

Section 6

Environmental Commitments

This section provides a tabulated summary of all environmental commitments made by the Proponent in the design of the proposed East Boggabri Coal Mine. These commitments are largely based on the proposed design features, operational safeguards and mitigation measures identified throughout the EIS to ensure the impact of the proposed mine would be minimised and/or within relevant environmental criteria. Where it has been considered relevant, monitoring programs have been proposed throughout the EIS and these are also summarised in this section. The commitments and monitoring programs presented relate to:

- *surface water resources;*
- *groundwater resources;*
- *soils;*
- *flora;*
- *fauna;*
- *Aboriginal heritage;*
- *noise and vibration;*
- *air quality;*
- *coal and coal reject transportation;*
- *visibility;*
- *rehabilitation; and*
- *land uses.*

The section has been prepared in tabular form with reference to the section of the EIS from which the commitment is drawn.



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Table 6.1

Environmental Commitments for the Proposed East Boggabri Coal Mine

Page 1 of 14

COMMITMENT		EIS SECTION	
SURFACE WATER			
Clean Water			
Clean water would be diverted away from disturbed areas, using a series of diversion banks and storage dams.		4.1.4.1	
The capture of clean water would remain with the maximum harvestable right of the Project Site of 47.8ML/year.		4.1.4.2	
Dirty Water			
Vegetation cover (particularly grass) would be retained or re-established over and adjacent to areas of surface disturbance.		4.1.4.1	
Dirty water would be captured and treated so that it could be discharged in accordance with relevant guidelines.		4.1.4.1	
Catchment banks/drains would be constructed to divert potentially sediment-laden waters into sediment basins constructed downstream of these areas of disturbance.		4.1.4.3.3	
Buffer zones of >50m would be maintained between the toe of the overburden emplacements and dirty water management structures to allow for the establishment and maintenance of vegetation.		4.1.4.3.6	
Unless captured water is to be used for dust suppression (not discharged), flocculants would be used in all sediment basins to expedite settlement. Dirty water would only be discharged if it satisfies discharge criteria.		4.1.4.3.3	
Water discharged from the Project Site would meet the parameter values below.		4.1.4.3.3	
Parameter	50th Percentile Limit	70th Percentile Limit	100th Percentile Limit
pH	-	-	6.5 to 8.5
Suspended Solids (mg/L)	20	35	50
Grease and Oil (mg/L)	-	-	10
Internal Roads			
The mine access road would be aligned such that only a single crossing of a central ephemeral watercourse is required and a concrete causeway be constructed at this point to traverse the watercourse.		4.1.4.3.4	
The access road would be constructed with an infall of at least 1% (V:H of 1:100) over its entire length so that any water that falls onto the road would be directed towards the overburden emplacements and open cut area.		4.1.4.3.4	
The road would be sealed between Goonbri Road and the mine facilities area reducing the potential for the generation of sediment-laden water.		4.1.4.3.4	
External Roads			
The road within the northern section of the proposed transport route would be constructed at ground level, without drains either side, to allow for low velocity sheet flow of water over the road.		4.1.4.3.4	
Contaminated Water			
All water from wash-down areas and workshops would be directed to oil separators and containment systems for decontamination of hydrocarbons.		4.1.4.3.5	
All storage tanks would be bunded with an impermeable surface and a capacity to contain a minimum 110% of the largest storage tank capacity.		4.1.4.3.5	



Table 6.1

Environmental Commitments for the Proposed East Boggabri Coal Mine

Page 2 of 14

COMMITMENT	EIS SECTION
SURFACE WATER (cont'd)	
Contaminated Water (cont'd)	
All hydrocarbon products would be securely stored.	4.1.4.3.5
With the exception of less mobile mining equipment which would be refuelled within the open cut area, designated areas would be allocated for refuelling and minor maintenance work and their use enforced by mine management.	4.1.4.3.5
Contingency Measures	
In the unlikely event that monitoring identifies that the quality of water discharging from the various sediment basins exceeds nominated criteria, the following measures would be adopted. <ul style="list-style-type: none"> • Use of additional flocculants. • Enlargement of sediment basins or construction of additional sediment basins. 	4.1.5
In the event of a major hydrocarbon spill, one or a combination of the following measures would be implemented. <ul style="list-style-type: none"> • Recovery of as much of the spilled material and contaminated soils as possible and placement on an impermeable surface for later remediation and/or transport to an approved waste depot. • Excavate one or more holes within or around the spill site to create a hydraulic gradient so that water and the spilled material would accumulate within the holes thus enabling pumping out. • Monitor groundwater for any contamination and treat appropriately. 	4.1.5
Final Landform Design	
The final landform would be constructed with only water falling on the upper surface of the rehabilitated overburden emplacements directed to the final void.	4.1.7.1
Monitoring	
All sediment basins would be regularly inspected and cleaned of consolidated sediment material when their capacity is reduced by 20% as indicated by marker posts installed within each sediment basin. All other water management and storage structures and controls would be inspected at least monthly with maintenance work undertaken immediately in the event any of these are not functioning adequately.	4.1.7.1
Record the volume of water contained within each storage dam at the beginning of a nominated period (to coincide with the AEMR), at the end of this 12 month period, as well as the volume of water pumped from each storage dam for use on the Project Site.	4.1.7.2



Table 6.1

Environmental Commitments for the Proposed East Boggabri Coal Mine

Page 3 of 14

COMMITMENT	EIS SECTION
GROUNDWATER	
Monitoring	
Regular testing for contamination by acid or salt generated by overburden/interburden would be undertaken to ensure the placed material continues to pose no contamination risk.	4.2.4
Monitoring the impacts of the proposal on the local groundwater table would be undertaken at a total of six existing and constructed bores.	4.2.6
Monitoring of each bore would include: <ul style="list-style-type: none"> • pH – to assess if any increase in acidity occurs due to the disturbance of sulphides within the coal measures; • electrical conductivity (salinity) – to assess if infilling of the mining void with mine overburden results in any changes to salinity; • total petroleum hydrocarbons – to assess if any of these contaminants (typically oils and diesel) used during mining have polluted the groundwater; • heavy metals – to assess if any of these contaminants which may be associated with the use of waste oils have polluted the groundwater; and • major cations and anions – to assess overall changes in groundwater chemistry. 	4.2.6
Contingency Measures	
Should monitoring data show that any groundwater quality impact assessment criteria are exceeded, the data would be statistically analysed to assess if the impacts are due to natural variations or the activities of the mine. If the change is considered a result of mining, the impacted bore would be re-sampled. If the exceedance is still observed, the following measures would be undertaken. <ul style="list-style-type: none"> (i) Install additional bores around the area to assess the extent of the impact and conduct a risk assessment to assess the risk to the nearest groundwater user. If this risk is significant then. (ii) Assess remedial options such as groundwater pumping and treatment or hydraulic isolation. (iii) Undertake remediation if necessary. 	4.2.7
SOILS	
Soil Stripping	
Topsoil would be stripped from SMU 1, 3 and 4 to a depth of 15cm and SMU 2 to a depth of 10cm.	
Topsoil from SMU 3 and SMU 4 would be directly transferred to areas on the "Tarrawonga" and "Kyalla" properties (in accordance with lease agreements) or transported to the Project Site or the Whitehaven Coal Mine for use in ongoing rehabilitation activities.	4.3.4
Subsoil material stripped from SMU 2 would be mixed with interburden placed within the overburden emplacement.	4.3.4
The limited subsoil from SMU 3 proposed to be stripped would be transferred for miscellaneous construction works on the "Tarrawonga" and "Kyalla" properties as per the agreements reached.	4.3.4



Table 6.1

Environmental Commitments for the Proposed East Boggabri Coal Mine

Page 4 of 14

COMMITMENT	EIS SECTION
SOILS (cont'd)	
Soil Stockpiling	
During the first 18 to 24 months of mine operations, topsoil from SMU 1 and SMU 2 would be stockpiled for later retrieval and spreading over specific areas of the final landform. Beyond the initial 24 months, it is proposed that the Project Site topsoil would typically be directly transferred.	
Topsoil stockpiles would not exceed 2m in height and, where practical, be maintained as windrows in preference to larger structures.	4.3.4
Any stockpiles retained for over three months would be seeded with a non-persistent cover crop.	4.3.4
Subsoil from SMU 1 would be stripped and stockpiled for use in progressive rehabilitation. Beyond 24 months of mine commencement, subsoil would typically be directly respread after stripping.	4.3.4
Where subsoil stockpiles exceed 3m in height, they would be provided with a cover of topsoil and be immediately seeded with a non-persistent cover crop.	4.3.4
Soil Inventory	
An inventory of soil resources present on the Project Site both in stockpiles and awaiting stripping would be maintained and regularly reconciled with rehabilitation requirements.	4.3.4
FLORA	
Project Site Layout and Design	
Out-of-pit overburden emplacements would avoid several stands of remnant native vegetation (Community 2 and Community 6).	4.4.3.4.2
The mine access road would minimise disturbance to existing native vegetation on the Project Site, particularly Community 2.	4.4.3.4.2
The proposed transport route would avoid disturbance to stands of native trees (Community 9) at the intersection with Goonbri Road, the crossing of Bollol Creek (Gins Gully) and a stand of trees approximately 250m south of Bollol Creek (Gins Gully).	4.4.3.4.2
General Safeguards	
The extent of clearing undertaken ahead of mining activities would be minimised and consistent with operational requirements.	4.4.3.4.3
Areas to be cleared would be marked.	4.4.3.4.3
Clearing and topsoil stripping would be undertaken in campaigns on an as-needs basis.	4.4.3.4.3
Where practicable, soil material and biomass would be directly transferred between the source and intended final destination beyond the first 18 to 24 months of mining.	4.4.3.4.3
Disturbed areas of the Project Site would be progressive rehabilitated.	4.4.3.4.3
Any additional internal roads would be constructed well away from stands of native vegetation.	4.4.3.4.3
Noxious weeds would be controlled at all times.	4.4.3.4.3



Table 6.1

Environmental Commitments for the Proposed East Boggabri Coal Mine

Page 5 of 14

COMMITMENT	EIS SECTION
FLORA (cont'd)	
General Safeguards (cont'd)	
A total of 167ha of the final landform would be designated for replanting of native tree, shrub and grass species.	4.4.3.5
Fencing would be erected to exclude grazing from the "Thuin and "Forest View" properties.	4.4.3.5
A 50m buffer would be maintained between Project Site activities and the eastern boundary of the Project Site, allowing for the creation of a linkage between native vegetation to the north and remnant stands within the "Thuin" property.	
FAUNA	
Removal of native vegetation, including regenerating White Cypress Pine patches, would be kept to a minimum.	4.5.6.2
The existing remnant stand of <i>Casuarina cristata</i> (Belah Community) would be preserved within the fenced "Thuin" property to allow the patch to regenerate as a food resource for the Glossy Black Cockatoo.	4.5.6.2
The "Thuin" and "Forest View" properties would be de-stocked and fenced improving the habitat patch quality for Grey-crowned Babblers in those areas of Project Site indirectly affected by the proposal.	4.5.6.2
Where possible, tree removal, especially the larger mature trees, would be carried out in late spring and early autumn to avoid impact on birds nesting over spring and bats occupying these during winter.	4.5.6.2
Inspections of mature trees for nesting birds and roosting bats would be undertaken prior to each clearing campaign where mature trees with hollows are to be removed.	4.5.6.2
If located, nesting and roosting hollows, as well as nests, used by listed threatened species, would, if possible, be relocated to appropriate locations nearby.	4.5.6.2
No felled timber within the Project Site would be burnt. Rather: <ul style="list-style-type: none"> • all stumps would be buried within the overburden emplacement; • all branches and tree trunks <300mm in diameter or containing hollows would be placed over areas designated for the re-establishment of native woodland; and • large diameter logs not containing hollows would be sold and/or used for farm-related activities. 	4.5.6.2
Areas identified for biodiversity offsets in the final land use would be fenced off as soon as practicable to allowed the local native vegetation community with a grassy understorey to regenerate.	4.5.6.2
Post-mining rehabilitation of the open cut area would commence as soon as possible to re-establish the connectivity of habitat corridors from Leard State Forest to adjoining vegetation remnants.	4.5.6.2
The southern emplacement would be rehabilitated with native tree, shrub and grass species.	4.5.6.2
A vegetation management plan would be prepared for those areas of the Project Site not used for ongoing grazing and cropping.	4.5.6.2



Table 6.1

Environmental Commitments for the Proposed East Boggabri Coal Mine

Page 6 of 14

COMMITMENT	EIS SECTION
ABORIGINAL HERITAGE	
An application for a Section 90 Permit under <i>National Parks and Wildlife Act 1974</i> would be made to disturb the identified sites NASO 1 and NISO 1.	4.6.5
Artefacts identified at sites NASO 1 and NISO 1 would be salvaged and relocated to the Cumbo Gunerah Keeping Place.	4.6.5
Disturbance to all other sites would be avoided with these retained in situ.	4.6.5
Aboriginal monitors would be invited to site for all soil stripping and ground disturbance activities.	4.6.5
Scarred tree NST1 would be enclosed within a fenced area with the location and description “Culturally Sensitive Area – Aboriginal Scarred Tree” marked on all mine plans.	4.6.5
All employees would be made aware of their responsibility under the <i>National Parks and Wildlife Act 1974</i> .	4.6.5
NOISE AND VIBRATION	
Construction Noise	
Under inversion and/or northeast wind conditions, construction activities would be restricted to only one of the more noisy activities eg. tree felling and topsoil stripping.	4.8.4
Noisier activities would only occur simultaneously during calm conditions or when wind is outside the northwest quadrant.	4.8.4
A 15m acoustic bund would be constructed at the leading edge of the southern emplacement during calm conditions or when winds are outside the northwestern quadrant.	4.8.4
Operational Noise	
Two active overburden emplacement areas would be maintained such that there would always be an out-of-pit and in-pit emplacement area available.	4.8.4
Placement of overburden on the northern and southern emplacements (particularly the southern emplacement) would be avoided during night-time operations.	4.8.4
A 15m acoustic bund would be constructed at the leading edge of the southern emplacement during non-adverse meteorological conditions.	4.8.4
Overburden would be placed within the in-pit emplacement during adverse meteorological conditions, behind the 15m high acoustic bund of the southern emplacement during calm conditions and on the acoustic bund during favourable meteorological conditions.	4.8.4
Should sufficient favourable conditions not be available to allow the construction of the 15m acoustic bund of the southern emplacement, the Proponent would use smaller (and quieter) dump trucks.	4.8.4
Mid-high frequency broadband reverse beepers would be fitted to mobile equipment, decreasing sound power levels by 2dB(A) to 3dB(A).	4.8.4
A Noise Management Protocol (NMP) would be prepared by the Proponent prior to the commencement of mining activities.	4.8.4
Traffic Noise	
The on-site road network would be well maintained to limit body noise from empty trucks travelling on internal roads.	4.8.4
All truck drivers would be instructed to avoid the use of engine brakes when approaching the mine site entrance and to be mindful of noise when accelerating.	4.8.4



Table 6.1

Environmental Commitments for the Proposed East Boggabri Coal Mine

Page 7 of 14

COMMITMENT	EIS SECTION
NOISE AND VIBRATION (cont'd)	
General Noise	
Equipment with lower sound power levels would be used in preference to more noisy equipment.	4.8.4
All equipment used on-site would be regularly serviced to ensure the sound power levels remain at or below nominated levels used to predict noise generation of the proposal.	4.8.4
Strict adherence to hours of operation, including transport activities would be enforced by Mine Management.	4.8.4
The Proponent would maintain dialogue with the residents of surrounding properties to ensure any concerns are addressed.	4.8.4
Blasting/Vibration	
Where practicable, the orientation of the blast face would be away from, or at an oblique angle, to nearby residences.	4.9.4.2
Blasthole spacing would be implemented in accordance with blast design.	4.9.4.2
Burden distance and stemming length would be carefully selected and then implemented precisely.	4.9.4.2
Appropriate materials, eg. < 20mm aggregates, would be used for stemming.	4.9.4.2
Blast design would ensure that charges detonate in the correct sequence and with inter-row delays that provide good progressive release of burden.	4.9.4.2
The maximum weight of explosive detonated in a given delay period (the maximum instantaneous charge) would be limited to conservative and proven levels.	4.9.4.2
The Proponent would follow the following blast notification procedures. <ul style="list-style-type: none"> • Prior notification of the proposed blasting schedule would be supplied to residents within 3km of the blast. Documentary evidence of the notification and the results of the blast monitoring, would be retained at the Production Manager's office. • The Company would erect a blast notice board near the mine entrance on Goonbri Road. 	4.9.4.5
Monitoring	
A noise monitoring program would be established prior to the commencement in consultation with the DEC. Two forms of monitoring are proposed. <ul style="list-style-type: none"> (i) Noise Model Validation. (ii) Ongoing compliance monitoring. 	4.8.6
Monitoring would also be considered at any residence whose occupants consider noise levels attributable to the mine development are excessive.	4.8.6
The results of monitoring would be provided to the DEC/DIPNR in the form of an annual report with refinements to safeguards and noise controls documented.	4.8.6
Blast vibration / airblast overpressure monitors would be positioned nominally at the "Bollol Creek Station", "Templemore" and "Tarrawonga" residences. Additional monitors would be installed as required.	4.9.6
Following each blast, the blast monitors would automatically forward the monitoring results via pager to mine personnel for review and reporting. All blast monitoring data would be presented in each AEMR.	4.9.6



Table 6.1

Environmental Commitments for the Proposed East Boggabri Coal Mine

Page 8 of 14

COMMITMENT	EIS SECTION
AIR QUALITY	
Vegetation Clearing and Soil Stripping	
Cleared trees and branches would be retained for use in stabilising slopes identified for rehabilitation with native woodland communities.	4.10.5.2
Where practicable, soil stripping would be undertaken at a time when there is sufficient soil moisture to prevent significant lift-off of dust.	4.10.5.2
The Proponent would avoid stripping soil in periods of high winds.	4.10.5.2
Dust suppression by water application would be used to increase soil moisture should stripping occur during periods of high wind or low soil moisture	4.10.5.2
Drilling and Blasting Activities	
The drill rig would utilise water injection or alternatively, be fitted with dust collectors.	4.10.5.2
Blast hole stemming would be used to prevent venting of explosion gases.	
Conducting blasting both before the establishment, and after the break-up of low-level atmospheric temperature inversions.	
Overburden Ripping and Placement	
Ripping of softer overburden material would be avoided during periods of high wind.	4.10.5.2
Coal Mining	
Low moisture coal would be sprayed with water prior to excavation to raise moisture content to >5.5%.	4.10.5.2
Road and Hardstand Area Construction	
Clearing ahead of construction activities would be minimised.	4.10.5.2
Cleared areas would be watered regularly during construction.	
Coal Processing Area	
Water would be applied to the coal at the feed hopper, crusher and at all conveyor transfer and discharge points.	4.10.5.2
All conveyors would be fitted with appropriate cleaning and collection devices to minimise the amount of material falling from the return conveyor belts.	
Some flexibility would exist to temporarily cease operation in the event of protracted dry periods, high winds, significant dust generation and dispersal towards the surrounding residences.	
Wind Erosion of Open Pit and Stockpiles	
To minimise the extent of clearing/site preparation in advance of mining.	4.10.5.2
Clear definition of any access or haulroads and the restriction of vehicles and equipment to those roads.	
Routine application of water with or without chemical dust suppressants.	
Progressive rehabilitation of areas of disturbance including topsoil and subsoil stockpiles.	
Installation of bund walls and windbreaks as required.	



Table 6.1

Environmental Commitments for the Proposed East Boggabri Coal Mine

Page 9 of 14

COMMITMENT	EIS SECTION
AIR QUALITY (cont'd)	
Internal Transport	
The road for the transportation of coal product between the processing area and mine entrance would be sealed.	4.10.5.2
Internal haul roads would be regularly watered. The frequency of water application to the various internal haulroads and exposed surfaces would be dependent on climatic factors.	
Earthmoving equipment and on-site vehicles would: <ul style="list-style-type: none"> • be fitted with exhaust controls which satisfy NSW DEC emission requirements; • be properly maintained and any mobile equipment which does not comply with NSW DEC guidelines would be removed; and • have the exhausts of all equipment directed upwards or to the side so as not to impinge on the ground and cause dust lift-off. 	4.10.5.3
External Transport	
Coal would not be loaded above the truck body sides, thereby preventing the accidental loss of coal from the truck during transportation.	4.10.5.2
All trucks carrying product coal from the mine would be covered with approved covers and the tailgates securely fixed to prevent windblown dust emission or spillages.	
Blasting	
The following factors contributing to non-ideal detonation behaviour and higher emission (principally NO ₂) concentrations, would be avoided whenever possible: <ul style="list-style-type: none"> • weak overburden which reduces the necessary explosive confinement, this would be ripped in preference to blasting; • water infiltration; • long explosive columns; and • explosive pre-compression, caused by hole-to-hole shock propagation due to wet overburden and clay veins. 	4.10.5.3
Monitoring	
It is proposed to monitor 24 hour concentration of PM ₁₀ adjacent to at least one specified assessment location.	4.10.7
It is proposed to monitor dust deposition adjacent to at least three of the specified assessment location.	4.10.7
Monitoring would be undertaken in accordance with the DEC document “ <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> ”, 2001 and with specified Australian Standards.	4.10.7
A QRAE Plus or similar multi-gas monitor with data logging capability would be used to record NO ₂ concentrations for initial blasting events at the “Bollol Creek Station” residence.	4.10.7



Table 6.1

Environmental Commitments for the Proposed East Boggabri Coal Mine

Page 10 of 14

COMMITMENT	EIS SECTION
PRODUCT TRANSPORTATION	
Design Features	
The intersections constructed with Goonbri Road, Manilla Road and Hoads Lane would conform with the appropriate RTA standards (see Section 2.8.3.2).	4.13.3.1
All roads to be constructed or incorporated into the proposed transport route would be sealed. At each intersection with existing public roads, the public road would be sealed for a distance of 50m on both sides of the intersection (see Section 2.8.3.3).	4.13.3.1
Design and engineering details for each of the above would be submitted to the relevant Council and/or the RTA for approval prior to construction.	4.13.3.1
Operational Safeguards	
All transport activities would be undertaken strictly in accordance with the development consent and environment protection licence.	4.13.3.2
Deliveries of any “oversize” loads would be undertaken in accordance with RTA and Council restrictions on transport hours and safety/warning requirements.	4.13.3.2
The despatch of product coal from the mine would be restricted to the hours of: <ul style="list-style-type: none"> • 7.00am to 9.15pm Monday to Friday; and • 7:00am and 5:15pm Saturday. Early morning truck movements would be staggered to limit the number of empty truck movements along the proposed transport route before 7.00am.	4.13.3.2
A covered load policy would be applied to all trucks transporting coal from the mine or backloading coarse reject from the Whitehaven CHPP.	4.13.3.2
Ensure all trucks transporting coal are well maintained and that the drivers act in a courteous manner at all times. Trucks assessed to be unroadworthy or not carrying covers would not be loaded.	4.13.3.2
All drivers would be required to operate in accordance with a Transport Policy and Code of Conduct. The Policy and Code would apply to all employee and contractor-owned vehicles.	4.13.3.2
The requirement(s) identified on traffic signs erected on the approaches to each intersection along the proposed transport route would be strictly adhered to.	4.13.3.2
Landowners and surrounding residents would be contacted prior to initial construction of the road, or upgrading works to inform each of the operational safeguards to be implemented and discuss the adoption of any additional safeguards proposed by the landowner/resident.	4.13.3.2
Routine liaison with local residents to ensure their satisfaction with all aspects of the transportation of coal along the transport route.	4.13.3.2
Ongoing Road Management	
An agreement would be reached, prior to the determination of the proposal, between the Proponent and Narrabri and Gunnedah Shire Councils for a proportional contribution to the maintenance of all affected public roads.	4.13.3.3



Table 6.1

Environmental Commitments for the Proposed East Boggabri Coal Mine

Page 11 of 14

COMMITMENT	EIS SECTION
VISIBILITY	
The Project Site would be progressively rehabilitated such that cleared or non-vegetated areas would be minimized. Non-persistent cover crops would be sown immediately over areas to be rehabilitated prior to the establishment of the designated vegetation type.	4.11.3
A 15m high bund wall would be constructed at the leading edge of the southern emplacement and would be immediately seeded with a non-persistent cover crop.	4.11.3
Overburden emplacements themselves have been designed to replicate existing topographic features.	4.11.3
The extent of land disturbance / clearing in advance of mining would be minimised.	4.11.3
Progressive rehabilitation of all disturbed areas within the Project Site would be undertaken.	4.11.3
The mine and associated areas of disturbance would be maintained in a clean and tidy condition at all times.	4.11.3
A maximum of seven lighting plants would be used for night-time activities and would have a combined illumination of 4 060 000 lumens.	4.11.3
Floodlights would be positioned and directed to minimise emissions and used only when required. Where the use of floodlights are required in the open cut, on the overburden emplacements or at the processing plant, they would be directed to the west or northwest, ie. away from the adjacent residences.	4.11.3
REHABILITATION	
<p>The Proponent's objectives are as follows.</p> <ul style="list-style-type: none"> • To provide a stable and safe landform commensurate with surrounding agricultural and nature conservation/land uses. • To ensure the created landforms blend with the surrounding landform so as to appear as a natural extension of the existing hills. • To revegetate with native tree, shrub and grass species and/or pasture species comparable with the existing/pre-existing vegetation communities • To re-instate areas of agricultural land on the "Nagero" property comparable with that disturbed during the mine life. 	2.13.2
The majority of slopes within the final void would approximate 10° and be formed through a combination of highwall blasting, pushing and backfilling.	2.13.3
The base of the final void would be up to 50m below the rim of the final void (approximately 265m AHD) with a minor water storage created (4-5m deep).	2.13.3
The final landform would incorporate a series of contour banks. The spacing and ultimate dimensions of these structures would be a function of the final slopes and catchment areas.	2.13.3



Table 6.1

Environmental Commitments for the Proposed East Boggabri Coal Mine

Page 12 of 14

COMMITMENT	EIS SECTION
REHABILITATION (cont'd)	
Decommissioning Activities	
Following the removal of the coal processing plant, the landform within the coal processing area would be re-profiled.	2.13.4
A thorough inspection of the soil directly below and surrounding fuel storage and refuelling areas would be conducted to ensure any contaminated soil is identified.	2.13.4
Small volumes of contaminated soil would be treated on-site by ripping, spreading and allowing to naturally remediate. Larger volumes of soil would be excavated and removed to a licensed disposal facility.	2.13.4
Should a decision be made for the mine access road to be rehabilitated in part or full, the rehabilitation methods would be all or a combination of the following. <ul style="list-style-type: none"> • The road would be closed with a lockable gate to prevent access from Goonbri Road. • The bitumen seal would be ripped and removed by truck and disposed at a licensed landfill facility. • All compacted sub-base and base-coarse material would be ripped, excavated and disposed of in the final mine void. • Topsoil would be respread and re-seeded with pasture species or native tree and shrub species, depending on the land use designated for that section of the road. 	2.13.4
Final Land Use	
Areas of the Project Site on the “Nagero” property would be rehabilitated to enable continuation of agricultural activities.	2.13.5
Areas of the Project Site on the “Thuin” and “Forest View” properties would be designated for the re-establishment of native vegetation and fauna habitat or allowed to naturally regenerate through de-stocking and stock exclusion.	2.13.5
The Proponent would routinely liaise with the local DIPNR, Soil Services, DEC (EPA), and Narrabri Shire Council officers when planning and/or undertaking rehabilitation activities.	2.13.5
Rehabilitation Procedures	
Wherever practicable, any friable or weathered materials are placed below the subsoil and topsoil layers, thereby avoiding the exposure of large rocks on the final surface.	2.13.6.2
Placement of coarse reject material within the in-pit emplacement would be subject to approval under Section 126 of the Coal Mining Regulation Act 1982. It is proposed placement would be within defined layers with each layer covered by inert material.	2.13.6.2
Soil would be placed on the shaped landform in the reverse order to stripping, ie. subsoil then topsoil, and be preferentially sourced from active stripping areas or from previously established stockpiles.	2.13.6.2
Subsoil layers would be spread on an even but roughened surface which has been ripped along the line of the contour to break any compacted and/or smooth surfaces.	2.13.6.2
Felled tree trunks and branches <300mm diameter and other smaller vegetative debris would be spread over those areas designated for native woodland re-establishment	2.13.6.2



Table 6.1

Environmental Commitments for the Proposed East Boggabri Coal Mine

Page 13 of 14

COMMITMENT	EIS SECTION
REHABILITATION (cont'd)	
Rehabilitation Procedures (cont'd)	
Contour banks would be progressively installed on the rehabilitated landform.	2.13.6.3
Flumes would be constructed on the slopes of the final landform to assist in controlling the flow of water on the slopes of the rehabilitated overburden emplacements.	2.13.6.3
The topsoiled surface of areas designated for post-mining agricultural land use would be sown with a mixture of appropriate pasture species.	2.13.6.2
Topsoiled surfaces of areas designated for post-mining nature conservation land use would be initially stabilised with a non-persistent cover crop. A selection of locally occurring tree species would then be planted.	2.13.6.2
Tree seedlings would be propagated from locally-collected seed.	2.13.6.2
Seed of locally occurring shrub species would also be broadcast to encourage the re-establishment of the shrub layer.	2.13.6.2
All areas identified for native woodland re-establishment would be fenced and all stock excluded.	2.13.6
On completion of all mining-related and associated activities, the Proponent would: <ul style="list-style-type: none"> • remove, rip or otherwise rehabilitate all on-site roads not required by the landowners for the ongoing management of their landholdings; 	2.13.6.4
<ul style="list-style-type: none"> • rip the compacted rock on hardstand areas, shape the area to the desired landform, replace the previously stockpiled sub-soil and topsoil and apply seed and fertilise; • install appropriate drainage controls; and • re-install fencing and gates at appropriate locations. 	
Appropriate noxious weed control or eradication methods and programs would be undertaken in consultation with DPI (Agriculture) and/or the local Noxious Weeds Inspector.	2.13.6.6
Offset Strategy	
A 50m buffer between the southern emplacement and the Project Site boundary would be maintained allowing for a linkage between Leard State Forest and vegetation to the south and southwest of the mine area.	2.13.6.7
Areas of the Project Site on the "Thuin" and "Forest View" properties would be de-stocked and fenced and allowed to regenerate naturally.	2.13.6.7
Of those areas disturbed by the proposal, 268ha or 81% of the total area of disturbance would be rehabilitated using native vegetation.	2.13.6.7
The Proponent would develop a Vegetation and Biodiversity Management Plan (VBMP) for the proposed East Boggabri Coal Mine to outline how the proposal would ensure "no net loss" of biodiversity value.	2.13.6.7



Table 6.1

Environmental Commitments for the Proposed East Boggabri Coal Mine

Page 14 of 14

COMMITMENT	EIS SECTION
REHABILITATION (cont'd)	
Monitoring and Maintenance	
The Proponent would undertake regular inspections of rehabilitation with rehabilitation success assessed against the short and long term rehabilitation objectives.	2.13.6.5
Aspects of rehabilitation to be monitored would include: <ul style="list-style-type: none"> evidence of any erosion or sedimentation from areas with establishing vegetation cover; success of initial grass cover establishment; success of tree and shrub plantings; adequacy of drainage controls; and general stability of the rehabilitation site 	2.13.6.5
Where rehabilitation success appears limited, maintenance activities would be initiated. These may include: <ul style="list-style-type: none"> re-seeding and where necessary, re-topsoiling and/or the application of specialised treatments; tree guards would be placed around planted seedlings should grazing by native animals (or domestic stock) be excessive; and if drainage controls are found to be inadequate or compromised by grazing stock or wildlife, these would be replaced and/or temporary fences installed to exclude grazing. 	2.13.6.5
Maintenance would continue until such time as the long term rehabilitation objectives are met.	2.13.6.5
LAND USES	
A buffer of 50m would be maintained along the eastern and southern Project Site boundaries to minimise impact on the "Templemore" and "Bollol Creek Station" properties.	4.14.3.1
To compensate the owners of "Tarrawonga" and "Kyalla" for use of small sections of their properties for the proposed transport route: <ul style="list-style-type: none"> topsoil stripped along the route would be provided for use on other areas of these properties; suitable subsoil would also be made available for additional construction activities; and the proposed transport route would be fenced along its entire length to prevent heavy vehicle/stock interaction. 	4.14.3.1
The Proponent would keep surrounding landholders and residents informed of the proposal at all times and provide appropriate forums for complaints and suggestions to be made.	4.14.4

