

Annual Environmental Management Report

2013

(SMALL MINE VERSION)

Enhance Place Mine



CONTENTS

1	INTRODUCTION AND GENERAL OBJECTIES	2
1.1	BACKGROUND DEVELOPMENT	2
1.2	MINE PRODUCTION, PRODUCT AND MARKET	2
2	TITLE DETAILS	3
2.1	LAND OWNERSHIP AND LAND USE BOUNDARIES	4
2.2	CONSENTS AND LICENCES	5
2.3	MOP AND AEMR PERIOD	5
2.4	SIGNATURES	5
3	MINING OPERATIONS DURING THE REPORTING PERIOD	5
4	REHABILITATION DURING THE REPORTING PERIOD	6
4.1	REHABILITATION MONITORING	7
4.2	FURTHER DEVELOPMENT OF FINAL REHABILITATION PLAN	7
4.3	METEOROLOGICAL DATA	7
5	ENVIRONMENTAL PERFORMANCE	9
6	COMMUNITY AND LIAISON	9
6.1	ENVIRONMENTAL COMPLAINTS	9

LIST OF FIGURES

Figure 1	Land Ownership Plan	4
Figure 2	Blackmans Flat Annual Rainfall 2006- 2013	8
Figure 3	Blackmans Flat Monthly Rainfall 2013	8

LIST OF TABLES

Table 2	Land Ownership	4
Table 3	Production and Waste Summary	5
Table 4	Rehabilitation Summary	6
Table 5	Species and Seeding Rate	6
Table 6	Maintenance Activities on Rehabilitated Land	7

APPENDICIES

Appendix A Final Rehabilitation and Post Mining Land Use

1 INTRODUCTION AND GENERAL OBJECTIES

1.1 BACKGROUND DEVELOPMENT

Enhance Place Pty Ltd (Enhance Place) was established in 1997 to recover remnant coal from areas previously open cut mined in the 1950's. A principle objective of Enhance Place was to provide the means to improve the appearance and general amenity of the land through the rehabilitation of land previously impacted by mining.

Enhance Place operated the Enhance Place Open Cut Coal Mine (Enhance Place Mine) from 1997 until its closure in June 2005 following the extraction of all economically feasible coal reserves.

The Enhance Place Mine is located in the Western Coalfields of NSW at Blackmans Flat, 15km north of Lithgow on the southern side of the Castlereagh Highway. The site is approximately 3km south-west of Mount Piper Power Station and adjacent to the Springvale Coal Handling Facility.

The Enhance Place Mine extracted coal over the abandoned Eastern Main Underground Mine workings (Eastern Main Mine). The Eastern Main Mine operated as a Board and Pillar mine until 1975. Mining activities were undertaken by six employees, being augmented for short periods by secondment of maintenance, operating or rehabilitation personnel from other areas of the contractor's operations as required.

When open cut operations ceased in June 2005 and since then, surface water control, rehabilitation of land-form with seeding and fertilisation, feral animal and weed control programmes have been instituted. Final rehabilitation is complete along with the fencing of the various public and private land portions (see **Plate 1** and **Plate 2**).

During this 2013 reporting period, a MOP amendment was under development for Enhance Place to fulfil the actions that arose from the 2012 AEMR inspection conducted in July 2013 and other land management responsibilities. The MOP amendment will incorporate a revised land management strategy including a weed management plan to ensure a sustainable final land use.

1.2 MINE PRODUCTION, PRODUCT AND MARKET

The mine ceased production at the end of June 2005 when all coal reserves had been extracted. There was no coal production or active mining operations undertaken at Enhance Place during the 2013 reporting period.



2 TITLE DETAILS

Name of Mine	Enhance Place Mine		
Mining Titles/Leases	ML 1422	Expiry Date	03/12/2018
Mining Titles/Leases	ML 1458	Expiry Date	29/11/2020
Mining Titles/Leases	ML 1520	Expiry Date	29/08/2023
Name of Leaseholder	Enhance Place Pty Ltd		
Name of Mine Operator	As above		
Postal Address	Enhance Place Pty Ltd		
	PO Box 202		
	Wallerawang, N.S.W, 2845		
Telephone	(02) 6355 7893		
Fax	(02) 6355 7894		
Email	Graham.goodwin@energyaustralia.com.au		

2.1 LAND OWNERSHIP AND LAND USE BOUNDARIES

Land ownership of the Enhance Place Mine consists of private freehold and crown land. The current status of land ownership, tenure and pre-mining land use at the Enhance Place Mine is summarised in **Table 1** and shown on **Figure 1**.

Table 1
Land Ownership

Land Owner/Occupier	Lot/DP	Tenure (freehold leasehold)	Pre-mining land use
Mr & Mrs J. Cherry	301/751636	Freehold	Grazing
Mrs J. Cope	302/751636 303/751636	<i>Perpetual Lease</i>	Grazing
D & J Hunt	370/751651	Freehold	Grazing
State of NSW - Glen Davis Recreation Area (R. 59960)	304/751636 305/751636	Crown Land	Grazing
State of NSW	7004/1026541	Crown Land	Bush/grazing
M & L Morris	101/1145705	Freehold	Grazing

* Note: an unformed crown road is within the rehabilitated site.

Figure 1
Land Ownership Plan



2.2 CONSENTS AND LICENCES

Local Council Area: Lithgow City Council Development Consent 36/99

Development Consent: granted [] required but not granted [] not required []

Do licences granted by other agencies apply to the mine activities? Yes [] No []

EPA [] - EPL No.6312 surrendered 28/09/2005 after cessation of mining

NPWS [N/A]

Dam Safety [N/A]


Other [N/A]

2.3 MOP AND AEMR PERIOD

MOP Commencement Date	11 October 2002	Completion Date	May 2013; new Care and maintenance MOP under development.
AEMR Start Date	1 January 2013	End Date	31 December 2013

2.4 SIGNATURES

Manager of Mine Engineering

Signature 
 Name Graham Goodwin
 Date 5.3.14

3 MINING OPERATIONS DURING THE REPORTING PERIOD

There were no mining activities undertaken during the reporting period as mining ceased on 29 June 2005.

Table 2
Production and Waste Summary

	Production and Waste (cubic metres)		
	Start of Reporting Period	At end of Reporting Period	End of next reporting (estimated)
Topsoil stripped	nil	nil	Nil
Topsoil used/spread	nil	nil	Nil
Waste Rock	nil	nil	Nil
Ore	nil	nil	Nil
Processing Waste	nil	nil	Nil
Product	nil	nil	Nil

4 REHABILITATION DURING THE REPORTING PERIOD

A summary of the disturbed and rehabilitated areas at the Enhance Place Mine is summarised in **Table 3**.

Table 3
Rehabilitation Summary

		Cumulative Area Affected (hectares)		
		To Date	Last Report	Next Report (estimated)
A: MINE LEASE AREA				
A1	Mine Lease(s) area	35	35	35
B: DISTURBED AREAS				
B1	Infrastructure Area	nil	nil	Nil
B2	Active Mining Area	nil	nil	Nil
B3	Waste Emplacements	nil	nil	Nil
B4	Tailings Emplacements	n/a	n/a	n/a
B5	Shaped Waste Emplacement	nil	nil	Nil
ALL DISTURBED AREAS		nil	nil	Nil
C: REHABILITATION PROGRESS				
C1	Total Rehabilitated Area	26	26	26
D: REHABILITATION ON SLOPES				
D1	10 to 18 Degrees	6	6	6
D2	Greater than 18 Degrees	0.5	0.5	0.5
E: SURFACE OF REHABILITATED LAND				
E1	Pasture and Grasses	20	20	20
E2	Native Forest / Eucalypt	6	6	6
E3	Plantations and Crops	nil	nil	Nil
E4	Other	nil	nil	Nil

Details of pasture and grass species used for rehabilitation, the seeding rates and the fertiliser are summarised in **Table 4**.

Table 4
Species and Seeding Rate

Cool Season		
Species	Rate (kg/ha)	Fertiliser
Cereal Rye Grass	20	Starter 15 or Grower 11 (or equivalent) 400kg/ha
Perennial Rye Grass	10	
Highlands Bent	10	
Phalaris (Sirosa)	5	
Seaton Park Sub-clover	6	
Red Clover	6	
Currie Cocksfoot	6	
Warm Season		
Japanese Millet	20	Starter 15 Or Grower 11 (or equivalent) 400kg/ha
NZ Rye	10	
Rhodes Grass	10	
White Clover (Haifa)	4	
Note: Legumes were inoculated with their appropriate rhizobia immediately prior to sowing		

Ongoing rehabilitation maintenance works were conducted during the reporting period which involved erosion control, grazing, slashing and weed spraying (see **Table 5**). As mining had ceased in June 2005 and all rehabilitation activities have been undertaken, no further rehabilitation works were required during the reporting period.

Table 5
Maintenance Activities on Rehabilitated Land

Nature of Treatment	Area Treated (ha)		Comment/control strategies/ treatment detail
	Report period	Next period	
Additional erosion control works (drains re-contouring, rock protection)	0	0	None
Re-covering (detail - further topsoil, subsoil sealing etc)	0	0	None
Soil treatment (detail - fertiliser, lime, gypsum etc)	0	0	None
Treatment/Management (detail - grazing, cropping, slashing etc)	35	35	Horse and stock grazing by current land owner, up to 13 plus animals.
Re-seeding/Replanting (detail - species density, season etc)	0	0	Further monitoring of seeded areas. Re-seeding in areas has not been required.
Adversely Affected by Weeds (detail - type and treatment)	17	17	Spraying of African Lovegrass and spot spraying of Blackberry.
Feral animal control (detail - additional fencing, trapping, baiting etc)	0	0	No additional feral animal control was undertaken.

4.1 REHABILITATION MONITORING

Further rehabilitation monitoring is proposed to be undertaken to ensure African Lovegrass and other exotic weed species are managed to an acceptable standard. Monitoring the final landform and stability of the site will continue while Enhance Place hold relevant mining authorities over the area.

No further works have been undertaken on the site and the land has been used for horse grazing by the property owner during the reporting period.

4.2 FURTHER DEVELOPMENT OF FINAL REHABILITATION PLAN

This has not altered since the previous reporting period.

4.3 METEOROLOGICAL DATA

An automatic weather station was installed at the Pine Dale Mine in 2006 (located in nearby Blackmans Flat). The data is downloaded by independent environmental consultants.

The average rainfall is 858mm at Lithgow (Birdwood St), approximately 15km from the Enhance Place Mine (Source: Bureau of Meteorology, based on the rainfall period 1889 – 2006).

During the reporting period, the Pine Dale Mine meteorological monitoring station received 576.6mm of rain, which is below the Lithgow area’s long term annual average. The Annual Rainfall for the period 2006 – 2013 recorded at the Pine Dale Mine meteorological monitoring station can be seen in **Figure 2**, whilst the monthly rainfall for 2013 can be seen in **Figure 3**.

Figure 2
Blackmans Flat Annual Rainfall 2006- 2013

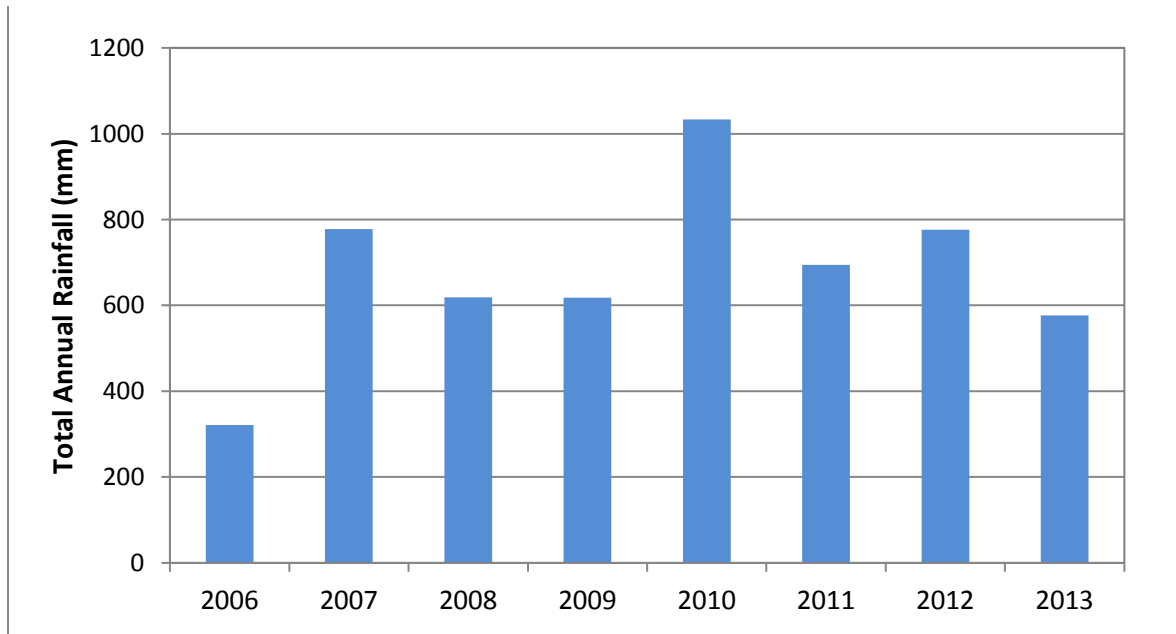
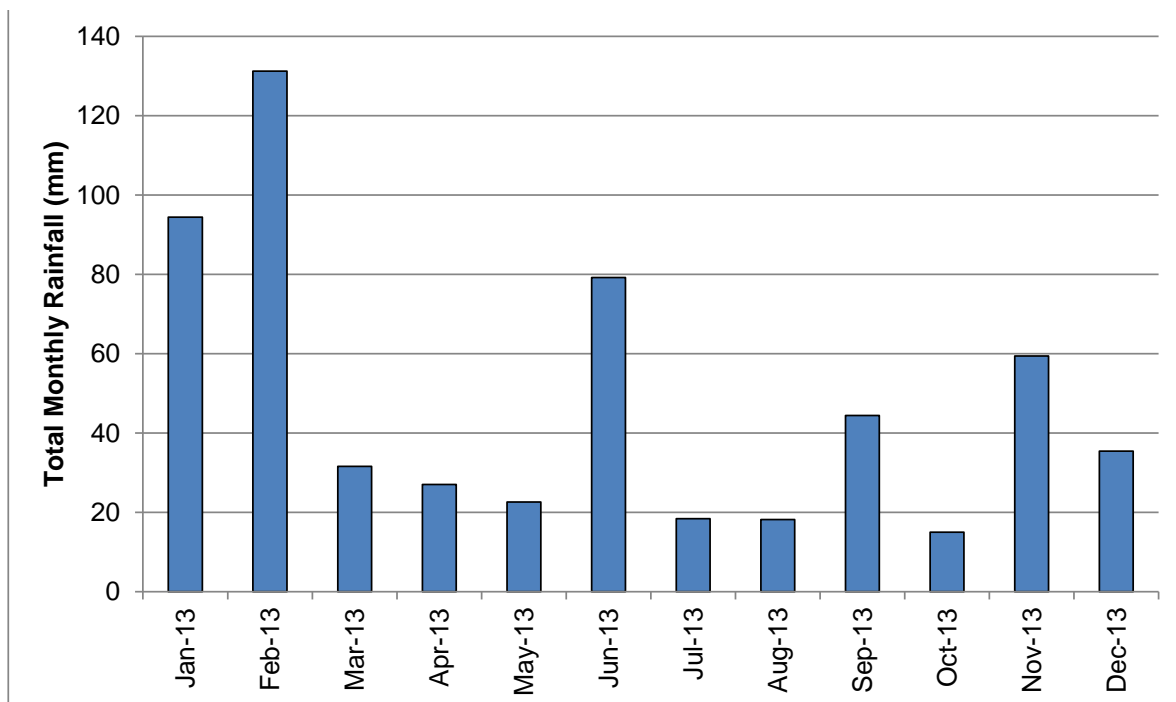


Figure 3
Blackmans Flat Monthly Rainfall 2013



5 ENVIRONMENTAL PERFORMANCE

The final landform and water management structures have been completed at Enhance Place. These areas and structures are inspected on a periodic basis by the Manager of Mining Engineering. It should be noted that the majority of land within the leases of Enhance Place Mine is privately owned and landowner permission is required to access the site. There were no environmental incidents reported during the 2013 reporting period.

The proposed final land use and ownership of the Glen Davis Recreation Trust area at the Enhance Place Mine is progressing in consultation with LCC and other relevant stakeholders.

Enhance Place will move to relinquish Mining Leases over the site following a satisfactory rehabilitation outcome and the resolution of the Glen Davis Trust land. Enhance Place will consult with relevant regulators and stakeholders to ensure final landuse and landform goals are achieved. Until the relevant leases are relinquished Enhance Place will continue ongoing monitoring and maintenance of the rehabilitated area as required.

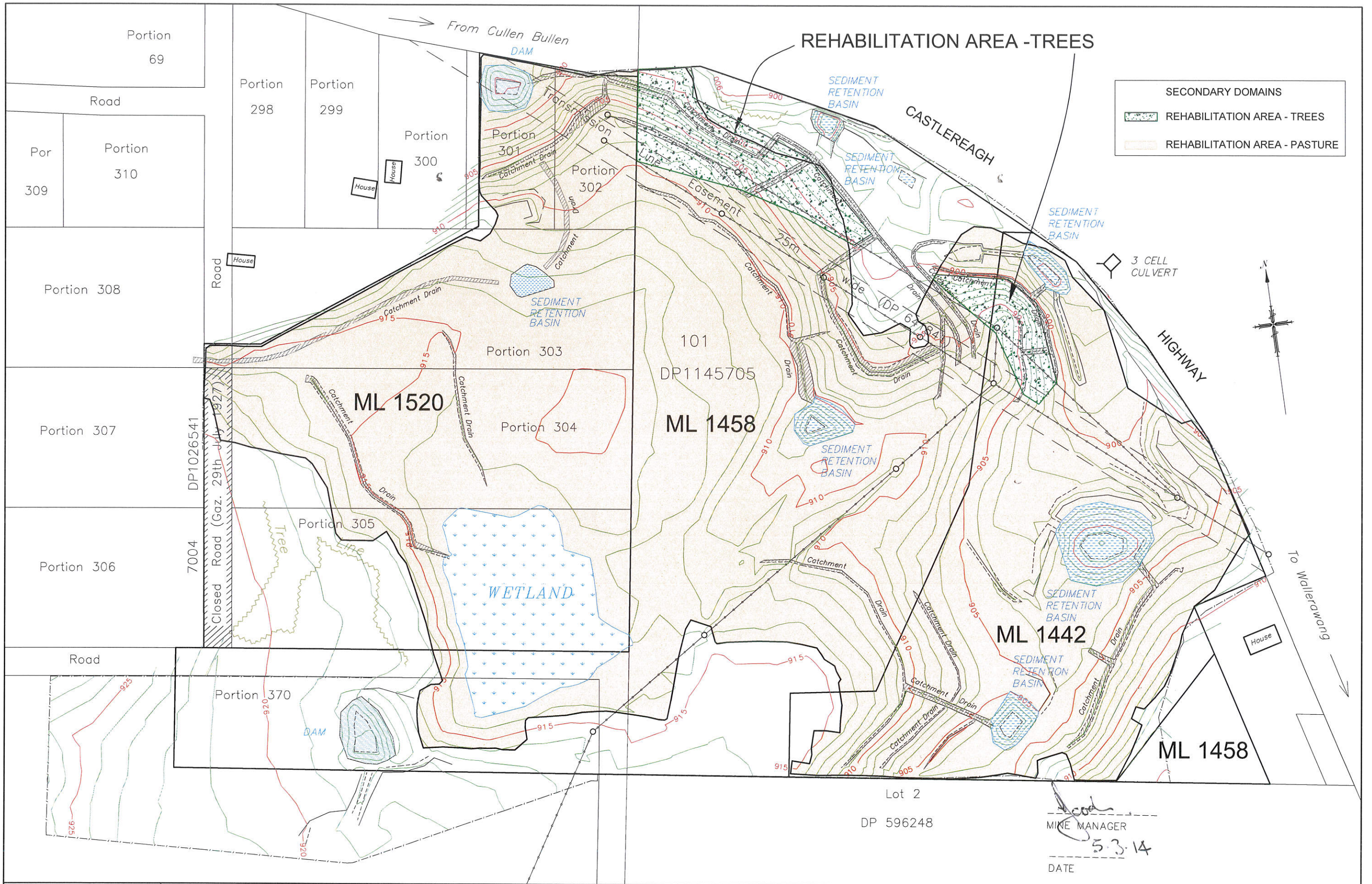
6 COMMUNITY AND LIAISON

6.1 ENVIRONMENTAL COMPLAINTS

There were no environmental complaints recorded during the reporting period from the general public or near neighbours. Discussions with key landholders were ongoing during the reporting period to ensure dialog was maintained regarding land management matters.

Appendix A

Enhance Place Mine Final Rehabilitation and Post Mining Land Use Plan



SECONDARY DOMAINS	
	REHABILITATION AREA - TREES
	REHABILITATION AREA - PASTURE

NOTES:

CEH
LITHGOW

CRAVEN, ELLISTON & HAYES (LITHGOW) PTY.LTD.
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DATE	18-12-13
AMENDED	
SURVEYOR	T.H./T.E
DRAWN	K.L.F./D.M.
CHECKED	

**ENHANCE PLACE MINE
FINAL REHABILITATION AND
POST MINING LAND USE**

SCALE - 1 : 1250 (A1 SHEET)

DWG No
**ENH-REH
PLAN 3**

Lot 2
DP 596248

Mike Manager
MIKE MANAGER
5.3.14
DATE