

# ENVIRONMENTAL ASSESSMENT

Duralie Extension Project

## SECTION 7 STATEMENT OF COMMITMENTS



## TABLE OF CONTENTS

SOC1	STATEMENT OF COMMITMENTS	SOC-1
SOC1.1	PROPOSED PROJECT ENVIRONMENTAL MANAGEMENT, MONITORING AND REPORTING	SOC-1
SOC1.2	SPECIFIC ENVIRONMENTAL COMMITMENTS	SOC-1

## LIST OF TABLES

Table SOC-1	Summary of Project Management, Monitoring and Reporting
Table SOC-2	Summary of the Offset Proposal

## LIST OF FIGURES

Figure SOC-1	Project Extension to the Environmental Monitoring Network
Figure SOC-2	Duralie Extension Project Offset Area

## SOC1 STATEMENT OF COMMITMENTS

In accordance with the Director-General's Environmental Assessment Requirements, this section provides a statement of Duralie Coal Pty Ltd's (DCPL's) commitments in relation to the Duralie Extension Project (the Project).

### SOC1.1 PROPOSED PROJECT ENVIRONMENTAL MANAGEMENT, MONITORING AND REPORTING

The environmental assessment provided in Section 4 in the Main Report of the EA outlines proposed environmental management and offset measures for the Project including those relevant to land resources, groundwater, surface water, noise, blasting, air quality, greenhouse gas emissions, terrestrial and aquatic ecology, Aboriginal heritage, non-Aboriginal heritage, road transport, socio-economics, hazard and risk, and visual character. Where relevant, environmental monitoring proposals are also provided in Section 4.

DCPL will review and revise the existing management and monitoring plans listed in Table SOC-1 to incorporate the Project. Table SOC-1 also lists new management and monitoring plans that will be prepared for the Project.

The existing monitoring programme at the Duralie Coal Mine (DCM) will be augmented to address additional Project disturbance areas and extensions. Figure SOC-1 shows the location of environmental monitoring sites proposed to be maintained for the Project.

The Project will be considered by the relevant regulatory authorities during their assessment of the Project. It is recognised that changes to the Project environmental management, monitoring and reporting proposals contained in this Environmental Assessment (EA) may be considered necessary during regulatory authority assessment of this EA. Environmental management, monitoring and reporting will be conducted in accordance with finalised Project Approval conditions, with the final monitoring details (locations, parameters and frequencies) to be provided in the relevant management plans/monitoring programmes.

## SOC1.2 SPECIFIC ENVIRONMENTAL COMMITMENTS

Environmental mitigation measures to be implemented for the Project are described in Section 4. Key commitments include:

- provision of alternative landholder access as a result of local road closures;
- design, construction and management of the post-mining alignment of Coal Shaft Creek;
- management of on-site waters;
- management and mitigation of operational noise;
- management of DCM run-of-mine (ROM) coal rail transport noise;
- monitoring of weather conditions during operational noise compliance monitoring;
- management and mitigation of potential blasting impacts; and
- provision of ecological offset measures for the Project.

These are described further below.

### **Alternative Landholder Access**

The entire length of Cheerup Road and approximately one kilometre of Durallie Road (within Mining Lease Application 1) will be closed as a result of the Project. The formal process for road closure will be conducted in accordance with the requirements of the Great Lakes Council (GLC).

These local road closures will result in the loss of existing public road access for one privately owned lot.

### **DCPL Commitment**

DCPL will negotiate an agreement or alternatively provide an alternative access route to the access-affected property in consultation with the relevant landholder and the GLC.

### **On-site Water Management**

The original proposal for the Project incorporated a controlled release of excess mine water to the Mammy Johnsons River and additional irrigation areas to the east of the Mammy Johnsons River.

During the assessment of the Project water balance and refinement of engineering and mine planning it was determined that an off-site controlled mine water release and irrigation areas to the east of Mammy Johnsons River was not required.

**Table SOC-1**  
**Summary of Project Management, Monitoring and Reporting**

<b>Proposed Management, Monitoring and Reporting</b>	<b>Key EA Sections and Appendices</b>
<b><i>Management and Monitoring</i></b>	
Site Water Management Plan	Section 4.4 and Appendix A
• Site Water Balance	Section 4.4 and Appendix A
• Erosion and Sediment Control Plan	Sections 4.2, 4.4 and 5 and Appendices A and N
• Surface Water Management and Monitoring Plan	Section 4.4 and Appendix A
• Groundwater Monitoring Plan	Section 4.3 and Appendix B
• Surface and Ground Water Response Plan	Sections 4.3 and 4.4 and Appendices A and B
• Irrigation Management Plan	Section 4.4 and Appendix A
• Coal Shaft Creek Reconstruction Plan <sup>#</sup>	Section 5 and Appendices A and N
Potentially Acid Forming Material Management Plan	Section 4.4 and Appendix I
Noise Monitoring Program	Section 4.5 and Appendix C
Blast Monitoring Program	Section 4.5 and Appendix C
Air Quality Monitoring Program	Section 4.6 and Appendix D
Energy Savings Action Plan	Section 4.7 and Appendix D
Vegetation Clearance Protocol	Sections 4.8 and 4.9 and Appendix E
Offset Management Plan <sup>#</sup>	Sections 4.8 and 4.9 and Appendix E
Aboriginal Cultural Heritage Management Plan	Section 4.11 and Appendix J
Rehabilitation Management Plan	Section 5 and Appendix N
• Topsoil Stripping Management Plan	Sections 4.2 and 5 and Appendix N
<b><i>Reporting</i></b>	
Annual Environmental Management Report	Section 6.4.1
Mining Operations Plan (incorporating Mine Closure Plan <sup>#</sup> )	Sections 4.14, 6.4.1 and Appendix G
Licences and Approvals	Section 6.4.1
Greenhouse Gas Reporting	Section 6.4.2

# New management plan to be prepared.

#### ***DCPL Commitment***

DCPL will maintain and extend current water management measures (e.g. on-site water storage, beneficial use of contained water for irrigation and diversion of runoff from upstream sources) in accordance with the conditions of the Project Approval and Environment Protection Licence.

#### ***Coal Shaft Creek - Reconstruction***

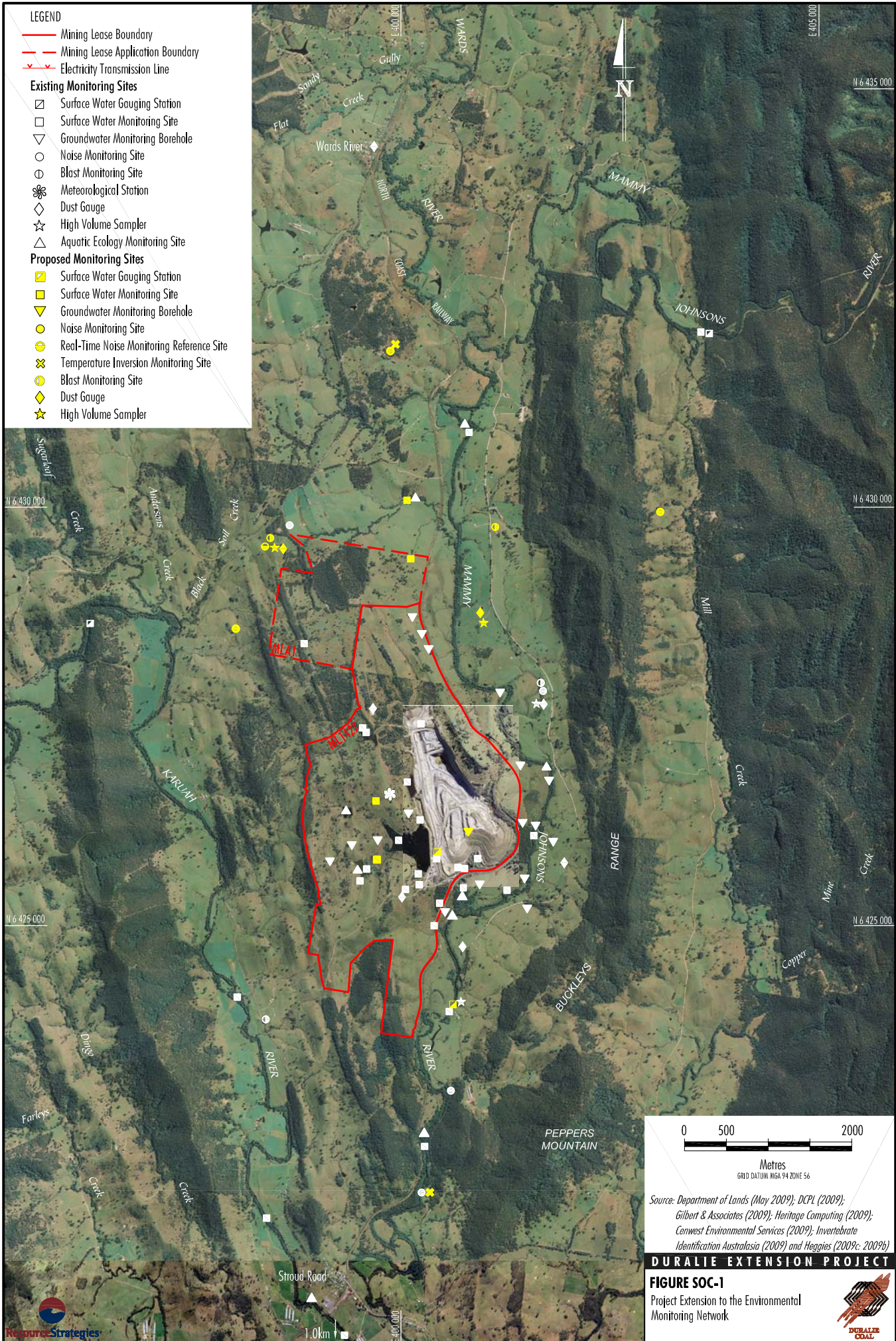
Coal Shaft Creek has been diverted around the existing Weismantel open pit to allow mining at the DCM. The Project surface water management system will include the continued use of the Coal Shaft Creek Diversion.

#### ***DCPL Commitment***

Following the completion of mining activities at the DCM, a final alignment of Coal Shaft Creek will be established, stabilised and revegetated prior to relinquishment of ML 1427. DCPL commits to a final alignment with the following components:

- a reworked section of the existing Coal Shaft Creek Diversion channel;
- a reconstructed meandering channel within a corridor over the in-pit waste rock emplacement; and
- a drop-down section between the two above components.

DCPL commits to the development of a Coal Shaft Creek Reconstruction Plan to document the final design of the post-mining alignment of Coal Shaft Creek.



- LEGEND**
- Mining Lease Boundary
  - - - Mining Lease Application Boundary
  - x-x- Electricity Transmission Line
- Existing Monitoring Sites**
- Surface Water Gauging Station
  - Surface Water Monitoring Site
  - ▽ Groundwater Monitoring Borehole
  - Noise Monitoring Site
  - ⊕ Blast Monitoring Site
  - ☼ Meteorological Station
  - ◇ Dust Gauge
  - ☆ High Volume Sampler
  - △ Aquatic Ecology Monitoring Site
- Proposed Monitoring Sites**
- Surface Water Gauging Station
  - Surface Water Monitoring Site
  - ▽ Groundwater Monitoring Borehole
  - Noise Monitoring Site
  - Real-Time Noise Monitoring Reference Site
  - ⊗ Temperature Inversion Monitoring Site
  - Blast Monitoring Site
  - ◇ Dust Gauge
  - ☆ High Volume Sampler



Metres  
GRID DATUM: NGA 94 ZONE 56

Source: Department of Lands (May 2009); DCPL (2009);  
 Gilbert & Associates (2009); Heritage Computing (2009);  
 Cenwest Environmental Services (2009); Invertebrate  
 Identification Australasia (2009) and Heggies (2009; 2009b)

**DURALIE EXTENSION PROJECT**

**FIGURE SOC-1**  
 Project Extension to the Environmental  
 Monitoring Network



Throughout the Project life, further analyses will be conducted into the geotechnical, hydrological and hydraulic design of the final alignment focussing on long-term stability, seepage management and the creation of habitat. The outcomes of these analyses will inform the final detailed design of the post-mining alignment and reconstruction of Coal Shaft Creek.

### **DCM ROM Coal Rail Transport Noise**

There will be a slight increase in the number of DCM ROM coal rail movements to the Stratford Coal Mine from approximately 950 to 1,125 per annum and the current hours of operation of the train (7.00 am to 10.00 pm) will be extended by some four hours (i.e. 7.00 am to 2.00 am) as a component of the Project.

#### *DCPL Commitment*

DCPL commits to replacing the existing locomotives on the DCM ROM coal transport train with GL class locomotives (or equivalent) which are quieter than the existing DCM locomotives from Year 2 of the Project (or sooner, subject to contract arrangements).

Prior to the introduction of the quieter locomotives, DCM rail movements will continue to be restricted to the existing DCM ROM train hours (7.00 am to 10.00 pm).

### **Operational Noise Management and Mitigation Measures**

Due to the extension of mining operations to the north and west and the increase in the mobile fleet, the Project has the potential to result in additional noise emissions at nearby residences.

#### *DCPL Commitment*

DCPL commits to adopting the following noise management and mitigation measures to appreciably reduce noise emissions associated with the Project:

- additional mobile equipment necessary to meet Project increased ROM coal production will be low noise emission standard, including up to 16 new CAT 785XQ haul trucks and attenuation of other new plant items (i.e. dozer, excavator, drill and grader);
- the use of two existing CAT 789 haul trucks will be restricted to daytime operations only;
- waste rock emplacement activities on elevated/exposed portions of the waste rock emplacement will be restricted to daytime only; and
- the height of the waste rock emplacement will be restricted to relative level 110 metres (m).

#### Noise Management Zone (1 to 5 A-weighted decibels [dBA] above Project-Specific Criteria)

For private residences within the Noise Management Zone, DCPL will implement reasonable and feasible acoustical mitigation (which may include measures such as enhanced glazing, insulation and/or air-conditioning), in consultation with the relevant landowner, where compliance noise monitoring shows Project noise levels are 3 to 5 dBA above Project-specific noise criteria.

#### Noise Affection Zone (>5 dBA above Project-Specific Criteria)

For private residences within the Noise Affection Zone, the following additional noise management procedures will be implemented for the Project:

- implementation of reasonable and feasible acoustical mitigation at receivers (which may include measures such as enhanced glazing, insulation and/or air-conditioning), in consultation with the relevant landowner, where compliance noise monitoring shows Project noise levels are greater than 5 dBA above Project-specific noise criteria; and
- negotiated agreements with landowners where required.

### **Compliance Noise Monitoring – Direct Temperature Inversion Measurement**

The noise limits stipulated in the existing DCM Development Consent (DA 168/99) with respect to temperature inversions, state:

*The noise emission limits ... apply under all meteorological conditions except for:  
...temperature inversions with a strength of greater than 3°C/100 m for all receivers...*

It is anticipated that should the Project be approved, similar conditions will be included in the Project Approval.

#### *DCPL Commitment*

During attended night-time compliance noise monitoring, DCPL will undertake direct temperature measurements at heights above ground level of approximately 10 m and 60 m at two locations (one to the north and one south of the DCM) to determine the strength of temperature inversions that may be present.

Direct temperature inversion measurements will be undertaken during Project compliance noise monitoring in all seasons.

For the purposes of determining Project operational noise compliance at nearby private residences, the results of the direct temperature inversion monitoring will be converted to a temperature gradient (degrees Celsius [°C]/100 m) for comparison to the inversion strength conditions stipulated in the Project Approval.

DCPL will regularly compare the stability class categories calculated from sigma-theta data measured at the DCM meteorological station and the results from direct measurement of temperature inversions. Over time, a relationship may emerge between calculated stability classes and measured temperature inversion strength that will assist with responding to night-time operational noise complaints.

**Management of Potential Blasting Impacts**

Consistent with the Blasting Management Plan, DCPL commits to appropriate blast designs addressing aspects including total charge size, instantaneous charge size, delay between hole explosive initiation, direction of initiation, type and quantity of stemming material and geology to minimise potential blasting impacts at nearby receivers.

DCPL commits to notifying the occupants of residential receivers within 2 kilometres (km) of a proposed blast prior to the blast occurring. In addition, DCPL will establish an exclusion zone around blast events, including the positioning of sentries on public access points for privately owned properties within 500 m of a blast event. DCPL also commits to notifying the occupants of residential receivers within 2 km of Project active mining areas that they are entitled to a structural property inspection by a suitably qualified, experienced and independent person.

**Ecological Offset Measures**

Approximately 87 hectares (ha) of natural vegetation communities and 109 ha of derived grassland will be cleared for the Project.

**DCPL Commitment**

DCPL commits to the provision of an area to offset the potential impacts of the Project and maintain or improve biodiversity values of the surrounding region in the medium to long-term.

DCPL proposes an offset area which is located on freehold Gloucester Coal Ltd/DCPL owned land located in the south and to the east of the Project area (Figure SOC-2), which is currently managed for pastoral purposes. Table SOC-2 provides a summary of the proposed offset.

**Table SOC-2  
Summary of the Offset Proposal**

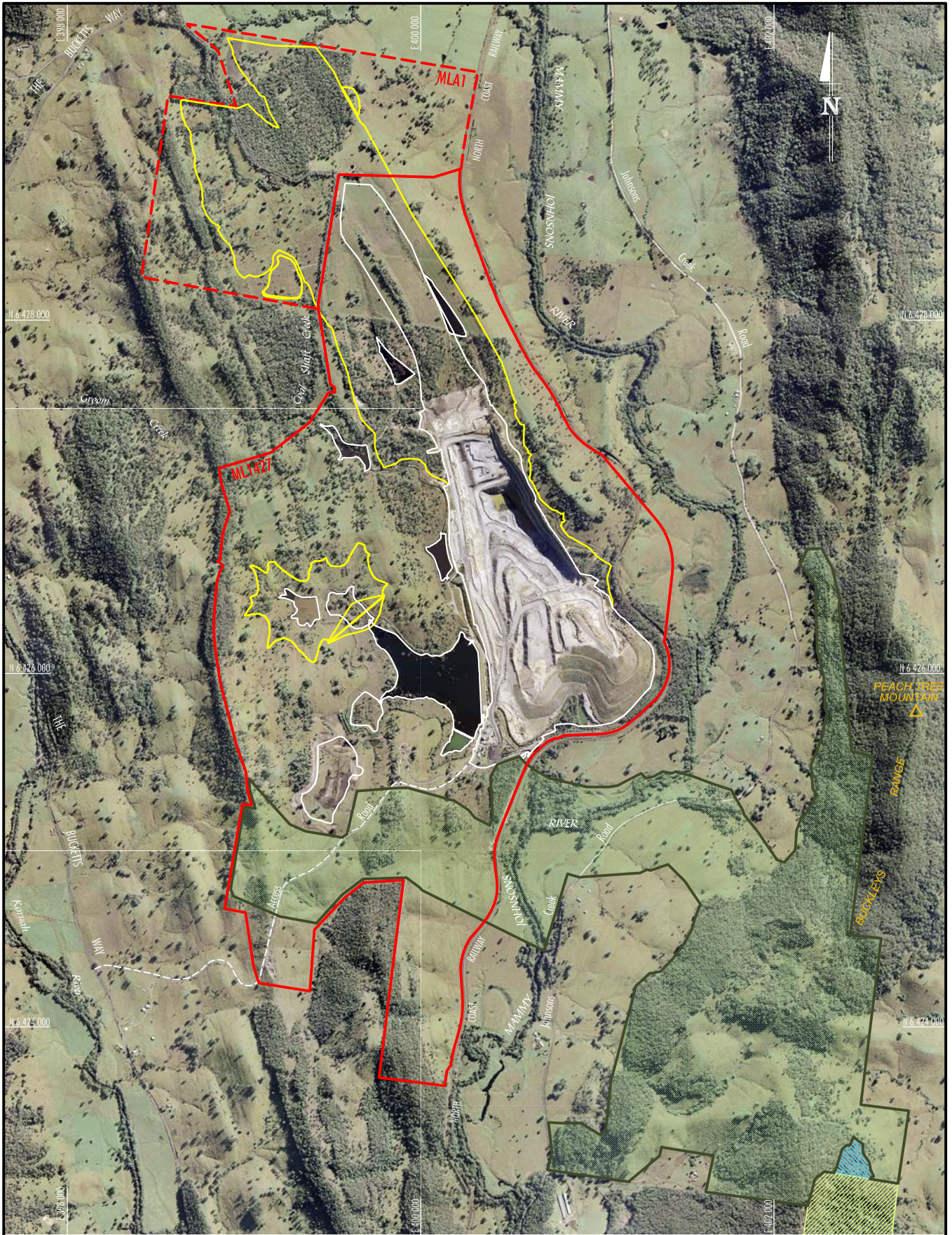
Area	Description	Approximate Area (ha)
Enhancement Area	Enhancement of existing areas of native vegetation communities through natural regeneration and management for conservation.	214
Revegetation Area	Re-establishment of woodland in derived grasslands by selective planting and fencing for natural regeneration.	230
<b>Total Area Conserved (ha)</b>		<b>444</b>

DCPL commits to conserving the proposed offset areas in perpetuity through a voluntary conservation agreement with the New South Wales (NSW) Minister for the Environment. A voluntary conservation agreement provides permanent protection as it is registered on the title of the land.

An Offset Management Plan will be prepared by a suitably qualified person(s) to facilitate the revegetation and regeneration of native vegetation and habitats and provide a framework for continued management and monitoring of the offset area. The Offset Management Plan will be prepared to the satisfaction of the Director-General of the NSW Department of Planning.

The proposed offset area will be independently audited at intervals agreed with relevant authorities. The audits will be conducted by a suitably qualified person(s) to:

- assess compliance with the Offset Management Plan;
- assess the performance of the offset area;
- review the adequacy of the management measures and monitoring programme; and
- recommend actions or measures to improve the performance of the offset, Offset Management Plan, or monitoring programme, if required.



**LEGEND**

- Mining Lease Boundary
- - - Mining Lease Application Boundary
- Approximate Extent of Existing/Approved Major Surface Development
- Approximate Extent of Additional Project Major Surface Development
- Land Under Existing Conservation Agreement
- Existing Duralie Coal Mine Offset Area
- Duralie Extension Project Offset Area



Source: AAHatch- Aerial Photography flown April 2009; DCPL (2009) and Cenwest Environmental Services & Resource Strategies (2009)

**DURALIE EXTENSION PROJECT**

**FIGURE SOC-2**  
Duralie Extension Project  
Offset Area

