

Amanda Cleary



Queensland
Government

From: Amanda Cleary [amanda.cleary@epa.qld.gov.au]
Sent: Tuesday, 8 August 2006 11:26 AM
To: David Genn (E-mail)
Subject: proposed conditions 7.8.06.doc

Environmental Protection Agency

Incorporating the
Queensland Parks and Wildlife Service



proposed conditions
7.8.06.doc...

Hi David

as discussed I have attached the draft conditions. I have colour coded the conditions so you can see who has asked for what. Please remember in regards to the tailings dam I am waiting for conformation from Personal and will let you know when I hear. I have not been able to speak to Glen regarding the EM plan and the impact it will have on issuing the EA, but when I hear I will let you know.

If you have any questions, please let me know

Regards

Amanda Cleary
Senior Environmental Officer

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proposed conditions 7.8.06.doc

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From: Sarah Fenaughty [Sarah.Fenaughty@epa.qld.gov.au]

Sent: Friday, 11 August 2006 3:31 PM

To: sch4p4(6) Personal information@skm.com.au

Cc: dgenn@newhopecoal.com.au; Amanda Cleary

Subject: Latest EA conditions

sch4p4(6) Personal information

Please find attached the latest version of conditions following our meeting today with David and Alison.

Any queries please call myself or Amanda Cleary.

Regards

Sarah Fenaughty
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Southern Region - Environmental Operations
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Environmental Protection Agency

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File note of meeting/discussion

☒ Meeting ☐ Telephone
Date: 11 August 2006 Time: 11:00am
Between: Amanda Cleary of: EPA
Sarah Fenaughty of: EPA
And: David Genn of: New Acland Coal
Alison Buchanan of: New Acland Coal

Subject: **Draft Conditions for ML50216**

The purpose of the meeting was to discuss the proposed draft conditions for the Stage 2 mine expansion that incorporates ML50216.

The proposed draft conditions are a result of the EIS process. The conditions have been proposed by EPA, DNR, Commonwealth Department of Environment and Heritage, etc.

Some conditions were amended in the meeting (see purple comments on attached document).

NAC are to provide additional information in some conditions and speak to Department of Environment and Heritage regarding conditions in schedule F – nature conservation.

Miss Cleary amended the draft conditions stating the change conditions and highlighting conditions that require information and emailed it to 4p4(6) Personal information (SKM) who will amend NAC current Environmental Management plan for submission to the EPA. Once this has been received EPA will confirm with NAC the draft conditions of the EA and issue the draft.

Release

H:\EPA\Operations\Amanda\Mining\New Acland Coal\ML50216\EA\Draft Cconditions\File note of meeting 11.8.06.doc

DRAFT CONDITIONS

Blue comments: additional conditions before

Red: NAC conditions

Black comments: standard EPA conditions

Green comments: recommendations from EIS report

Orange comments: (6) Personal information

Purple comments: items changed in meeting 11 August 2006

This Environmental Authority incorporates the following Schedules:

- Schedule A - General
- Schedule B - Air
- Schedule C - Water
- Schedule D - Noise and Vibration
- Schedule E - Land
- Schedule F - Nature Conservation
- Schedule G - Waste Management
- Schedule H - Community
- Schedule I - Light
- Schedule J - Definitions

Schedule 1 - General

Financial Assurance

- (A1) The Environmental Authority holder must give the administering authority a Financial Assurance in the amount and form required by the administering authority prior to the commencement of activities proposed under this Environmental Authority.

NOTE: The calculation of Financial Assurance for condition (A1-1) must be in accordance with Guideline 17 and may include a performance discount. The amount is defined as the maximum total rehabilitation cost for complete rehabilitation of all disturbed areas, which may vary on an annual basis due to progressive rehabilitation. The amount required for the financial assurance must be the highest Total Rehabilitation Cost calculated for any year of the Plan of Operations and calculated using the formula: (Financial Assurance = Highest Total Annual Rehabilitation Cost x Percentage Required).

- (A2) The Financial Assurance is to remain in force until the administering authority is satisfied that no claim on the assurance is likely.

NOTE: Where progressive rehabilitation is completed and acceptable to the administering authority, progressive reductions to the amount of financial assurance will be applicable where rehabilitation has been completed in accordance with the acceptance criteria defined within this environmental authority.

Maintenance of measures, plant and equipment

- (A3) The Environmental Authority holder must:

- (a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this Environmental Authority; and
- (b) maintain such measures, plant and equipment in a proper condition; and
- (c) operate such measures, plant and equipment in a proper manner.

Monitoring

- (A4) The Environmental Authority holder must 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.
- (A5) Where monitoring is a requirement of this Environmental Authority, ensure that a competent person(s) conducts all monitoring.
- (A6) All monitoring and research data, collected for the purpose of demonstrating compliance with this Environmental Authority, must be collated and maintained in a central location, such that the data are accessible on request by the administering authority.
- (A7) A monitoring program which includes monitoring locations, frequency, parameters, monitoring techniques and quality assurance protocols must be detailed in the Plan of Operations.

Storage and handling of flammable and combustible liquids

- (A8) 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).
- (A9) All hydrocarbon storages must be designed, constructed and maintained in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids of 2004 (or more recent editions).
- (A10) The base and walls of all bunded areas must be maintained free from gaps or cracks that may result in the loss of containment.

Definitions

- (A11) Words and phrases used throughout this Environmental Authority are defined in Schedule K Definitions Section at the end of this Environmental Authority. Where a definition for a term used in this Environmental Authority is sought and the term is not defined within this Environmental Authority, the definitions in the *Environmental Protection Act 1994*, its Regulations and Environmental Protection Policies must be used.

END OF CONDITIONS FOR SCHEDULE A

Schedule B – Air

Dust Nuisance

- (B1) Subject to Conditions (B2) and (B3) the release of dust or particulate matter or both resulting from the mining activity must not cause an environmental nuisance, at any sensitive place.
- (B2) When requested by the administering authority, dust and particulate monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days to the administering authority following completion of monitoring.

Dust Deposition Monitoring

- (B3) If the Environmental Authority holder can provide evidence through monitoring that the following limits are not being exceeded then the holder is not in breach of (B1):
- (a) Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with AS 3580.10.1 Methods for sampling and analysis of ambient air - Determination of particulates - Deposited matter - Gravimetric method of 1991; and
 - (b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour

averaging time, at a sensitive place downwind of the operational land, when monitored in accordance with:

- Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet - Gravimetric method, when monitored in accordance with AS 3580.9.6
- Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM (sub) 10 high volume sampler with size-selective inlet - Gravimetric method of 1990; or
- Any alternative method of sampling PM10, which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.

NOTE: You must propose which monitoring method is appropriate in accordance with condition (B3) (a) or (b) or both.

- (B4) If monitoring indicates exceedence of the relevant limits in Condition (B3), then the Environmental Authority holder must:
- address the complaint including the use of appropriate dispute resolution if required; or
 - as soon as practicable or at the request of the administering authority, implement dust abatement measures so that emissions of dust from the activity do not result in further environmental nuisance.
- (B5) Rehabilitation must be carried out in such a manner as to minimise releases of wind-blown dust and erosion.
- (B6) Dust emissions from mining activities must be suppressed by the use of water or treated in any other suitable manner to prevent a dust nuisance at a sensitive place.
- (B7) All sealed traffic areas must be cleaned as necessary to minimise the release of dust and particulate matter to the atmosphere.
- (B8) Trafficable areas must be sealed with bitumen or an equivalent hard surface, or otherwise maintained to the satisfaction of the administering authority, in a condition which minimises the release of wind blown or traffic generated dust.
- (B9) Temporary roads used for material haulage must be watered or treated in any other suitable manner, to minimise wind-blown or traffic generated dust.

Odour nuisance

- (B10) Subject to condition (B11), the release of noxious or offensive odour(s) or any other noxious or offensive airborne contaminant(s) resulting from the mining activity must not cause an environmental nuisance at any sensitive or commercial place.
- (B11) When requested by the administering authority, odour monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (B12) If monitoring indicates Condition (B10) is not being met then the environmental authority holder must:
- a) address the complaint including the use of appropriate dispute resolution if required; or
 - b) immediately implement odour abatement measures so that emissions of odour from the activity do not result in further environmental nuisance.

END OF CONDITIONS FOR SCHEDULE B

Schedule C – Water

Water Management Plan

- (C1) Within the **twelve months** from the date the environmental authority takes effect, the holder of this environmental authority must develop and implement a **Water Management Plan** to be implemented through the Plan of Operations.
- (C2) The Water Management Plan must identify methods to:
- identify the environmental values of the receiving waters including Lagoon and Spring Creek and water quality objectives and how they will be protected;
 - incorporate a risk management approach to how changing levels of flood, drought and water quality risks should be addressed;
 - manage stormwater discharge;
 - develop and implement a system for emergency spills or discharges including procedures to minimise extent and duration of release, staff training, investigation and reporting procedures;
 - manage the environmental impacts of any release of wastewater to the environment so that any impacts are minimised including restricting any discharge to waters to occasions where there is flow in receiving waters to provide considerable dilution;
 - separate clean water from undisturbed areas and water from disturbed areas;
 - manage site water quality and quantity during the (3) phases of mining: development, operation and decommissioning and include a site water balance including groundwater generated through mine dewatering;
 - safeguard against the potential for soil erosion and acid drainage; and
 - provide details of operational monitoring and monitoring of hydrological processes including associated performance indicators.
- (C3) The holder of this environmental authority must submit to the administering authority a draft of the Water Management Plan within **six months** of the date the environmental authority takes effect for comment prior to implementation of the plan.
- (C4) A copy of the Water Management Plan and any subsequent amendment of the Water Management Plan must be kept at the place to which this environmentally relevant activity relates and be available for examination by Emergency Services Personnel or an authorised person on request.

Release to waters

- (C5) Contaminants must not be released from the mine to any waters or the bed and banks of any waters other than treated/settled stormwater from environmental dam(s) that is in accordance with the contaminant release limits in **Schedule C – Table 1**.

Schedule C - Table 1 (End of Pipe contaminant release limits)

Parameter	Units	Minimum	Maximum
pH		6.0	9.0
Electrical Conductivity	µS/cm	-	1500
Total Suspended Solids	mg/L	-	100

- (C6) Notwithstanding condition C5, the holder of the environmental authority is authorised to release contaminants to waters of Lagoon or Spring Creek as defined in the Water Management Plan in a manner that will ensure the level of electrical conductivity within the receiving waters will not exceed 1500 µS/cm at any time, 50 metres downstream from the discharge point, as a result of the discharge. Any release to waters must only occur where there is an existing minimum flow in receiving waters upstream of the discharge point to provide adequate dilution such that 1500 µS/cm is not exceeded outside the 50 metre mixing zone.

(C7) The holder of this authority must undertake monitoring at regular intervals during any release to waters at a point 50 metres downstream of the discharge, to ensure that the level of electrical conductivity does not exceed 1500 µS/cm at that point. If monitoring indicates that 1500 µS/cm is exceeded, release of wastewaters must cease immediately.

(C8) Monitoring of contaminant releases must be undertaken at the overflow from the environment dam(s) identified in Schedule C – Table 2 and records kept, and comply with the quality characteristics and at the frequency specified in Schedule C – Table 1.

Schedule C - Table 2 (End of pipe monitoring locations and frequency)

Monitoring point	Latitude (GDA 94)	Longitude (GDA 94)	Monitoring Frequency	Monitoring parameters
ED1 Overflow point from Environmental Dam 1	27° 15' 40.56030" S	151° 41' 48.32659" E	As soon as practical prior to, at least daily during and immediately after any release to waters from this point.	pH, total suspended solids (mg/L), electrical conductivity µS/cm, sulphate (SO ₄) (mg/L), time of day, water temperature, flow rate (m/s)
ED2 Overflow point from Environmental Dam 2	27° 16' 54.96167" S	151° 41' 36.83113" E	As soon as practical prior to, at least daily during and immediately after any release to waters from this point.	
ED3 Overflow point from Environmental Dam 3	27° 18' 29.40913" S	151° 42' 50.52694" E	As soon as practical prior to, at least daily during and immediately after any release to waters from this point.	
ED4 Overflow point from Environmental Dam 4	27° 17' 41.49436" S	151° 41' 33.60156" E	As soon as practical prior to, at least daily during and immediately after any release to waters from this point.	

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

Note: Monitoring of receiving waters for discharges from Environmental Dams will be undertaken using Rising Stage Samplers where practical.

(C9) Ambient water monitoring must be undertaken at locations and frequencies prescribed in Schedule C – Table 3 and any mining activity release must comply with the contaminant limits defined in Schedule C – Table 1.

Schedule C - Table 3 (Receiving Water Monitoring Locations and Frequency)

Monitoring Point	Latitude (GDA 94)	Longitude (GDA 94)	Monitoring Frequency	Monitoring parameters
Lagoon Creek at a point upstream of mine	NAC to provide	NAC to provide	At least once every 6 months and as soon as practical prior to, at least daily during and immediately after any release to waters.	pH, total suspended solids (mg/L), electrical conductivity µS/cm, sulphate (SO ₄) (mg/L), time of day, water temperature, flow rate (m/s)
Spring Creek at a point downstream of mine	NAC to provide	NAC to provide	At least once every 6 months and as soon as practical prior to, at least daily during and immediately after any release to waters.	pH, total suspended solids (mg/L), electrical conductivity µS/cm, sulphate (SO ₄) (mg/L), time of day, water temperature, flow rate (m/s)
Spring Creek at a point upstream downstream of mine	NAC to provide	NAC to provide	At least once every 6 months and as soon as practical prior to, at least daily during and immediately after any release to waters.	pH, total suspended solids (mg/L), electrical conductivity µS/cm, sulphate (SO ₄) (mg/L), time of day, water temperature, flow rate (m/s)
Lagoon Creek at two points downstream of mine	NAC to provide	NAC to provide	At least once every 6 months and as soon as practical prior to, at least daily during and immediately after any release to waters.	At least once every 6 months and immediately before, at least daily during and immediately after any release to waters.

Note: A monitoring point may also include a monitoring point requested by the administering authority in the event of release to waters.

Capacity of Tailings and Process Water Dams

David to sch4p4 (6) Personal information

(C10) The design storage allowance on 1st November of each year for any dam containing hazardous waste constructed or operated within the operational land must comply with Schedule C - Table 4.

Schedule C - Table 4 (Storage design * for dams containing hazardous waste)

Dam Name	Design Storage Allowance** Critical Wet Period	Spillway Critical Design Storm***	Mandatory **** Reporting Level
Process Water Dam	0.1 AEP 4 month wet season plus process inputs for the 4 month wet season	0.001 AEP	0.01 AEP
Tailings Storage Facility	0.1 AEP 4 month wet season plus process inputs for the 4 month wet season	0.001 AEP	0.01 AEP
Environmental Dam 2	AEP 4 month wet season	0.001 AEP	0.01 AEP

NOTE: AEP means Annual Exceedance Probability.

- * Calculations are to be carried out in accordance with the "Site Water Management" guideline in the Technical Guidelines for Environmental Management of Exploration and Mining in Queensland – DME 1995.
- ** The design storage allowance on 1st November of each year for any dam containing hazardous waste constructed within the operational land must be equivalent to the run-off from the critical wet period plus process inputs for the period. Process inputs refers to hazardous process waste and any water, which is being disposed of in the storage facility.
- *** The critical storm has a duration that produces the peak discharge for the catchment

**** The level below spillway crest that can accommodate runoff from a 72 hour AEP storm, or the AEP wave allowance whichever level is lower.

(C11) The spillway for any dam containing hazardous waste, constructed within the operational land must be designed and maintained to withstand the peak flow from the spillway critical design storm in **Schedule C – Table 4**.

(C12) The holder of the Environmental Authority must mark the mandatory reporting level defined in **Schedule C – Table 4** on the spillway of all dams containing hazardous waste within the operational land.

(C13) The holder of the Environmental Authority must notify the administering authority when the pondage level of the dam containing hazardous waste reaches the mandatory reporting level defined in **Schedule C – Table 4**.

(C14) The holder of this Environmental Authority must implement measures to prevent access to any dams containing hazardous waste by all livestock and minimise access by native fauna.

(C15) The base and walls of the Tailings Storage Facility and environmental dams must be constructed, installed and maintained:

- (i) so as to minimise the likelihood of a release of contaminants through the bed or banks of the dam to any waters (including groundwater); and
- (ii) so as to ensure the stability of the dam(s) construction.

(C16) Construction of sediment dams other than any dams in the final rehabilitation landform must not occur on out of pit spoil dumps.

(C17) Before construction of any dam containing hazardous waste, a person suitably qualified and experienced in dam engineering must: (a) prepare design plans which design the dam to an appropriate engineering standard; and (b) certify that the design plans meet an appropriate engineering standard and are consistent with the conditions in the environmental authority.

(C18) Before construction of a dam containing hazardous waste, the holder of the environmental authority for the dam must submit the certified design plans to the administering authority, for review and comment.

(C19) When the construction of the dam containing hazardous waste is complete, the holder of the environmental authority must: (a) obtain certification from a person suitably qualified and experienced in dam construction that the construction of the dam is either in accordance with or generally in accordance with the certified design plans; and (b) submit the construction certification to the administering authority.

(C20) The holder of the environmental authority must construct and operate the dam in accordance with the certified: (a) design plans; (b) operational plans; and (c) conditions contained in the environmental authority, in order to prevent or minimise environmental harm.

Groundwater Monitoring

(C21) The location of monitoring bores must take into consideration the location of any voids, Tailings Storage Facilities, hazardous waste rock dumps, heap leach pads, location and depth of aquifers and hydro geological factors within the host rocks which may allow the movement of hazardous contaminants.

(C22) Groundwater, affected by the mining activities must be monitored at the locations and frequencies defined in **Schedule C – Table 5**.

Schedule C - Table 5 (On-lease Ground Water Monitoring Locations and Frequency)

Monitoring point	Latitude	Longitude	Aquifer	Surface RL (m)	Total Depth (m)	Monitoring frequency
15P ML, near ED1	27° 15' 44.40780" S	151° 41' 46.56897" E	Coal Measures	441.20	60.0	Monthly
16P ML, near southeastern boundary	27° 15' 18.36435" S	151° 43' 47.55710" E	Coal Measures	464.40	84.0	Monthly
18P nested piezometer (near CHPP)	27° 16' 29.27663" S	151° 41' 45.23075" E	Coal Measures	459.60	130.0	Monthly
25P ML, near eastern boundary	27° 16' 50.29675" S	151° 43' 41.12241" E	Basalt	493.70	50.0	Monthly
26P ML, near northeastern boundary	27° 16' 16.57705" S	151° 43' 43.89206" E	Coal Measures	497.50	50.0	Monthly
27P ML, near Cherry Road exit	27° 16' 00.37396" S	151° 43' 10.37992" E	Coal Measures	484.40	50.0	Monthly
28P ML, northern area	27° 15' 46.28750" S	151° 42' 32.99149" E	Coal Measures	457.00	50.0	Monthly
843 near southeastern boundary	27° 17' 13.28365" S	151° 41' 32.69584" E	Basalt	441.90	48.0	Monthly
848 near ED2	27° 16' 58.98916" S	151° 41' 33.12875" E	Coal Measures	443.70	66.0	Monthly
81P	27° 17' 59.74912" S	151° 42' 18.06339" E	Coal Measures	460.37	42.0	Monthly
82P	27° 18' 02.04446" S	151° 44' 12.59898" E	Coal Measures	448.62	48.0	Monthly
83P	27° 18' 28.46569" S	151° 43' 24.79850" E	Coal Measures	439.32	48.0	Monthly
84P	27° 18' 37.76433" S	151° 41' 24.52821" E	Basalt	447.95	30.0	Monthly

Schedule C - Table 6 (Off-lease Ground Water Monitoring Locations and Frequency) David to provide info and determine if more than one off site bore in each aquifer is adequate.

Monitoring point	Latitude	Longitude	Aquifer	Surface RL (m)	Total Depth (m)	Monitoring frequency
NAC to provide	NAC to provide	NAC to provide	NAC to provide	NAC to provide	NAC to provide	Monthly
NAC to provide	NAC to provide	NAC to provide	NAC to provide	NAC to provide	NAC to provide	Monthly

(C23) A groundwater monitoring network must be maintained. The network must:

- (a) be installed and maintained by a person possessing appropriate qualifications and experience in the fields of hydrogeology and groundwater monitoring program design to be able to competently make recommendations about these matters;
- (b) be constructed in accordance with methods prescribed in the latest edition of the Agriculture and Resource Management Council of Australia and New Zealand manual titled 'Minimum Construction Requirements for Water Bores in Australia'; and

- (c) include a sufficient number of 'bores of compliance' that are located at an appropriate distance from potential sources of impact from mining activities and provides the following:
- (i) representative groundwater samples from the uppermost aquifer; and
 - (ii) background water quality in hydraulically up-gradient or background bore(s) that have not been affected by any mining activities to groundwater's; and
 - (iii) the quality of groundwater down gradient of any potential source of contamination including groundwater passing the relevant bore(s) of compliance.
- (C24) Conduct monitoring and keep records of groundwater quality for the relevant bores of compliance for the aquifers. All determinations of groundwater quality must be:
- (i) conducted for the water quality characteristics and at the minimum frequency stated in **Schedule C – Table 6 and 7**;
 - (ii) taken from sufficient monitoring points and / or well to obtain representative samples of groundwater both up-gradient and down-gradient of the potential influence;
 - (iii) carried out with sufficient regularity and spatial and temporal replication to make statistically valid conclusions about the presence or absence of contamination or other impact.
 - (iv) carried out with sufficient number of sampling events to determine ambient groundwater quality and level prior to any development of the site occurring.
 - (v) followed by an assessment of whether or not there has been any statistically significant adverse change compared to background values at locations hydraulically down gradient of the potential sources of contamination for each quality characteristic in **Schedule C – Table 8**.
- (C25) On any occasion that samples are obtained in accordance with condition (C23), the holder of this Environmental Authority must measure and record standing groundwater levels in metres accurate to 0.01 metres. The elevation of the reference point, relative to Australian Height Datum, for use in any groundwater level measurement must be determined to an accuracy to 0.01 metres.
- (C26) Subject to condition C22, on-lease groundwater levels must be monitored and compared with two bores located off-lease and within the same aquifer. The difference in variation of drawdown from on-lease bores compared to the variation in drawdown from off-lease bores within any one month sampling period should be no greater than one metre. Where a difference of more than one metre is identified and that difference is not the result of pumping of licensed bores, the administering authority must be notified within 14 days of completion of monitoring.
- (C27) The method of sampling of groundwater must comply with that set out in the latest edition of the Environmental Protection Agency's Water Quality Sampling Manual.
- (C28) Groundwater level fluctuations as measured in 'bores of compliance' that are caused by seepage from Tailings Storage Facility or environmental dam must be notified within 14 days to the administering authority following completion of monitoring.
- (C29) Subject to Condition (C22), if the groundwater contaminant trigger levels defined in **Schedule C - Table 7** 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.
- (C30) Subject to Condition (C22), groundwater contaminant limits must not exceed the contaminant limits defined in **Schedule C -Table 7**.

Schedule C - Table 7 (Groundwater Monitoring Limits and Frequencies)

Quality Characteristic	Units	Contaminant Limits and Groundwater level	Monitoring Frequency
Al	mg/L	+/- 20% of background	Half Yearly
As	mg/L	+/- 20% of background	Half Yearly
Ca	mg/L	+/- 10% of background	Half Yearly
Se	mg/L	+/- 20% of background	Half Yearly
Cl	mg/L	+/- 10% of background	Half Yearly
Cu	mg/L	+/- 20% of background	Half Yearly
F	mg/L	+/- 20% of background	Half Yearly
Fe	mg/L	+/- 20% of background	Half Yearly
Total N	mg/L	+/- 20% of background	Half Yearly
K	mg/L	+/- 10% of background	Half Yearly
Mg	mg/L	+/- 10% of background	Half Yearly
Mn	mg/L	+/- 20% of background	Half Yearly
Na	mg/L	+/- 10% of background	Half Yearly
SO ₄	mg/L	+/- 10% of background	Half Yearly
HCO ₃	mg/L	+/- 10% of background	Half Yearly
TDS	mg/L	+/- 10% of background	Half Yearly
EC	µS/cm	+/- 0.5 for coal measures aquifers +/- 1 for basalt aquifers	Quarterly
pH	unit		Quarterly
Standing water level	cm		Monthly

- (C31) The baseline value for condition C30 is to be determined by sampling for a period of three years from reference bores listed in **Schedule C – Table 5**.
- (C32) A record of the results of groundwater monitoring must be kept and made available to the administering authority on request.
- (C33) The location of the **two** off-lease monitoring bores within the basalt and coal-seam aquifers referenced in **Schedule C – Table 6** must be investigated and installed within 12 months of the environmental authority being issued.

Erosion and Sediment Control

- (C34) All reasonable and practicable measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment to the environmental dams.
- (C35) Erosion protection measures and sediment controls must be provided and maintained to effectively minimise any likelihood of erosion and release of sediments from the mine and be maintained during site clearing, construction, mining operations and rehabilitation. Such measures should include diversion drainage works and sedimentation traps and dams.

Sewage Effluent

- (C36) All effluent released from the treatment plant must be monitored at the frequency and for the parameters specified in **Schedule C – Table 8**.

Schedule C - Table 8 (Sewage Effluent Quality Targets for Dust Suppression and Irrigation)

Quality characteristics	Release limit	Units	Limit type	Monitoring frequency
5-day Biochemical Oxygen Demand (uninhibited)	<20	mg/L	max	Quarterly
pH	6.5 – 8.5		range	Quarterly
Faecal Coliforms, based on the average of a minimum of five samples collected	<1000 c.f.u.	Colonies per 100 mL	max	Quarterly
Free chlorine residual		mg/L	max	Quarterly

- (C37) Sewage effluent used for dust suppression or irrigation must not exceed sewage effluent release limits defined in **Schedule C – Table 8**.
- (C38) Sewage effluent used for dust suppression or irrigation must not cause spray drift or over spray to any sensitive place, **other than the active mining areas within ML 50176 and ML 50216**.
- (C39) Subject to condition C40, sewage effluent from sewage treatment facilities must be reused or evaporated and must not be directly released from the sewage treatment plant to any water way or drainage line.
- (C40) **In periods of wet weather or following wet weather, when no irrigation of effluent is reasonably practicable and when effluent storage ponds are full, the release of effluent to waters is permitted from the overflow point from Environmental Dam 2 and in accordance with the release limits in Schedule C – Table 1.**
- (C41) **The holder of this Environmental Authority must ensure that irrigation of effluent is carried out in such a manner that prevents and/or minimises environmental harm.**

END OF CONDITIONS FOR SCHEDULE C

Schedule D – Noise

Noise Nuisance

- (D1) **Notwithstanding any other condition of this environmental authority, noise from the activity must not cause an environmental nuisance, at any sensitive place.**
- (D2) When requested by the administering authority, noise monitoring and recording must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of an authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (D3) If the Environmental Authority holder can provide evidence through monitoring that the limits defined in **Schedule D – Table 1 and 2** inclusive, are not being exceeded then the holder is not in breach of Condition D1. Noise Monitoring must include:
- (i) **background noise level;**
 - (ii) **LA₁₀, adj 10 mins**
 - (iii) **LA₁, adj 10 min**
 - (iv) **LA_{max}, adj T**
 - (v) **LA_r, 1 hour**

- (vi) **the level and frequency of occurrence of impulsive or tonal noise;**
- (vii) **Atmospheric conditions including temperature, wind speed and directions;**
- (viii) **Effects due to extraneous factors such as traffic noise; and**
- (ix) **Location, date and time of monitoring.**

- (D4) If monitoring indicates exceedance of the limits in **Schedule D – Table 1 and 2**, then the Environmental Authority holder must:
- (a) Address the complaint including the use of appropriate dispute resolution if required; and
 - (b) Immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance.
- (D5) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

Schedule D - Table 1 (Noise Limits – Sensitive Place)

Noise level dB(A) measured as	Monday to Saturday			Sundays and public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
Noise measured at a 'Noise sensitive place'						
LA _r , 1 hour	50	45	40	50	45	40

Note: The method of measurement and reporting of noise levels must comply with the latest editions of the Environmental Protection Agency's Noise Manuals.

Schedule D - Table 2 (Airblast Overpressure Level)

Noise Parameter	Monday to Friday 9am-5pm Saturday 9am – 1pm
Air blast overpressure level (dB [Lin] Peak)	115 db (linear peak for 9 out of any 10 consecutive blasts, regardless of the interval between blasts)
Air blast overpressure level (dB [Lin] Peak)	120 db (maximum)

* **Blasting not permitted on public holidays and Sundays.**

Note: The method of measurement and reporting of over pressure levels must comply with the latest edition of the Environmental Protection Agency's vibration and air blast overpressure monitoring guideline.

Vibration Nuisance

- (D6) Subject to Conditions (D7) and (D8) vibration from the mining activity must not cause an environmental nuisance, at any sensitive or commercial place.
- (D7) When requested by the administering authority, vibration monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days to the administering authority following the completion of monitoring.
- (D8) If the Environmental Authority holder can provide evidence through monitoring that the limits defined in **Schedule D - Table 3** are not being exceeded then the holder is not in breach of condition D6.

Monitoring must include:

- location of the blast(s) within the mining area (including which bench level); and
- atmospheric conditions including temperature, relative humidity and wind speed and direction; and
- location, date and time of recording.

(D9) If monitoring indicates exceedance of the relevant limits in **Schedule D - Table 3**, then the Environmental Authority holder must:

- address the complaint including the use of appropriate dispute resolution if required; or
- immediately implement vibration abatement measures so that vibration from the activity does not result in further environmental nuisance.

Schedule D - Table 3 (Vibration Limits)

Vibration Parameter	Vibration measured at sensitive place
	Monday to Friday 9am-5pm Saturday 9am – 1pm
Peak particle velocity (mm/s)	5 mm/sec for nine (9) out of ten (10) consecutive blasts initiated. Any single blast not to exceed 10 mm/sec.

* Blasting not permitted on public holidays and Sundays.

Note: The method of measurement and reporting of vibration levels must comply with the latest edition of the Environmental Protection Agency's vibration and air blast overpressure monitoring guideline.

END OF CONDITIONS FOR SCHEDULE D

Schedule E – Land

Green Waste Storage

(E1) The waste management hierarchy must be considered in the management of green waste.

Final Land Use and Rehabilitation Plan

(E2) Within twelve months of the date of this environmental authority the holder of this environmental authority must develop and implement a Final Land Use and Rehabilitation Plan to ensure that all areas disturbed by mining activities will be suitably rehabilitated in accordance with **Schedule E – Table 1**.

The Plan must include, but is not limited to the following:

- disturbance type;
- disturbance area;
- pre and post mine land descriptions;
- pre and post mine land capability;
- analogue site(s) identification;
- a description of rehabilitation management techniques incorporating works and monitoring programs and timetables;
- indicators for success; and
- keeping of appropriate records or rehabilitation measures implemented including taking of photographs demonstrative of rehabilitation achieved and the preparation of annual rehabilitation progress reports.

Note: The Final Land Use and Rehabilitation Plan is to be managed through the Plan of Operations.

Schedule E- Table 1 (Final Land Use and Rehabilitation Approval Schedule – ML 50170 and MLA50216)

David to determine if the RE areas need to be included in this table after consultation with Department of Environment and Heritage.

	Disturbance Type						
	Residual Voids	Tailings Dams	Recontoured spoil area	Waste Rock Dumps	Infrastructure & ROM Areas	Roads and Tracks	Water Supply and Sediment Dams
Tenure ID	ML50216	ML50170	ML50170 ML50216	ML50216	ML50170	ML50170 ML50216	ML50216
Projective Surface Area (ha)	55	70	740	100	5	5	40
Post mine land use	Possible water storage	Grazing	Grazing	Grazing	Grazing	Grazing	Possible water storage
Post mine land suitability classification	5	5	NAC to provide	4	4	4	5

Note: The Final Land Use and Rehabilitation Plan is to be managed through the Plan of Operations.

(E3) All areas significantly disturbed by mining activities must be rehabilitated in accordance with the Mine Closure Plan outlined in Condition E5.

(E4) Progressive rehabilitation must commence when areas become available within the operational land.

Closure and Post Closure

(E5) The Environmental Authority holder must submit a Mine Closure Plan to the administering authority at least five years prior to the surrender of this Environmental Authority.

(E6) When the deposition of tailings ceases, the holder of this Environmental Authority must install a final cover system to the Tailings Storage Facility, which effectively minimises:

- infiltration of water into the Tailings Storage Facility; and
- the likelihood of any erosion occurring to either the final cover system, dumped spoil material or deposited tailings;

(E7) The final cover system must include an inert layer to reduce infiltration and an upper/final layer of earthen material that is capable of sustaining plant growth.

Sustainable Final Land Use Outcomes

(E8) Areas that are to be progressively rehabilitated must comply with, but not be limited to, the following outcomes:

- All areas disturbed by mining activities must be rehabilitated to the landform design criteria defined in the Final Land Use and Rehabilitation Plan required by Condition E2 to E4; and
- The final landforms must be stable with erosion rates comparable to a suitable analogue site.

Grazing Pasture Outcome

(E9) Areas which are to be progressively rehabilitated to grazing pasture must comply with the following outcomes:

- generate a self sustaining vegetation with projective cover, species composition and species distribution comparable with that of analogue sites to be determined by the study detailed in

Condition E10 e.g. planting local native grass and shrub species where possible. These vegetation species must be listed in the Final Land Use and Rehabilitation Plan;

- (b) all areas disturbed by mining activities must be rehabilitated to the landform design criteria defined in **Schedule E – Table 2**;
- (c) a measure of productivity (e.g. sustainable dry matter production, stock live weight gain) are comparable to the selected analogue sites detailed in Condition E10).

(E10) Complete an investigation into rehabilitation of disturbed areas and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in Condition E9 and landform design criteria in **Schedule E – Table 2** within twelve months of the issue of the Environmental Authority.

Schedule E- Table 2 (Landform design criteria for New Acland Coal Mine)

Disturbance Type	Slope Range (%)	Projective Surface Area (ha)
Residual Voids (high wall)	0 – 214 % or 65°	55
Residual Voids (low wall)	0 – 100 % or 45°	
Tailings Dam Top	0 – 20 % or 11.5°*	60
Tailings Dam Wall	0 – 20 % or 11.5°*	10
Recountoured Spoil Area	0 – 20 % or 11.5°*	740
Waste Rock Dumps	0 – 20 % or 11.5°*	100
Infrastructure and ROM areas	0 – 18% or 10°	5
Roads and Tracks	0 – 10 % or 5.7°	5

Note: * = The slope depends on the vertical height and slope length. See Landform Acceptance Criteria.

Residual Void Outcome

(E11) Residual voids must comply with the following outcomes:

- (a) residual voids must not cause any serious environmental harm to land, surface waters or any recognised ground water 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; and
- (b) residual voids must comply with **Schedule E – Table 3**.

(E12) Complete an investigation into residual voids and submit the findings in the Mine Closure Plan outlined by Condition E5 to the administering authority proposing acceptance criteria to meet the outcomes in (E2) and landform design criteria in **Schedule E – Table 3**.

Schedule E - Table 3 (Residual Void Design)

Void Identification	Void wall - competent rock slope (%)	Void wall - incompetent rock slope (%)	Void maximum surface area (ha)
Central Pit/South Pit Void	65° or 214%	45° or 100%	55

Dams Containing Hazardous Waste

(E13) The construction and operation of any dam containing hazardous waste within the operational land must comply with **Schedule E – Table 4**.

Schedule E - Table 4 (Size and Purpose of Dams Containing Hazardous Waste)

Name of Dam Containing Hazardous Waste	Maximum surface area of contents in dam (ha)	Maximum volume of dam (ML)	Maximum depth of dam (m)	Purpose of Dam
Tailings Storage Facility 1 and 2	65	2975	16	Containment of Tailings from a Coal Washery
Environmental Dam 2	9	232	4.5	Capture of overland flow from undisturbed areas - Backup for Tailings Dam

David to disclose p4(16) Personal information

Note 1: The name of the dam containing hazardous waste should refer to the name of the dam e.g. process residue facility and decant dam

Note 2: For dams which do not require a dam wall, input the maximum void depth e.g. where dams are formed by excavating below the land surface or backfilling a residual void

Note 3: Purpose of the dam should outline the designed function, e.g. "the permanent containment of tailings resulting from the extraction of nickel, cobalt, and other metals at the XYZ Refinery.

(E14) Any dam containing hazardous waste constructed or operated within the operational land must be located within the polygonal area defined by the points defined in **Schedule E – Table 5**.

Schedule E - Table 5 (Location of dams Containing Hazardous Waste)

Name of Dam Containing Hazardous Waste	Latitude (GDA94) ¹	Longitude (GDA94) ¹
Tailings Storage Facility	27° 17' 07.12337" S 27° 16' 56.76992" S 27° 16' 46.42023" S	151° 41' 32.11693" E 151° 42' 04.90262" E 151° 42' 10.21294" E
ED 2?	27° 16' 18.49038" S 27° 16' 23.19723" S	151° 41' 58.08516" E 151° 41' 40.08298" E

Note 1: A minimum of 3 points is required to constrain the location of all activities associated with the dam containing hazardous waste. Additional infrastructure which forms part of any dam containing hazardous waste may include appurtenant works consisting of tailings discharge pipelines, seepage collection systems, runoff diversion bunds, containment systems, pressure relief wells, decant and recycle water streams.

Standards and Criteria

- (E15) The holder of the environmental authority must design, construct and operate all high-hazard dams containing hazardous waste in accordance with the Code of Environmental Compliance for Environmental Authorities for High Hazard Dams Containing Hazardous Waste.
- (E16) The holder of the environmental authority must design, construct and operate all low-hazard dams containing hazardous waste and non-hazardous dams in accordance with the criteria outlined in Appendix B of the Code of Environmental Compliance for Mining Lease Projects.

Inspection of Dams

(E17) The holder of the environmental authority must design, construct and operate all high-hazard dams containing hazardous in accordance with the Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste.

- (E18) All low hazard dams containing hazardous waste and non-hazardous dams must comply with the criteria outlined in Appendix B of the Code of Environmental Compliance for Mining Lease Projects.
- (E19) High hazard dams containing hazardous waste shall be inspected by a Registered Professional Engineer (RPEQ) on or about 1st October but definitely before 1st November each year or at any time if alarming, unusual or otherwise unsatisfactory conditions are observed.
- (E20) For each inspection, the engineer shall assess the condition of the dam and its foundations, determine the hydraulic adequacy of the dam and assess the adequacy of the works with respect to dam safety.
- (E21) For each inspection, two copies of the engineer's report and any recommendations as to measures to be taken to ensure the integrity of the dam shall be furnished to the administering authority within 28 days of the inspection.

Embankment Monitoring

- (E22) During the operational life of the storage the holder of the environmental authority must regularly monitor and record the standing water levels in three monitoring wells, which will be located in a line through the highest section of the embankment.

Decommissioning of Dams – Documentation and Compliance

- (E23) Dams containing hazardous waste must not be abandoned, must be decommissioned to a situation where water can no longer be stored in the dams and the dams and their contained waste(s) are stable, whereafter the dams are no longer dams and they become landforms on the operational land and must comply with the rehabilitation requirements of the Environmental Authority.
- (E24) Decommissioning activities for dams must be documented in detail in the plan of operations under which the activities are to occur. Where the detailed documentation is not already contained in the Design Plan for the dam, the detailed documentation is considered to be an amendment to the design plan and must be submitted as an amendment to the design plan required by the Code of Environmental Compliance for Environmental Authorities for High Hazard Dams Containing Hazardous Waste.

Infrastructure

- (E25) 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.

NOTE: This is not applicable where the landowner/holder is also the Environmental Authority holder.

Weed Control

- (E26) All areas within the mining lease will be managed to reduce the spread of declared plants including both disturbed and undisturbed areas.

END OF CONDITIONS FOR SCHEDULE E

Schedule F – Nature Conservation

Conservation David to provide evidence that no EREs exist on site and to provide map and condition for buffer distance between Lagoon Creek and flood levy bank.

- (F1) The holder of this Environmental Authority must provide a map of the Endangered Regional Remnant Ecosystems proposed for retention to demonstrate commitment to conserving the ecological values of these ecosystems and the Environmental Authority holder will consult with the Environmental Protection Agency to identify the specific values that must be preserved within the area identified as an Endangered Regional Remnant Ecosystem.
- (F2) The holder of this Environmental Authority must consult with the Environmental Protection Agency prior to commencing rehabilitation of disturbed areas in or within 500 m of an Endangered Regional Remnant Ecosystem to determine the most appropriate technique for the specific area.

- (F3) All disturbed areas must be re-contoured to final landform and revegetated, as agreed in writing with the administering authority, within 18 months of the area becoming available.

- (F4) Within 3 months of the Environmental Authority taking effect and as soon as favourable seasonal conditions allow, the holder of this Environmental Authority must undertake an additional fauna field survey of the project area to specifically target the presence of the following species:

- (a) *Anomalopus mackayi* (Five-clawed Worm-skink, Long-legged Worm-skink); and
- (b) *Tympanocryptis pinguicollis* (Grassland Earless Dragon, South-eastern Lined Earless Dragon).

- (F5) The survey methodology, techniques and survey effort should be sufficiently robust to determine the likely presence or absence of the above reptile species. A report containing the field survey methodologies, together with the results of the surveys and a map showing suitable habitat and a procedure for potential translocation (if either reptile species is identified) must be submitted to the EPA within 28 days of completing the survey.

- (F6) The holder of the Environmental Authority must ensure that staff induction and environmental awareness programs include reference to *Anomalopus mackayi* (Five-clawed Worm-skink, Long-legged Worm-skink) and *Tympanocryptis pinguicollis* (Grassland Earless Dragon, South-eastern Lined Earless Dragon) to ensure that any individuals that might be present in the project area are identified and reported to the mine site environmental officer for recovery and release into suitable habitat.

- (F7) As soon as conditions allow¹ the holder of this Environmental Authority must conduct an additional flora field survey of the project site to determine the area and abundance of the *Dichanthium sericeum* (Bluegrass) ecological community. In the interim, any cattle on this area should be removed and appropriate signage and fencing erected to provide a 50m buffer around the perimeter of the mapped area (according to Version 4 of the regional ecosystem mapping) to minimise direct and indirect disturbance and maximise the opportunity for Bluegrass community regeneration. Furthermore, active weed removal of declared weeds and weeds of concern as defined by any applicable weed management plans for Rosalie Shire should be undertaken within the fenced off area.

- (F8) Within 28 days of completing the survey the holder of this Environmental Authority must submit to the administering authority and DNR&W a report assessing the condition of the Bluegrass community. The report must include the following information:

- (c) a map defining the extent of the Bluegrass community;
- (d) flora species composition, abundance and percentage cover;
- (e) the level of weed infestation;
- (f) the value of this remnant regional ecosystem in a regional context; and
- (g) potential impact of mining activities on the Bluegrass remnant.

- (F9) The holder of this Environmental Authority must develop an Environmental Rehabilitation Management Plan and submit the Plan to the Administering Authority and the Department of Natural Resources, Mines and Water at least 28 days prior to project commissioning. The Plan must include:

David to address matter with NRM in terms of providing offset areas for RE's and Bottle Tree Hill and not rehabilitating cleared RE's to their original state and advise the EPA

- (a) A map outlining the progressive revegetation of a surface area covering no less than the surface area of REs proposed to be cleared. The areas chosen to rehabilitate should achieve the key objectives of enhancing corridor connectivity and promoting long-term local biodiversity. The

¹ As soon as conditions allow means as soon as there has been sufficient rainfall to enable the plants within the Bluegrass (*Dichanthium sericeum*) dominant grassland ecological community to recover to a point where the extent of the community, flora species composition, abundance and percentage cover and the level of weed infestation can be determined.

locations should include riparian areas of Lagoon Creek, existing stands of RE11.3.17 and RE11.9.10, Bottle Tree Hill and other disturbed areas within the ML areas;

- (b) Specific rehabilitation acceptance criteria for native RE communities including indicators of soil profile development, floristic characteristics such as species composition, cover percent, diversity and distribution, and ecosystem functionality characteristics such as key species recruitment, nutrient cycling, successional change and habitat complexity;
- (c) A rehabilitation monitoring program designed to demonstrate progression of rehabilitated communities towards self-sustaining vegetation communities based on local reference site/s;
- (d) An auditing and reporting mechanism that would be capable of identifying, in a timely manner, when rehabilitation is not achieving the required outcomes; and
- (e) Proposed remedial actions for rehabilitation areas not achieving the required outcomes.

END OF CONDITIONS FOR SCHEDULE F

Schedule G – Waste Management

Storage of tyres

- (G1) Tyres stored awaiting disposal or transport for take-back and, recycling, or waste-to-energy options - should be stockpiled in volumes less than 3m in height and 200m² in area and at least 10m from any other tyre storage area.
- (G2) All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a 10m radius of the scrap tyre storage area.
- (G3) Disposing of scrap tyres resulting from the mining activities in spoil emplacements is acceptable, provided tyres are placed as deep in the spoil as reasonably practicable.
- (G4) Scrap tyres resulting from the mining activities disposed within the operational land must not impede saturated aquifers or compromise the stability of the consolidated landform.

Waste Handling and Management

- (G5) Regulated waste must only be removed from the authorised place by a person that can legally transport this waste under the *Environmental Protection Act 1994*.
- (G6) From the commencement of the activity, the holder of this Environmental Authority must maintain and update its existing Waste Management Plan and ensure that it addresses at least the following matters:
 - (i) the types and amounts of wastes generated by the facility
 - (ii) how the waste will be dealt with, including a description of the types and amounts of waste that will be dealt with under each of the waste management practices mentioned in the waste management hierarchy (section 10 in the *Environmental Protection (Waste Management) Policy 2000*);
 - (iii) procedures for identifying and implementing opportunities to improve the waste management practices employed.
 - (iv) procedures for dealing with accident, spills, and other incidents that may impact on the waste management
 - (v) details of any accredited management system employed, or planned to be employed, to deal with the waste
 - (vi) how often the performance of the waste management practices will be assessed (at least annually)

- (vii) the indicators or other criteria on which the performance of the waste management practices will be assessed.

Note: The Waste Management Plan is to be managed through the Plan of Operations

(G7) The holder of this integrated authority must not:

- (i) allow waste to burn or be burned at or on the licensed place; or
- (ii) remove waste from the licensed place and burn such waste elsewhere.

(This condition does not apply to the material that is required to be burnt under quarantine regulations and burning of such material is to be carried out in a way that does not cause environmental harm and this condition does not refer to activities carried out under the provisions of the Fire Services Act 1990).

Waste Rock Management

- (G8) Subject to the release limits defined in Schedule C, all reasonable and practicable measures must be implemented to prevent hazardous leachate being directly or indirectly released or likely to be released as a result of the activity to any groundwater or watercourse.

Notification of Improper Disposal of Regulated Waste

- (G9) If the holder of this Environmental Authority becomes aware that a person has removed waste from the licensed place and disposed of the waste in a manner which is not authorised by this Environmental Authority or is improper or unlawful, then the holder of Environmental Authority must, as soon as practicable, notify the administering authority of all relevant facts, matters and circumstances known concerning the disposal.

Emergency Response/Contingency Plan

- (G10) Within 12 months of the date of this Environmental Authority, the holder of this Environmental Authority must develop and implement an Emergency Response/Contingency Plan to manage the environmental impacts of uncontrolled release of contaminants to the environment.
- (G11) The Emergency Response/Contingency Plan must address at least the following matters:
 - Response procedures to be implemented to reduce the likelihood of any release of contaminants to the environment.
 - Response procedures to prevent any further release or if such is not practicable, minimise the extent and duration of any release to the greatest practicable extent.
 - The practices and procedures to be employed to restore the environment, or if such is not practicable, mitigate any environmental impacts of the release.
 - A description of the resources to be used in response to a release.
 - The training of staff that will be called upon to respond to a release.
 - Procedures to investigate the cause of any release, and where necessary, implement remedial actions to reduce the likelihood of recurrence of a similar event.
 - The provision and availability of documented procedures to staff attending any release to enable them to effectively respond.
 - Timely and accurate reporting of the circumstance and nature of release events to the administering authority
- (G12) A copy of the Emergency Response/Contingency Plan and any subsequent amendment of the Emergency Response/Contingency Plan must be kept at the place to which this environmentally relevant activity relates and be available for examination by Emergency Services Personnel or an authorised person on request.

END OF CONDITIONS FOR SCHEDULE G

Schedule H - Community

Complaint recording/response

- (H1) All complaints received by the holder of this environmental authority relating to the environmentally relevant activity must be recorded in a suitable database with the following details:
- time and date of complaint;
 - type of communication (telephone, letter, personal etc.);
 - name, contact address and contact telephone number of complainant (Note: if the complainant does not wish to be identified then "Not identified" is to be recorded);
 - response and investigation undertaken as a result of the complaint;
 - name of person responsible for investigating complaint; and
 - action taken as a result of the complaint investigation and signature of responsible person.
- (H2) The complaints record required by condition number H1 must be maintained for a period of not less than three (3) years.

Notification of Emergencies and Incidents

- (H3) As soon as practicable after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with the conditions of this environmental authority, the holder of this environmental authority must notify the administering authority of the release by telephone or facsimile.
- (H4) The notification of emergencies or incidents as required by condition number H3 must include but not be limited to the following:
- the holder of the environmental authority;
 - the location of the emergency or incident;
 - the number of the environmental authority;
 - the name and telephone number of the designated contact person;
 - the time of the release;
 - the time the holder of the environmental authority became aware of the release;
 - the suspected cause of the release;
 - the environmental harm and or environmental nuisance caused, threatened, or suspected to be caused by the release; and
 - actions taken to prevent further any release and mitigate any environmental harm and or environmental nuisance caused by the release.
- (H5) Not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of the environmental authority must provide written advice of the information supplied in accordance with condition number H4 in addition to:
- proposed actions to prevent a recurrence of the emergency or incident;
 - outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance; and
 - the results of any environmental monitoring performed.

Exception Reporting

- (H6) The holder of this environmental authority must notify the administering authority in writing of any monitoring result that indicates an exceedence of or non-compliance with any environmental authority limit within twenty-eight (28) days of completion of analysis.
- (H7) The written notification required by condition number H6 above must include:
- the full analysis results;
 - details of investigation or corrective actions taken; and
 - any subsequent analysis.

END OF CONDITIONS FOR SCHEDULE H

Schedule I - Light

- (I1) Subject to condition (I2), the emission of light resulting from the mining activity must not cause an environmental nuisance at any sensitive place.
- (I2) When requested by the administering authority, an assessment of the light nuisance* must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (with in neither frivolous nor vexatious based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days of the administering authority following completion of the assessment.
- (I3) If the assessment indicates condition (I1) is not being met then the environmental authority holder must:
- (a) address the complaint including the use of appropriate dispute resolution if requires; or
 - (b) immediately implement light abatement measures so the emissions of light from the activity do not result in further environmental nuisance.
- (* = Assessment to be conducted according to and with reference to the limits specified in AS 4282-1997 Control of the Obtrusive Effects of Outdoor lights).

END OF CONDITIONS FOR SCHEDULE J

Schedule J – Definitions

Words and phrases used throughout this licence are defined below except where identified in the *Environmental Protection Act 1994* or subordinate legislation. Where a word or term is not defined, the ordinary English meaning applies, and regard should be given to the Macquarie Dictionary.

“µg/L” means micrograms per litre.

“50th percentile” means that the measured values of the quality characteristic must not be greater than the release limit for any more than three out of six consecutive samples where the time interval between the taking of each consecutive sample is not less than three days.

“80th percentile” means that the measured values of the quality characteristic must not be greater than the release limit for any more than one out of five consecutive samples where the time interval between the taking of each consecutive sample is not less than three days.

“acceptance criteria” means the measures by which actions implemented are deemed to be complete. The acceptance criteria indicate the success of the decommissioning and rehabilitation outcomes or remediation of areas which have been significantly disturbed by the mining activities. Acceptance criteria may include information regarding:

- stability of final land forms in terms of settlement, erosion, weathering, pondage and drainage;
- control of geochemical and contaminant transport processes;
- quality of runoff waters and potential impact on receiving environment;
- 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 recolonisation of specific fauna groups such as collembola, mites and termites which are involved in these processes;
- microbiological studies including recolonisation 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 ground water levels and catchment yields.

“Act” means the Environmental Protection Act 1994.

“administering authority” means the Environmental Protection Agency or its successor.

“airblast overpressure” is the energy transmitted from the blast site within the atmosphere in the form of pressure waves, consisting of both audible (noise) and inaudible (concussion) energy. The maximum excess pressure in this wave is the peak airblast overpressure measured in decibels linear (dB).

“ambient (or total) noise” at a place, means the level of noise at the place from all sources (near and far), measured as the Leq for an appropriate time interval.

“annual exceedance probability” means the probability that the given event will be exceeded within a one year period.

“appropriately qualified person” means a person or body possessing appropriate experience and qualifications to perform these tasks.

“ARD” means acid rock drainage and refers to the low pH, high heavy metal pollutant typical of sulphidic mine wastes, and most commonly associated with the production of ferrous iron and sulphuric acid through the oxidation of sulphide minerals.

“authority” means Environmental Authority under the *Environmental Protection Act 1994*.

“background noise level” means noise, measured in the absence of the noise under investigation, as either:

- L A90,T being the A-weighted sound pressure level exceeded for 90 percent of the time period of not less than 15 minutes, using Fast response, or
- L LAbg,T being the arithmetic average of the minimum readings during a representative time period of not less than 15 minutes, using Fast response.

“blasting” means the use of explosive materials to fracture-

- (a) rock, coal and other minerals for later recovery; or
- (b) structural components or other items to facilitate removal from a site or for reuse.

“commercial place” means a place used as an office or for business or commercial purposes, other than a place within the boundaries of the operational land.

“construction” in relation to tailings dams includes building a new dam and modifying or lifting an existing dam.

“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.

“dB (Linear) Peak” is the maximum reading in decibels (dB) obtained using the “P” time – weighting characteristic as specified in AS 1259.1 – 1990 with all frequency – weighted networks inoperative.

“design plan” - in the context of a dam design is the documentation required under the “Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste” to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, the procedures and criteria to be used for operating the dam and the decommissioning and rehabilitation objectives in terms procedures, works and outcomes at the end of dam life. The documents can include design and investigation reports, drawings, specifications and certifications.

“design plan in the context of a dam design” is the documentation required under the Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, the procedures and criteria to be used for operating the dam and the decommissioning and rehabilitation objectives in terms procedures, works and outcomes at the end of dam life. The documents can include design and investigation reports, drawings, specifications and certifications.

“design storage allowance” as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

“declared plant” means a plant that has been declared under the *Rural Lands Protection Act 1985*.

“environmental authority holder” means the holder of this environmental authority.

“environmental nuisance” is unreasonable interference or likely interference with an environmental value caused by:

- (a) noise, dust, odour, light; or
- (b) an unhealthy, offensive or unsightly condition because of contamination; or
- (c) another way prescribed by regulation.

“flowable substance” means matter or mixture of materials which can be forced to or otherwise flow under any conditions possible in a situation. It includes water, other liquids or a mixture that includes water or any other liquid or suspended solids.

“foreseeable future” is the period used for assessing the total risk of an event occurring. Permanent structures and ecological sustainability should be expected to still exist at the end of a 150 year foreseeable future with an acceptable risk of failure before that time.

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

"high hazard dam" means a dam defined as high hazard in the EPA Information Sheet on Determining Dams Containing Hazardous Waste.

"infrastructure" means water storage dams, roads and tracks, buildings and other structures built for the purpose of mining activities but does not include facilities required for the long term management of mining impacts or the protection of potential resources. Such facilities include dams containing hazardous waste, waste rock dumps, voids, or ore stockpiles and buildings or other structures whose ownership can be transferred and which have a residual beneficial use for the next owner of the operational land or the background land owner.

"LA_{max adj, T}" means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than 15 minutes, using Fast response.

"L_{Aeq, 1 hour}" means the specific noise level measured as the A-weighted equivalent continuous noise level (L_{Aeq}) plus any adjustment for the character of the noise (tonal and/or impulsive) determined over a reference time period of one hour.

"land" in the "land Schedule 2" of this document means land excluding waters and the atmosphere.

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

"land suitability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

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

"leachate" means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the operational land which contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

"mandatory reporting level" the volume below the spillway crest, equivalent to the lower of the AEP, 72 hour storm or the AEP wave allowance (AEP is the annual exceedance probability).

"Maximum Instantaneous Charge (MIC)" is the maximum amount of explosive on any one specific delay detonator in any one blast hole.

"maximum" means that the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.

"MaxLpA,T" means the maximum A-weighted sound pressure level measured over a time period of not less than 15 minutes, using Fast response.

"median" means the middle value, where half the data are smaller, and half the data are larger. If the number of samples is even, the median is the arithmetic average of the two middle values.

"mg/kg" means milligrams per kilogram.

"mg/L" means milligrams per litre.

"minimum" means that the measured value of the quality characteristic or contaminant must not be less than the release limit stated.

"ng/L" means nanograms per litre.

"noise sensitive place" means:

- a legal dwelling, caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area; or
- a public park or gardens.

and includes the curtilage of any such place.

"noxious" means harmful or injurious to health or physical well being, other than trivial harm.

"offensive" means causing unreasonable offence or displeasure; is unreasonably disagreeable to the sense; disgusting, nauseous or repulsive, other than trivial harm.

"peak particle velocity (ppv)", is a measure of ground vibration magnitude and is the maximum instantaneous particle velocity at a point during a given time interval in mms-1. (Peak particle velocity can be taken as the vector sum of the three component particle velocities in mutually perpendicular directions).

$$\text{"percent slope"} = \frac{\text{height difference (metres)}}{\text{horizontal difference (metres)}} \times 100$$

"protected area" means:

- a protected area under the *Nature Conservation Act 1992*; or
- a marine park under the *Marine Parks Act 1992*; or
- a World Heritage Area.

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

"range" means that the measured value of the quality characteristic or contaminant must not be greater than the higher release limit stated nor lower than the lower release limit stated.

"rehabilitation" means the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this Environmental Authority and, where relevant, includes remediation of contaminated land.

"representative" means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the mining activities.

"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.

"sediment dam" means a structure for the capture and treatment of stormwater runoff contaminated only by sediments from disturbed areas and which discharge off-site once full.

"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.

"sensitive place" [e.g. odour and dust] has the same meaning as and includes a noise sensitive place and a commercial place.

"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.

Some examples of disturbed land include:

- areas where soil has been compacted, removed, covered, exposed or stockpiled;
- areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation & topsoil)
- areas where land use suitability or capability has been diminished;
- areas within a watercourse, waterway, wetland or lake where mining activities occur;
- areas submerged by tailings or hazardous contaminant storage and dam walls in all cases;
- areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after mining activities have ceased; or
- areas where land has been contaminated and a suitability statement has not been issued.

However, the following areas are not included:

- areas off lease (e.g. roads or tracks which provide access to the mining lease);
- areas previously significantly disturbed which have achieved the rehabilitation outcomes;
- by agreement with the EPA, areas previously significantly disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);
- areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc), which is to be left by agreement with the landowner. The agreement to leave permanent infrastructure must be recorded in the Landowner Agreement and lodged with the EPA;
- disturbances that pre-existed the grant of the tenure unless those areas are disturbed during the term of the tenure.

“spillway” means the passage or outlet from the dam through which surplus water flows.

“stable” means land form dimensions are or will be stable within tolerable limits now and in the foreseeable future. Stability includes consideration of geotechnical stability, settlement and consolidation allowances, bearing capacity (traffic ability), erosion resistance and geochemical stability with respect to seepage and contaminant generation.

‘suitably qualified and experienced person’ in relation to dams means a person who is a Registered Professional Engineer of Queensland under the provisions of the Professional Engineers Act 1988 or a Corporate Member of the Institution of Engineers Australia or holds equivalent professional qualifications and has the following: (a) knowledge of engineering principles related to the structures; geomechanics, hydrology, hydraulics, chemistry and environmental impact of dams; and (b) at least a total of five years of suitable experience and demonstrated experience in at least four of the following areas: investigation, design, or construction of dams, operation and maintenance of dams, geomechanics with particular emphasis on stability, geology and geochemistry, hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorology, hydraulics with particular reference to sediment transport and disposition, erosion control, beach processes, and hydrogeology with particular reference to groundwater, solute transport processes and monitoring thereof, and dam safety.

“the holder” means the holder of this Environmental Authority.

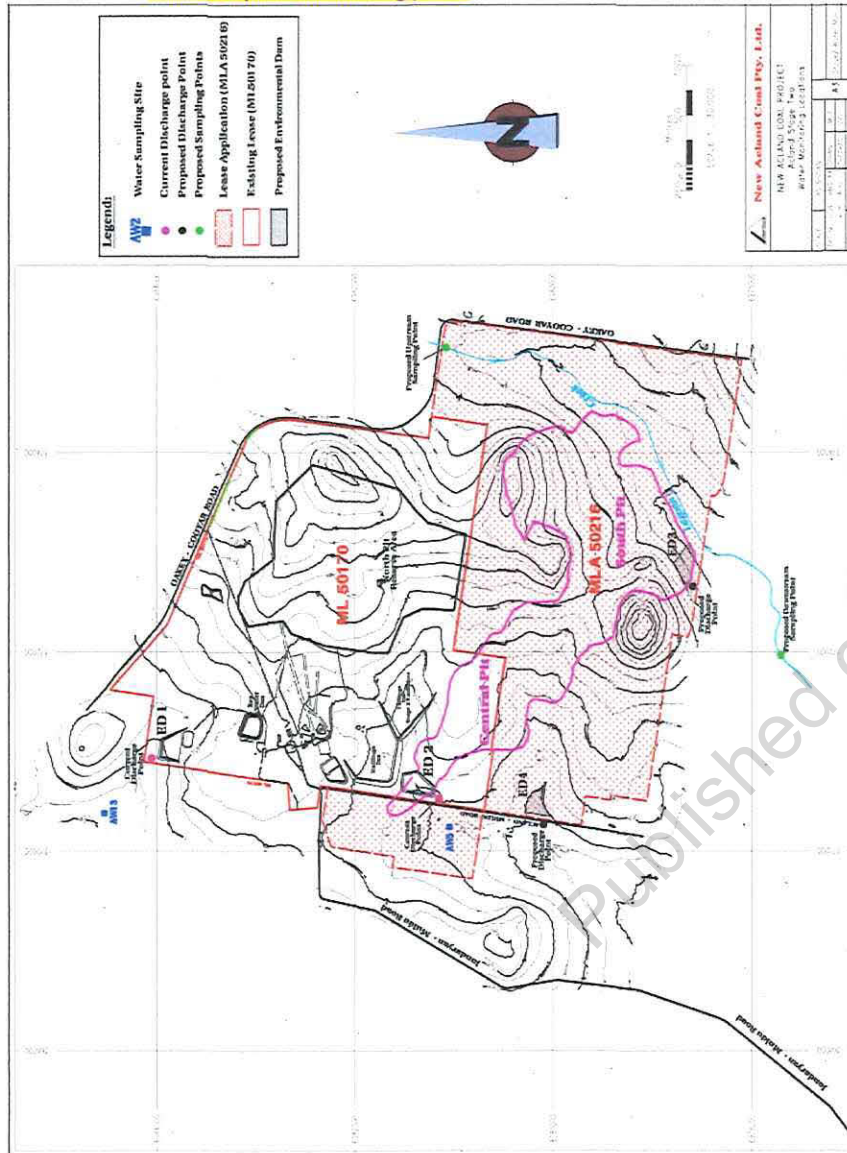
“Total Organic Carbon” (“TOC”) means the sum of all compounds of carbon which contain at least one carbon to carbon bond plus methane and its derivatives. For the purpose of measurement 1 gram of TOC is deemed to have the same flame ionisation response as 1 gram of hexane.

“tolerable limits” means that a range of values could be accepted to achieve an overall environmental management objective (eg a range of settlement of a tailing capping could still meet the objective of draining the cap quickly, preventing pondage and limiting infiltration and percolation).

“waters” - includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water in natural or artificial watercourses, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater or any part thereof.

Appendix A Monitoring Maps

Surface Water **David to update monitoring points**



Amanda Cleary

From: Genn, David [dgenn@newhopecoal.com.au]
Sent: Thursday, 17 August 2006 9:59 AM
To: amanda.cleary@epa.qld.gov.au
Cc: sch4 Contrary to public interest@skm.com.au; Buchanan, Alison
Subject: New Acland Coal Mine - Additional Information - Draft Environmental Authority
Importance: High

Hello Amanda

Please find attached additional information (e.g. location data, etc.) required for the draft Environmental Authority, the updated surface water monitoring map and the map modification information (which shows that no EREs are defined on site at New Acland Coal Mine). I am still awaiting the confirmation e-mails from NRM&W (conservation matter) and Waste Solutions (off site groundwater monitoring bores matter).

Is it possible for you to update the draft Environmental Authority this week and send a copy to myself? This will allow New Hope to update the draft EM Plan in the interim, so that the only outstanding issue is the hazardous dam matter. If we can achieve resolution at the meeting with next week, this will allow New Hope to update the EM Plan and lodge it the following day (Wednesday 23 August - with a bit of luck). I will call to discuss.

Regards

David Genn
Senior Environmental Officer
NEW HOPE COAL AUSTRALIA
Direct Phone: +61 7 3810 0548
Fax: +61 7 3810 0515

Mobile: (6) Personal information

Email: dgenn@newhopecoal.com.au

<<stage2_surfwater_mon.jpg>> <<060810 Draft EA Additional Information.doc>> <<060815 Vegetation Map Modification Information NRM&W.pdf>>

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Website: www.newhopecoal.com.au



Draft EA – Additional Information

New Acland Coal Mine

Schedule C - Table 3 (Receiving Water Monitoring Locations and Frequency)

Monitoring Point	Latitude (GDA 94)	Longitude (GDA 94)	Monitoring Frequency	Monitoring parameters
Lagoon Creek at a point upstream of mine (LCU1)	27° 17' 9.7728" S	151° 44' 23.136" E	At least once every 6 months and as soon as practical prior to, at least daily during and immediately after any release to waters.	pH, total suspended solids (mg/L), electrical conductivity μ S/cm, sulphate (SO ₄) (mg/L), time of day, water temperature, flow rate (m/s)
Lagoon Creek at two points downstream of mine (LCD1 & LCD2)	LCD1: 27° 18' 35.64" S	151° 43' 4.3536" E	At least once every 6 months and as soon as practical prior to, at least daily during and immediately after any release to waters.	At least once every 6 months and immediately before, at least daily during and immediately after any release to waters.
	LCD2: 27° 18' 37.36" S	151° 43' 1.8768" E		
Spring Creek at a point upstream of mine (SCU1)	27° 14' 18.7728" S	151° 41' 31.2864" E	At least once every 6 months and as soon as practical prior to, at least daily during and immediately after any release to waters.	pH, total suspended solids (mg/L), electrical conductivity μ S/cm, sulphate (SO ₄) (mg/L), time of day, water temperature, flow rate (m/s)
Spring Creek at a point downstream of mine (SCD1)	27° 14' 47.364" S	151° 40' 36.2028" E	At least once every 6 months and as soon as practical prior to, at least daily during and immediately after any release to waters.	pH, total suspended solids (mg/L), electrical conductivity μ S/cm, sulphate (SO ₄) (mg/L), time of day, water temperature, flow rate (m/s)
Downstream of Environmental Dam 2 and Environmental Dam 4 (JW20)	27° 17' 46.1228" S	151° 41' 16.0147" E	At least once every 6 months and as soon as practical prior to, at least daily during and immediately after any release to waters.	pH, total suspended solids (mg/L), electrical conductivity μ S/cm, sulphate (SO ₄) (mg/L), time of day, water temperature, flow rate (m/s)

Note 1: A monitoring point may also include a monitoring point requested by the administering authority in the event of release to waters.

Note 2: LCD1 is approx 70 m downstream of road (site AW4) and LCD2 is approx 50m downstream of LCD1.

**Schedule C – Table 6 (Off-lease Ground Water Monitoring Locations and Frequency)**

Monitoring point	Latitude	Longitude	Aquifer	Surface RL (m)	Total Depth (m)	Monitoring frequency
BMH1 Paddock (Jondaryan-Muldu Rd)	27° 16' 37.5852" S	151° 40' 57.5616" E	Basalt	TBA	TBA	Monthly
CSMH1 Paddock (Oakey-Cooyar Rd)	27° 19' 19.7904" S	151° 44' 20.8788" E	Coal Measures	TBA	TBA	Monthly

Note: TBA = To be advised on completion of the hole. This task should be completed prior to the grant of the final environmental authority for the Stage 2 expansion of New Acland Coal Mine.

15 August 2006 (Waste Solutions Australia Pty Ltd) advised that one monitoring bore off lease for comparison purposes was sufficient as long as it was intersecting a similar groundwater system (i.e. for both the basalt and coal seam aquifers). A confirmation e-mail will be sent on receipt.

The bores have been sited by New Hope's Geologist based on his geological experience in the area. New Hope will compare the aquifer details during construction of the monitoring bores to ensure the groundwater systems on and off lease are comparable.

Schedule E - Table 5 (Location of dams Containing Hazardous Waste)

Name of Dam Containing Hazardous Waste	Latitude (GDA94) ¹	Longitude (GDA94) ¹
1. Tailings Storage Facility	27° 17' 16.7031402" S	151° 42' 27.3833932" E
2. Environmental Dam 2	27° 17' 10.9622837" S	151° 42' 28.4233861" E
	27° 16' 51.1028709" S	151° 42' 31.8627267" E
	27° 16' 27.2791954" S	151° 42' 03.7029825" E
	27° 16' 29.1169479" S	151° 41' 39.1178177" E
	27° 17' 08.8291088" S	151° 41' 31.8175509" E

Note 1: A minimum of 3 points is required to constrain the location of all activities associated with the dam containing hazardous waste. Additional infrastructure which forms part of any dam containing hazardous waste may include appurtenant works consisting of tailings discharge pipelines, seepage collection systems, runoff diversion bunds, containment systems, pressure relief wells, decant and recycle water streams.

Note 2: The location polygon defined in Schedule E – Table 5 encloses both the Tailings Storage Facility and Environmental Dam 2.

Additional Condition – Lagoon Creek Buffer

The holder of the environmental authority will not conduct mining activities within 100 metres of Lagoon Creek (buffer zone). The holder of the environmental authority in the vicinity of the South Pit will be allowed to construct and maintain a temporary flood protection bund and access road for inspection purposes within 50 metres of Lagoon Creek (i.e. within the original 100 metre buffer zone). The holder of the environmental authority will also be able to access the 100 metre buffer zone for riparian conservation and weed management purposes.

16 August 2006 – Ed Power from the Department of Natural Resources, Mines and Water confirmed by telephone conversation that areas disturbed by mining were not to be included in New Hope's proposed conservation project. It was agreed that areas disturbed by mining at New Acland Coal Mine would be rehabilitated back to a grazing outcome, while areas, such as Bottle Tree Hill and the riparian zone of Lagoon Creek within Mining Lease Application 50216, would be the subject of New Hope's proposed conservation project. New Hope's proposed conservation project is to offset the areas of remanet vegetation that need to be cleared by mining operations at New Acland Coal Mine. A confirmation e-mail will be sent on receipt.

As a result, the applicable Condition in the Schedule F Nature Conservation of the Draft Environmental Authority requires amendment to reflect the agreed outcome described above.

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New Acland Coal Pty Ltd

ABN 90 081 022 380

Contact

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RECEIVED
24 AUG 2006
TOOWOOMBA



Our Ref: New Acland Coal Mine Stage 2 Expansion - Draft EM Plan

Your Ref:

CARMS LOGON

TWB20 06/727

File: TWB

23 August 2006

Attention: Ms Sarah Fenaughty

District Manager – South West

Environmental Operations – Southern Region

Environmental Protection Agency

PO Box 731

TOOWOOMBA QLD 4350

Dear Sarah

Re: New Acland Coal Mine Stage 2 Expansion – Draft EM Plan

Please find enclosed a final copy of the draft Environmental Management Plan (EM Plan) for the Stage 2 Expansion of New Acland Coal Mine.

As you are aware, the draft EM Plan was developed from the Environmental Impact Statement assessment process conducted for the Stage 2 Expansion of New Acland Coal Mine under the *Environmental Protection Act 1994* and follow-up negotiations between New Acland Coal Pty Ltd and the Environmental Protection Agency.

It is understood that the Environmental Protection Agency will issue the draft Environmental Authority (EA) to New Acland Coal Pty Ltd in the near future to allow completion of the mining lease application process under the *Mineral Resources Act 1989*.

New Acland Coal Pty Ltd is facing critical production deadline timeframes in terms of completion of the mining lease application process, and therefore, would appreciate if the Environmental Protection Agency could expedite provision of the draft EA.

If you have any further questions or queries in relation to this matter, please do not hesitate to contact me using my details above.

Yours faithfully

NEW ACLAND COAL PTY LTD

sch4 Contrary to public interest

Dave Genn

Senior Environmental Officer

060823 EPA DRAFT EM PLAN SUBMISSION LETTER.DOC

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New Acland Coal Mine



Draft Environmental Management Plan

Mining Lease No. 50170 & Mining Lease Application No. 50216

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Draft Environmental Management Plan - ML 50170 & MLA 50216 (August 2006)

Authors: David Genn, Senior Environmental Officer (New Hope Coal Australia)
sch4p4(6) Personal information

TABLE OF CONTENTS

1	Draft Environmental Management Plan	3
1.1	Introduction	3
1.1.1	The Project	3
1.1.2	Location	3
1.1.3	Project Description	3
1.1.4	Project Proponent	5
1.1.5	Structure of the EM Plan	5
1.1.6	Purpose of the EM Plan	5
1.1.7	Mining Leases	5
1.1.8	Project Name	5
1.1.9	Real Property Descriptions	5
1.1.10	Description of Land within the Mining Tenements	7
1.1.11	Neighbouring Land	7
1.2	Project Description	7
1.2.1	Description of the Mine	7
1.2.2	Mining Process	7
1.2.3	Mine Rehabilitation	8
1.2.4	Description of Coal Processing and Handling	8
1.2.5	Water Management	9
1.2.6	Sewage Treatment	9
1.2.7	Mining Related Activities	10
1.2.8	Environmental Management System	10
1.3	Environmental Values, Potential Impacts, Commitments, Proposed Draft Conditions And Supporting Information	10
1.3.1	Content of the Section	10
1.3.2	General	12
1.3.3	Air Quality	14
1.3.4	Water Resources	19
1.3.5	Noise and Vibration	32
1.3.6	Land Management	36
1.3.7	Nature Conservation	47
1.3.8	Waste Management	52
1.3.9	Community	56
1.3.10	Light	58
1.3.11	Cultural Heritage	60
1.4	Monitoring	62
1.4.1	Background	62
1.4.2	Proposed Environmental Protection Objective	62
1.4.3	Commitments	62
1.4.4	Proposed Environmental Authority Conditions	62
1.5	Reporting	63
1.5.1	Objective	63
1.5.2	Commitments	63
1.6	Continuous Improvement	63
1.6.1	Environmental Management System	63
1.6.2	Studies and Investigations	63
1.6.3	Research	63

1.7	Staff Training	64
1.8	Environmental Auditing and Review	64
1.8.1	Background	64
1.8.2	Objective	64
1.8.3	Commitments	64
1.9	Schedule J - Definitions	65
1.10	References	71
Appendix A Monitoring Maps		73

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1 Draft Environmental Management Plan

1.1 Introduction

1.1.1 The Project

The New Acland Coal Mine Stage 2 Expansion Project (Project) involves the development and operation of an open cut coal mine producing up to 4 million tonnes per annum (Mtpa) of thermal coal for the domestic and export market.

New Acland Coal Pty Ltd (NAC) acquired Mineral Development Licence (MDL) 244 from Shell Coal Australia Pty Ltd in December 1999 to establish Stage 1 of the Project. NAC was granted Mining Lease (ML) 50170 (1103 hectares) in September 2001 to initially develop the North Pit. During 2002, NAC commenced development of Stage 1 of the Project within ML 50170 to supply thermal coal to domestic and export markets. During late 2004, NAC commenced the environmental approvals process for Stage 2 of the Project, which includes this Environmental Management Plan (EM Plan).

This EM Plan supports a new mining lease application to the south of ML 50170 (Mining Lease Application MLA 50216) to allow development of the Centre and South Pits within MDL 244. This proposal requires an Environmental Impact Statement process. This expansion will extend the life of the Project to approximately 15 years.

1.1.2 Location

The Project is located on the Darling Downs in southern Queensland, approximately 14 kilometres north northwest of Oakey and 35 kilometres northwest of Toowoomba. The Project site is also 3 kilometres north northeast of the small township of Acland in the Rosalie Shire (Figure 1-1).

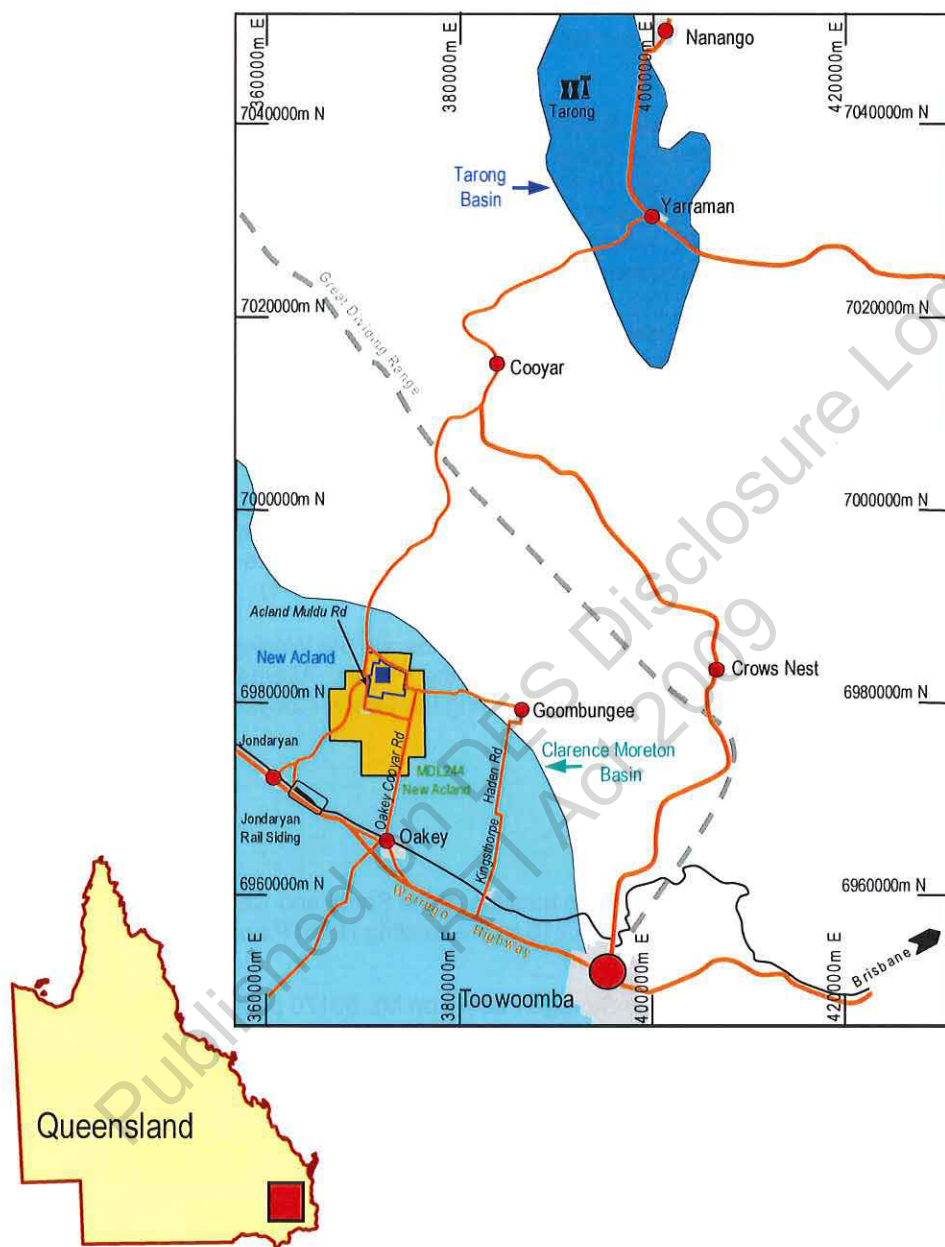
The main access roads to the Mine site from Brisbane/Toowoomba are the Warrego Highway to Jondaryan and the Jondaryan-Muldu Road from Jondaryan to the Project. Alternative access to the Mine from the Warrego Highway is via Oakey and Acland using the Oakey-Cooyar, Acland and Acland-Muldu Roads, respectively.

1.1.3 Project Description

The main elements of the Project are:

- expansion of the existing mining activities by the addition of the South and Centre Pits resource areas within Mining Lease Application (MLA) 50216 to the existing North Pit on ML 50170.
- total production up to 4 Mtpa product coal;
- tailings disposal within the existing Tailings Storage Facility on ML 50170 possibly to be extended to the southeast, and also possibly within cells in the back filled mine pits;
- coarse rejects will be disposed of in the backfilled mine pits as operations progress;
- an 'out-of-pit' waste dump associated with the South Pit; and
- a mine surface water management system involving various strategic water management structures.
- upgrade of the existing heavy vehicle workshop and mine administration buildings;
- addition to the existing coal handling and preparation plant (CHPP) of a new module; and
- progressive upgrade the Jondaryan-Muldu Road to handle the expected increase in haulage and vehicle traffic to the Jondaryan rail siding.

The total mining reserves for the three pits, calculated on a working section basis, is 65 million tonnes of product coal.



LEGEND

- Operating Mine
- Coal Project Area
- Walloon Coal Measures
- Tarong Basin
- Township
- Major Road Route
- Railway
- Built up area
- Power Station

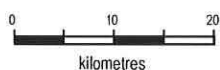


Figure 1-1

New Acland Coal Mine
General Location Plan

Release

1.1.4 Project Proponent

NAC, a subsidiary of New Hope Corporation Ltd (trading name: New Hope Coal Australia or NHCA) is a listed public company that has coal mining, exploration, port and resource based activities in southeast and central Queensland.

The Company also has engineering, port operation, forestry and real estate interests in southeast Queensland.

1.1.5 Structure of the EM Plan

In accordance with Section 203 of the *Environmental Protection Act 1994* (EP Act), this EM Plan describes the following:

- Each relevant mining tenement (**Section 1.1- Introduction**);
- All relevant mining activities and the land on which the mining activities are to be carried out (**Section 1.2- Project Description**);
- The environmental values likely to be affected by the mining activities; and the potential adverse and beneficial impacts of the mining activities on the environmental values, as well as the environmental protection objectives, standards and measurable indicators (**Section 1.3- Environmental Values, Potential Impacts, Commitments, Proposed Draft Conditions and Supporting Information**);
- Details of an extensive monitoring program planned for the Project (**Section 1.4- Monitoring**); and
- Strategies for reporting, continuous improvement, staff training and environmental auditing (Sections 1.5, 1.6, 1.7, 1.8- Reporting, Continual Improvement, Staff Training and Environmental Auditing and Review respectively).

1.1.6 Purpose of the EM Plan

Section 202 of the EP Act states that the purpose of an EM Plan is to propose environmental protection commitments to assist the administering authority prepare the draft Environmental Authority. Commitments are expressed so as to be measurable and auditable; they set objectives, standards and measurable indicators; and they include control strategies to ensure achievement of the objectives.

In addition, this EM Plan was prepared in the context of the EPA's "Guideline No. 8 – Preparing an environmental management overview strategy (EMOS) for non-standard mining projects."

1.1.7 Mining Leases

NAC currently operates in ML 50170 within MDL 244. NAC has applied for a new ML within MDL 244, MLA 50216, adjoining the southern and western boundaries of ML 50170.

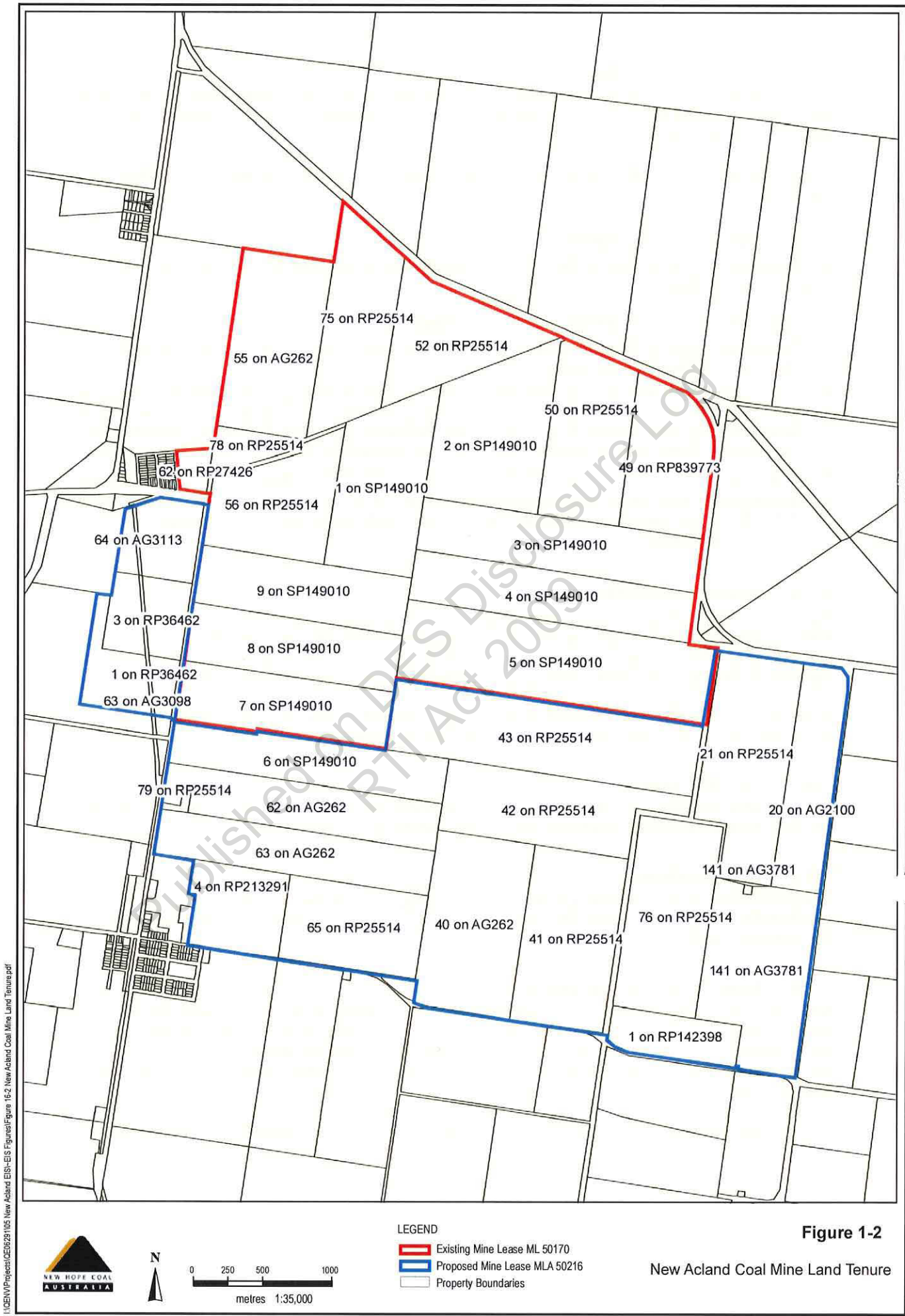
1.1.8 Project Name

The name of the Project is the New Acland Coal Mine Stage 2 Expansion Project. An existing non-standard Environmental Authority (Mining Activities) is held for the ML 50170 – Environmental Authority No. MIM800129603.

1.1.9 Real Property Descriptions

NAC owns all the land within ML 50170 and MLA 50216. All NAC's property descriptions are within the Parish of Watts, County of Aubigny. NAC has obtained closure of the three road reserves within ML 50170 under the *Lands Act 1994* in consultation with the Department of Natural Resources and Mines (DNRM), the Department of Main Roads (DMR), Telstra Corporation Ltd and the Rosalie Shire Council (RSC).

Real Property Descriptions for land underlying ML 50170 and MLA 50216 are shown in **Figure 1-2**.



I:\ENV\Projects\CE029105 New Acland EIS-EIS Figures\Figure 16-2 New Acland Coal Mine Land Tenure.pdf

1.1.10 Description of Land within the Mining Tenements

Land use on the existing ML 50170 and MLA 50216 currently includes cropping and grazing. Rainfed cropping and grazing represent the main agricultural pursuits that are viable in the area in the long term.

1.1.11 Neighbouring Land

Surrounding land uses include grazing, cropping, coal mining and the town of Acland.

1.2 Project Description

1.2.1 Description of the Mine

The term "mining activities" is defined in Section 147 of the EP Act, and this Project will, in summary, involve the following types of mining activities defined in that section:

- exploring and mining under the *Mineral Resources Act 1989*;
- processing those materials;
- a number of activities directly associated with, or facilitating or supporting, the mining and processing activities (see **Section 2** for details);
- rehabilitation/remediation; and
- actions taken to prevent environmental harm.

1.2.2 Mining Process

The conventional open cut truck and shovel/excavator mining operation currently used at New Acland Coal Mine will continue for the Project. Equipment will include excavators, front-end loaders, scrapers, dozers, graders and rear dump trucks. Ancillary equipment will include light vehicles, service trucks and water trucks.

The main features of the mining sequence are as follows.

- Topsoil is stripped and stockpiled using scrapers and/or bulldozers, loaders and rear dump trucks for use in rehabilitation.
- Overburden/interburden is excavated in benches using a hydraulic excavator and loaded into rear dump trucks for transport to an out-of-pit dump or, if operations have progressed sufficiently, for dumping in-pit.
- As required, overburden/interburden is drilled and blasted. Coal is not blasted.
- The ROM coal is loaded into rear dump trucks by loaders for transport to the ROM Pad. The ROM coal is either stockpiled or dumped directly into a ROM hopper for processing in the CHPP.
- Tailings (fine waste) and coarse rejects (coarse waste) are produced as part of the coal processing by the CHPP. Tailings are pumped to the Tailings Storage Facility for disposal. In the future, tailings may also be disposed of in-pit. Coarse rejects are disposed of in-pit.
- The product coal is transported to domestic markets by road and/or rail, or to export markets by rail.
- Rehabilitation activities are conducted in a progressive manner as disturbed areas become available behind the mine path.
- Key facts about the Project's mining process are as follows.
- The North Pit will continue mining operations until reserves are exhausted during 2015.
- The South Pit will commence operations during 2007 and will continue until reserves are exhausted during 2021.
- The Centre Pit will commence operations during 2015 and will continue until reserves are exhausted during 2021.
- Construction of the South Pit will require an out-of-pit dump.
- An additional out-of-pit dump may be required for the North Pit.
- Construction of the Centre Pit will allow the North Pit to be backfilled.
- The Centre and South pits will be developed up to approximately 50 m deep.
- The waste rock dumps will be progressively shaped to their final landform, topsoiled and seeded with pasture grasses, shrubs and tree seeds. The landform design will be based on a maximum

slope of 17% (or 9.6 degrees). Drainage structures such as graded banks will direct runoff to sediment dams constructed at the base of the dumps, or within the rehabilitated landform.

- A final void will remain at the junction of the Centre and South Pits at the completion of mining during 2021. The final void is expected to be approximately 40 - 50 m below ground level and will cover an area of about 50 ha.

1.2.3 Mine Rehabilitation

The proposed post-mine land use for disturbed areas will be grazing, using appropriate pasture and tree species. The criteria for achieving this vegetation community will be developed during the operation as part of the site-specific rehabilitation trials, monitoring and research programs.

The main features of the progressive rehabilitation process are:

- construction of a stable final landform consisting of waste dumps, backfilled void space and a final void at the junction of the Centre and South Pits of the pits;
- construction of the dumps progressively to final landform design, such that minimal reshaping is required at the end of mining. The waste dumps will be constructed by 10 m lifts on external dump faces, with a maximum working dump lift height of 30 m. Angle of repose slopes will be recontoured to a maximum angle of 17%. Drainage benches capable of carrying runoff from a 1 in 20 ARI "time of concentration" storm will be retained between the 10 m dump lifts;
- use of suitable topsoil, which will either be stockpiled until suitable recontoured areas are available, or respread immediately across available recontoured areas;
- contour ripping as an erosion control measure immediately after topsoil placement;
- seeding with an appropriate seed mix (grass, shrub and tree species) into the ripped seedbed prior to the commencement of the wet season to maximise the benefits of subsequent rainfall;
- application of appropriate fertiliser for plant establishment if required;
- respraying cleared vegetation on rehabilitated areas, roadside and laydown areas where practicable; and
- the final void will be fenced and/or bunded to prevent access. The final void will collect water from groundwater ingress and direct rainfall.

1.2.4 Description of Coal Processing and Handling

ROM coal will be transported by rear dump trucks on unsealed mine haul roads to the ROM Pad for eventual processing by the CHPP. The upgraded CHPP will typically handle an average raw ROM feed rate of 20 000 tonnes per day (4 Mtpa) to produce 11 500 tonnes per day of product (4 Mtpa). The actual daily rate depends upon the coal source and operating conditions within the pit. An average of 1.5 Mt of reject materials will be produced per year.

The CHPP infrastructure comprises the following:

- ROM Pad;
- ROM hopper and supporting infrastructure;
- coal washery;
- clean/washed coal stockpile;
- truck-loading facility;
- weighbridge;
- raw water dam and water supply infrastructure; and
- tailings and coarse reject disposal infrastructure.

Road trucks will transport product coal off-site either to:

- the rail siding and coal loading facility east of Jondaryan (via the Jondaryan-Muldu Road) for rail transport to domestic and export markets (i.e. depending on coal quality);
- domestic markets directly by road alone.
- Export quality coal is railed to the Port of Brisbane Coal Handling Facility for eventual shipping to foreign markets.

1.2.5 Water Management

Water supply is a critical issue for the Project's long term sustainable operation. The Project's Stage 1 operations have relied on the use of a licensed groundwater allocation, mainly from the Great Artesian Basin, to meet water supply demands. Groundwater use within the Great Artesian Basin has become a sensitive issue, and as a result, NAC has explored a number of alternative water supply options for the Project.

NAC has attempted to secure recycled water from Toowoomba City Council's Water Futures Program (Wetalla Wastewater Treatment Plant) as the main water supply for the Project. NAC is attempting to negotiate a long term agreement with Toowoomba City Council to eventually accept 2000 ML/annum of 'Class A+' quality recycled water. In terms of the Project, this water supply arrangement will secure a reliable water source, significantly reduce groundwater usage and demonstrate a beneficial use of a waste product.

The current political status of the Toowoomba City Council's proposed Water Futures Program has added a degree of uncertainty to its future establishment. As a result, NAC has recently suspended the inclusion of this water as the main water supply for the Project. NAC will undertake re-modelling of the water balance for the Project once the certainty of the Toowoomba City Council's proposal is re-established.

The main areas of water use by the Project are the CHPP and dust suppression, which have predicted water requirements of approximately 1200 ML/annum and 500 ML/annum, respectively. NAC will also continue to use its licensed allocation of 160 ML/annum for the Project's potable water supply (approximately 20 ML/annum).

A number of water management structures will be required. Each structure serves a specific purpose within the Project's overall water management. The key elements of the Project's water management are:

- the separation of run-off from undisturbed and disturbed areas;
- the construction of a levee to protect the South Pit from Lagoon Creek's flood flows;
- a number of groundwater bores for emergency and potable water demands;
- a Raw Water Dam and Tailings Storage Facility that interact for water supply to the CHPP; and
- a number of sediment and environmental dams, which control runoff from disturbed areas (e.g. waste rock dumps).

Water recycling will continue to be an important water management practice at the Project. For example, water will be returned from the Tailings Storage Facility and re-incorporated into the CHPP's water supply circuit.

The Project's water management is a dynamic system that is regularly modified to incorporate operational changes as mining progresses across the Project site. As a result, water management is detailed and updated in each Plan of Operations for the Project.

1.2.6 Sewage Treatment

The Project's existing package STP will be used during the construction and operational phases. The STP has a capacity for 160 equivalent persons (EP) and will not need to be upgraded.

1.2.7 Mining Related Activities

The mining-related activities that will be carried out within the Project's boundaries (ML 50170 and MLA 50216) include:

- Access track and road construction;
- Clearing of vegetation;
- Topsoil stripping, stockpiling and placement;
- Rehabilitation;
- Dam and levee construction
- Overburden drill and blast;
- Overburden removal by truck and shovel/excavator;
- Coal mining and coal haulage;
- Coal stockpiling;
- CHPP operation;
- Disposal of coal tailings;
- Disposal of waste rock;
- Disposal of coarse rejects;
- Water management system operation;
- Borefield operation (expected to significantly decrease);
- Haul road watering;
- Sewerage treatment plant operation;
- Potable water treatment plant operation;
- Diesel, oil and other hydrocarbon storage;
- Chemical storage;
- Cultural Heritage clearance;
- Lube truck operation;
- Heavy equipment and light vehicle refuelling;
- Operation of a Heavy Equipment Workshop;
- Heavy equipment and light vehicle washing;
- Detonator and primer storage in magazine; and
- Disposal of general wastes and regulated waste.

1.2.8 Environmental Management System

The Project's operations will take place under a tailored environmental management system (EMS) consistent with ISO 14001.

The EMS is the cornerstone of the Project's due-diligence approach to environmental management, and encompasses the measures used to prevent or minimise environmental harm, ensure compliance and promote continuous improvement.

1.3 Environmental Values, Potential Impacts, Commitments, Proposed Draft Conditions And Supporting Information

1.3.1 Content of the Section

This document has been designed incorporating the framework for drafting an Environmental Management Plan as outlined in the Queensland Environmental Protection Agency's "Guideline 8 – Preparing an Environmental Overview Strategy (EMOS) for Non-Standard Mining Projects". This document has been prepared in accordance with the following stages as described in **Figure 1-3** below.

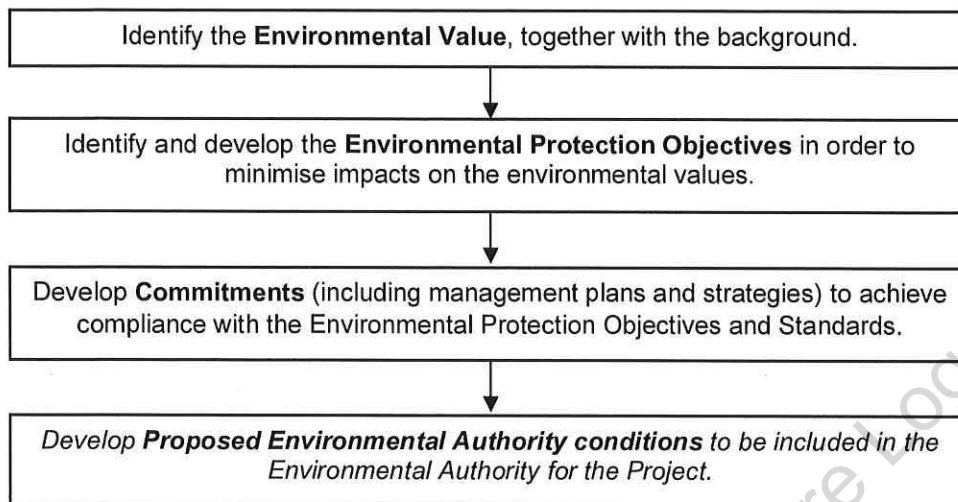


Figure 1-3 The Environmental Management Overview Strategy Framework

The guiding definitions for the terms that are used throughout the EM Plan are:

Environmental Values: Environmental values are those qualities or physical characteristics of the environment that are conducive to ecological health, public amenity or safety.

Section 9 of the EP Act describes an Environmental Value as:

- "(a) a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or
- (b) another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation."

Environmental Protection Objectives: Describes the key elements of the environment and the outcomes to be protected in order to minimise impacts on the environmental values.

Commitments: Describes the technological and design elements together with management plans and strategies proposed to be taken to meet the environmental protection objectives and achieve the standards.

Proposed Environmental Authority Conditions: These are draft conditions containing measurable indicators and standards that are proposed to be included in the Environmental Authority to protect identified environmental values that may be impacted on by the Project.

Indicators: These are the indicators by which the level of achievement of the environmental protection objectives can be determined, in a measurable and auditable way.

Standards: These are numerical standards for each of the indicators by which adequate levels of achievement of the environmental protection objectives and protection of the environmental values can be determined.

Words and phrases used throughout this EM Plan are defined in **Section 1.9** except where identified in the EP Act or subordinate legislation. Where a word or term is not defined, the ordinary English meaning applies, and regard should be given to the Macquarie Dictionary.

1.3.2 General

1.3.2.1 Background

There are a number of general issues that do not relate to environmental values or control strategies, but are to be included in the Environmental Authority. Conditions of the Environmental Authority are proposed here for 'Schedule A – General Conditions'.

1.3.2.2 Proposed Environmental Authority Conditions: Schedule A – General Conditions

Financial Assurance

- (A1) The Environmental Authority holder must give the administering authority a Financial Assurance in the amount and form required by the administering authority prior to the commencement of activities proposed under this Environmental Authority.

NOTE: The calculation of Financial Assurance for condition (A1-1) must be in accordance with Guideline 17 and may include a performance discount. The amount is defined as the maximum total rehabilitation cost for complete rehabilitation of all disturbed areas, which may vary on an annual basis due to progressive rehabilitation. The amount required for the financial assurance must be the highest Total Rehabilitation Cost calculated for any year of the Plan of Operations and calculated using the formula: (Financial Assurance = Highest Total Annual Rehabilitation Cost x Percentage Required).

- (A2) The Financial Assurance is to remain in force until the administering authority is satisfied that no claim on the assurance is likely.

NOTE: Where progressive rehabilitation is completed and acceptable to the administering authority, progressive reductions to the amount of financial assurance will be applicable where rehabilitation has been completed in accordance with the acceptance criteria defined within this environmental authority.

Maintenance of measures, plant and equipment

- (A3) The Environmental Authority holder must:

- (a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this Environmental Authority; and
- (b) maintain such measures, plant and equipment in a proper condition; and
- (c) operate such measures, plant and equipment in a proper manner.

Monitoring

- (A4) The Environmental Authority holder must 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.
- (A5) Where monitoring is a requirement of this Environmental Authority, ensure that a competent person(s) conducts all monitoring.
- (A6) All monitoring and research data, collected for the purpose of demonstrating compliance with this Environmental Authority, must be collated and maintained in a central location, such that the data are accessible on request by the administering authority.
- (A7) A monitoring program which includes monitoring locations, frequency, parameters, monitoring techniques and quality assurance protocols must be detailed in the Plan of Operations.

Storage and handling of flammable and combustible liquids

- (A8) 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).
- (A9) All hydrocarbon storages must be designed, constructed and maintained in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids of 2004 (or more recent editions).
- (A10) The base and walls of all bunded areas must be maintained free from gaps or cracks that may result in the loss of containment.

Definitions

- (A11) Words and phrases used throughout this Environmental Authority are defined in **Schedule J Definitions** Section at the end of this Environmental Authority. Where a definition for a term used in this Environmental Authority is sought and the term is not defined within this Environmental Authority, the definitions in the *Environmental Protection Act 1994*, its Regulations and Environmental Protection Policies must be used.

END OF CONDITIONS FOR SCHEDULE A

1.3.3 Air Quality

1.3.3.1 Background

Dust is considered the only potential contaminant of air from the Project. Gaseous emissions such as SO₂ and NO_x are not considered relevant owing to their very low levels of emissions. Contributors to particulate emissions from the surrounding environment include:

- farming activities (in particular dust from cultivated areas);
- smoke; and
- the existing New Acland Coal Mine.

The main sources of particulate matter from the Project area are generated by the following activities:

- vegetation clearing;
- topsoil stripping;
- overburden and interburden drilling and blasting;
- overburden and interburden loading, haulage and tipping;
- coal loading and haulage; and
- wind erosion of cleared or exposed areas and stockpiles.

Dust emissions will vary according to the following factors:

- coal seam, overburden and interburden properties;
- prevailing meteorological conditions;
- the mining activities occurring, such as vegetation clearing, topsoil stripping, overburden removal or coal extraction;
- location, condition (e.g. moisture content) and extent of stockpiles; and
- length of time that cleared areas remain unvegetated.

1.3.3.2 Environmental Value

The environmental values of the air environment to be enhanced or protected under this EM Plan are the qualities of the air environment that are conducive to suitability for the life, health and wellbeing of humans.

1.3.3.3 Potential Impacts on the Environmental Value

Dust

The operations which may have the potential to generate significant amounts of particulate emissions are:

- excavators/shovels/front-end loaders - loading trucks;
- bulldozing;
- trucks dumping;
- drilling;
- blasting;
- wheel generated dust from unpaved roads (e.g haul roads);
- topsoil stripping;
- scrapers;
- road grading;
- stacking and reclaiming from stockpiles;
- conveyor transfer points miscellaneous transfer points and conveying;

- wind erosion from active stockpiles and waste rock dumps;
- coal crushing; and
- vehicle exhausts.

Nearest sensitive receptors for dust are:

- Acland Township; and
- all near neighbours immediately surrounding the Project site, including those near the Jondaryan rail siding.

Contributors to particulate emissions from the surrounding environment include farming activities (in particular dust from cultivated areas), dust from the Project's operations and smoke from burning off. Dust is considered the only potential contaminant of air from the Project.

Air dispersion modelling of dust was conducted to predict the ground level concentrations of dust. The predicted levels of suspended and deposited dust are within EPP (Air) guideline levels at the nominated sensitive receptor sites – the nearby residences.

Predicted dust levels (all inclusive of the background dust) for locations outside of the Project were up to 108 $\mu\text{g}/\text{m}^3$ for the 24-hour PM_{10} (respirable particulates less than ten micrometres in diameter), compared to the guideline level of 150 $\mu\text{g}/\text{m}^3$; and up to 23 $\mu\text{g}/\text{m}^3$ for the annual PM_{10} (compared to the guideline level of 50 $\mu\text{g}/\text{m}^3$). Annual average Total Suspended Particulate (TSP) levels were predicted to be up to 45 $\mu\text{g}/\text{m}^3$ (compared to the guideline level of 90 $\mu\text{g}/\text{m}^3$); and annual dust deposition levels were predicted to be up to 27 $\text{mg}/\text{m}^2/\text{day}$ (compared to the guideline level of 120 $\text{mg}/\text{m}^2/\text{day}$).

Dust monitoring already undertaken by NAC has indicated that actual dust levels are significantly lower than the predicted dust levels for current operations, and this is expected to be the case for the expanded operations.

Greenhouse Gases

The following sources would contribute to direct and indirect greenhouse gas emissions from the Project:

- fuel (diesel) burning in heavy equipment and light vehicles;
- combustion in explosives used in blasting;
- methane from exposed coal seams; and
- land clearing.

1.3.3.4 Environmental Protection Objective

The environmental protection objective for air quality is to minimise the impacts of mine-derived dust on sensitive receptors beyond the boundaries of the relevant mining leases.

1.3.3.5 Commitments

Dust Control

The following dust control measures may be implemented if required:

- dust generated by construction and mining activities will be suppressed to levels that are safe for site personnel by regular water spraying;
- all reasonable and practical measures to reduce dust from blasting will be undertaken;
- provide dust suppression sprays at locations in coal handling facilities that produce excessive dust (e.g. crusher, transfer points);
- implementation of speed limits on unsealed roads where necessary, to reduce dust generation;
- earthworks supervisors will pay particular attention to the management of topsoil stripping such that dust not become a safety hazard or severe nuisance;
- land disturbance will be restricted to that necessary for safe and efficient operations;

- vegetation will not be burned without a permit; and avoid burning cleared vegetation when wind is blowing towards sensitive receptors;
- Dust deposition monitoring and particulate (PM₁₀) monitoring data will be used to assess the effectiveness of dust and particulate suppression measures, and the project will actively seek to reduce dust and particulate emission levels (both on-site and off-site) as far as practically and reasonably possible;
- all complaints about dust will be investigated promptly and appropriate action taken to reduce dust nuisance; and
- a register of dust complaints will be maintained on site.

Dust Monitoring

Dust deposition monitoring will continue to be carried out at sensitive receptors to confirm the modelling prediction that operations will not result in a significant increase in dust levels. Monitoring will be carried out in accordance with "AS/NZS 3580.10.1:2003 Methods for sampling and analysis of ambient air. Method 10.1 Determination of particulate matter - Deposited Matter - Gravimetric method".

The following air quality standards have been adopted for the Project:

- Airborne dust deposition rate will not exceed an average annual 120 mg/m²/day at nearby sensitive receptors.
- Particulates (PM₁₀) will not exceed 150µg/m³ (24 hour average) at nearby sensitive receptors.
- All monitoring and sampling techniques will be consistent with the EPA's Air Quality Sampling Manual and applicable Australian Standards.
- Monitoring results will be interpreted on a monthly basis and reported on an annual basis.

Greenhouse Gas

An inventory of greenhouse gas emissions will be maintained. NAC will join the Federal Government's Greenhouse Challenge Plus program, which will require:

- completion of annual on-line reporting of Greenhouse emissions;
- development of suitable Greenhouse abatement measures; and
- development of an Action Plan to implement the proposed Greenhouse abatement measures

NAC will also negotiate with landholders currently affected, or likely to be affected in the future, by dust nuisance with the aim of investigating and implementing suitable dust reduction measures at these dwellings to minimise the dust disturbance caused by Stage 2 mining activities.

1.3.3.6 Proposed Environmental Authority Conditions: Schedule B – Air

Dust Nuisance

- (B1) Subject to Conditions (B2) and (B3) the release of dust or particulate matter or both resulting from the mining activity must not cause an environmental nuisance, at any sensitive place.
- (B2) When requested by the administering authority, dust and particulate monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days to the administering authority following completion of monitoring.

Dust Deposition Monitoring

- (B3) If the Environmental Authority holder can provide evidence through monitoring that the following limits are not being exceeded then the holder is not in breach of (B1):
- (a) Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with AS 3580.10.1 Methods for sampling and analysis of ambient air - Determination of particulates - Deposited matter - Gravimetric method of 1991; and
 - (b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (μm) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a sensitive place downwind of the operational land, when monitored in accordance with:
 - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet - Gravimetric method, when monitored in accordance with AS 3580.9.6 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM (sub) 10 high volume sampler with size-selective inlet - Gravimetric method of 1990; or
 - Any alternative method of sampling PM10, which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.

NOTE: You must propose which monitoring method is appropriate in accordance with condition (B3) (a) or (b) or both.

- (B4) If monitoring indicates exceedence of the relevant limits in Condition (B3), then the Environmental Authority holder must:
- address the complaint including the use of appropriate dispute resolution if required; or
 - as soon as practicable or at the request of the administering authority, implement dust abatement measures so that emissions of dust from the activity do not result in further environmental nuisance.
- (B5) Rehabilitation must be carried out in such a manner as to minimise releases of wind-blown dust and erosion.
- (B6) Dust emissions from mining activities must be suppressed by the use of water or treated in any other suitable manner to prevent a dust nuisance at a sensitive place.
- (B7) All sealed traffic areas must be cleaned as necessary to minimise the release of dust and particulate matter to the atmosphere.
- (B8) Trafficable areas must be sealed with bitumen or an equivalent hard surface, or otherwise maintained to the satisfaction of the administering authority, in a condition which minimises the release of wind blown or traffic generated dust.
- (B9) Temporary roads used for material haulage must be watered or treated in any other suitable manner, to minimise wind-blown or traffic generated dust.

Odour nuisance

- (B10) Subject to condition (B11), the release of noxious or offensive odour(s) or any other noxious or offensive airborne contaminant(s) resulting from the mining activity must not cause an environmental nuisance at any sensitive or commercial place.

evidence that limited leakage occurs across some faults. Little or no hydraulic connection is believed to exist between the deeper Hutton Sandstone aquifers and the overlying coal seams.

The compartmentalisation of the coal measures means that dewatering for mining purposes is straightforward. Water pumped from dewatering bores will be used for coal processing, dust control or for other purposes at the Mine.

Overlying the Walloon Coal Measures are extensive areas of Tertiary basalt and Alluvium. There are limited amounts of basalt within the Mine area containing small volumes of groundwater, mainly in the deeper palaeo-channel deposits. The area and thickness of basalt increases to the west of the site.

There are no known aquifers associated with alluvium deposits in the Mine area. The nearest alluvium with significant groundwater supplies is associated with Oakey Creek, approximately 15 kilometres to the southeast of Acland.

The Mine is within a proclaimed area as defined under the *Water Act 2000*, and as a result, all water bores require a licence issued by DNRM before they are drilled. The driller is required to submit a copy of the drilling results for each hole to the DNRM.

Prior to the properties within ML 50170 being purchased by NAC, there were many (privately owned) registered bores within ML 50170. Most of the bores were used for stock and domestic supplies in an area where surface water resources are often unreliable. The majority of bores are located within coal measure aquifers with a small number tapping limited basalt aquifers.

North and east of ML 50170, the majority of bores are located in coal seams deeper than proposed mining limits or in the upper aquifer in the underlying Hutton Sandstone. Bores are often greater than 100 metres deep with yields generally <1 litre per second. Water quality varies from potable to saline with most water being suitable for stock watering.

South of ML 50170, the majority of bores including those in and around Acland are located in coal seams or adjacent sandstone aquifers. The depth of the holes increases down dip towards the south. Water quality in the coal measures is often only suitable for stock. Sandstone aquifers can produce potable water.

West of Muldu, most bores tap basalt aquifers. Yields up to 13 litres per second are possible, often with better quality water than occurs in the coal seam aquifers. Some of these bores are used for potable water supply. West of Acland, most bores produce poorer quality water from the less productive coal seam aquifers.

Groundwater quality

Groundwater quality in the area is classified as moderately to very saline (1600 to 6600 $\mu\text{S}/\text{cm}$), mildly alkaline, with varying proportions of cations and anions depending on the type of aquifer being tapped. Water associated with basalt tends to have Ca, Mg and HCO_3 as the major ions while water pumped from the coal measures tends to have Na and Cl as the main ions.

To assess general quality, the results have been compared to health guidelines (NHMRC 1996) and stock watering guidelines (ANZECC 1992). Generally, groundwater is suitable for stock watering but not for potable uses, except for groundwater obtained from the Basalt aquifer, which is used for potable water.

Groundwater uses

Currently, water is supplied from a series of licensed water bores accessing the deeper Great Artesian Basin aquifers (Hutton and Precipice Sandstones) and the shallow basalt aquifers. Groundwater extraction within the mining leases for Project use will cease when the Wetalla recycled water supply is commissioned, except for emergency use and a potable water supply (basalt aquifer only). All water management structures on site and groundwater piezometers are monitored and evaluated on a monthly (levels), quarterly (quality) and annual basis.

Groundwater Protection - final void

A final void will remain at the junction of the Centre and South Pits. The final void is expected to collect and accumulate water only from groundwater ingress, direct rainfall into the void, and from overland surface flows from those slopes of the South Pit waste dump draining into the void. All other surface flows from the vicinity of the final void will be diverted around the void.

1.3.4.2 Environmental Values

With respect to the *Environmental Protection (Water) Policy 1997* the appropriate environmental values to be protected are:

- the biological integrity of a modified surface water aquatic ecosystem; and
- the suitability of surface and groundwater for agricultural use.

1.3.4.3 Potential Impacts on the Environmental Values

Project activities that may affect surface water include:

- changes to catchment hydrology due to containment of mine site runoff and the Lagoon Creek levee;
- operation of dams associated with the Project's surface water management system, including change in water quality due to the level of contaminants from process water that may be captured by and released from Environmental Dams; and
- release of surplus water during high rainfall events (discharge events).

The potential impacts on groundwater during mine dewatering and operation are:

- the pressure head within aquifers surrounding the Project will reduce, which will result in an increased depth to water surface within bores located within the area of impact; and
- reduced pressure head within aquifers will potentially reduce the rate at which groundwater can be extracted from bores due to reduced head of water above the pump.

The drawdown of the water table associated with the Project is unlikely to have an impact on the surrounding shallow aquifers as these aquifers are located well above and are poorly connected to the Project's deeper water supply aquifers. The predicted impacts on groundwater will be minimal as the Project is planned to receive its main water supply from Toowoomba City Council's Wetalla wastewater treatment plant.

1.3.4.4 Proposed Environmental Protection Objectives

The objectives of the Project's surface water and groundwater management system are to:

- separate runoff from disturbed and undisturbed areas;
- minimise the contamination of surface water on site;
- contain, treat and reuse surface water on site in preference to discharge;
- manage releases from the site to protect downstream environmental values; and
- provide alternative supplies of water to nearby landholders whose bores are adversely affected by water table drawdown.

1.3.4.5 Commitments

Management of Mine Site Water and Releases

Local runoff from the Project will be controlled to ensure that water will not discharge off site without meeting stringent Environmental Authority conditions.

The Project's impacts on downstream water quality will be minimised by:

- releasing from the Project only if the discharges do not exceed the defined criteria (discharge limits); and
- ensuring all runoff from disturbed areas passes through sediment dams before entering local creeks.

Dirty and clean water catchments will be clearly defined. No runoff from disturbed areas is to pass off-site without being routed through a sediment pond and/or environmental dam.

Water will be recycled to ensure efficient use of the resource and to minimise the chance of off site discharges during major rainfall events.

Fuels and oils will be stored in bunded areas in accordance with AS1940-2004. Bunded areas will have compacted floors or liners to minimise or prevent seepage losses.

Contaminated water containing oil or other hydrocarbon products will be contained, collected and used on site or treated to reduce hydrocarbon to acceptable levels before release. Waste oil and other hydrocarbon products are collected and removed from the Project site by a licensed operator.

Sediment and Erosion Controls

The Project will require a number of sedimentation dams to remove the bulk of suspended sediment from runoff from disturbed areas prior to discharge from the site.

The sediment dams will be designed to:

- take advantage of existing water management structures on site;
- maximise retention time and deposition of suspended particles by using appropriate hydraulic design parameters; and
- treat dirty runoff from the Project's major disturbance areas.

In addition:

- the 'Engineering Guidelines for Queensland for Soil Erosion and Sediment Control' (IEAust 1996) will be referenced;
- land disturbance will be restricted to that necessary for the safe operation of the Project;
- disturbance will be controlled using the Project's existing 'permit to clear' system;
- topsoil will be salvaged for use in rehabilitation;
- stormwater and runoff from upstream catchments will be diverted away from active mining and disturbed areas;
- drains will be protected as required to prevent scouring;
- sediment dams will be cleaned periodically;
- hazardous materials will be stored in bunded areas or stored such that contaminated runoff is not generated;
- traffic will be confined to maintained tracks and roads; and
- dams, waterways, diversion banks and water recycling schemes will be installed and upgraded as necessary to adequately manage and control water quality and quantity on the Project site.

Water Supply for Affected Neighbours

NAC will seek to reach mutually agreeable arrangements with affected neighbouring groundwater users for the provision of alternative supplies throughout the Project's life, and following mine closure. Alternative supplies will be put in place before supplies from relevant existing landholder bores are adversely affected. Options for alternative supplies include:

- installation of new pumps capable of extracting groundwater from greater depths or more efficiently within existing bores;
- deepening of existing bores to target new and/or more reliable aquifers;
- installation of a new bore at another location on the property; and
- provision of a piped water source from the Project that is compliant with the proposed discharge limits and suitable for stock watering or other purposes.

The specific arrangements for affected properties will be discussed with each relevant landholder with a view to reaching a mutually acceptable agreement. If necessary, professional dispute resolution services will be sought if agreement cannot be reached.

Impacts from Levees

The proposed construction of a levee on Lagoon Creek will be approximately 3 kilometres in length. The levee will be constructed to the west of the existing creek and has been designed to protect the South Pit from flooding. Flood levels at surrounding properties are not expected to be adversely affected by the presence of the levee.

Sewage Effluent

The Project has an existing package STP for 160 equivalent persons. Effluent from the STP will be pumped to a sediment dam for possible re-use on site (e.g. dust suppression). A licensed contractor maintains operation of the STP.

1.3.4.6 Monitoring

Water sampling will follow the EPA Water Quality Sampling Manual and water samples will be analysed by a National Association of Testing Authorities (NATA) accredited laboratory.

Currently, NAC conducts routine water monitoring of:

- any water leaving the Project to determine if downstream water users are adversely affected by the Project's operation;
- on site water management structures to provide a continuous evaluation of water quality issues; and
- a series of groundwater piezometers located in the Great Artesian Basin, Walloon Coal Measures and Basalt aquifers located within ML 50170 and on surrounding properties to identify potential impacts to drawdown levels and water quality in those aquifers.

Monitoring results will be interpreted on receipt and action taken to address any adverse results. Legitimate complaints in relation to water issues will be dealt with promptly using NHCA's complaint handling procedure.

A detailed description of the water management system including current monitoring locations, a site plan, a schematic of the main structures and discharge points, and a description of water use/recycling practices will be included in each Plan of Operations. A monthly evaluation and annual reporting of water monitoring results will be undertaken to check the effectiveness of the Project's water management system.

After mining has ceased and decommissioning and rehabilitation works are complete, NAC will seek to relinquish its Project mining leases. Prior to relinquishment, NAC will undertake the necessary investigations to ensure there are no long-term or residual impacts on the local groundwater regime as a result of the Project's previous mining activities.

1.3.4.7 Proposed Environmental Authority Conditions: Schedule C – Water

Water Management Plan

- (C1) Within the **twelve months** from the date the environmental authority takes effect, the holder of this environmental authority must develop and implement a **Water Management Plan** to be implemented through the Plan of Operations.
- (C2) The Water Management Plan must identify methods to:
- identify the environmental values of the receiving waters including Lagoon and Spring Creek and water quality objectives and how they will be protected;
 - incorporate a risk management approach to how changing levels of flood, drought and water quality risks should be addressed;
 - manage stormwater discharge;
 - develop and implement a system for emergency spills or discharges including procedures to minimise extent and duration of release, staff training, investigation and reporting procedures;
 - manage the environmental impacts of any release of wastewater to the environment so that any impacts are minimised including restricting any discharge to waters to occasions where there is flow in receiving waters to provide considerable dilution;
 - separate clean water from undisturbed areas and water from disturbed areas;
 - manage site water quality and quantity during the (3) phases of mining: development, operation and decommissioning and include a site water balance including groundwater generated through mine dewatering;
 - safeguard against the potential for soil erosion and acid drainage; and
 - provide details of operational monitoring and monitoring of hydrological processes including associated performance indicators.
- (C3) The holder of this environmental authority must submit to the administering authority a draft of the Water Management Plan within **six months** of the date the environmental authority takes effect for comment prior to implementation of the plan.
- (C4) A copy of the Water Management Plan and any subsequent amendment of the Water Management Plan must be kept at the place to which this environmentally relevant activity relates and be available for examination by Emergency Services Personnel or an authorised person on request.

Release to waters

- (C5) Contaminants must not be released from the mine to any waters or the bed and banks of any waters other than treated/settled stormwater from environmental dam(s) that is in accordance with the contaminant release limits in **Schedule C – Table 1**.

Schedule C - Table 1 (End of Pipe contaminant release limits)

Parameter	Units	Minimum	Maximum
pH		6.0	9.0
Electrical Conductivity	µS/cm	-	1500
Total Suspended Solids	mg/L	-	100

- (C6) Notwithstanding condition C5, the holder of the environmental authority is authorised to release contaminants to waters of Lagoon or Spring Creek as defined in the Water Management Plan in a manner that will ensure the level of electrical conductivity within the receiving waters will not exceed 1500 µS/cm at any time, 50 metres downstream from the discharge point, as a result of the discharge. Any release to waters must only occur where there is an existing minimum flow in receiving waters upstream of the discharge point to provide adequate dilution such that 1500 µS/cm is not exceeded outside the 50 metre mixing zone.

(C7) The holder of this authority must undertake monitoring at regular intervals during any release to waters at a point 50 metres downstream of the discharge, to ensure that the level of electrical conductivity does not exceed 1500 $\mu\text{S}/\text{cm}$ at that point. If monitoring indicates that 1500 $\mu\text{S}/\text{cm}$ is exceeded, release of wastewaters must cease immediately.

(C8) Monitoring of contaminant releases must be undertaken at the overflow from the environment dam(s) identified in **Schedule C – Table 2** and records kept, and comply with the quality characteristics and at the frequency specified in **Schedule C – Table 1**.

Schedule C - Table 2 (End of pipe monitoring locations and frequency)

Monitoring point	Latitude (GDA 94)	Longitude (GDA 94)	Monitoring Frequency	Monitoring parameters
ED1 Overflow point from Environmental Dam 1	27° 15' 40.56030 S	151° 41' 48.32659 E	As soon as practical prior to, at least daily during and immediately after any release to waters from this point.	pH, total suspended solids (mg/L), electrical conductivity $\mu\text{S}/\text{cm}$, sulphate (SO_4) (mg/L), time of day, water temperature, flow rate (m/s)
ED2 Overflow point from Environmental Dam 2	27° 16' 54.96167 S	151° 41' 36.83113 E	As soon as practical prior to, at least daily during and immediately after any release to waters from this point.	
ED3 Overflow point from Environmental Dam 3	27° 18' 29.40913" S	151° 42' 50.52694" E	As soon as practical prior to, at least daily during and immediately after any release to waters from this point.	
ED4 Overflow point from Environmental Dam 4	27° 17' 41.49436 S	151° 41' 33.60156" E	As soon as practical prior to, at least daily during and immediately after any release to waters from this point.	

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

Note: Monitoring of receiving waters for discharges from Environmental Dams will be undertaken using Rising Stage Samplers where practical.

(C9) Ambient water monitoring must be undertaken at locations and frequencies prescribed in **Schedule C – Table 3** and any mining activity release must comply with the contaminant limits defined in **Schedule C – Table 1**.

Schedule C - Table 3 (Receiving Water Monitoring Locations and Frequency)

Monitoring Point	Latitude (GDA 94)	Longitude (GDA 94)	Monitoring Frequency	Monitoring parameters
Lagoon Creek at a point upstream of mine (LCU1)	27° 17' 9.7728 S	151° 44' 23.136 E	At least once every 6 months and as soon as practical prior to, at least daily during and immediately after any release to waters.	pH, total suspended solids (mg/L), electrical conductivity $\mu\text{S}/\text{cm}$, sulphate (SO_4) (mg/L), time of day, water temperature, flow rate (m/s)
Lagoon Creek at two points downstream of mine (LCD1 & LCD2)	LCD1: 27° 18' 35.64 S	151° 43' 4.3536 E	At least once every 6 months and as soon as practical prior to, at least daily during and immediately after any release to waters.	At least once every 6 months and immediately before, at least daily during and immediately after any release to waters.
	LCD2: 27° 18' 37.36 S	151° 43' 1.8768 E		
Spring Creek at a point upstream of mine (SCU1)	27° 14' 18.7728 S	151° 41' 31.2864 E	At least once every 6 months and as soon as practical prior to, at least daily during and immediately after any release to waters.	pH, total suspended solids (mg/L), electrical conductivity $\mu\text{S}/\text{cm}$, sulphate (SO_4) (mg/L), time of day, water temperature, flow rate (m/s)
Spring Creek at a point downstream of mine (SCD1)	27° 14' 47.364 S	151° 40' 36.2028 E	At least once every 6 months and as soon as practical prior to, at least daily during and immediately after any release to waters.	pH, total suspended solids (mg/L), electrical conductivity $\mu\text{S}/\text{cm}$, sulphate (SO_4) (mg/L), time of day, water temperature, flow rate (m/s)
Downstream of Environmental Dam 2 and Environmental Dam 4 (JW20)	27° 17' 46.1228" S	151° 41' 16.0147" E	At least once every 6 months and as soon as practical prior to, at least daily during and immediately after any release to waters.	pH, total suspended solids (mg/L), electrical conductivity $\mu\text{S}/\text{cm}$, sulphate (SO_4) (mg/L), time of day, water temperature, flow rate (m/s)

Note 1: A monitoring point may also include a monitoring point requested by the administering authority in the event of release to waters.

Note 2: LCD1 is approx 70 m downstream of road (site AW4) and LCD2 is approx 50m downstream of LCD1.

Note 3: Receiving water monitoring points are shown on Schedule K - Map 1.

Capacity of Tailings and Process Water Dams

- (C10) The design storage allowance on 1st November of each year for any dam containing hazardous waste constructed or operated within the operational land must comply with Schedule C - Table 4.

Schedule C - Table 4 (Storage design* for dams containing hazardous waste)

Dam Name	Design Storage Allowance**	Spillway	Mandatory ****
	Critical Wet Period	Critical Design Storm***	Reporting Level
Tailings Storage Facility	0.1 AEP 4 month wet season plus process inputs for the 4 month wet season	0.001 AEP	0.01 AEP
Environmental Dam 2	(Not Applicable *****)	0.001 AEP	0.6 metres below the spillway crest *****

NOTE: AEP means Annual Exceedence Probability.

* Calculations are to be carried out in accordance with the "Site Water Management" guideline in the Technical Guidelines for Environmental Management of Exploration and Mining in Queensland – DME 1995.

** The design storage allowance on 1st November of each year for any dam containing hazardous waste constructed within the operational land must be equivalent to the run-off from the critical wet period plus process inputs for the period. Process inputs refers to hazardous process waste and any water, which is being disposed of in the storage facility.

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

**** The level below spillway crest that can accommodate runoff from a 72 hour AEP storm, or the AEP wave allowance whichever level is lower.

***** The requirement for a design storage allowance for Environmental Dam 2 was removed by the administering authority following discussions with the project proponent on 22 August 2006.

***** This reporting level was nominated by the administering authority following discussions with the project proponent on 22 August 2006.

- (C11) The spillway for any dam containing hazardous waste, constructed within the operational land must be designed and maintained to withstand the peak flow from the spillway critical design storm in **Schedule C – Table 4**.
- (C12) The holder of the Environmental Authority must mark the mandatory reporting level defined in **Schedule C – Table 4** on the spillway of all dams containing hazardous waste within the operational land.
- (C13) The holder of the Environmental Authority must notify the administering authority when the pondage level of the dam containing hazardous waste reaches the mandatory reporting level defined in **Schedule C – Table 4**.
- (C14) The holder of this Environmental Authority must implement measures to prevent access to any dams containing hazardous waste by all livestock and minimise access by native fauna.
- (C15) The base and walls of the Tailings Storage Facility and environmental dams must be constructed, installed and maintained:
- (i) so as to minimise the likelihood of a release of contaminants through the bed or banks of the dam to any waters (including groundwater); and
 - (ii) so as to ensure the stability of the dam(s) construction.
- (C16) Construction of sediment dams other than any dams in the final rehabilitation landform must not occur on out of pit spoil dumps.
- (C17) Before construction of any dam containing hazardous waste, a person suitably qualified and experienced in dam engineering must: (a) prepare design plans which design the dam to an appropriate engineering standard; and (b) certify that the design plans meet an appropriate engineering standard and are consistent with the conditions in the environmental authority.

- (C18) Before construction of a dam containing hazardous waste, the holder of the environmental authority for the dam must submit the certified design plans to the administering authority, for review and comment.
- (C19) When the construction of the dam containing hazardous waste is complete, the holder of the environmental authority must: (a) obtain certification from a person suitably qualified and experienced in dam construction that the construction of the dam is either in accordance with or generally in accordance with the certified design plans; and (b) submit the construction certification to the administering authority.
- (C20) The holder of the environmental authority must construct and operate the dam in accordance with the certified: (a) design plans; (b) operational plans; and (c) conditions contained in the environmental authority, in order to prevent or minimise environmental harm.

Groundwater Monitoring

- (C21) The location of monitoring bores must take into consideration the location of any voids, Tailings Storage Facilities, hazardous waste rock dumps, heap leach pads, location and depth of aquifers and hydro geological factors within the host rocks which may allow the movement of hazardous contaminants.
- (C22) Groundwater, affected by the mining activities must be monitored at the locations and frequencies defined in **Schedule C – Tables 5 and 6**.

Schedule C - Table 5 (On-lease Ground Water Monitoring Locations and Frequency)

Monitoring point	Latitude	Longitude	Aquifer	Surface RL (m)	Total Depth (m)	Monitoring frequency
15P ML, near ED1	27° 15 44.40780 S	151° 41 46.56897 E	Coal Measures	441.20	60.0	Monthly
16P ML, near southeastern boundary	27° 15 18.36435 S	151° 43 47.55710 E	Coal Measures	464.40	84.0	Monthly
18P nested piezometer (near CHPP)	27° 16 29.27663 S	151° 41 45.23075 E	Coal Measures	459.60	130.0	Monthly
25P ML, near eastern boundary	27° 16 50.29675 S	151° 43 41.12241 E	Basalt	493.70	50.0	Monthly
26P ML, near northeastern boundary	27° 16 16.57705 S	151° 43 43.89206 E	Coal Measures	497.50	50.0	Monthly
27P ML, near Cherry Road exit	27° 16 00.37396 S	151° 43 10.37992 E	Coal Measures	484.40	50.0	Monthly
28P ML, northern area	27° 15 46.28750 S	151° 42 32.99149 E	Coal Measures	457.00	50.0	Monthly
843 near southeastern boundary	27° 17 13.28365 S	151° 41 32.69584 E	Basalt	441.90	48.0	Monthly
848 near ED2	27° 16 58.98916 S	151° 41 33.12875 E	Coal Measures	443.70	66.0	Monthly
81P	27° 17' 59.74912" S	151° 42' 18.06339" E	Coal Measures	460.37	42.0	Monthly
82P	27° 18' 02.04446" S	151° 44' 12.59898" E	Coal Measures	448.62	48.0	Monthly
83P	27° 18' 28.46569" S	151° 43' 24.79850" E	Coal Measures	439.32	48.0	Monthly
84P	27° 16' 37.76433" S	151° 41' 24.52821" E	Basalt	447.95	30.0	Monthly

Schedule C - Table 6 (Off-lease Ground Water Monitoring Locations and Frequency)

Monitoring point	Latitude	Longitude	Aquifer	Surface RL (m)	Total Depth (m)	Monitoring frequency
BMH1 Paddock (Jondaryan-Muldu Rd)	27° 16 37.5852 S	151° 40 57.5616 E	Basalt	TBA	TBA	Monthly
CSMH1 Paddock (Oakey-Cooyar Rd)	27° 19 19.7904 S	151° 44 20.8788 E	Coal Measures	TBA	TBA	Monthly

Note: TBA = To be advised on completion of the hole. This task will be completed within 12 months of the grant of the final environmental authority for the Stage 2 expansion of New Acland Coal Mine.

(C23) A groundwater monitoring network must be maintained. The network must:

- (a) be installed and maintained by a person possessing appropriate qualifications and experience in the fields of hydrogeology and groundwater monitoring program design to be able to competently make recommendations about these matters;
- (b) be constructed in accordance with methods prescribed in the latest edition of the Agriculture and Resource Management Council of Australia and New Zealand manual titled 'Minimum Construction Requirements for Water Bores in Australia'; and
- (c) include a sufficient number of 'bores of compliance' that are located at an appropriate distance from potential sources of impact from mining activities and provides the following:
 - (i) representative groundwater samples from the uppermost aquifer; and
 - (ii) background water quality in hydraulically up-gradient or background bore(s) that have not been affected by any mining activities to groundwater's; and
 - (iii) the quality of groundwater down gradient of any potential source of contamination including groundwater passing the relevant bore(s) of compliance.

(C24) Conduct monitoring and keep records of groundwater quality for the relevant bores of compliance for the aquifers. All determinations of groundwater quality must be:

- (i) conducted for the water quality characteristics and at the minimum frequency stated in **Schedule C – Table 7**;
- (ii) taken from sufficient monitoring points and / or well to obtain representative samples of groundwater both up-gradient and down-gradient of the potential influence;
- (iii) carried out with sufficient regularity and spatial and temporal replication to make statistically valid conclusions about the presence or absence of contamination or other impact.
- (iv) carried out with sufficient number of sampling events to determine ambient groundwater quality and level prior to any development of the site occurring.
- (v) followed by an assessment of whether or not there has been any statistically significant adverse change compared to background values at locations hydraulically down gradient of the potential sources of contamination for each quality characteristic in **Schedule C – Table 7**.

(C25) On any occasion that samples are obtained in accordance with condition (C23), the holder of this Environmental Authority must measure and record standing groundwater levels in metres accurate to 0.01 metres. The elevation of the reference point, relative to Australian Height Datum, for use in any groundwater level measurement must be determined to an accuracy to 0.01 metres.

- (C26) Subject to condition C22, on-lease groundwater levels must be monitored and compared with two bores located off-lease and within the same aquifer. The difference in variation of drawdown from on-lease bores compared to the variation in drawdown from off-lease bores within any one month sampling period should be no greater than one metre. Where a difference of more than one metre is identified and that difference is not the result of pumping of licensed bores, the administering authority must be notified within 14 days of completion of monitoring.
- (C27) The method of sampling of groundwater must comply with that set out in the latest edition of the Environmental Protection Agency's Water Quality Sampling Manual.
- (C28) Groundwater level fluctuations as measured in 'bores of compliance' that are caused by seepage from Tailings Storage Facility or environmental dam must be notified within 14 days to the administering authority following completion of monitoring.
- (C29) Subject to Condition (C22), if the groundwater contaminant trigger levels defined in **Schedule C - Table 7** 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.
- (C30) Subject to Condition (C22), groundwater contaminant limits must not exceed the contaminant limits defined in **Schedule C - Table 7**.

Schedule C - Table 7 (Groundwater Monitoring Limits and Frequencies)

Quality Characteristic	Units	Contaminant Limits and Groundwater level	Monitoring Frequency
Al	mg/L	+/- 20% of background	Half Yearly
As	mg/L	+/- 20% of background	Half Yearly
Ca	mg/L	+/- 10% of background	Half Yearly
Se	mg/L	+/- 20% of background	Half Yearly
Cl	mg/L	+/- 10% of background	Half Yearly
Cu	mg/L	+/- 20% of background	Half Yearly
F	mg/L	+/- 20% of background	Half Yearly
Fe	mg/L	+/- 20% of background	Half Yearly
Total N	mg/L	+/- 20% of background	Half Yearly
K	mg/L	+/- 10% of background	Half Yearly
Mg	mg/L	+/- 10% of background	Half Yearly
Mn	mg/L	+/- 20% of background	Half Yearly
Na	mg/L	+/- 10% of background	Half Yearly
SO ₄	mg/L	+/- 10% of background	Half Yearly
HCO ₃	mg/L	+/- 10% of background	Half Yearly
TDS	mg/L	+/- 10% of background	Half Yearly
EC	µS/cm	+/- 0.5 for coal measures aquifers +/- 1 for basalt aquifers	Quarterly
pH	unit		Quarterly
Standing water level	cm		Monthly

- (C31) The baseline value for condition C30 is to be determined by sampling for a period of three years from reference bores listed in **Schedule C – Table 5**.
- (C32) A record of the results of groundwater monitoring must be kept and made available to the administering authority on request.

- (C33) The location of the two off-lease monitoring bores within the basalt and coal-seam aquifers referenced in **Schedule C – Table 6** must be investigated and installed within 12 months of the environmental authority being issued.

Erosion and Sediment Control

- (C34) All reasonable and practicable measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment to the environmental dams.
- (C35) Erosion protection measures and sediment controls must be provided and maintained to effectively minimise any likelihood of erosion and release of sediments from the mine and be maintained during site clearing, construction, mining operations and rehabilitation. Such measures should include diversion drainage works and sedimentation traps and dams.

Sewage Effluent

- (C36) All effluent released from the treatment plant must be monitored at the frequency and for the parameters specified in **Schedule C – Table 8**.

Schedule C - Table 8 (Sewage Effluent Quality Targets for Dust Suppression and Irrigation)

Quality characteristics	Release limit	Units	Limit type	Monitoring frequency
5-day Biochemical Oxygen Demand (uninhibited)	<20	mg/L	max	Quarterly
pH	6.5 – 8.5		range	Quarterly
Faecal Coliforms, based on the average of a minimum of five samples collected	<1000 c.f.u.	Colonies per 100 mL	max	Quarterly
Free chlorine residual		mg/L	max	Quarterly

- (C37) Sewage effluent used for dust suppression or irrigation must not exceed sewage effluent release limits defined in **Schedule C – Table 8**.
- (C38) Sewage effluent used for dust suppression or irrigation must not cause spray drift or over spray to any sensitive place, other than the active mining areas within ML 50176 and ML 50216.
- (C39) Subject to condition C40, sewage effluent from sewage treatment facilities must be reused or evaporated and must not be directly released from the sewage treatment plant to any water way or drainage line.
- (C40) In periods of wet weather or following wet weather, when no irrigation of effluent is reasonably practicable and when effluent storage ponds are full, the release of effluent to waters is permitted from the overflow point from Environmental Dam 2 and in accordance with the release limits in **Schedule C – Table 1**.
- (C41) The holder of this Environmental Authority must ensure that irrigation of effluent is carried out in such a manner that prevents and/or minimises environmental harm.

END OF CONDITIONS FOR SCHEDULE C

1.3.5 Noise and Vibration

1.3.5.1 Background

The Acland area is a predominantly rural environment. As a result, the ambient noise levels are generally low, particularly during evening and night time periods. The main influence on the ambient noise levels is from insect activity.

During the warmer months – generally from October through to April – insect noise is the predominant feature of the ambient noise levels and at this time they are at their loudest. During the cooler months the insect noise is either at a lower level or not present at all. The quietest ambient noise levels, therefore, occur during the cooler months. In addition to insect noise, the ambient noise environment is also affected at irregular intervals by noise from bird, traffic, aircraft, and agricultural and residential activities.

The existing New Acland Coal Mine and traffic on the Jondaryan-Muldu road contributes to the existing noise environment. The only significant ground vibration source in the vicinity of the Project area is the New Acland Coal Mine.

1.3.5.2 Environmental Value

The environmental values to be enhanced or protected are the acoustic qualities suitable for the wellbeing of a community, including its social and economic amenity; and for the wellbeing of the individual, including the individual's opportunities to sleep, relax, listen to the television / radio, and converse without unreasonable interference from intrusive noise or vibration.

(Source: Section 10 Environmental Protection (Noise) Policy 1997 (EPP Noise))

1.3.5.3 Potential Impacts on the Environmental Value

Mine

Noise sources from the Project include:

- trucks;
- hydraulic excavators;
- drills;
- dozers;
- front end loader;
- graders;
- crushers;
- CHPP;
- workshop operations;
- blasting; and
- light vehicles.

Predicted noise levels are likely to be below the nominated assessment criteria for all periods of the day, including the night time criterion of 40 dB(A), even under worst-case meteorological conditions. Noise will be controlled by the implementation of appropriate control strategies.

The *Environmental Protection Regulation* (EP Reg) airblast overpressure limit of less than 115 dBL for four out of five blasts can be achieved by varying blast specifications depending on the type of blast (box-cut and stripping blast) and distance to the nearest residence.

Peak ground vibration from blasts with the standard blasting specification loading are predicted to be less than 3 mm/s at the nearest residence, well below the EP Reg limit of 10 mm/s.

1.3.5.4 Proposed Environmental Protection Objective

Section 11 of the EPP (Noise) specifies that the acoustic quality objective of the legislation is to achieve an ambient level of 55 dB(A)¹ or less for most of Queensland's population living in residential areas. This section also states that it *is not intended that, in achieving the acoustic quality objective, any part of the acoustic environment be allowed to significantly deteriorate.*

The Project will operate 24 hours a day, seven days a week. In terms of environmental nuisance, an overall night time noise criterion of 40 dB(A) at the nearest sensitive receptors is to be achieved.

1.3.5.5 Commitments

Noise monitoring will continue to be conducted when legitimate complaints are received. Occupants will be informed of any changes to mine operations that have the potential to cause a significant change to noise emissions.

A site contact number will continue to be provided to neighbours to allow a timely response to any legitimate complaint about nuisance noise. Complaints will be investigated to determine the source of the nuisance noise and, where appropriate, noise monitoring will be conducted at the affected residence. Should monitoring indicate that the noise level is persistently over the night time limit of 40 dB(A) and is causing a continuing nuisance, the Project shall seek to reach an agreement with the occupier of the residence to provide noise reduction treatment of the dwelling to minimise the nuisance.

A predictive airblast model will be calibrated based on field observation and used to determine blast specifications (such as stemming, hole spacing and charge factor) such that blasts are managed within EP Reg limits.

To reduce mining noise and vibration impacts, one or more of the following control options will be considered and implemented as necessary:

- Blasting parameters including size and timing will be controlled to ensure compliance;
- Meteorological conditions will be factored into the timing and execution of certain operations;
- As required, overburden material will be selectively placed as bunds to provide acoustic and visual shields/barriers between operations and nearby residences;
- Where possible, mining equipment sound levels will be reduced by implementing control measures at the noise source;
- Equipment will be operated in the correct manner and will receive appropriate maintenance to reduce operational sound power levels;
- Noisier operations will be scheduled during daylight hours only or in-pit during night time hours;
- The speed of trucks is kept to an operational minimum to help reduce noise levels from the Project;
- Roads at the Project are maintained in good condition to help reduce noise levels;
- When purchasing new mining equipment, NAC will consider the sound power outputs of the equipment; and
- NAC will continue to investigate new technologies that may assist in the reduction of noise levels such as alternatives to reversing beepers.

NAC will also negotiate with landholders currently affected, or likely to be affected in the future, by noise emissions with the aim of investigating and implementing suitable noise reduction measures at these dwellings to minimise the noise disturbance caused by mining activities.

1.3.5.6 Proposed Environmental Authority Conditions: Schedule D – Noise

Noise Nuisance

- (D1) Notwithstanding any other condition of this environment authority, noise from the activity must not cause an environmental nuisance, at any sensitive place.
- (D2) When requested by the administering authority, noise monitoring and recording must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of an authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (D3) If the Environmental Authority holder can provide evidence through monitoring that the limits defined in **Schedule D – Table 1** and **2** inclusive, are not being exceeded then the holder is not in breach of Condition D1. Noise Monitoring must include:
- (i) background noise level;
 - (ii) LA_{10} , adj 10 mins
 - (iii) LA_1 , adj 10 min
 - (iv) LA_{max} , adj T
 - (v) LAr , 1 hour
 - (vi) the level and frequency of occurrence of impulsive or tonal noise;
 - (vii) Atmospheric conditions including temperature, wind speed and directions;
 - (viii) Effects due to extraneous factors such as traffic noise; and
 - (ix) Location, date and time of monitoring.
- (D4) If monitoring indicates exceedance of the limits in **Schedule D – Tables 1** and **2**, then the Environmental Authority holder must:
- (a) Address the complaint including the use of appropriate dispute resolution if required; and
 - (b) Immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance.
- (D5) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

Schedule D - Table 1 (Noise Limits – Sensitive Place)

Noise level dB(A) measured as	Monday to Saturday			Sundays and public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
Noise measured at a 'Noise sensitive place'						
LAr , 1 hour	50	45	40	50	45	40

Note: The method of measurement and reporting of noise levels must comply with the latest editions of the Environmental Protection Agency's Noise Manuals.

Schedule D - Table 2 (Airblast Overpressure Level)

Noise Parameter	Monday to Friday 9am-5pm Saturday 9am – 1pm
Air blast overpressure level (dB [Lin] Peak)	115 db (linear peak for 9 out of any 10 consecutive blasts, regardless of the interval between blasts)
Air blast overpressure level (dB [Lin] Peak)	120 db (maximum)

* Blasting not permitted on public holidays and Sundays.

Note: The method of measurement and reporting of over pressure levels must comply with the latest edition of the Environmental Protection Agency's vibration and air blast overpressure monitoring guideline.

Vibration Nuisance

- (D6) Subject to Conditions (D7) and (D8) vibration from the mining activity must not cause an environmental nuisance, at any sensitive or commercial place.
- (D7) When requested by the administering authority, vibration monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days to the administering authority following the completion of monitoring.
- (D8) If the Environmental Authority holder can provide evidence through monitoring that the limits defined in **Schedule D - Table 3** are not being exceeded then the holder is not in breach of condition D6.

Monitoring must include:

- location of the blast(s) within the mining area (including which bench level); and
 - atmospheric conditions including temperature, relative humidity and wind speed and direction; and
 - location, date and time of recording.
- (D9) If monitoring indicates exceedance of the relevant limits in **Schedule D - Table 3**, then the Environmental Authority holder must:
- address the complaint including the use of appropriate dispute resolution if required; or
 - immediately implement vibration abatement measures so that vibration from the activity does not result in further environmental nuisance.

Schedule D - Table 3 (Vibration Limits)

Vibration Parameter	Vibration measured at sensitive place
	Monday to Friday 9am-5pm
	Saturday 9am – 1pm
Peak particle velocity (mm/s)	5 mm/sec for nine (9) out of ten (10) consecutive blasts initiated. Any single blast not to exceed 10 mm/sec.

* Blasting not permitted on public holidays and Sundays.

Note: The method of measurement and reporting of vibration levels must comply with the latest edition of the Environmental Protection Agency's vibration and air blast overpressure monitoring guideline.

END OF CONDITIONS FOR SCHEDULE D

1.3.6 Land Management

1.3.6.1 Land Use

The main land uses within the Project area are cropping and grazing. Surrounding land uses include grazing, cropping, coal mining and the Acland township. The post-mine land use for areas disturbed by mining at the Project will be a self sustaining grazing-based vegetation community using appropriate pasture and native tree and shrub species.

1.3.6.2 Pre- and Post-Mine Land Use Suitability

The land use suitability was determined for beef cattle grazing and dryland cropping as these are the dominant land uses in the district. The methodology used to identify the limitations and their impacts on land suitability followed DPI (1990) and DME (1995).

The Project will change the land use suitability of the site. Factors influencing changes in land suitability include changed physical, chemical and biological properties of soil, changes in slope and slope length and changes in soil depth. The suitability of the waste rock dumps for cropping and grazing is constrained by slope angle, the nature of soil cover, and altered moisture profile. These constraints would increase the risk of erosion significantly if cropping or grazing were undertaken.

The primary control strategies to reduce the impacts of these changes centre on:

- achieving stable rehabilitated landforms;
- using measurable standards to assess the success of rehabilitated landforms; and
- progressive rehabilitation over the life of mine.

1.3.6.3 Good Quality Agricultural Land

The Project will remove some areas of Good Quality Agricultural Land (GQAL).

State Planning Policy 1/92 provides a framework for development to be assessed that considers the value of GQAL. The policy acknowledges that there will be developments that can legitimately alienate GQAL because they represent an overriding benefit to the community.

The Project is considered to provide the following overriding community benefits:

- it allows the utilisation of the coal resources of the State;
- it provides substantial employment within Rosalie Shire and elsewhere in Queensland; and
- it allows the continuation and expansion of a locally significant industry that provides substantial export income to the State.

There is no alternative location on land of lesser agricultural quality. The Project location is dictated by the position of the coal reserves.

1.3.6.4 Waste Characterisation

Waste characterisation studies show that:

- 3% of waste rock is likely to be potentially acid forming (PAF);
- a further 19% is likely to be PAF-LC (lower capacity), i.e. $\text{NAPP} \leq 5 \text{ kg H}_2\text{SO}_4 / \text{t}$; and
- 78% of waste rock to be mined is likely to be non-acid forming (NAF).

1.3.6.5 Land Contamination

The Project site has been used for grazing, mining and cropping. Contamination may have occurred from agricultural chemicals such as dips, drenches and herbicides. However, the concentrations were within the range of published background levels and are consistent with the prior use of each site for small-scale activities.

None of the affected land is currently registered as contaminated land on the Contaminated Land Register or the Environmental Management Register.

The Project's workshop and fuel storage areas are recognised as having the potential to generate contaminated land through hydrocarbon spills. All fuel and chemical storage areas within the industrial area will be bunded, and contaminants from the workshop and truck wash-down areas will be directed to a sump or drain where they can be contained for subsequent treatment or proper disposal.

Potential for land contamination from the spilling of hydrocarbons will be minimised through the development and implementation of standard operating procedures for transport, handling and storage of hydrocarbons. Other measures such as bunding around storage areas, emergency spill response planning and employee training will be employed. Correct handling procedures will be followed at all times. Any land contamination that occurs will be recorded on a register and remediated.

1.3.6.6 Environmental Values

The environmental values of the land that are to be protected or enhanced are:

- a beneficial post mining land use – a self sustaining vegetation community using appropriate pasture and native tree, shrub and grass species; and
- a stable, non-polluting landform.

1.3.6.7 Potential Impacts on the Environmental Value

The Project's activities with potential to impact on the land are:

- clearing of vegetation;
- stripping and stockpiling of topsoil;
- construction of access tracks and haul roads;
- construction of elevated waste rock dumps;
- disposal of tailings within a tailings dam, or voids;
- creation of a final void; and
- potential land contamination from the spillage of hazardous materials (e.g. hydrocarbons).

1.3.6.8 Proposed Environmental Protection Objective

Two objectives are proposed to protect the environmental values of the mined land:

Objective 1: A beneficial post mining land use

The post-mine land use for areas disturbed by mining will be a self sustaining grazing-based vegetation community using appropriate pasture and native tree and shrub species.

Objective 2: A stable, non-polluting landform.

Land disturbed by mining activities will be made stable (geotechnically and erosionally) to ensure that the post-mine land use is not compromised by instability of the site.

1.3.6.9 Commitments

Waste Rock Management

As required, waste rock dump design investigations will be undertaken to facilitate:

- physical characterisation of available NAF materials for burying PAF materials;
- physical characterisation of the PAF rock to be covered; and
- development of selective placement options.

NAC will develop procedures to minimise ARD processes. These procedures will provide for on-going identification of waste types to ensure their appropriate placement and long term management. A surplus of NAF waste rock materials is available for construction of earth material covers.

To-date, Stage 1 of the Project has not experienced any occurrences of ARD.

Rehabilitation

Rehabilitation practice at New Acland Coal Mine (Stage 1) has demonstrated that conventional rehabilitation on a range of materials mined is successful. The knowledge gained will be used to further develop rehabilitation strategies for the Project.

The rehabilitation strategy at the Project consists of the following integrated measures:

- appropriate pre-disturbance preparation such as topsoil salvage and management plans;
- implementation of practical landform designs to prevent erosion and establish final landform stability;
- identification of an appropriate post-mine land use consistent with local environmental constraints;
- revegetation trials to assist the selection of appropriate revegetation species and methodologies;
- use of an analogue site to assist the selection of appropriate revegetation species and to develop suitable performance indicators for assessing rehabilitation success;
- progressive rehabilitation of disturbed areas, using rehabilitation procedures appropriate to the type of disturbance;
- implementation of erosion control measures;
- a rehabilitation monitoring program to assess the success of rehabilitation;
- a corrective action program to address areas of failed rehabilitation; and
- preparation of Final Rehabilitation Report (FRR) prior to surrender of the Project's mining tenure.

Post-Mine Landform

Stable landforms will be established following mining, using soils capable of supporting vegetation communities adapted to the local environment. The disturbed land will be rehabilitated to a condition that is self-sustaining, or to a condition where the maintenance requirements are consistent with the post-mining land use.

The proposed final landform consists of waste rock dumps and the Tailings Storage Facility. A final void of approximately 50 ha will be left at the junction of the South and Centre Pits, with the remainder of the pit backfilled to the pre-mining level. The levee along Lagoon Creek will remain after mining ceases.

The post mine final landform will most likely be a terraced landform constructed by 10 m lifts on external dump faces, with a maximum working dump lift height of 30 m. The landform will be recontoured from angle of repose slopes to a maximum angle of 17% (or 9.6 degrees).

Appropriately designed contour banks and rock-lined waterways will be constructed on dump slopes to control and direct runoff to sediments dams and then environmental dams, before possible discharge off site.

The Tailings Storage Facility will be contoured to similar design criterion, covered with benign waste rock and revegetated. If tailings are disposed of in the mine pit, the tailings will be covered with overburden, topsoiled and seeded.

The final void will be left in a geotechnically stable condition at the final batter angle. Bunds and/or fences will be constructed along the crest of the pit to prevent access by vehicles, people and animals.

Topsoil Management

Suitable topsoil will be stripped for use in the rehabilitation program. The topsoil will either be stockpiled until suitable re-contoured areas are available, or respread immediately across the area to be rehabilitated.

The topsoil resources present are more than adequate for the rehabilitation of the waste rock dumps and other disturbed areas.

In addition:

- the 'Engineering Guidelines for Queensland for Soil Erosion and Sediment Control' (IEAust 1996) will be followed, where appropriate;
- areas to be cleared will be clearly marked with tape, pegs or other means and will conform with the limits on design drawings. Particular attention will be paid to defining the boundaries of clearing where significant vegetation is present;
- clearing will not commence until drainage control works are in place;
- cleared vegetation will be windrowed along the contour to assist with erosion control;
- vegetation clearing will be restricted to that necessary for safe operations;
- the necessary 'site clearance permit' will be gained before clearance activities are undertaken on site;
- Cultural Heritage clearance according to NAC's Co-operation Agreements and Cultural Heritage Management Plans with the two Traditional Owner groups (Jarowair and Western Wakka Wakka) will be undertaken over all areas to be disturbed by the Project;
- topsoil will be salvaged from all disturbed areas, unless specific directions have been given that certain soils are unsuitable; and
- topsoil stockpiles will be located away from drainage lines and the final surface will be ripped to promote natural revegetation and infiltration of run off.

Progressive Rehabilitation

A progressive rehabilitation program will be implemented throughout the mine life and reported in each Plan of Operations.

Revegetation

The revegetation methods for all types of disturbed land at the Project will normally consist of the following:

- resspreading stockpiled or freshly stripped topsoil;
- contour ripping;
- seeding with an appropriate seed mix;
- application of appropriate fertiliser for plant establishment if required; and
- monitoring of revegetation against specific performance indicators to assess rehabilitation success or maintenance requirements.

Rehabilitation Success Criteria and Monitoring

The site-specific criteria for achieving a self-sustaining vegetation community will be developed during the operation based on rehabilitation trials, assessment of an analogue site and the monitoring of progressive rehabilitation.

Criteria for successful rehabilitation may include the following parameters:

- percentage ground cover or foliage projective cover;
- standing dry matter;
- species diversity;
- erosion rates; and
- downstream water quality.

The Project's rehabilitation areas will be monitored using the selected parameters and trends tracked to demonstrate progress towards a self-sustaining vegetative cover and to identify areas requiring maintenance. The initial rehabilitation success criteria targets for the Project are described below and will be refined throughout the life of the Project.

Revegetation - Grazing	
Acceptance Criteria	Monitoring
Foliage Projective Cover of monitoring rehabilitation sites is at or above 70% understorey Foliage Projective Cover.	Biennial monitoring of randomly selected plots within mine rehabilitation areas proposed for the "grazing outcome" and the selected analogue site.
Standing Dry Matter to be within +/- 10% of the analogue sites production rate over a period of 12 months.	Biennial monitoring of randomly selected plots within mine rehabilitation areas proposed for the "grazing outcome" and the analogue site using methods described in Campbell and Hacker (2002).
Grazing species diversity on the mine rehabilitation sites to be on average within +/- 20% of the analogue site.	Biennial monitoring of randomly selected plots within mine rehabilitation areas proposed for the "grazing outcome" and the analogue.
Erosion rates of the mine rehabilitation areas, as determined by the Revised Universal Soil Loss Equation (RUSLE) (Renard et. al. 1994), to be within +/- 10% of the rates of the analogue site.	Biennial monitoring of randomly selected plots within mine rehabilitation areas proposed for the "grazing outcome" and the analogue site using methods described in Renard et. al. 1994.

Voids				
Acceptance Criteria				Monitoring
Void Identification	Void wall - competent rock max slope (%)	Void wall - incompetent rock max slope (%)	Void maximum surface area (ha)	Development and ongoing review of the long term mine plan. Regular surveying of void parameters during mining activities.
(TBA)	214 % or 65 ⁰	100% or 45 ⁰	55	
All remaining voids must left in a geotechnically stable and safe condition and must not cause any additional environmental harm.				Risk assessments of remaining voids. Geotechnical investigations of remaining voids. Monthly water quality monitoring of void water. Monthly/quarterly groundwater monitoring of piezometers surrounding remaining voids.

Land Form Design				
Acceptance Criteria			Monitoring	
Slope	Vertical Height (m)	Maximum Length (m)	Development and ongoing review of the long term mine plan. Regular surveying of slope parameters during construction of dumps and final profiling of the landform.	
20% (11.5 ⁰)	10	50		
15% (8.6 ⁰)	20	133		
10% (5.8 ⁰)	22	220		
5% (2.9 ⁰)	26	520		
3% (1.7 ⁰)	28	900		
Post mining land capability zones within the rehabilitation are within +/- 10% of their agreed areas.			Development and ongoing review of the long term mine plan. Review of the Schedule of Rehabilitation in each new Plan of Operations. Regular surveying of post mining land capability zones within the rehabilitation.	
Adequately designed* water management and erosion control structures are installed as required on dump slopes to minimise erosion and maximise protection of the downstream water environment.			Inspection of water management and erosion control structures following significant rainfall events and monthly during the wet season. Monthly water quality monitoring of water management, erosion control structures and off site discharges.	

(* = In terms of ARI/AEP, ToC, slope factors, etc.)

Tailings Storage Facilities	
Acceptance Criteria	Monitoring
<p>Tailings Storage Facilities are not abandoned and are decommissioned to a situation where:</p> <ul style="list-style-type: none"> ■ water can no longer be stored; ■ water infiltration is minimised; and ■ a stable rehabilitated landform is achieved that complies with all other applicable Acceptance Criteria. 	<p>(See Acceptance Criteria: Revegetation and Land Form Design)</p> <p>Periodic inspection of capping activities.</p> <p>Monthly/quarterly groundwater monitoring of piezometers surrounding Tailings Storage Facilities (levels and water quality).</p>

Infrastructure	
Acceptance Criteria	Monitoring
<p>All non-essential infrastructure is removed by surrender of the mining lease.</p>	<p>Periodic review of on site infrastructure.</p> <p>Status of infrastructure agreements with the background landowner.</p>

Decommissioning

The decommissioning and final rehabilitation of the Project will occur on a staged basis over several years. A contaminated site assessment will be carried out as part of the FRR.

On the completion of mining, infrastructure will be treated as follows:

- mine roads will be left behind for use as farm roads (or rehabilitated);
- water dams will remain if required by the subsequent landowner and approved by regulators; otherwise, the dams will be rehabilitated;
- buildings, plant and equipment not required by the subsequent landowner will be removed and the surface rehabilitated (e.g. CHPP, workshop, offices, storage tanks and coal handling facilities); and
- concrete pads will either be covered with benign waste rock or ripped and removed, then topsoiled and revegetated.

The final void remaining at the end of the mine life will cover approximately 50 ha and will be on average 40 m deep, with a maximum depth of about 50 m below the surface. A bund and fence will be constructed around the crest of the pit to prevent access to the final void.

1.3.6.10 Proposed Environmental Authority Conditions: Schedule E – Land Buffer Zone

- (E1) The holder of the environmental authority must not cause any disturbance within 50 metres of the high bank of Lagoon Creek (buffer zone) as shown on **Schedule K – Map 2** unless in accordance with condition E2 and E3.
- (E2) The holder of the environmental authority is authorised to construct and maintain a flood protection levee and access road for inspection purposes, with the tow of the levee being no closer than 50 metres from the high bank of Lagoon Creek as shown on **Schedule K – Map 2**.
- (E3) The holder of the environmental authority is authorised to access the 50 metre buffer zone as shown on **Schedule K – Map 2**, for the purposes of maintaining the integrity of the flood protection levee, riparian conservation and weed management purposes.
- (E4) The flood protection levee must be designed and inspected by a *suitably qualified and experienced person*. The final design level of the levee crest must be above the predicted 1,000 year ARI event flood level.

- (E5) Any section of the outside face of the levee must be treated with cover material and grass seeded (unless rock armoured) within three months of completion of the earthworks for that section of the outside face of the levee.
- (E6) The condition of the levee must at a minimum be assessed:
- a) By the environmental authority holder within 1 week of any storm of such intensity that greater than 25mm of rain falls in less than 3 hours; and
 - b) By a *suitably qualified and experienced person* at least once per year between the months of May and October inclusive (i.e. during the 'dry' season and before the onset of the 'wet' season).
- (E7) Remedial works identified as necessary during assessments conducted under Condition E6 must be commenced within 30 days unless delayed by inclement weather.
- (E8) Any actions and incidents on site that may impact upon the integrity of the levee bank must be notified to the administering authority in accordance with Condition H4.

Green Waste Storage

- (E9) The waste management hierarchy must be considered in the management of green waste.

Final Land Use and Rehabilitation Plan

- (E10) Within twelve months of the date of this environmental authority the holder of this environmental authority must develop and implement a Final Land Use and Rehabilitation Plan to ensure that all areas disturbed by mining activities will be suitably rehabilitated in accordance with **Schedule E – Table 1**.

The Plan must include, but is not limited to the following:

- (i) disturbance type;
- (ii) disturbance area;
- (iii) pre and post mine land descriptions;
- (iv) pre and post mine land capability;
- (v) analogue site(s) identification;
- (vi) a description of rehabilitation management techniques incorporating works and monitoring programs and timetables;
- (vii) indicators for success; and
- (viii) keeping of appropriate records or rehabilitation measures implemented including taking of photographs demonstrative of rehabilitation achieved and the preparation of annual rehabilitation progress reports.

Note: The Final Land Use and Rehabilitation Plan is to be managed through the Plan of Operations.

Schedule E- Table 1 (Final Land Use and Rehabilitation Approval Schedule – ML 50170 and MLA50216)

	Disturbance Type						
	Residual Voids	Tailings Dams	Recontoured spoil area	Waste Rock Dumps	Infrastructure & ROM Areas	Roads and Tracks	Water Supply and Sediment Dams
Tenure ID	ML50216	ML50170	ML50170 ML50216	ML50216	ML50170	ML50170 ML50216	ML50216
Projective Surface Area (ha)	55	70	740	100	5	5	40
Post mine land use	Possible water storage	Grazing	Grazing	Grazing	Grazing	Grazing	Possible water storage
Post mine land suitability classification	5	5	3-4	4	4	4	5

Note: The Final Land Use and Rehabilitation Plan will be managed through the Plan of Operations.

(E11) All areas significantly disturbed by mining activities must be rehabilitated in accordance with the Mine Closure Plan outlined in Condition E13.

(E12) Progressive rehabilitation must commence when areas become available within the operational land.

Closure and Post Closure

(E13) The Environmental Authority holder must submit a Mine Closure Plan to the administering authority at least five years prior to the surrender of this Environmental Authority.

(E14) When the deposition of tailings ceases, the holder of this Environmental Authority must install a final cover system to the Tailings Storage Facility, which effectively minimises:

- (i) infiltration of water into the Tailings Storage Facility; and
- (ii) the likelihood of any erosion occurring to either the final cover system, dumped spoil material or deposited tailings;

(E15) The final cover system must include an inert layer to reduce infiltration and an upper/final layer of earthen material that is capable of sustaining plant growth.

Sustainable Final Land Use Outcomes

(E16) Areas that are to be progressively rehabilitated must comply with, but not be limited to, the following outcomes:

- (i) All areas disturbed by mining activities must be rehabilitated to the landform design criteria defined in the Final Land Use and Rehabilitation Plan required by Condition E10 to E12; and
- (ii) The final landforms must be stable with erosion rates comparable to a suitable analogue site.

Grazing Pasture Outcome

(E17) Areas which are to be progressively rehabilitated to grazing pasture must comply with the following outcomes;

- (a) generate a self sustaining vegetation with projective cover, species composition and species distribution comparable with that of analogue sites to be determined by the study detailed in Condition E10 e.g. planting local native grass and shrub species where possible. These vegetation species must be listed in the Final Land Use and Rehabilitation Plan;
- (b) all areas disturbed by mining activities must be rehabilitated to the landform design criteria defined in **Schedule E – Table 2**;
- (c) a measure of productivity (e.g. sustainable dry matter production, stock live weight gain) are comparable to the selected analogue sites detailed in Condition E18).

(E18) Complete an investigation into rehabilitation of disturbed areas and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in Condition E17 and landform design criteria in **Schedule E – Table 2** within twelve months of the issue of the Environmental Authority.

Schedule E- Table 2 (Landform design criteria for New Acland Coal Mine)

Disturbance Type	Slope Range (%)	Projective Surface Area (ha)
Residual Voids (high wall)	0 - 214 % or 65 °	55
Residual Voids (low wall)	0 – 100 % or 45°	
Tailings Dam Top	0 – 20 % or 11.5 °*	60
Tailings Dam Wall	0 – 20 % or 11.5 °*	10
Recountoured Spoil Area	0 – 20 % or 11.5 °*	740
Waste Rock Dumps	0 – 20 % or 11.5 °*	100
Infrastructure and ROM areas	0 – 18% or 10 °	5
Roads and Tracks	0 – 10 % or 5.7 °	5

Note: * = The slope depends on the vertical height and slope length. See Landform Acceptance Criteria.

Residual Void Outcome

(E19) Residual voids must comply with the following outcomes:

- (a) residual voids must not cause any serious environmental harm to land, surface waters or any recognised ground water 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; and
- (b) residual voids must comply with **Schedule E – Table 3**.

(E20) Complete an investigation into residual voids and submit the findings in the Mine Closure Plan outlined by Condition E13 to the administering authority proposing acceptance criteria to meet the outcomes in (E10) and landform design criteria in **Schedule E – Table 3**.

Schedule E - Table 3 (Residual Void Design)

Void Identification	Void wall - competent rock slope (%)	Void wall - incompetent rock slope (%)	Void maximum surface area (ha)
Central Pit/South Pit Void	65° or 214%	45° or 100%	55

Dams Containing Hazardous Waste

(E21) The construction and operation of any dam containing hazardous waste within the operational land must comply with **Schedule E – Table 4**.

Schedule E - Table 4 (Size and Purpose of Dams Containing Hazardous Waste)

Name of Dam Containing Hazardous Waste	Maximum surface area of contents in dam (ha)	Maximum volume of dam (ML)	Maximum depth of dam (m)	Purpose of Dam
Tailings Storage Facility 1 and 2	65	2975	16	Containment of Tailings from a Coal Washery
Environmental Dam 2	9	232	4.5	Capture of overland flow from undisturbed areas - Backup for Tailings Dam

Note 1: The name of the dam containing hazardous waste should refer to the name of the dam e.g. process residue facility and decant dam

Note 2: For dams which do not require a dam wall, input the maximum void depth e.g. where dams are formed by excavating below the land surface or backfilling a residual void

Note 3: Purpose of the dam should outline the designed function, e.g. "the permanent containment of tailings resulting from the extraction of nickel, cobalt, and other metals at the XYZ Refinery."

(E22) Any dam containing hazardous waste constructed or operated within the operational land must be located within the polygonal area defined by the points defined in **Schedule E – Table 5**.

Schedule E - Table 5 (Location of dams Containing Hazardous Waste)

Name of Dam Containing Hazardous Waste	Latitude (GDA94) ¹	Longitude (GDA94) ¹
1. Tailings Storage Facility	27° 17' 16.7031402" S	151° 42' 27.3833932" E
2. Environmental Dam 2	27° 17' 10.9622837" S	151° 42' 28.4233861" E
	27° 16' 51.1028709" S	151° 42' 31.8627267" E
	27° 16' 27.2791954" S	151° 42' 03.7029825" E
	27° 16' 29.1169479" S	151° 41' 39.1178177" E
	27° 17' 08.8291088" S	151° 41' 31.8175509" E

Note 1: A minimum of 3 points is required to constrain the location of all activities associated with the dam containing hazardous waste. Additional infrastructure which forms part of any dam containing hazardous waste may include appurtenant works consisting of tailings discharge pipelines, seepage collection systems, runoff diversion bunds, containment systems, pressure relief wells, decant and recycle water streams.

Note 2: The location polygon defined in Schedule E – Table 5 encloses both the Tailings Storage Facility and Environmental Dam 2.

Standards and Criteria

(E23) The holder of the environmental authority must design, construct and operate all high-hazard dams containing hazardous waste in accordance with the Code of Environmental Compliance for Environmental Authorities for High Hazard Dams Containing Hazardous Waste.

- (E24) The holder of the environmental authority must design, construct and operate all low-hazard dams containing hazardous waste and non-hazardous dams in accordance with the criteria outlined in Appendix B of the Code of Environmental Compliance for Mining Lease Projects.

Inspection of Dams

- (E25) The holder of the environmental authority must design, construct and operate all high-hazard dams containing hazardous in accordance with the Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste.
- (E26) All low hazard dams containing hazardous waste and non-hazardous dams must comply with the criteria outlined in Appendix B of the Code of Environmental Compliance for Mining Lease Projects.
- (E27) High hazard dams containing hazardous waste shall be inspected by a Registered Professional Engineer (RPEQ) on or about 1st October but definitely before 1st November each year or at any time if alarming, unusual or otherwise unsatisfactory conditions are observed.
- (E28) For each inspection, the engineer shall assess the condition of the dam and its foundations, determine the hydraulic adequacy of the dam and assess the adequacy of the works with respect to dam safety.
- (E29) For each inspection, two copies of the engineer's report and any recommendations as to measures to be taken to ensure the integrity of the dam shall be furnished to the administering authority within 28 days of the inspection.

Embankment Monitoring

- (E30) During the operational life of the storage the holder of the environmental authority must regularly monitor and record the standing water levels in three monitoring wells, which will be located in a line through the highest section of the embankment.

Decommissioning of Dams – Documentation and Compliance

- (E31) Dams containing hazardous waste must not be abandoned, must be decommissioned to a situation where water can no longer be stored in the dams and the dams and their contained waste(s) are stable, whereafter the dams are no longer dams and they become landforms on the operational land and must comply with the rehabilitation requirements of the Environmental Authority.
- (E32) Decommissioning activities for dams must be documented in detail in the plan of operations under which the activities are to occur. Where the detailed documentation is not already contained in the Design Plan for the dam, the detailed documentation is considered to be an amendment to the design plan and must be submitted as an amendment to the design plan required by the Code of Environmental Compliance for Environmental Authorities for High Hazard Dams Containing Hazardous Waste.

Infrastructure

- (E33) 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.

NOTE: This is not applicable where the landowner/holder is also the Environmental Authority holder.

Weed Control

- (E34) All areas within the mining lease will be managed to reduce the spread of declared plants including both disturbed and undisturbed areas.

END OF CONDITIONS FOR SCHEDULE E

1.3.7 Nature Conservation

1.3.7.1 Background

Terrestrial flora, fauna and biodiversity studies have occurred over the Project area. These are described in Ison (1999) and SKM (2005). The aquatic flora and fauna, and riparian flora of the Project area, and of lands immediately up and downstream are also described in Ison (1999) and SKM (2005).

1.3.7.2 Terrestrial Flora and Fauna

Terrestrial Flora

The vegetation on most of the Project area has a reduced conservation significance due to clearing for cropping and pasture improvement for grazing. Where patches of trees remain, grazing activity has removed the natural understorey species. Similarly, the number and species of fauna occurring on the site has been affected by existing land use practices.

The only known species that are considered rare or threatened in the vicinity are three species of grasses that are found at some locations in road reserves in the vicinity. *Bothriochloa biloba* was found at one location within the boundary of ML 50170. This grass species is no longer considered rare or threatened under the *Nature Conservation Act 1992* (EPA Southwest District, pers. comm., 20 July 2001).

Six vegetation communities were identified on the site. One is listed as threatened ecological communities under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act):

- 11.3.21 *Dichanthium sericeum* grassland on alluvial plains.

This community is outside the footprint of the Project area and from field observation appears to be heavily degraded. This community is found on the western side of Acland-Muldu Road

Three species of grass, which are listed under the EPBC Act have been recorded from the area surrounding the Project site. These species are *Homopholis belsonii* (vulnerable), *Bothriochloa biloba* (vulnerable) and *Digitaria porrecta* (endangered).

However only *Homopholis belsonii* has been found on the Project, adjacent to the southern boundary.

Three ecological communities were identified on the Project area that have conservation significance at the state level, as they are listed as endangered or of concern under the *Vegetation Management Act 1999*:

- 11.3.17 - *Eucalyptus populnea* woodland with *Acacia harpophylla* and/or *Casuarina cristata* on alluvial plains;
- 11.3.21 - *Dichanthium sericeum* and/or *Astrebla spp.* grassland on alluvial plains; and
- 11.9.10 - *Acacia harpophylla*, *Eucalyptus populnea* open forest on Cainozoic fine-grained sedimentary rocks.

The three grass species discussed above are also listed under the *Nature Conservation Act 1992* (NC Act). *Homopholis belsonii* is listed as endangered, *Bothriochloa biloba* is vulnerable and *Digitaria porrecta* is also vulnerable.

Weeds of management concern have been identified. Some are declared as pests by the DNRM under the *Land Protection (Pest and Stock Route Management) Act 2002*.

Terrestrial Fauna and Avifauna

A total of 136 fauna species were observed or recorded on MDL 244 during surveys conducted by Ison Environmental Planners in November 1998 and February 1999. This includes 20 mammals, 98 bird species, 10 reptiles and 8 amphibians.

No mammal, bird amphibian or reptile species identified on the Project area are listed as being of conservation significance under the EPBC Act or NC Act.

There is an old record of the five-clawed work skink (*Anomalopus mackayi*) north of Oakey, however this lizard has not been recorded in Queensland since 1984. Particular effort was made during the survey to determine the presence of this species of skink in the Project area. No specimens were located.

Weeds

Significant environmental weed species and declared pest plants noted within the Project area include African boxthorn (*Lycium ferrocissimum*), Prickly pear (*Opuntia stricta*), Saffron thistle (*Carthamus lanatus*), Thornapple (*Datura spp.*), Noogoora burr (*Xanthium pungens*) and Bathurst burr (*Xanthium spinosum*).

1.3.7.3 Aquatic Flora and Fauna

Creek Systems and Aquatic Habitat

Lagoon Creek is a highly disturbed aquatic ecosystem. Surface drainage is characterised by ephemeral flows in poorly defined stream channels. Farm dams and scattered waterholes within Lagoon Creek provide the only permanent to semi-permanent water sources in the Acland area.

Riparian Vegetation of the Creek Systems

A large percentage of the vegetation has been disturbed and now supports only scattered trees and an understorey dominated by weed and grass species.

Macroinvertebrates

Aquatic macroinvertebrate data was not obtained from field studies, primarily due to constraints associated with sampling ephemeral streams. When flowing waters and semi-permanent pools do persist within Lagoon Creek, the development of an invertebrate community comprising both the aquatic larval stages of a variety of fauna (with terrestrial adults), true aquatic fauna (entire life cycle within water), and fauna able to survive arid periods, either as eggs, aestivating adults or through migration, may be expected.

Fishes

Previous surveys of the mine site indicate that the aquatic biodiversity of the waterways is low. Only a single fish species was found, the introduced *Gambusia affinis*, which was recorded in farm dams (the only source of surface water available at the time of surveys) (Ison, 1999).

There is potential for other fish species to be present within the natural waterways, as some fish species such as Hyrtl's Catfish (*Neosilurus hyrtlii*) and Spangled Perch (*Leiopotherapon unicolor*) are adapted to persisting in such ephemeral streams either by aestivating in wet substrates or migrating from permanent waterholes; both species are relatively common and widespread in the region and their presence is best determined by sampling during stream flows. Neither is considered of conservation significance.

Rare and Threatened Aquatic Species

No species of conservation significance were recorded on the site. No species found are listed under the EPBC Act or the *Nature Conservation (Wildlife) Regulation 1994* (NCWR).

1.3.7.4 Environmental Values

The environmental values to be protected or enhanced are the terrestrial and aquatic flora and fauna of the highly disturbed ecosystems in the vicinity of the Project.

1.3.7.5 Potential Impacts on the Environmental Values

Potential Impacts on Terrestrial Flora and Fauna

The activity with the potential to affect terrestrial flora and fauna and habitat is the clearing of vegetation.

Potential Impacts on Aquatic Flora and Fauna

Activities with the potential to affect aquatic flora and fauna are:

- the alteration of hydrological regimes and stream water quality; and
- release of water from the Project area.

1.3.7.6 Proposed Environmental Protection Objective

The environmental protection objective is to manage the terrestrial flora and fauna at the Project site and to minimise the risks to flora and fauna outside the immediate Project area.

1.3.7.7 Commitments

Various mitigation and rehabilitation measures will be adopted to minimise the impact of the Project on the environmental values of the site and associated areas.

Terrestrial Flora and Fauna

Mitigation measures intended to reduce the potential impacts of the Project on terrestrial flora and fauna values of the Project site are described below.

General measures

Areas to be cleared will have boundaries clearly marked by tape, pegs or other means and will conform to the limits of design drawings. Particular attention will be paid to defining the boundaries of clearing where endangered and of concern regional ecosystems are present.

All vegetation clearance will be restricted to that necessary for safe operations. A plan for dealing with fauna during clearing and construction will be prepared to outline protocols for dealing with injured wildlife and other necessary actions relating to fauna.

A riparian buffer area will be maintained along the stretches of Lagoon Creek adjacent to the Project to prevent further loss of vegetation and habitat. Maintenance and protection of the riparian zone will help improve surface water quality and maintain wildlife habitat.

The conservation value of the previously disturbed or cleared sections of the Project area which are outside the proposed mine footprint will be managed to reduce fragmentation of vegetation and assist in the mitigation of noise and lighting impacts from the Project.

A flora and fauna monitoring program will be established to protect flora and fauna of conservation significance within and surrounding the Project area. The monitoring program will be designed for implementation prior to commencement of the Project, and will continue until decommissioning and final rehabilitation. Issues to be considered in the monitoring program include:

- monitoring the protection and regeneration of vegetation on Bottle Tree Hill through pre-clearing checks and the fencing-off of vegetation to be retained outside the Project's disturbance footprint; and
- weed monitoring in conservation and buffer zones.

Weed Management

A Weed Management Plan (WMP) will be prepared for the Project. The WMP will detail the following:

- management methods for declared weeds on the Project area in accordance with local management practice and/or DNRM Pest Fact sheets;
- monitoring of treated areas to assess the success of declared weed eradication;
- monitoring of Project site to identify any new infestations;
- information on identifying declared weeds; and
- use of vehicle wash-down facilities for earthmoving equipment entering and leaving the Project area.

Aquatic Flora and Fauna

Any releases from the Project dams will be managed to coincide with natural flow events in Lagoon Creek, and to produce a downstream water quality of environmentally acceptable character.

The following mitigation strategies will assist in protecting existing riparian floristic values:

- monitoring and targeted control of declared weed species in disturbed and undisturbed areas; and
- overgrazing by cattle should be prevented along creeks. If overgrazing is having an adverse impact (e.g. resulting in erosion) then stocking rates should be reduced or cattle access restricted (e.g. through fencing).

1.3.7.8 Proposed Environmental Authority Conditions: Schedule F – Nature Conservation

Conservation

- (F1) Within 3 months of the Environmental Authority taking effect and as soon as favourable seasonal conditions allow, the holder of this Environmental Authority must undertake an additional fauna field survey of the project area to specifically target the presence of the following species:
- (a) *Anomalopus mackayi* (Five-clawed Worm-skink, Long-legged Worm-skink); and
 - (b) *Tympanocryptis pinguicollis* (Grassland Earless Dragon, South-eastern Lined Earless Dragon).
- (F2) The survey methodology, techniques and survey effort should be sufficiently robust to determine the likely presence or absence of the above reptile species. A report containing the field survey methodologies, together with the results of the surveys and a map showing suitable habitat and a procedure for potential translocation (if either reptile species is identified) must be submitted to the EPA within 28 days of completing the survey.
- (F3) The holder of the Environmental Authority must ensure that staff induction and environmental awareness programs include reference to *Anomalopus mackayi* (Five-clawed Worm-skink, Long-legged Worm-skink) and *Tympanocryptis pinguicollis* (Grassland Earless Dragon, South-eastern Lined Earless Dragon) to ensure that any individuals that might be present in the project area are identified and reported to the mine site environmental officer for recovery and release into suitable habitat.

- (F4) As soon as conditions allow¹ the holder of this Environmental Authority must conduct an additional flora field survey of the project site to determine the area and abundance of the *Dichanthium sericeum* (Bluegrass) ecological community. In the interim, any cattle on this area should be removed and appropriate signage and fencing erected to provide a 50m buffer around the perimeter of the mapped area (according to Version 4 of the regional ecosystem mapping) to minimise direct and indirect disturbance and maximise the opportunity for Bluegrass community regeneration. Furthermore, active weed removal of declared weeds and weeds of concern as defined by any applicable weed management plans for Rosalie Shire should be undertaken within the fenced off area.
- (F5) Within 28 days of completing the survey the holder of this Environmental Authority must submit to the administering authority and DNRM&W a report assessing the condition of the Bluegrass community. The report must include the following information:
- (c) a map defining the extent of the Bluegrass community;
 - (d) flora species composition, abundance and percentage cover;
 - (e) the level of weed infestation;
 - (f) the value of this remnant regional ecosystem in a regional context; and
 - (g) potential impact of mining activities on the Bluegrass remnant.
- (F6) The holder of this Environmental Authority must develop an Conservation Management Plan for the riparian area of Lagoon Creek and existing stands of regional ecosystems RE11.3.17 and RE11.9.10 located on Bottle Tree Hill and submit the Plan to the Administering Authority and the Department of Natural Resources, Mines and Water within twelve months of the date this environmental authority takes effect. The Plan must for the two proposed conservation areas (Lagoon Creek and Bottle Tree Hill):
- (a) ensure the combined surface area to be protected and enhanced is no less than the surface area of the regional ecosystems proposed to be cleared by mining activities on Mining Leases 50170 and 50216;
 - (b) develop appropriate conservation/rehabilitation objectives;
 - (c) outline suitable conservation/rehabilitation techniques (including those areas where local native plant species/communities are to be re-established and/or enhanced);
 - (d) develop an action plan/rehabilitation schedule for the planned conservation/rehabilitation activities;
 - (e) propose specific conservation/rehabilitation acceptance criteria (including those areas where local native plant species/communities are re-established and/or enhanced);
 - (f) detail a suitable monitoring program to quantify conservation/rehabilitation success (including those areas where local native plant species/communities are re-established and/or enhanced); and
 - (g) propose appropriate remedial actions for conservation/rehabilitation areas not achieving the required conservation/rehabilitation objectives.

END OF CONDITIONS FOR SCHEDULE F

¹ **As soon as conditions allow** means as soon as there has been sufficient rainfall to enable the plants within the Bluegrass (*Dichanthium sericeum*) dominant grassland ecological community to recover to a point where the extent of the community, flora species composition, abundance and percentage cover and the level of weed infestation can be determined.

1.3.8 Waste Management

1.3.8.1 Background

The major sources of waste with the potential to cause impacts are:

- mine wastes, including overburden and interburden, some of which may be potentially acid forming;
- coal processing waste;
- regulated waste (hydrocarbon waste, batteries, tyres, detergents, solvents) from workshop activities;
- general waste (benign construction waste, wood, food scraps, wrapping paper and rags);
- recyclable general waste (paper, cans and glass);
- recyclable scrap metal; and
- sewage effluent and dried sewage sludge.

1.3.8.2 Environmental Value

The environmental value to be protected or enhanced is the life, health and wellbeing of people and the diversity of ecological processes and associated ecosystems surrounding the Project area.

Source: Environmental Protection (Waste Management) Policy 2000 (EPP (Waste Management)).

1.3.8.3 Potential Impacts on the Environmental Value

Inappropriate disposal of waste may lead to the contamination of land and water and cause adverse effects on ecosystem health.

1.3.8.4 Proposed Environmental Protection Objective

Minimise the impacts of waste on the environment by managing the following aspects of the operation effectively:

- mine wastes, including potentially acid forming waste;
- coal processing wastes (tailings and coarse rejects);
- regulated wastes; and
- general construction and operational wastes.

1.3.8.5 Commitments

The Project will manage wastes in accordance with the Waste Management Hierarchy listed in the EPP (Waste Management), which involves:

- waste avoidance;
- waste reuse;
- waste recycling; and
- waste disposal.

Mine Waste

NAC will minimise the potential impacts from the Project's mine waste by conducting spoil characterisation to identify PAF material, undertaking progressive rehabilitation of disturbed areas as they become available, implementing and maintaining an adequately designed surface water management system for undisturbed and disturbed catchments, and constructing the necessary erosion control structures for disturbed and rehabilitated areas.

Coal Processing Plant Wastes

Tailings from the CHPP are placed in the Tailings Storage Facility. At the completion of mining and processing, this area will be rehabilitated. Tailings may also be placed below ground level in backfilled sections of spoil.

Coarse rejects from the CHPP are placed in backfilled sections of spoil. At the completion of mining and processing, this area will be rehabilitated.

General and Regulated Waste

General wastes is collected and segregated on-site for reuse, recycling or disposal if necessary. Transportation of regulated wastes off-site is conducted by licensed waste contractors.

Hazardous Materials

Any hazardous materials used on site will be recorded in a Hazardous Materials Register (HMR). This register will include details on storage location; storage requirements; proper usage; handling information; and disposal procedures. This information will be available in Material Safety Data Sheets (MSDS) which will be kept for all materials and chemicals maintained within the HMR.

In addition:

- AS 1940-2004 for the Storage and Handling of Flammable and Combustible Liquids will be implemented on site;
- contractors will provide a list of hazardous chemicals and MSDS prior to bringing chemicals on site;
- no chemical will be allowed on site without an MSDS;
- a chemical register will be continued on site;
- corrosive materials will be stored and handled in accordance with AS 3780.8 (Class 8 substances – corrosives);
- fuels, oils and chemicals in containers of 200 L or more will be stored in a bunded area with capacity of at least 110% of the largest container;
- fuels, oils and chemicals in containers less than 200 L capacity will be stored as above or in a fenced and roofed compound;
- all fuels, oils and chemicals will be clearly labelled;
- transfer of bulk fuel and handling of hazardous chemicals will be undertaken only by trained personnel;
- spill clean up kits including absorbent materials will be kept at each fuel and chemical storage facility; and
- an area will be designated for the temporary storage or bioremediation of hydrocarbon contaminated soils.

1.3.8.6 Proposed Environmental Authority Conditions: Schedule G – Waste Management

Storage of tyres

- (G1) Tyres stored awaiting disposal or transport for take-back and, recycling, or waste-to-energy options - should be stockpiled in volumes less than 3m in height and 200m² in area and at least 10m from any other tyre storage area.
- (G2) All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a 10m radius of the scrap tyre storage area.
- (G3) Disposing of scrap tyres resulting from the mining activities in spoil emplacements is acceptable, provided tyres are placed as deep in the spoil as reasonably practicable.
- (G4) Scrap tyres resulting from the mining activities disposed within the operational land must not impede saturated aquifers or compromise the stability of the consolidated landform.

Waste Handling and Management

- (G5) Regulated waste must only be removed from the authorised place by a person that can legally transport this waste under the *Environmental Protection Act 1994*.
- (G6) From the commencement of the activity, the holder of this Environmental Authority must maintain and update its existing Waste Management Plan and ensures that it addresses at least the following matters:
- (i) the types and amounts of wastes generated by the facility
 - (ii) how the waste will be dealt with, including a description of the types and amounts of waste that will be dealt with under each of the waste management practices mentioned in the waste management hierarchy (section 10 in the *Environmental Protection (Waste Management) Policy 2000*);
 - (iii) procedures for identifying and implementing opportunities to improve the waste management practices employed.
 - (iv) procedures for dealing with accident, spills, and other incidents that may impact on the waste management
 - (v) details of any accredited management system employed, or planned to be employed, to deal with the waste
 - (vi) how often the performance of the waste management practices will be assessed (at least annually)
 - (vii) the indicators or other criteria on which the performance of the waste management practices will be assessed.

Note: The Waste Management Plan is to be managed through the Plan of Operations

- (G7) The holder of this integrated authority must not:
- (i) allow waste to burn or be burned at or on the licensed place; or
 - (ii) remove waste from the licensed place and burn such waste elsewhere.

(This condition does not apply to the material that is required to be burnt under quarantine regulations and burning of such material is to be carried out in a way that does not cause environmental harm and this condition does not refer to activities carried out under the provisions of the Fire Services Act 1990).

Waste Rock Management

- (G8) Subject to the release limits defined in **Schedule C**, all reasonable and practicable measures must be implemented to prevent hazardous leachate being directly or indirectly released or likely to be released as a result of the activity to any groundwater or watercourse.

Notification of Improper Disposal of Regulated Waste

- (G9) If the holder of this Environmental Authority becomes aware that a person has removed waste from the licensed place and disposed of the waste in a manner which is not authorised by this Environmental Authority or is improper or unlawful, then the holder of Environmental Authority must, as soon as practicable, notify the administering authority of all relevant facts, matters and circumstances known concerning the disposal.

Emergency Response/Contingency Plan

- (G10) Within 12 months of the date of this Environmental Authority, the holder of this Environmental Authority must develop and implement an Emergency Response/Contingency Plan to manage the environmental impacts of uncontrolled release of contaminants to the environment.
- (G11) The Emergency Response/Contingency Plan must address at the least the following matters:
- Response procedures to be implemented to reduce the likelihood of any release of contaminants to the environment.
 - Response procedures to prevent any further release or if such is not practicable, minimise the extent and duration of any release to the greatest practicable extent.
 - The practices and procedures to be employed to restore the environment, or if such is not practicable, mitigate any environmental impacts of the release.
 - A description of the resources to be used in response to a release.
 - The training of staff that will be called upon to respond to a release.
 - Procedures to investigate the cause of any release, and where necessary, implement remedial actions to reduce the likelihood of recurrence of a similar event.
 - The provision and availability of documented procedures to staff attending any release to enable them to effectively respond.
 - Timely and accurate reporting of the circumstance and nature of release events to the administering authority
- (G12) A copy of the Emergency Response/Contingency Plan and any subsequent amendment of the Emergency Response/Contingency Plan must be kept at the place to which this environmentally relevant activity relates and be available for examination by Emergency Services Personnel or an authorised person on request.

END OF CONDITIONS FOR SCHEDULE G

1.3.9 Community

1.3.9.1 Background

Regional Setting

The Project is located in a rural area with neighbours involved in grazing and cropping activities. The Project is adjacent to the town of New Acland. Acland has a short history of involvement with the mining industry.

1.3.9.2 Environmental Value

The lifestyle, including the wealth, health, safety, and wellbeing of the community surrounding the Project.

1.3.9.3 Potential Impacts on the Environmental Value

Mining activities have the potential for the following impacts:

- dust;
- noise;
- ground vibration;
- groundwater changes (level/supply and quality);
- airblast overpressure; and
- lighting.

1.3.9.4 Proposed Environmental Protection Objective

The environmental protection objective is to minimise environmental nuisance to neighbours from mining and associated activities and to respond to concerns expeditiously.

1.3.9.5 Commitments

NAC will continue to use its existing complaints procedures that include:

- maintenance of a register of complaints held on site;
- a process for receiving, handling, investigating and documenting complaints;
- investigation follow up and a response as soon as practicable to the complainant; and
- a commitment to resolving legitimate complaints in an amicable manner.
- NAC will maintain its existing community consultation program to monitor and address relevant social issues as they arise and to disseminate relevant Project information on a regular basis. NAC will continue to consult with local authorities and/or relevant State government departments in relation to mining related issues.

1.3.9.6 Proposed Environmental Authority Conditions : Schedule H - Community Complaint recording/response

- (H1) All complaints received by the holder of this environmental authority relating to the environmentally relevant activity must be recorded in a suitable database with the following details:
- time and date of complaint;
 - type of communication (telephone, letter, personal etc.);
 - name, contact address and contact telephone number of complainant (Note: if the complainant does not wish to be identified then "Not identified" is to be recorded);
 - response and investigation undertaken as a result of the complaint;
 - name of person responsible for investigating complaint; and
 - action taken as a result of the complaint investigation and signature of responsible person.

- (H2) The complaints record required by condition number H1 must be maintained for a period of not less than three (3) years.

Notification of Emergencies and Incidents

- (H3) As soon as practicable after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with the conditions of this environmental authority, the holder of this environmental authority must notify the administering authority of the release by telephone or facsimile.
- (H4) The notification of emergencies or incidents as required by condition number H3 must include but not be limited to the following:
- the holder of the environmental authority;
 - the location of the emergency or incident;
 - the number of the environmental authority;
 - the name and telephone number of the designated contact person;
 - the time of the release;
 - the time the holder of the environmental authority became aware of the release;
 - the suspected cause of the release;
 - the environmental harm and or environmental nuisance caused, threatened, or suspected to be caused by the release; and
 - actions taken to prevent further any release and mitigate any environmental harm and or environmental nuisance caused by the release.
- (H5) Not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of the environmental authority must provide written advice of the information supplied in accordance with condition number H4 in addition to:
- proposed actions to prevent a recurrence of the emergency or incident;
 - outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance; and
 - the results of any environmental monitoring performed.

Exception Reporting

- (H6) The holder of this environmental authority must notify the administering authority in writing of any monitoring result that indicates an exceedence of or non-compliance with any environmental authority limit within twenty-eight (28) days of completion of analysis.
- (H7) The written notification required by condition number H6 above must include:
- the full analysis results;
 - details of investigation or corrective actions taken; and
 - any subsequent analysis.

END OF CONDITIONS FOR SCHEDULE I

1.3.10 Light

1.3.10.1 Background

The Acland area is a predominantly rural environment. As a result at night, light sources are sparse and illumination levels are generally low with little or no concentrated light sources except for the streetlights of Acland, scattered property lights, intermittent passing vehicular lights and infrequent aircraft lights.

1.3.10.2 Environmental Value

The environmental values of the light environment to be enhanced or protected under this EM Plan are the qualities of the light environment that support the safety, lifestyle, general living and wellbeing of humans.

1.3.10.3 Potential Impacts on the Environmental Value

Light sources at the Mine can be defined as permanent and temporary. Permanent lights at the Mine are located around infrastructure, such as the Administration block, Washplant, Workshop, ROM Pad and crib rooms. Temporary lights at the Mine are mobile lighting plants (towers) used to illuminate active work areas at night, such as pit faces, dump areas and haul roads.

Permanent and temporary light sources may produce fugitive/spill light or light pollution in two forms – direct illuminance (light level) and luminous intensity (glare). These forms of light pollution may impact on sleep patterns of nearby light sensitive receptors (nearby neighbours) or close by transport systems (passing traffic).

The impacts from light pollution may be influenced by topography, climatic effects (e.g. fog), individual source light size/strength, the concentrating of light sources and light design (e.g. presence or absence of shielding).

The impacts of light may also be subjective (i.e. in terms of sensitivity of the receptor).

1.3.10.4 Proposed Environmental Protection Objective

NAC will ensure that light from New Acland Coal Mine does not cause a nuisance to any nearby light sensitive receptors (e.g. nearby residents or drivers using roadways adjacent to the Mine).

1.3.10.5 Commitments

NAC will continue to implement the following light pollution control strategies at New Acland Coal Mine.

- Legitimate light complaints will be dealt with promptly using NHCA's complaint handling procedure. Appropriate control strategies will be implemented as necessary in order to address the cause(s) of legitimate complaints and to otherwise ensure compliance is maintained.
- Nearby residents will be provided with a pager number for the Mine. This contact number will allow the Mine to immediately investigate perceived light problems and to respond as required to eliminate legitimate problems.
- As required, light sources at the Mine will be fitted with shielding devices (e.g. glare shields and screens) to reduce and remove light pollution.

Independent monitoring by a light consultant will be commissioned as required to check operational light levels and in response to complaints to establish if perceived light levels are compliant with AS4282-1997.

1.3.10.6 Proposed Environmental Authority Conditions : Schedule I - Light

Schedule I - Light

- (I1) Subject to condition (I2), the emission of light resulting from the mining activity must not cause an environmental nuisance at any sensitive place.
- (I2) When requested by the administering authority, an assessment of the light nuisance* must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (with in neither frivolous nor vexatious based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days of the administering authority following completion of the assessment.
- (I3) If the assessment indicates condition (I1) is not being met then the environmental authority holder must:
 - (a) address the complaint including the use of appropriate dispute resolution if requires; or
 - (b) immediately implement light abatement measures so the emissions of light from the activity do not result in further environmental nuisance.

(* = Assessment to be conducted according to and with reference to the limits specified in AS 4282-1997 Control of the Obtrusive Effects of Outdoor lights).

END OF CONDITIONS FOR SCHEDULE I

1.3.11 Cultural Heritage

1.3.11.1 Background

The cultural heritage assessment conducted by Ann Wallin and Associates demonstrated that the Acland area contains a high proportion of lithic scatters and resources (Wallin 1999).

From the archaeological record, it appears that the Acland area was an important route for Aboriginal people travelling to the bunya nut festivals in the Bunya Mountains. This triennial festival with its social, economic and spiritual associations had a major significance for the tribes of southeast Queensland and northern New South Wales.

Although a large number of artefacts were located, it is feasible that this would not necessarily impede approval of mining in the area from an archaeological perspective, so long as a representative collection of artefacts was made prior to excavation, and the process was duly monitored.

To facilitate site clearance and protection of Aboriginal artefacts on MDL 244 (which includes ML 50170 and MLA 50216), NAC has entered into separate legal agreements and developed separate Cultural Heritage Management Plans (CHMPs) with both Traditional Owner Groups – Jarowiar and Western Wakka Wakka. The legal agreements and CHMPs are confidential documents designed to manage all identified Aboriginal issues for the life of the project (i.e. within MDL 244). The legal agreements and CHMPs are also consistent with the following Federal and State legislation:

- *Australian Heritage Commission Act 1975-1990 (National Estate);*
- *Aboriginal and Torres Strait Islander Heritage Protection Act 1986;*
- *Aboriginal Heritage Act 2003;* and
- *Queensland Heritage Act 1992.*

The site possesses no other known archaeological or historical values and there are no sites identified within the Project area requiring protection.

The town of Acland contains some sites of European cultural heritage significance to the local and regional area. Mining had a significant effect on the development of the Acland and surrounding region. Coal mining near Acland commenced in 1913, with production at the Acland No.2 Colliery at Hoff's Well located on the outskirts of Acland commencing in 1929 with continuous coal mining until 1966. Intermittent coal mining continued at this site until 1984 when it was permanently closed down.

The mine's significance from a heritage perspective provides an insight into the development of mining technology and methodologies over the long period of its operation. The majority of the history from the mining operation has been recorded and preserved at the Acland mine museum site located on the outskirts of the Acland township.

A number of other structures of heritage significance to the Acland community include the Soldier's Roll of Honour, the Public Hall and the Church of England. NAC is presently in discussion with Rosalie Shire Council regarding an off-site Pioneer/Heritage Park to display Acland's significant heritage items as a tourist attraction.

1.3.11.2 Environmental Value

The cultural and scientific significance of European and Aboriginal occupation in the vicinity of the Project.

1.3.11.3 Potential Impacts on the Environmental Value

Potential impacts on cultural heritage values include loss of and/or damage to artefacts of European and Aboriginal significance by the Project's operation.

1.3.11.4 Proposed Environmental Protection Objective

The environmental protection objective is to preserve the cultural heritage values (Indigenous and Non-Indigenous) of the Project area.

NAC will also investigate the possibility of retaining and restoring the heritage sites of Acland in their existing locations to retain as much of their cultural heritage significance as possible. This may include options for retaining a core heritage area on-site (e.g. the Acland No.2 Colliery site) to relocate the remainder of Acland's European heritage of significance.

NAC will also consult with remaining Acland residents about the options for protecting and enhancing Acland's European cultural heritage sites of significance.

1.3.11.5 Commitments

NAC is legally bound to implement and maintain the legal agreements and CHMPs with both Traditional Owner Groups – Jarowiar and Western Wakka Wakka. Therefore, NAC will ensure all of its cultural heritage responsibilities are met.

1.3.11.6 Proposed Environmental Authority Conditions

No specific Environmental Authority conditions are proposed with respect to cultural heritage.

1.4 Monitoring

1.4.1 Background

Environmental monitoring is performed to provide data to measure the impact of the Project on the surrounding environment and to measure the efficiency/effectiveness of the various environmental impact control strategies.

1.4.2 Proposed Environmental Protection Objective

To demonstrate that the Project is operated in accordance with its Environmental Authority Conditions.

1.4.3 Commitments

Environmental monitoring will occur in accordance with the requirements of the Environmental Authority.

The environmental monitoring will include rehabilitation success, surface water quality, groundwater quality and level, dust deposition and noise. Commitments and proposed Environmental Authority Conditions have been included in the relevant sections of this EM Plan.

An Environmental Monitoring Manual (EMM) will continue to be maintained as part of the Project Environmental Management System. The EMM will outline the Project's environmental monitoring program (including monitoring sites, parameters and their frequency of measurement and make reference to monitoring procedures and records).

The EMM will be made available to the administering authority on request.

Environmental monitoring data will be collected for the various monitoring parameters, stored for a period of at least five years in a suitable accessible format, and reported internally to key personnel on at least a monthly basis and externally to the administering authority and the public on an as required basis.

1.4.4 Proposed Environmental Authority Conditions

See the 'Monitoring' section of Schedule A – General (page 12)

1.5 Reporting

1.5.1 Objective

To provide timely, relevant and appropriately presented information on the environmental performance of the Project to key personnel within NAC and NHCA, government authorities, the local community and the general public.

1.5.2 Commitments

NAC will fulfil its statutory obligations in terms of reporting, including Annual Returns requirements, National Pollutant Inventory (NPI) reporting and Greenhouse Challenge Plus reporting.

A Register of Environmental Incidents will be maintained. Incidents that may potentially compromise compliance with the conditions of the Environmental Authority will be reported immediately to operations management. NAC will report all statutory non-compliances to the administering authority.

1.6 Continuous Improvement

In order to enable continuous improvement to occur at the Project, NAC will:

- as required, commission research and/or investigations into technical issues and/or legitimate complaints in order to resolve current or foreseen problems, improve environmental management and maintain statutory compliance;
- continue the development and implementation of NHCA's Environmental Management System (EMS);
- provide environmental awareness training to all staff; and
- where appropriate, forward investigation/research results and reports to the administering authority to support proposed amendments to the EM Plan, Plan of Operations or Environmental Authority.

1.6.1 Environmental Management System

The Project will progressively implement and maintain an EMS consistent with ISO 14001 EMS (i.e. as part of NHCA's EMS).

1.6.2 Studies and Investigations

The Proponent is committed to the following studies and investigations:

Land Resources

- **Revegetation** – on-site field trials may be conducted with a range of pasture and native tree and shrub species to explore possible rehabilitation options; and
- **Rehabilitation** – The criteria for achieving a self-sustaining vegetation community will be developed based on the results of an analogue site investigation.

1.6.3 Research

NHCA supports research in mining and has committed support to an Australian Coal Association Research Program (ACARP) study proposed by Greening Australia. As required, NAC will commission the necessary research to address any outstanding environmental or rehabilitation issues identified in relation to operation of the Project.

1.7 Staff Training

Environmental awareness training will continue to be provided to staff as part of the implementation of NHCA's EMS. On-going environmental awareness training will cover such issues as:

- any recent or upcoming changes to environmental regulation of mining;
- relevant legislative requirements including the role of the EP Act (and subordinate Regulation), 'environmental harm' and the 'general environmental duty';
- statutory requirements of the Environmental Authority; and
- environmental incident reporting.

The environmental awareness training will be achieved through a variety of methods including induction training, formal presentations, and impromptu meetings.

All staff and contractors will be trained in, and visitors informed of, general environmental awareness during site induction. Records of training content and attendance will also be maintained.

Specifically, NAC requires that employees, contractors and visitors are aware of:

- their roles and responsibilities (including environmental incident reporting);
- the environmental impacts, potential or actual, of their activities on site;
- the potential consequences of poor environmental performance; and
- site emergency procedures.

Following initial environmental awareness training, further (ongoing) training is expected to cover specific environmental issues such as air quality, noise, water, etc and their relevance to the Project.

Environmental incidents occurring on site may result in a requirement to develop specific training programs designed to reduce the risk of a recurrence.

1.8 Environmental Auditing and Review

1.8.1 Background

The Project will conduct environmental audits to assess compliance with regulatory requirements and the performance of the site EMS.

1.8.2 Objective

The objectives of the environmental auditing and review programs are to:

- monitor and report on compliance with statutes (e.g. Environmental Authority Conditions), EM Plan commitments and Plan of Operations, environmental policy, company standards, best practice guidelines and signatory codes;
- monitor the EMS for consistency with the principles of ISO14001; and
- ensure a senior management review of performance via consideration of the audit reports.

1.8.3 Commitments

An environmental auditing program will be implemented at the Project. The program will include:

- Internal Environmental Audits - annually;
- Environmental Management System Review – annually;
- Plan of Operations Audits – with each Plan of Operations; and
- Administering Authority Audits - at a frequency determined by the authority.

1.9 Schedule J - Definitions

Words and phrases used throughout this licence are defined below except where identified in the *Environmental Protection Act 1994* or subordinate legislation. Where a word or term is not defined, the ordinary English meaning applies, and regard should be given to the Macquarie Dictionary.

“**µg/L**” means micrograms per litre.

“**50th percentile**” means that the measured values of the quality characteristic must not be greater than the release limit for any more than three out of six consecutive samples where the time interval between the taking of each consecutive sample is not less than three days.

“**80th percentile**” means that the measured values of the quality characteristic must not be greater than the release limit for any more than one out of five consecutive samples where the time interval between the taking of each consecutive sample is not less than three days.

“**acceptance criteria**” means the measures by which actions implemented are deemed to be complete. The acceptance criteria indicate the success of the decommissioning and rehabilitation outcomes or remediation of areas which have been significantly been disturbed by the mining activities. Acceptance criteria may include information regarding:

- stability of final land forms in terms of settlement, erosion, weathering, pondage and drainage;
- control of geochemical and contaminant transport processes;
- quality of runoff waters and potential impact on receiving environment;
- 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 recolonisation of specific fauna groups such as collembola, mites and termites which are involved in these processes;
- microbiological studies including recolonisation 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 ground water levels and catchment yields.

“**Act**” means the Environmental Protection Act 1994.

“**administering authority**” means the Environmental Protection Agency or its successor.

“**airblast overpressure**” is the energy transmitted from the blast site within the atmosphere in the form of pressure waves, consisting of both audible (noise) and inaudible (concussion) energy. The maximum excess pressure in this wave is the peak airblast overpressure measured in decibels linear (dB).

“**ambient (or total) noise**” at a place, means the level of noise at the place from all sources (near and far), measured as the Leq for an appropriate time interval.

“**annual exceedance probability**” means the probability that the given event will be exceeded within a one year period.

“**appropriately qualified person**” means a person or body possessing appropriate experience and qualifications to perform these tasks.

“**ARD**” means acid rock drainage and refers to the low pH, high heavy metal pollutant typical of sulphidic mine wastes, and most commonly associated with the production of ferrous iron and sulphuric acid through the oxidation of sulphide minerals.

“**authority**” means Environmental Authority under the *Environmental Protection Act 1994*.

“background noise level” means noise, measured in the absence of the noise under investigation, as either:

- **L A90,T** being the A-weighted sound pressure level exceeded for 90 percent of the time period of not less than 15 minutes, using Fast response, or
- **L LA_{bg},T** being the arithmetic average of the minimum readings during a representative time period of not less than 15 minutes, using Fast response.

“blasting” means the use of explosive materials to fracture-

- (a) rock, coal and other minerals for later recovery; or
- (b) structural components or other items to facilitate removal from a site or for reuse.

“commercial place” means a place used as an office or for business or commercial purposes, other than a place within the boundaries of the operational land.

“construction” in relation to tailings dams includes building a new dam and modifying or lifting an existing dam.

“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.

“dB (Linear) Peak” is the maximum reading in decibels (dB) obtained using the “P” time – weighting characteristic as specified in AS 1259.1 – 1990 with all frequency – weighted networks inoperative.

“design plan” - in the context of a dam design is the documentation required under the “Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste” to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, the procedures and criteria to be used for operating the dam and the decommissioning and rehabilitation objectives in terms procedures, works and outcomes at the end of dam life. The documents can include design and investigation reports, drawings, specifications and certifications.

“design plan in the context of a dam design” is the documentation required under the Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, the procedures and criteria to be used for operating the dam and the decommissioning and rehabilitation objectives in terms procedures, works and outcomes at the end of dam life. The documents can include design and investigation reports, drawings, specifications and certifications.

“design storage allowance” as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

“declared plant” means a plant that has been declared under the *Rural Lands Protection Act 1985*.

“environmental authority holder” means the holder of this environmental authority.

“environmental nuisance” is unreasonable interference or likely interference with an environmental value caused by:

- (a) noise, dust, odour, light; or
- (b) an unhealthy, offensive or unsightly condition because of contamination; or
- (c) another way prescribed by regulation.

“flowable substance” means matter or mixture of materials which can be forced to or otherwise flow under any conditions possible in a situation. It includes water, other liquids or a mixture that includes water or any other liquid or suspended solids.

“foreseeable future” is the period used for assessing the total risk of an event occurring. Permanent structures and ecological sustainability should be expected to still exist at the end of a 150 year foreseeable future with an acceptable risk of failure before that time.

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

“high hazard dam” means a dam defined as high hazard in the EPA Information Sheet on Determining Dams Containing Hazardous Waste.

“infrastructure” means water storage dams, roads and tracks, buildings and other structures built for the purpose of mining activities but does not include facilities required for the long terms management of mining impacts or the protection of potential resources. Such facilities include dams containing hazardous waste, waste rock dumps, voids, or ore stockpiles and buildings or other structures whose ownership can be transferred and which have a residual beneficial use for the next owner of the operational land or the background land owner.

“L_{Amax adj,T}” means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than 15 minutes, using Fast response.

“L_{Ar, 1 hour}” means the specific noise level measured as the A-weighted equivalent continuous noise level (L_{Aeq}) plus any adjustment for the character of the noise (tonal and/or impulsive) determined over a reference time period of one hour.

“land” in the “land Schedule 2 of this document means land excluding waters and the atmosphere.

“land capability” as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

“land suitability” as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

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

“leachate” means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the operational land which contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

“mandatory reporting level” the volume below the spillway crest, equivalent to the lower of the AEP, 72 hour storm or the AEP wave allowance (AEP is the annual exceedence probability).

“Maximum Instantaneous Charge (MIC)” is the maximum amount of explosive on any one specific delay detonator in any one blast hole.

“maximum” means that the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.

“MaxLpA,T” means the maximum A-weighted sound pressure level measured over a time period of not less than 15 minutes, using Fast response.

“median” means the middle value, where half the data are smaller, and half the data are larger. If the number of samples is even, the median is the arithmetic average of the two middle values.

“mg/kg” means milligrams per kilogram.

“mg/L” means milligrams per litre.

“minimum” means that the measured value of the quality characteristic or contaminant must not be less than the release limit stated.

“ng/L” means nanograms per litre.

“noise sensitive place” means:

- a legal dwelling, caravan park, residential marina or other residential premises; or

- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area; or
- a public park or gardens.

and includes the curtilage of any such place.

“noxious” means harmful or injurious to health or physical well being, other than trivial harm.

“offensive” means causing unreasonable offence or displeasure; is unreasonably disagreeable to the sense; disgusting, nauseous or repulsive, other than trivial harm.

“peak particle velocity (ppv)”, is a measure of ground vibration magnitude and is the maximum instantaneous particle velocity at a point during a given time interval in mms-1. (Peak particle velocity can be taken as the vector sum of the three component particle velocities in mutually perpendicular directions).

“percent slope” = $\frac{\text{height difference (metres)}}{\text{horizontal difference (metres)}} \times 100$

“protected area” means:

- a protected area under the *Nature Conservation Act 1992*; or
- a marine park under the *Marine Parks Act 1992*; or
- a World Heritage Area.

“progressive rehabilitation” means rehabilitation (defined below) undertaken progressively OR a staged approach to rehabilitation as mining operations are ongoing.

“range” means that the measured value of the quality characteristic or contaminant must not be greater than the higher release limit stated nor lower than the lower release limit stated.

“rehabilitation” means the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this Environmental Authority and, where relevant, includes remediation of contaminated land.

“representative” means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the mining activities.

“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.

“sediment dam” means a structure for the capture and treatment of stormwater runoff contaminated only by sediments from disturbed areas and which discharge off-site once full.

“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.

“sensitive place” [e.g. odour and dust] has the same meaning as and includes a noise sensitive place and a commercial place.

“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.

Some examples of disturbed land include:

- areas where soil has been compacted, removed, covered, exposed or stockpiled;
- areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation & topsoil)
- areas where land use suitability or capability has been diminished;
- areas within a watercourse, waterway, wetland or lake where mining activities occur;
- areas submerged by tailings or hazardous contaminant storage and dam walls in all cases;
- areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after mining activities have ceased; or
- areas where land has been contaminated and a suitability statement has not been issued.

However, the following areas are not included:

- areas off lease (e.g. roads or tracks which provide access to the mining lease);
- areas previously significantly disturbed which have achieved the rehabilitation outcomes;
- by agreement with the EPA, areas previously significantly disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);
- areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc), which is to be left by agreement with the landowner. The agreement to leave permanent infrastructure must be recorded in the Landowner Agreement and lodged with the EPA;
- disturbances that pre-existed the grant of the tenure unless those areas are disturbed during the term of the tenure.

“spillway” means the passage or outlet from the dam through which surplus water flows.

“spillway crest” means the highest point (elevation) of the spillway, above which water will flow along the spillway and discharge from the dam if the flow rate is sufficient.

“stable” means land form dimensions are or will be stable within tolerable limits now and in the foreseeable future. Stability includes consideration of geotechnical stability, settlement and consolidation allowances, bearing capacity (traffic ability), erosion resistance and geochemical stability with respect to seepage and contaminant generation.

‘suitably qualified and experienced person’ in relation to dams means a person who is a Registered Professional Engineer of Queensland under the provisions of the Professional Engineers Act 1988 or a Corporate Member of the Institution of Engineers Australia or holds equivalent professional qualifications and has the following: (a) knowledge of engineering principles related to the structures, geomechanics, hydrology, hydraulics, chemistry and environmental impact of dams; and (b) at least a total of five years of suitable experience and demonstrated experience in at least four of the following areas: investigation, design, or construction of dams, operation and maintenance of dams, geomechanics with particular emphasis on stability, geology and geochemistry, hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorology, hydraulics with particular reference to sediment transport and disposition, erosion control, beach processes, and hydrogeology with particular reference to groundwater, solute transport processes and monitoring thereof; and dam safety.

“the holder” means the holder of this Environmental Authority.

“Total Organic Carbon” (“TOC”) means the sum of all compounds of carbon which contain at least one carbon to carbon bond plus methane and its derivatives. For the purpose of measurement 1 gram of TOC is deemed to have the same flame ionisation response as 1 gram of hexane.

“tolerable limits” means that a range of values could be accepted to achieve an overall environmental management objective (eg a range of settlement of a tailing capping could still meet the objective of draining the cap quickly, preventing pondage and limiting infiltration and percolation).

“waters” - includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water in natural or artificial watercourses, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater or any part-thereof.

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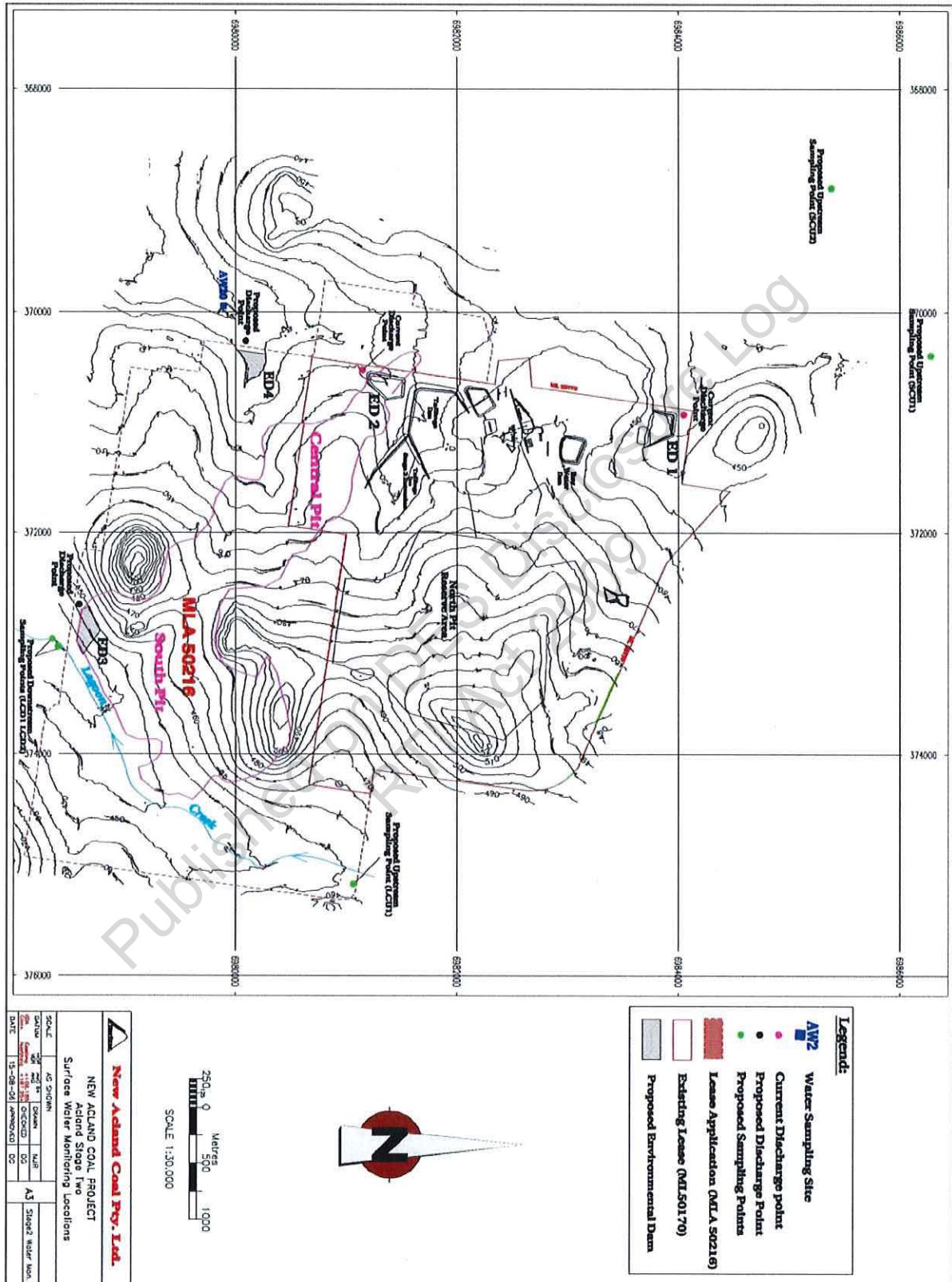
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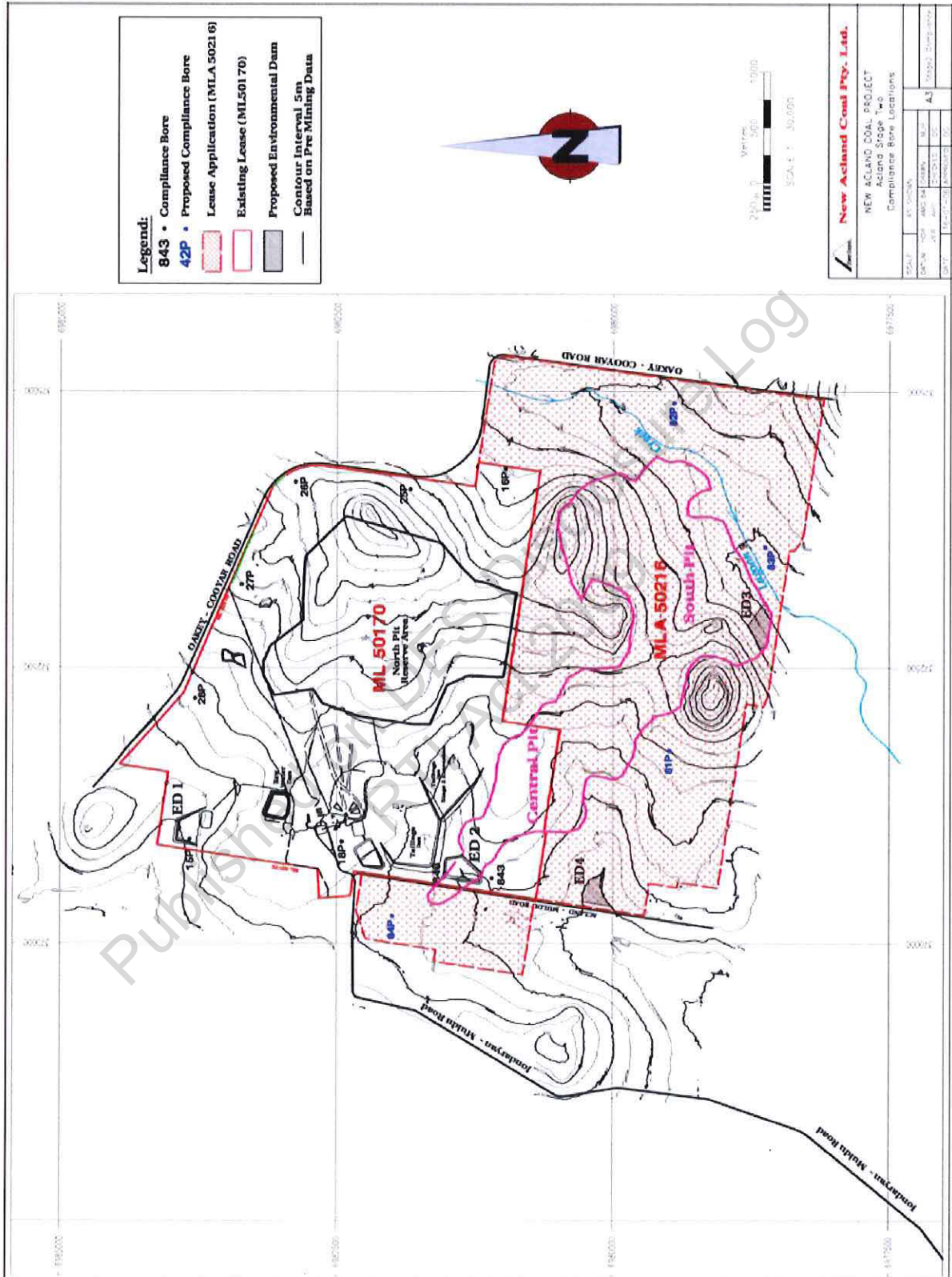
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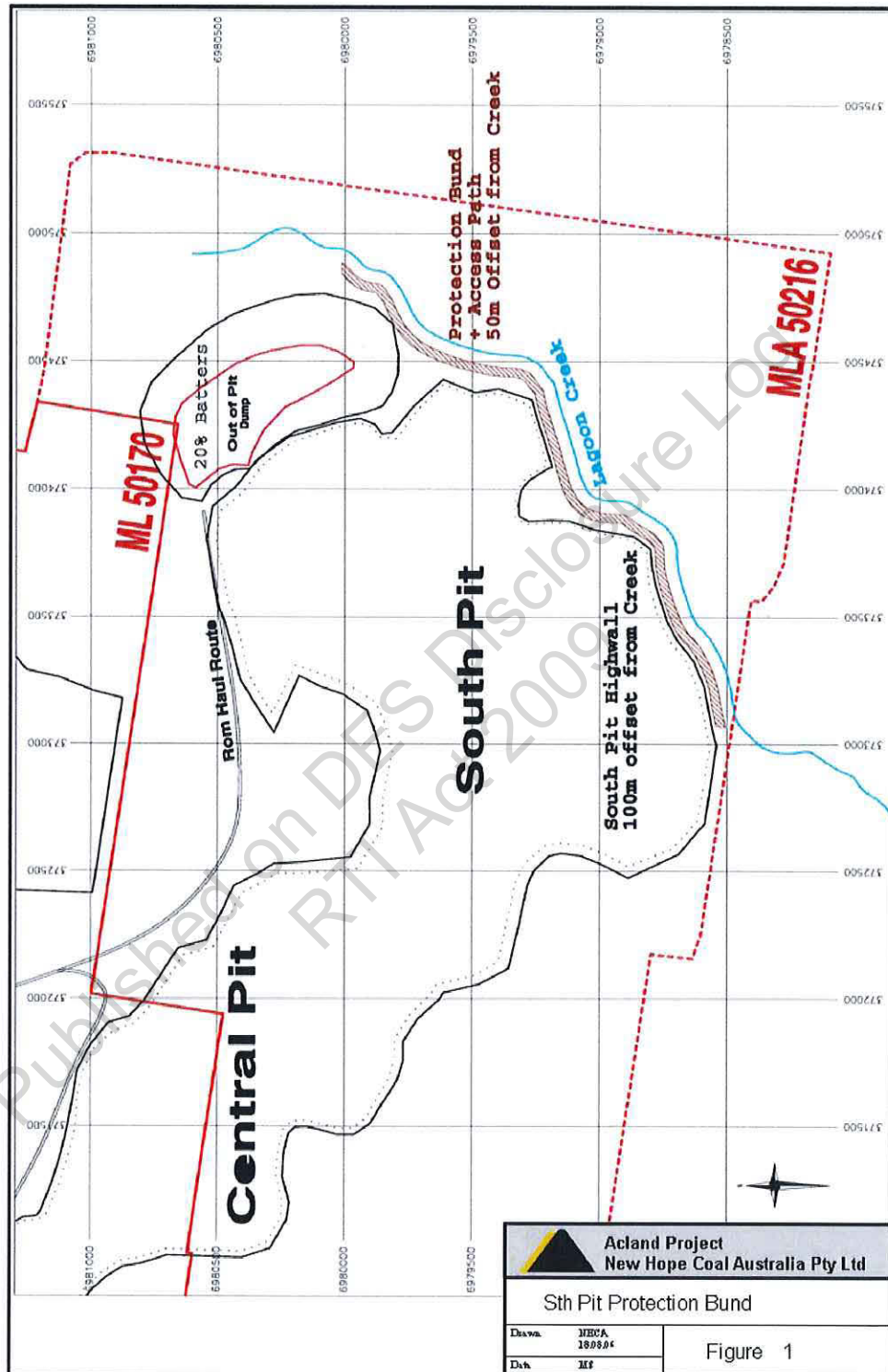
Appendix A Monitoring Maps

Surface Water





Lagoon Creek Bund



Amanda Cleary

From: Genn, David [dgenn@newhopecoal.com.au]
Sent: Tuesday, 29 August 2006 5:06 PM
To: amanda.cleary@epa.qld.gov.au
Subject: RE: draft conditions

Hello Amanda

I wish to advise that New Acland Coal Pty Ltd is satisfied with the proposed conditions of the draft Environmental Authority for the Stage 2 expansion of New Acland Coal Mine (MLA 50216). Thank you for your help, effort and dedication.

Regards

Dave Genn

From: Amanda Cleary [mailto:amanda.cleary@epa.qld.gov.au]
Sent: Tuesday, 29 August 2006 12:56 PM
To: Genn, David
Subject: draft conditions

Hi David

As discussed, I have attached a copy of the draft conditions for ML50170 and ML50216. Could you please confirm that NAC are satisfied with the conditions so Sarah can approve the draft EA tomorrow.

If you have any questions, please don't hesitate to contact me.

Regards

Amanda Cleary

Senior Environmental Officer

Environmental Protection Agency

South West District Office

158 Hume Street.

TOOWOOMBA, QLD 4350

Ph: (07) 4699 4313

Release

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Queensland
Government

Enquiries Amanda Cleary
Telephone (07) 4699 4313
Your reference ML50216 and ML50170
Our reference TWB741

Environmental Protection Agency

Incorporating the
Queensland Parks and Wildlife Service

5 September 2006

Mr Dennis Brown-Kenyon
New Acland Coal Pty Ltd
17 Lowry Street
IPSWICH QLD 4350

Dear Mr Brown-Kenyon

New Acland Coal Pty Ltd – ML50170 and ML50216

I refer to the application made by New Acland Coal Pty Ltd application for a new level 1 non-code compliant environmental authority (MIM800317705) for mining lease ML50216.

Pursuant to section 208 of the *Environmental Protection Act 1994*, the Environmental Protection Agency (EPA) has allowed the application for the environmental authority MIM800317705 for ML50216 to proceed. Please find attached the draft environmental authority for the application.

Consequently, environmental authority MIM800129603 that pertains to ML50170 will now form part of a project and is superseded by environmental authority MIM800317705 under section 155(4)(b) of the *Environmental Protection Act 1994*. As a result, all conditions for mining leases ML50170 and ML50216 are now included in environmental authority MIM800317705.

In accordance with section 251(4)(b) of the *Environmental Protection Act 1994*, objections resulting from the public notification process can not be made about mining activities carried out under the environmental authority before the deciding of this application. Specifically, this means that objections can only be made regarding conditions specific to mining on ML50216 during the public notification process, despite the conditions for ML50170 being contained within the same environmental authority. For the purposes of mining activities on ML50170, MIM800129603 is current pending the approval of ML50216.

Plan of Operations – ML50170 and ML50216

Once the Department of Natural Resources, Mines and Water (NRMW) have granted the tenure for ML50216 please ensure that your Plan of Operations is amended to include both ML50170 and ML50216, and ensure that it is consistent with the new environmental authority conditions.

Should you have any questions in relation to these matters, please contact Amanda Cleary of this office on 4699 4313.

Yours sincerely

sch4 Contrary to public interest

Sarah Fenaughty
District Manager (South West)
Southern Region

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