8-2 Notification to the administering authority, in accordance with **condition G8-1** must be provided to the administering authority's Pollutions Hotline on 1300 130 372 and the PollutionHotline@des.qld.gov.au.

G9-1 **Exploration**

All exploration activities carried out on the relevant mining tenure must comply with each of the standard environmental conditions contained in the most recent version of the *Eligibility criteria and standard conditions for exploration and mineral development projects*.

G9-2 Notwithstanding condition G9-1, the environmental authority holder is authorised to carry out exploration activities on the relevant mining tenure, within 500m from, but not in, the category B environmentally sensitive area, provided that those activities do not cause any significant environmental harm.

G9-3 Notwithstanding condition G9-1 and G9-2, the environmental authority holder is authorised to carry out low impact exploration activities on the relevant mining tenure, within the category B environmentally sensitive area, provided that those activities do not cause any significant environmental harm.

G10-1 The environmental authority holder must ensure that vehicles used for transporting bulk materials from the licensed place have appropriate load preparation to prevent the spillage and/or loss of particulate matter and/or windblown dust during transport.

Waste

WA1-1 All general and regulated waste generated in carrying out mining activities must be removed to a facility that can lawfully reduce, recycle or dispose the waste

WA2-1 **Waste Rock**

By **29 June 2018**, the environmental authority holder must develop and implement a Waste Rock Management Plan (WRMP), certified by an appropriately qualified person which includes:

1. a detailed design of the waste rock dumps that meets the requirements of this condition;
2. characterisation of the waste rock to predict the quality of runoff and seepage generated, including salinity, acidity, alkalinity, dissolved metals, metalloids and non-metallic inorganic substances;
3. a progressive sampling program to validate pre-mine waste rock characterisation. The waste rock sampling program must include validation of

salinity, acidity, alkalinity, dissolved metals, metalloids and non-metallic inorganic substances;

4. where the acid mine drainage potential and neutral mine drainage potential of waste rock material has not been conclusively determined, geochemical kinetic testing must be conducted to indicate oxidation rates, potential reaction products and effectiveness of control strategies;
5. a materials balance and disposal plan demonstrating how potentially acid forming and acid forming waste rock will be selectively placed and/or encapsulated to prevent the generation of acid mine drainage;
6. a materials balance and disposal plan demonstrating how waste rock that has a potential to generate neutral and/or saline mine drainage will be selectively placed and managed to prevent the generation of neutral mine drainage;
7. a sampling program to verify encapsulation and/or placement of potentially acid forming, acid forming waste rock and waste rock that has a potential to generate neutral mine drainage, in accordance with the detailed design plan;
8. records must be maintained of all waste rock characterisation and disposal including contingency planning for the management of acid mine drainage and neutral mine drainage;
9. how often the effectiveness of the plan will be assessed;
10. a rehabilitation strategy and monitoring program that will achieve the rehabilitation objectives specified in the land schedule of this environmental authority;
11. a monitoring program that verifies the requirements of condition WA2-1(j) have been completed.

Condition

Acoustic

N1-1	Noise or vibration generated by mining activities must not cause environmental harm to any sensitive place or commercial place.

Condition

Air

A1-1 Air emissions resulting from mining activities must not cause environmental harm to any sensitive place or commercial place.

Condition

Land

L1-1 **Rehabilitation landform criteria**

All areas significantly disturbed by mining activities must be rehabilitated to a stable landform with a self-sustaining vegetation cover in accordance with Schedule 2 — Table 1 (Final Land Use and Rehabilitation Approved Schedule).

L1-2 Progressive rehabilitation must commence when areas become available within the operational land.

L1-3 Complete an investigation into rehabilitation of disturbed areas and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in Schedule B — Table 1 by 1 March 2004.

L1-4 A detailed rehabilitation strategy must be developed for the mining leases covered by this authority. This strategy must identify potential options for the rehabilitation of the tailings dam, leach heap, and main pit in particular, and identify the preferred options. A report on this strategy must be submitted to the administering authority for approval by 8 October 2018.

L2-1 **Residual void outcome**

Residual voids must not cause any serious environmental harm to land, surface waters or any recognised groundwater aquifer, other than the environmental harm constituted by the existence of the residual void itself and subject to any other condition within this environmental authority.

L3-1 **Dams containing hazardous waste**

The holder of the environmental authority must design, construct and operate all low-hazard dams containing hazardous waste and non-hazardous waste in accordance with the criteria outlined in the most recent version of the *Eligibility criteria and standard conditions for mining lease activities* (attached).

L4-1 **Infrastructure**

All infrastructure, constructed by or for the environmental authority holder during the mining activities including water storage structures, must be removed from the site prior to mining lease surrender, except where agreed in writing by the post mining land owner / holder.

L5-1 **Matters of State Environmental Significance**

Significant residual impacts to prescribed environmental matters, are not authorised under this environmental authority or the *Environmental Offsets Act 2014.*

L5-2 Records demonstrating that each impact to a prescribed environmental matter did not, or is not likely to, result in a significant residual impact to that matter must be:
a) completed by an appropriately qualified person; and
b) kept for the life of the environmental authority.

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Condition

Water

W1-1 **Release to waters**

Receiving waters affected by the release of process water or storm water contaminated by the mining activities or both must be monitored at the locations and frequencies defined in Schedule 1 — Table 1 and comply with the contaminant limits defined in Schedule 1 — Table 2.

W2-1 **Stream sediment contaminant levels**

All reasonable and practicable erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment.

W2-2 The bed of the receiving waters, affected by the release of process water and storm water contaminated by the mining activities must be monitored at the locations and frequencies defined in Schedule 1 — Table 3.

W2-3 Subject to condition (W2-2), if the stream sediment contaminant trigger levels defined in Schedule 1 — Table 4 are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

W2-4 All stream sediment sampling must be undertaken in accordance with AS 5667.1 Guidance on Sampling of Bottom Sediments 1998.

W4-1 **Groundwater**

Groundwater, affected by the mining activities must be monitored at the locations and frequencies defined in Schedule 1 — Table 5.

W4-2 Subject to Condition (W4-1), groundwater contaminant limits must not exceed the contaminant limits defined in Schedule 1 - Table 6.

W4-3 The method of water sampling required by this environmental authority must comply with that set out in the latest edition of the administering authority's Water Quality Sampling Manual.

W4-4 The holder of this environmental authority must not release contaminants to groundwater.

Definition

Definitions

Key terms and/or phrases used in this document are defined in this section and bolded throughout this document. Applicants should note that where a term is not defined, the definition in the *Environmental Protection Act 1994,* its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

"acceptance criteria" means the measures by which the actions implemented to rehabilitate the land are deemed to be complete. The acceptance criteria indicate the success of the rehabilitation outcome or remediation of areas which have been significantly disturbed by the mining activities. Acceptance criteria may include information regarding:

- Vegetation establishment, survival and succession;
- Vegetation productivity, sustained growth and structure development;
- Fauna colonisation and habitat development;
- Ecosystem processes such as soil development and nutrient cycling, and the re-colonisation of specific fauna groups such as collembolan, mites and termites which are involved in these processed;
- Microbiological studies including re-colonisation by mycorrhizal fungi, microbial biomass and respiration;

- Effects of various establishment treatments such as deep ripping, topsoil handling, seeding and fertiliser application on vegetation growth and development;

- Resilience of vegetation to disease, insect attack, drought and fire;

- Vegetation water use and effects on groundwater levels and catchment yields.

"administering authority" means the Department of Environment and Heritage Protection or its successor.

"authority" means environmental authority (mining activities) under the Environmental Protection Act 1994.

"competent person" means a person with the demonstrated skill and knowledge required to carry out the task to a standard necessary for the reliance upon collected data or protection of the environment.

"dam" means a containment or proposed containment whether permanent or temporary, which is designed to contain, divert or control flowable substances. However this does not include a fabricated or manufactured tank or container designed to a recognised standard.

"**environmental authority holder"** means the holder of this environmental authority.

"hazardous waste" means any substance, whether liquid, solid or gaseous, derived by or resulting from the processing of minerals that tend to destroy life or impair or endanger health.

"land" in the "land section" of this document means land excluding waters and atmosphere.

"land use" term to describe the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

“low impact exploration activities” means soil and rock chip sampling, drone use, vehicle access (on established access tracks) and drilling where it can be undertaken without land or vegetation clearing.

"mineral" means a substance which normally occurs naturally as part of the earth's crust or is dissolved or suspended in water within or upon the

earth's crust and includes a substance which may be extracted from such a substance, and includes —

(a) clay if mined for .use for its ceramic properties, kaolin and bentonite;

(b) foundry sand;

(c) hydrocarbons and other substances or matter occurring in association with shale or coal and necessarily mined, extracted, produced or released by or in connection with mining for shale or coal or for the purpose of enhancing the safety of current or future mining operations for coal or the extraction or production of mineral oil therefrom;

(d) limestone if mined for use for its chemical properties;

(e) marble;

(f) mineral oil or gas extracted or produced from shale or coal by in situ processes;

(g) peat;

(h) salt including brine;

(i) shale from which mineral oil may be extracted or produced;

(j) silica, including silica sand, if mined for use for its chemical properties

(k) rock mined in block or slab form for building or monumental purposes;

but does not include —

(l) living matter;

(m) petroleum within the meaning of the Petroleum Act 1923;

(n) soil, sand, gravel or rock (other than rock mined in block or slab form for building or monumental purposes) to be used or to be supplied for use as such, whether intact or in broken form;

(o) water.

"progressive rehabilitation" means rehabilitation (defined below) undertaken progressively or a staged approach to rehabilitation as mining operations are ongoing.

"rehabilitation" the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set

out in the environmental authority and, where relevant includes remediation of contaminated land.

"residual void" means an open pit resulting from the removal of ore and/or waste rock which will remain following the cessation of all mining activities and completion of rehabilitation processes.

"self-sustaining" means an area of land which has been rehabilitated and has maintained the required acceptance criteria without human intervention for a period nominated by the administering authority.

"significant disturbance" — includes land

(a) if it is contaminated land; or

(b) it has been disturbed and human intervention is needed to rehabilitate it.

i. to a state required under the relevant environmental authority; or

ii. if the environmental authority does not require the land to be rehabilitated to a particular state — to its state immediately before the disturbance.

"stable" means geotechnical stability of the rehabilitated landform where instability related to the excessive settlement and subsidence caused by consolidation / settlement of the wastes deposited, and sliding / slumping instability has ceased.

"trivial harm" means environmental harm which is not material or serious environmental harm and will not cause actual or potential loss or damage to property of an amount of, or amounts totalling more than $5,000.

"watercourse" means a river, creek or stream in which water flows permanently or intermittently in a visibly defined channel (natural, artificially improved) with:

(a) continuous bed and banks;

(b) an extended period of flow for some months after rain ceases, and

(c) an adequacy of flow that sustains basic ecological processes and maintains biodiversity.

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

Appendices

Schedule 1—Tables for Agency Interest: Water

Table 1 (Receiving water monitoring locations and frequency)

Monitoring point	MGA 94 North	MGA 94 East	Monitoring frequency
Mt Coolon - SW1	7633354	537281	Six Monthly
Mt Coolon - SW2	7633448	536241	Six Monthly
Glen Eva - SW1	7629630	546339	Six Monthly

NOTE: This does not apply to dams containing hazardous waste

Table 2 (Receiving water contaminant limits)

Parameter	Units	Limit type	Limit
pH		Range	6 - 9
Total Dissolved Solids	Mg/L	Maximum	4000
Sulfate	Mg/L	Maximum	1000[1]
Arsenic	Mg/L	Maximum	0.5[1]
Cadmium	Mg/L	Maximum	0.01[1]
Copper	Mg/L	Maximum	0.5[1]
Lead	Mg/L	Maximum	0.1[1]
Mercury	Mg/L	Maximum	0.002[1]
Molybdenum	Mg/L	Maximum	0.05[1]
Selenium	Mg/L	Maximum	0.02[1]
Zinc	Mg/L	Maximum	20[1]

[1] Measured as a total unfiltered concentration

NOTE: This does not apply to dams containing hazardous waste.

Table 3 (Receiving stream sediment monitoring locations and frequency)

Monitoring point	MGA 94 North	MGA 94 East	Monitoring frequency
Mt Coolon - SD1	7633354	537281	Annually
Mt Coolon - SD2	7633448	536241	Annually
Glen Eva - SD1	7629630	546339	Annually

Table 4 (Receiving stream sediment contaminant trigger levels)

Parameter	Units	Contaminant trigger levels (2 X Background X 80%)
Antimony	Mg/Kg	25
Arsenic	Mg/Kg	40
Cadmium	Mg/Kg	1
Chromium	Mg/Kg	370
Copper	Mg/Kg	270
Lead	Mg/Kg	220
Mercury	Mg/Kg	1
Nickel	Mg/Kg	74
Zinc	Mg/Kg	23

Table 5 (Groundwater monitoring locations and frequency)

Monitoring point	MGA94 Northern	MGA94 Eastern	Monitoring frequency
KMB01	535995	7633623	Biannually
KMB02	536378	7633095	Biannually
KMB04	537224	7633066	Biannually
Glen Eva - GW 1	7630428	546466	Biannually

Table 6 (Groundwater contamination limits)

Parameter	Units	Limit type	Contaminant Limit
pH		Range	6-9
Total Dissolved Solids	Mg/L	Maximum	6000
Sulfate	Mg/L	Maximum	1000[1]
Arsenic	Mg/L	Maximum	0.5[1]
Cadmium	Mg/L	Maximum	0.01[1]
Copper	Mg/L	Maximum	0.5[1]
Lead	Mg/L	Maximum	0.1[1]
Mercury	Mg/L	Maximum	0.002[1]
Molybdenum	Mg/L	Maximum	0.05[1]
Selenium	Mg/L	Maximum	0.02[1]
Zinc	Mg/L	Maximum	20[1]
WAD Cyanide	Mg/L	Maximum	0.2[1]

[1]Measured as total unfiltered concentration

Schedule 2—Tables of Agency Interest: Land

Table 1 (Final Land Use and Rehabilitation Approval Schedule)

Tenure ID	Disturbance Type	Projective surface area (ha)	Post-mine land use	Rehabilitation Goal	Post-mine land capability
Mt Coolon (Koala)					
ML1029 ML1086	Waste Dump	17.5	Low Hill – Open Woodland Ecosystem	Safe to humans and wildlife, Stable, Non-polluting, Able to sustain agreed land use	VII
ML1029 ML1086	Open Cut Pit	8.8	Non-use management area	Safe to humans and wildlife, Stable, Non-polluting	Void
ML1029	Anc Infrastructure	0.7	Grazing - Open Pasture	Safe to humans and wildlife, Stable, Non-polluting, Able to sustain agreed land use	VI
ML1029	Tailings Dump	2.7	Low Hill - Open Woodland Ecosystem		VII
ML1029 Ml1086	Sediment Dams	1.4	Grazing - Open Pasture		VI
ML1029 ML1085	Core Farm	0.1	Grazing - Open Pasture		VI
ML1086	Magazine	0.2	Grazing - Open Pasture		VI
ML1029	Office Area	0.3	Grazing - Open Pasture		VI
ML1029 ML1086	ROM Pad	0.6	Grazing - Open Pasture		VI
ML1029 ML1086	Laydown Area	1.0	Grazing - Open Pasture		VI
ML1029 ML1085 ML1086	Roads	1.4	Grazing - Open Pasture		VI
ML1029	Bund	0.4	Grazing - Open Pasture		VI
Glen Eva					
ML10227	Clay Dump	3.8	Low Hill- Open Woodland Ecosystem	Safe to humans and wildlife, Stable, Non-polluting, Able to sustain agreed land use	VII
	Waste Dump	30.8	Low Hill - Open		VII

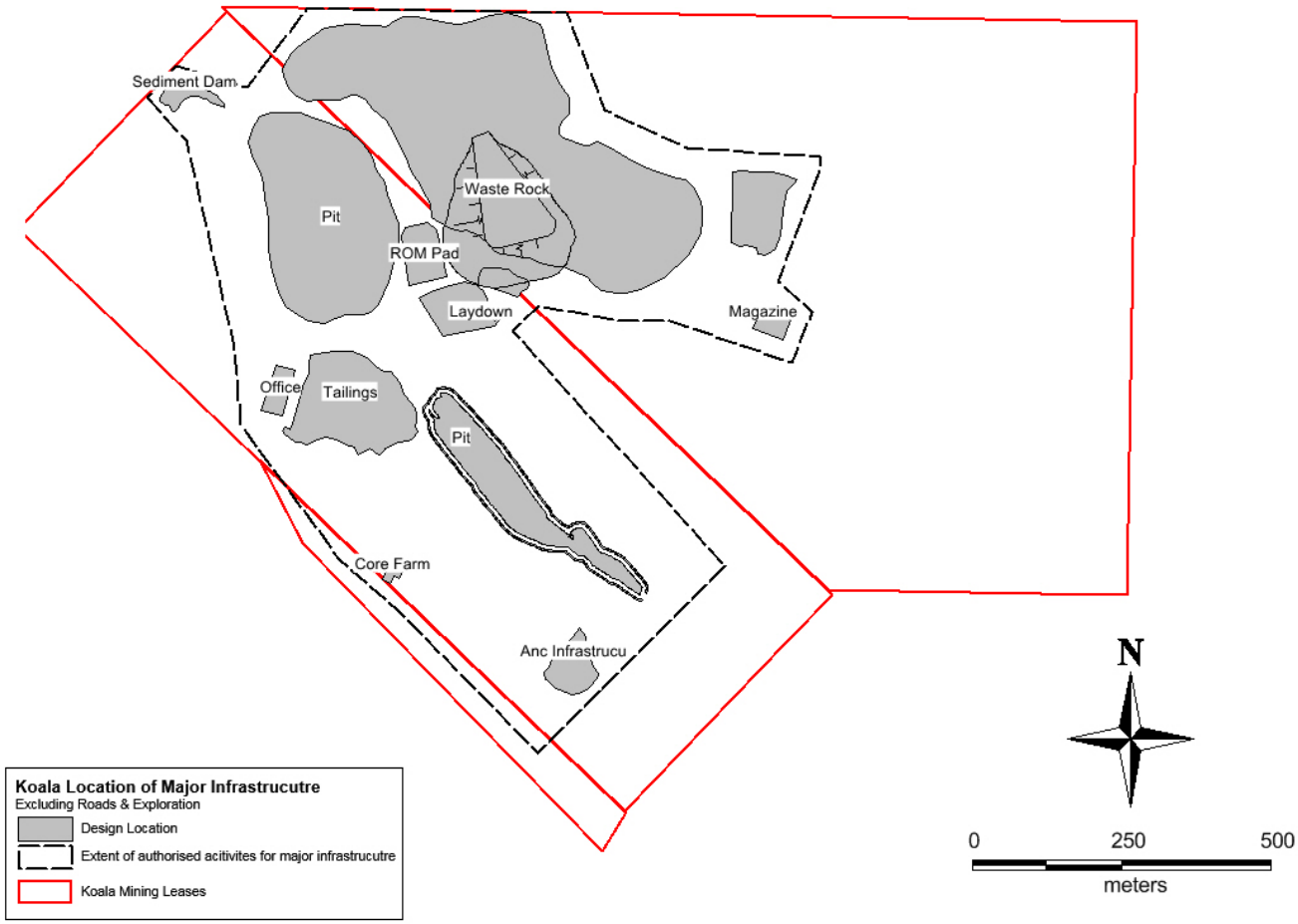
			Woodland Ecosystem		
	Open Cut Pit	7.2	Non-use management area	Safe to humans and wildlife, Stable, Non-polluting	Void
	Sediment Dam	2.4	Grazing - Open Pasture	Safe to humans and wildlife, Stable, Non-polluting, Able to sustain agreed land use	VI
	Anc Infrastructure	0.6	Grazing - Open Pasture		VI

Table 2 (Authorised mining activities and locations)

Tenure ID	Disturbance Type	Authorised Disturbance Area (ha)
Mt Coolon (Koala)		
ML1029 ML1086	Waste Dump	17.5
ML1029 ML1086	Open Cut Pit	8.8
ML1029	Anc Infrastructure	0.7
ML1029	Tailings Dump	2.7
Ml1086 ML1029	Sediment Dam	1.4
ML1029 ML1085	Core Farm	0.1
ML1086	Magazine	0.2
ML1029	Office Area	0.3
ML1029 ML1086	ROM Pad	0.6
ML1029 ML1086	Laydown Area	1.0
ML1086 ML1029 ML1085	Roads	1.4
ML1029	Bund	0.4
Glen Eva		
ML10227	Clay Dump	3.8
	Waste Dump	30.8
	Open Cut Pit	7.2
	Sediment Dam	2.4
	Anc Infrastructure	0.6

Schedule 3

Schedule 3—Figure 1 (Project infrastructure layout - Koala)



Schedule 3—Figure 2 (Project infrastructure layout - Glen Eva)