

LIDDELL COAL OPERATIONS

APPENDIX **F**

Pre-Project Environmental Risk Register

APPENDICES

Liddell Coal Operations DA 305-11-01 Mod 5

Environmental Risk Register (2011)

Aspect	Potential Risk/issue	Existing control	Risk rank	Proposed controls
Groundwater	Mining into the alluvial boundary, resulting in a negative impact on Bowmans Creek.	Previous mapping of alluvial boundary reviewed and updated using LiDAR survey. Existing groundwater monitoring program. Groundwater specialist engaged with extensive experience at LCO.	18 (High)	Specialist groundwater assessment to be conducted. Mine plans to be developed based on the confirmed alluvial boundary from LiDAR survey to ensure suitable setback from the alluvial boundary.
	Unacceptable cumulative impact on regional groundwater.	Existing groundwater monitoring program. Groundwater specialist engaged with extensive experience at LCO and wider region.	18 (High)	Specialist groundwater assessment to be conducted that will assess cumulative impacts.
Ecology	That EEC's (state and/or federally listed) are identified in the project area.	Annual flora and fauna monitoring. Specialist ecologist engaged to conduct ecological assessment of Project Area.	17 (High)	Assessment of requirement for offsets included in scope of work for Ecological Assessment.
Heritage	That significant aboriginal sites are identified within disturbance footprint.	Specialist engaged. Good baseline data from previous Environmental Impact Assessments. Good relationship with Aboriginal stakeholder reference group.	17 (High)	Archaeological assessment to be conducted.
	Unacceptable impacts on existing European heritage site (Chain of Ponds Hotel).	Specialist engaged. Historical data relating to blasting impacts on Chain of Ponds Hotel.	8 (Medium)	European heritage to be included in archaeological assessment. Blasting assessment to also assess potential impacts on Chain of Ponds hotel.

Aspect	Potential Risk/issue	Existing control	Risk rank	Proposed controls
Surface water	Greater than predicted water make, resulting in operational impacts.	Existing surface water monitoring program. Site specific water balance model, and a Greater Ravensworth water balance model. Specialist engaged with extensive experience at LCO.	9 (Medium)	Specialist surface water assessment to be conducted that will include an update of the water balance model to determine predicted water storage required. Results of groundwater assessment will be included in surface water assessment and water balance update.
	Greater than predicted water make, resulting in unplanned discharge.	Ability to send water to surrounding XCN sites. HRSTS licenced discharge point. Water balance model. Surface water specialist engaged, with extensive experience at LCO.	9 (Medium)	Specialist surface water assessment to be conducted that will include an update of water balance model to determine predicted water storage required. Results of groundwater assessment will be included in surface water assessment and water balance update.
	Inadequate water supply to meet predicted demand.	Site specific water balance model, and a Greater Ravensworth water balance model. Specialist engaged to update water balance model.	14 (Medium)	Specialist surface water assessment to be conducted that will include an update of water balance model to incorporate predicted water demand.
Air quality	Unacceptable dust levels on sensitive receptors.	Existing air quality monitoring network. Specialist engaged with extensive experience at LCO to undertake assessment. Real time air quality monitoring undertaken (this is in addition to DA requirements relating to air quality)	8 (Medium)	Air quality impact assessment to be undertaken.
	Unacceptable regional cumulative air quality impacts	Specialist engaged with extensive experience at LCO and regional area.	8 (Medium)	Cumulative assessment to be included in the air quality impact assessment.

Aspect	Potential Risk/issue	Existing control	Risk rank	Proposed controls
Community	That objections to the proposed modification are received.	Proposed modification involves active mining areas moving away from nearest neighbours. No increase proposed to annual production rates, or operating hours.	8 (Medium)	Community consultation will be conducted as part of the EIS preparation.
Waste management	Inadequate disposal of waste, including tailings and rejects.	Internal tailings management strategy. Approved MOP.	5 (Low)	Waste management is to be addressed in EIS.
	Unexpected geochemistry (PAF), resulting in unacceptable water quality impacts.	Long history of mining with no issues relating to PAF material.	5 (Low)	Specialist engaged to address in EIS.
Mine closure	Unacceptable final landform.	Conceptual Mine Closure Plan. Approved MOP, which includes final landform and rehabilitation strategy.	5 (Low)	Final landform to be addressed in EIS.
Land and agricultural capability	Reduction in pre-mining land capability and agricultural suitability	Specialist engaged to assess land capability and agricultural suitability. Rehabilitation plan approved as part of the MOP, which includes commitment to return land to an agricultural land use post mining at LCO.	5 (Low)	Agricultural Impact Statement to be included in EIS. Land capability to also be addressed.
Noise	That noise levels are above acceptable criteria.	Proposed modification involves active mining areas moving away from nearest neighbours. Specialist engaged with extensive experience at LCO. Quarterly attended ongoing noise monitoring undertaken; this is above DA requirement (which is 6 monthly). New fleet in operation with noise attenuation. No expansion is proposed to this current fleet.	5 (Low)	Specialist noise assessment to be conducted.

Aspect	Potential Risk/issue	Existing control	Risk rank	Proposed controls
Blasting/vibration	Unacceptable impacts relating to blasting on sensitive receptors.	Long history of blasting at LCO. Existing extensive blast monitoring network. Specialist engaged with extensive experience at LCO. Proposed modification involves active mining areas moving away from neighbours.	5 (Low)	Blasting and vibration to be included in the specialist noise assessment.
Spontaneous combustion	Unacceptable air quality impacts relating to spontaneous combustion.	Spontaneous combustion management plan.	5 (Low)	Spontaneous combustion to be included in the air quality impact assessment.
Greenhouse gas	Unacceptable greenhouse gas emissions.	Specialist engaged with extensive experience at LCO. No proposed change to mining method, production levels or seams mined.	5 (Low)	Greenhouse gas assessment to be conducted as part of EIS.
Visual amenity	Unacceptable impacts relating to visual amenity on sensitive receptors.	Surrounding comparable land use. Proposed modification involves active mining areas moving away from nearest neighbours. Specialist engaged to undertake visual amenity assessment.	5 (Low)	Visual assessment to be included in the EIS.
Socio economic	Adverse socio-economic impacts such as loss of jobs due to reduced Life of Mine if project approval is not granted.	Consultation with DoPI. Development Approval process. Specialists engaged.	5 (Low)	EIS to address socio economic impacts.
	Unacceptable impacts on the surrounding community as a result of the modification.	No change to workforce proposed. No change to operating hours. No change to annual ROM production. Social Involvement Plan.	5 (Low)	EIS to address socio economic impacts.
Traffic and transport	Unacceptable levels of traffic on local transport routes.	No increase proposed to annual production rates, or operating hours. No proposed changes to traffic and transport.	5 (Low)	Traffic and transport will be addressed in the EIS.