

A wide, flat grassy field with a forested hill in the background and utility poles. The field is green and appears to be a pasture or agricultural land. In the background, there is a dense forest covering a hillside. Several utility poles with power lines are visible across the field.

Enhance Place A.E.M.R

2011

Background Development

- The company, Enhance Place Pty Ltd, was established in 1997 to recover remnant coal from small areas of former (1950~54) open cut mine sites and provide the means to improve the appearance and general amenity of the land, post rehabilitation of remnant coal mining.

Mine Production, Product and Market

- Production History:
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- 1998 – 73,632 tonnes
- 1999 – 86,007 tonnes
- 2000 – 77,804 tonnes
- 2001 – 77,579 tonnes
- 2002 – 77,109 tonnes
- 2003 – 101,851 tonnes
- 2004 – 89,000 tonnes
- 2005 - 27,228 tonnes

- Total - 609,940 tonnes

- The mine ceased production at the end of June 2005 when all coal reserves had been extracted.

Rehabilitation during the AEMR period

- The Department of Industry & Investment letter dated 6th September 2011, reference 11/4542 and 06/4313 commented upon the 2010 AEMR proposed:
- As observed during previous inspections, localised areas of poor revegetation have been identified on the north eastern part of the lease fronting the Castlereagh Highway
- The above note was addressed in the following procedures.
- Commissioning of both the Gundungurra Tribal Council Aboriginal Corporation and the Land Management Department of Muru Mittigar Ltd to complete a comprehensive planting program.
- This consisted of:
 - 400 Wattle, Eucalypt and mixed shrub and tree species
 - Install tree guards to all plantings
 - Supply and spread approx 240kg Japanese Millet seed
- Ongoing monitoring of the planting program with regular weed control, as required, is maintained in and about the area.
- Communication initiated with the Lithgow City Council to resolve the ownership of the 'Glen Davis Recreational Trust Area' into the ownership of Enhance Place Pty Limited.

Maintenance Activities on Rehabilitated Land

- **Additional erosion control works**
- Sediment dam structure completed
- **Re-covering**
- Planting of the light covered area adjacent to the Castlereagh Highway.
- **Soil treatment**
- Addition of agricultural fertiliser post slashing completed.
- **Treatment/Management**
- Slashing of the taller vegetation (grasses) over the area completed.
- **Re-seeding/Replanting**
- Further monitoring of seeded areas. Re-seeding in areas has not been required.
- **Adversely Affected by Weeds**
- Slashing of the vegetation completed in 2010. Spraying of Blackberry as it presented in small area.
- **Feral animal control**
- Kangaroos prevalent. Numbers do not reach uncontrolled levels.
- **Fencing**
- Remedial works to fencing undertaken.

METEOROLOGICAL DATA

- **Rainfall figures**
- 2002 – 419mm (91mm less than 2001, 357mm less than 2000)
- 2003 – 641mm (222mm more than 2002, 135mm less than 2000)
- 2004 – 640mm (1mm less than 2003, 136mm less than 2000)
- 2005 – 765mm (115mm more than 2004, 114mm more than 2003)
- 2006 – 337mm (428mm less than 2005, 304 less than 2003)
- 2007 – 778mm (441mm more than 2006, 138mm more than 2004)
- 2008 – 584mm (159mm less than 2007, 247 mm more than 2006)
- 2009 – 613mm (29mm more than 2008, 165 mm less than 2007)
- 2010 – 1033.4 mm (420.4 mm more than 2009, 449.4 more than 2008)
- 2011 – 690 mm (343.4 mm less than 2010, 77 mm more than 2009)

- The results of the meteorological monitoring showed that rainfall was lower than the average 860mm.
- The above figures indicate the region is still experiencing the effects of the 100 year drought situation.
- This data is from the automatic weather station located at Pine Dale Mine.

Summary of Performance & Future Initiatives

- 1998 – Progressively built landform behind mining through replacing and reshaping overburden.
- 1999 – Progressively built landform behind mining through replacing and reshaping overburden. Some clay and topsoil spread across eastern side of property. Sowed and fertilised grass seed (half a dozen varieties).
- 2000 – Continued building landform behind mining through replacement and reshaping of overburden. 1.3 Ha of spring sowing completed. Continued to spread clay and topsoil across completed mining areas. Slashing of grass in rehabilitated eastern areas undertaken.

Summary of Performance & Future Initiatives

- 2001 – Continued building landform behind mining through replacement and reshaping of overburden. 3.9 Ha of autumn sowing completed.
- 2002 - Continued building landform behind mining through replacement and reshaping of overburden. Some clay spread. Some topsoil stockpiled. No sowing or fertilising done. Start of the drought – greatly reduced precipitation. Minimal renewal of pasture growth. No dams located on property to allow irrigation of pastures. Minimal runoff when rain fell.

Summary of Performance & Future Initiatives

- 2003 - Continued building landform behind mining through replacement and reshaping of overburden. Some clay spread. Some topsoil stockpiled. No sowing or fertilising done. Continuation of the drought – greatly reduced precipitation. No renewed pasture growth – several species of grass wilted and died. The continuing effects of the drought were devastating. No dams located on property to allow irrigation of pastures. Minimal runoff when rain fell.
- 2004 - Continued building landform behind mining through replacement and reshaping of overburden. Some clay and topsoil spread over north, north-eastern area and southern area. Some topsoil and clay stockpiled. No sowing or fertilising done. Continuation of the drought – greatly reduced precipitation, however, reasonable rainfall recorded from November onwards. Some renewed pasture growth – several species of grass wilted and died but were rejuvenated by rainfall. The continuing effects of the drought were devastating through the winter months. No dams located on mine property to allow irrigation of pastures. Minimal runoff when rain fell. Sediment retention basin constructed on north-eastern portion of the property. Void at pump sump 50% filled. Green mulch spread over clay and topsoil in north-eastern area. Vegetation now growing over this – due to natural seeding. Void near old Newport Open Cut bathroom filled in. Stockpile of topsoil near May Brown's house spread over south eastern area. Clay spread on slopes near Jack Cherry's property. Dam re-established for Jack Cherry.

Summary of Performance & Future Initiatives

- 2005 – Mining ceased at the end of June 2005. From June to December the mine underwent substantial rehabilitation. The final mining void and the pump sump were back filled and the surrounding slopes shaped and profiled. Hunt’s dam, originally destroyed during the mining process and located just to the west of the final mining void, was rebuilt. Topsoil and clay was spread over reshaped and profiled areas of the mining lease. A wetland was established to the west of the property (northeast of Hunt’s dam). The purpose of the wetland was to serve as a decelerator to the 100/500 year storms that cause huge water volume runoff on the property. The wetland also serves as a wildlife refuge for native frogs, ducks, ibis and other birds. The property was then seeded and fertilised. Rainfall was 125mm more than in 2004 (2004 – 640mm, 2005 – 765mm) and this assisted with the germination and growth of the grass seed that had been sowed. Grasses planted were: rye corn, kangaroo grass, millet, clovers, sub-clovers, cocksfoot, fescue and rye. Native tree seed sown were: wattle, stringy bark, she-oak, brittle jack and peppermint gum.
- 2006 - The EPL No.6312 was surrendered on 28 September 2005. The continuation of the drought through 2006 didn’t augur well for vegetative growth. However, during wet periods there were times of good pasture growth. Contour and dropdown drains lined with “terra firma” and gabion rock were constructed across the mine property. Wood ash was stockpiled on the property and was spread through 2007. All areas were deeply ripped and silt fencing placed on steep slopes. Sediment Retention Basin spillways were fortified with large diameter rock.

Summary of Performance & Future Initiatives

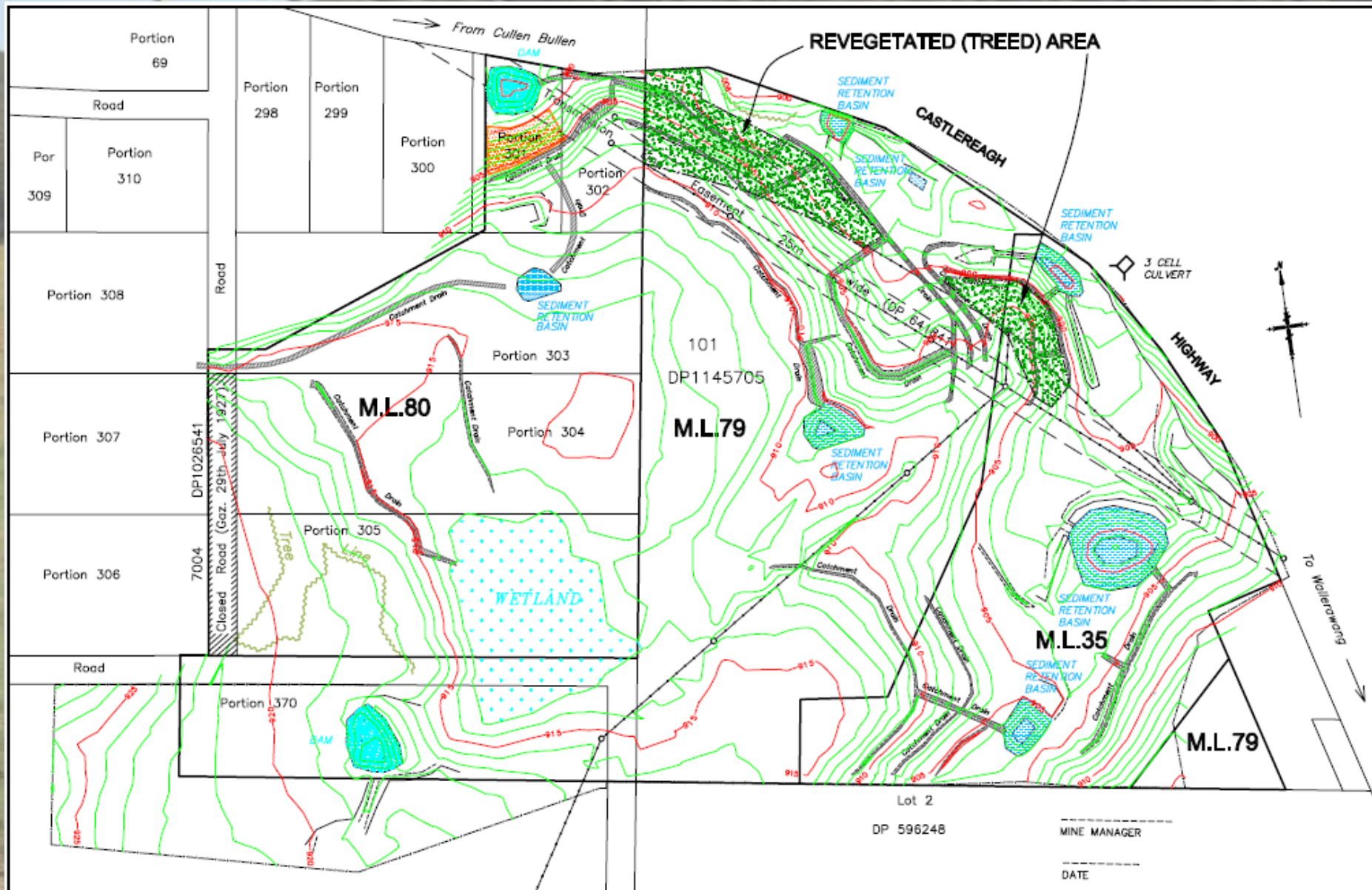
- 2007 - All broad surface treatment was completed. Scrap steel was completely removed. Trees were planted.
- 2008 – Reseeding of limited areas took place along with improved landform to properties owned by Mr & Mrs. Cherry.

Summary of Performance & Future Initiatives

- 2009 - Fencing of the various properties completed after satisfactory pasture establishment occurred. Final rock picking and slashing program completed of the taller grasses during autumn 2009.
- 2010 – Completed sediment dam structure stabilising. Completed fencing of entire area, inclusive of monitoring points and treed area.
- 2011 - Spraying of blackberry where it presented. Slashing program completed of the taller grasses during autumn 2011.
- MOP Extension Request to 2013 submitted 12th September 2011
- MOP Extension Granted on 20th September 2011
- Under the Coal Mine Health & Safety Act the mine is now classified as an abandoned mine. Relinquishment of the mining leases is proposed in following rehabilitation acceptance.

Complaints and Liaison

- There were no recorded complaints during the reporting period
- Regular liaison occurred between the company and landholders during the reporting period



NOTES:



Craven, Elliston & Hayes (Lithgow) Pty. Ltd.
CONSULTING LAND, ENGINEERING AND MINING SURVEYORS

ACN 056 544 551

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EMAIL: survey@ceh.com.au

DATE	31-12-11
AMENDED	
SURVEYOR	T.H./T.E
DRAWN	K.L.F.
CHECKED	

ENHANCE PLACE MINE
AEMR PLAN
END DECEMBER 2011

SCALE - 1 : 2500 (A3 SHEET)

DWG No
ENH-AEMR11

Town and Country Rural Supplies Landmark
11 Kirkcaldy St
Bathurst
2795
ph : 63324044
fax: 63324033
email: yickiwilson1@bigpond.com

Date: 24th February 2009

To: John Doherty.


Re: Soil tests at Enhance Mine.

Thank you for giving us the opportunity to help you with your revegetation program. Recently we received the results of your soil tests. I have passed these on to the local DPI agronomists. We have treated the five soil tests as one as they have similar properties. The result show that the soils are low in Ph, high in Aluminium, low in Organic carbon, and medium to high in Sulphur. Other elements are either high or low but the above four are the main issues to be addressed. After reviewing the results the agronomist has recommended the following;

- 1) Apply lime at the rate of 3-5 tonne / ha, incorporated if possible. This will address the PH and aluminium levels. Approximate costs: lime \$30.00/tonne. Delivery \$270 up to 24 tonne
- 2) Poultry litter for nitrogen, phosphorus, and organic matter. Recommended at 15 cubic metres per ha. Approximate cost delivered \$26.62/cu m in 50m loads.
- 3) Sow acid tolerant pasture species. Eg: Cocksfoot, Serradella, Rye grass, Sub Clover, Oats, and pine trees.

Any questions or queries please do not hesitate to contact me on 63324044.

Yours Faithfully,


Iain McKean

FAXED
26/2/09
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