



Enhance Place Pty Limited

ABN: 31 077 105 867

Waste Management Plan

for the

Pine Dale Coal Mine (Including the Yarraboldy Extension)



August 2015

Revision History				
Version	Revision Date	Reason for Revision	Author	Authorised by:
1	June 2011	First edition	RW Corkery & Co	Hilton Goldinch
2	August 2015	Care and Maintenance	Coleen Milroy	Graham Goodwin

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CONTENTS

	Page
1. INTRODUCTION.....	5
2. SCOPE	5
3. WASTE MANAGEMENT OBJECTIVES	5
4. SITE LOCATION AND DESCRIPTION	6
5. APPROVAL AND LEGISLATIVE REQUIREMENTS	8
6. MINE WASTE STREAMS.....	8
7. WASTE MANAGEMENT MEASURES.....	9
7.1 GENERAL SITE WASTE MANAGEMENT.....	9
7.2 WASTE REDUCTION	10
7.3 REUSE OF WASTE MATERIALS.....	10
7.4 RECYCLING.....	11
7.5 WASTE DISPOSAL	11
8. RESPONSIBILITIES AND ACCOUNTABILITIES.....	11
 TABLES	
Table WA1 Schedule of wastes likely to be generated at the Pine Dale Coal Mine.....	9
Table WA2 Accountable Positions and Tasks	11
 FIGURES	
Figure BF1 Locality Plan	7

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1. INTRODUCTION

This Waste Management Plan (WaMP) has been prepared for the Pine Dale Coal Mine, incorporating the Yarraboldy Extension, (“the mine”) in accordance with *Schedule 3 Condition 40* of Project Approval 10_0041 which requires that the WaMP be prepared to the satisfaction of the Director-General and be submitted for approval by the end of April 2011.

It is noted that an extension of the required date for submission of the WaMP to 16 May 2011 was provided by the then Department of Planning and Infrastructure (DoP&I).

The WaMP provides information on the following.

1. Relevant approval and legislative requirements (see Section 2).
2. Waste Management Objective (see Section 3).
3. Waste streams generated by the mine (see Section 4).
4. Waste management Measures (see Section 5).
5. Responsibilities and accountabilities (see Section 6).

This WaMP applies for the life of the mine and applies to both the establishment and operational phases. It is proposed that the WaMP will be reviewed on a bi-annual basis and, if required, updated to reflect any changes to waste management practices. Any significant updates to the WaMP will be submitted to the DPE for endorsement.

The Pine Dale Mine has been placed on care and maintenance following the cessation of all coal extraction in April 2014. Rehabilitation activities are proposed during the care and maintenance term only.

2. SCOPE

The scope of the WaMP applies to the mine, incorporating ML 1569, ML 1578, and MLA 375, and covers all activities during the care and maintenance term which may impact on, or influence a risk to waste management. The purpose of the WaMP is to:

- a) Identify mine waste streams (Section 6);
- b) Implement controls to mitigate accumulation and generation of waste (Section 7);
- c) Define responsibilities (Section 8).

3. WASTE MANAGEMENT OBJECTIVES

The objectives of waste management at the mine are as follows.

- (i) To identify and classify waste types and quantities generated on site.
- (ii) To minimise waste production and avoid unnecessary resource consumption (Reduce).
- (iii) To identify potential re-use or recycling opportunities and ensure appropriate handling and collection procedures are in place (Reuse & Recycle).
- (iv) To ensure the disposal of wastes conforms to applicable guidelines and standards.

- (v) To ensure areas where fuels, oils or other potential contaminants are stored are appropriately bunded.
- (vi) To ensure sewage disposal does not result in adverse environmental impacts.

4. SITE LOCATION AND DESCRIPTION

The Pine Dale coal mine is owned and operated by Enhance Place Pty Ltd (Enhance Place), located approximately 17 kilometres north-west of Lithgow and 5km north of Wallerawang in New South Wales (see **Figure BF1**).

Extractive open cut mining operations ceased in April 2014 when Approved mineable resources were exhausted. Rehabilitation activities are currently being undertaken consistent with the Approved Care and Maintenance Mining Operations Plan.

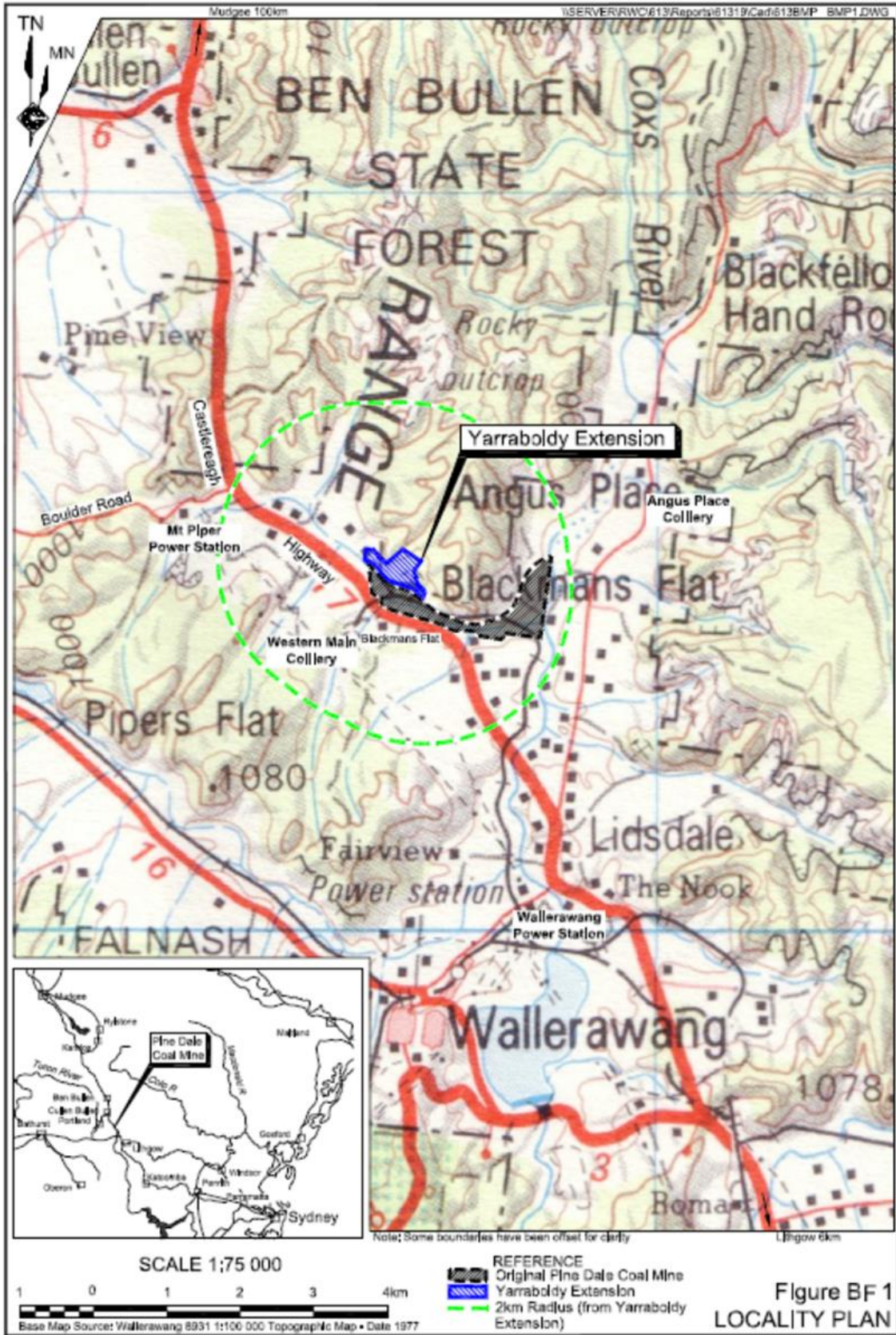


Figure BF1 Locality Plan

5. APPROVAL AND LEGISLATIVE REQUIREMENTS

Conditional requirements within Project Approval 10_0041 relevant to the WaMP include the following.

Ref	Project Approval Condition
Waste Schedule 3 Condition 39	<i>The Proponent shall: (a) minimise the waste generated by the project; (b) and ensure that the waste generated by the project is appropriately stored, handled and disposed of, to the satisfaction of the Director-General.</i>
Waste Schedule 3 Condition 40	<i>The Proponent shall prepare and implement a Waste Management Plan for the project to the satisfaction of the Director-General. This plan must be submitted to the Director-General by the end of April 2011.</i>
Table 1	

The following Acts, Regulations and Guidelines are also considered to be applicable to the WaMP.

- *Waste Classification Guidelines (DECCW 2009).*
- *Protection of the Environment Operations Act 1997.*
- *Waste Avoidance and Resource Recovery Act 2001.*
- *Protection of the Environment Operations (Waste) Regulation 2005.*

6. MINE WASTE STREAMS

The wastes that will be generated at the mine can be categorised into non-production and production wastes. Non-production wastes and estimated volumes may include the following.

- General domestic type wastes from the on-site office, amenities, ablutions and first aid facilities and routine maintenance consumables (approximately 3m³ per month).
- Hydrocarbons including waste oil (approximately 2 000L per month).
- Sewage / Septic Pump Out (approximately 3 000L per month).
- Scrap steel and other wastes remaining from equipment maintenance and former open cut mining operations (approximately 0.5t per month).

Production wastes generated by the mine will effectively consist of waste rock / overburden material. No wastes from the crushing of the coal will be produced as the crushing facility does not produce any coarse reject or fine tailings.

Table WA1 provides a summary of the waste types, their likely source and management / disposal options.

**Table WA1
Schedule of wastes likely to be generated at the Pine Dale Coal Mine**

Waste Type	Source	Management/Disposal
Paper	Office/Workshop areas.	Paper to be placed into recycling bins for collection.
Cardboard	Used as packaging for various items.	Cardboard to be placed into recycling bins for collection.
PET bottles, Aluminium cans etc	Office, Crib Room, Workshop	Placed into recycling bins for collection.
Plastic Packaging	Used for shrink wrap over large goods deliveries. Used for general packaging.	Placed into general rubbish receptacles for disposal to landfill.
Putrescible Waste	Waste from employees.	Placed into general rubbish receptacles for disposal to landfill.
Timber	Pallets / crates from goods deliveries.	Collected as firewood for employees.
Metal	Scrap materials from maintenance.	Metals to be stored separately and removed from site for recycling.
Hydrocarbons	Used in workshop and servicing areas.	Any excess oil which is collected will be stored in an appropriately bunded location prior to removal by a licenced waste oil recycler / transport to a licenced facility.
Batteries	Expended batteries from vehicle fleet.	Will be removed from site for collection by a licenced contractor / transported to a licenced facility.
Tyres	Expended tyres from vehicle fleet.	Tyres will be disposed of at a licenced facility.
Effluent	From bathhouse and office areas.	Effluent will be treated using the on-site septic system and pumped out by a licenced contractor for disposal at a licenced facility.
Waste Rock	From mining activities.	Construction of amenity bund and backfilling of mined out areas.

7. WASTE MANAGEMENT MEASURES

A Care and Maintenance Risk Assessment (CMRA) has been undertaken for the Care and Maintenance term (Pine Dale Mine 2014). Waste was not identified as a risk due to minimal number of employees and contractors based at Pine Dale Mine on a permanent basis.

7.1 GENERAL SITE WASTE MANAGEMENT

The following general site waste management actions will be put into practice to minimise the accumulation / generation of waste on site.

- All Company and contract personnel working on site will undergo a site induction. The site induction will include an overview of the waste management practices at the mine site.

- All waste areas will be clearly identified as waste storage areas. This will include bins and other receptacles for domestic waste, and which will be marked according to the type of waste accepted, eg. scrap metal, oil filters and oily rags, general waste, etc.
- Clear instructions will be posted within the Crib Room detailing recycling and waste separation information.
- There will be no long term storage of any waste materials on the mine site (excepting waste rock / overburden) and no off-site wastes will be accepted or disposed of on site. Notably, the waste rock / overburden will be utilised in construction of the amenity bund and backfilling of mined areas.

During care and maintenance the further waste management actions will be put into practice to minimise the accumulation / generation of waste on site.

- General waste bins will be kept at the site office for the collection of putrescible waste. These bins will be emptied and inspected as part of the regular inspection and maintenance program for the site.
- There will be some machinery and ancillary equipment located at Pine Dale during care and maintenance. As such hydrocarbon based materials will be stored or kept at the site in accordance with this plan and the Environment Management Strategy. Any waste hydrocarbon materials will be transported from the site by a licenced contractor.
- In the unlikely event that contaminated soil is identified then the material would be treated on site or disposed off-site by a licenced contractor.
- Sewage management facilities will be maintained during care and maintenance and regular inspections and pump out undertaken as required.

7.2 WASTE REDUCTION

The following methods will be used to minimise waste production.

- The ordering of stock will be regularly reviewed to ensure efficient stock control and to avoid wastage.
- Effluent from the site office, bathhouse and other amenities will continue to be treated using the on-site pump-out septic system.
- The use of degreasers will be regulated in the workshop to ensure the efficiency of the oil-water separator.

7.3 REUSE OF WASTE MATERIALS

Opportunities for the re-use of materials on site will be evaluated on a regular basis, for example wherever possible machinery parts will be reconditioned and reused.

7.4 RECYCLING

The Company will provide appropriate storage areas or receptacles for all materials that are suitable for recycling. The main recyclable waste materials that will be generated are as follows.

- Paper and cardboard: will be primarily generated within the office and to a lesser in the workshop area. Paper will be placed into appropriate collection bins, which will be collected by a recycling contractor or transported to a recycling facility on an as needs basis.
- Scrap metal: will be generated principally within the workshop. The scrap metal will be placed into large skip bins or stockpiled and will be collected by a metal recycler as sufficient quantities are available.
- Waste oil, oil filters and oily rags: will be generated at the workshop and will be collected within bunded areas. Oily waste will be removed from site by a licensed waste oil contractor for recycling.
- Batteries: will be removed from site for delivery to a facility able to despatch them to an appropriate recycling facility.
- Miscellaneous recyclables: including printer cartridges, aluminium cans and recyclable plastics will also be stored at appropriate locations prior to collection by, or delivery to, appropriate recycling facilities.

The Manager Mining Engineering will undertake random inspections of waste storage locations to ensure that the appropriate separation and collection waste is being undertaken.

7.5 WASTE DISPOSAL

Waste materials which cannot be either re-used or recycled will be sent to a licensed landfill that may accept that category of waste or collected by a licenced waste contractor.

Any wastes which are required to be tracked will be done so, in accordance with the relevant legislation.

8. RESPONSIBILITIES AND ACCOUNTABILITIES

The procedures and management measures presented in the WaMP will be made available to all members of the workforce on site. The responsible workforce will be made aware of the procedures through inductions, training (as required) and regular toolbox talks / meetings. The ultimate responsibility for waste management is the Manager Mining Engineering.

Table WA2 outlines the accountable positions and tasks relating to waste management at the Pine Dale Coal Mine.

Table WA2
Accountable Positions and Tasks

Position	Accountable Task
Manager Mining Engineering	<ul style="list-style-type: none">• Ensure that the management measures outlined within the WaMP are implemented.• Ensure that all waste contractors are appropriately licenced / wastes

	<p>are disposed of at a licenced facility.</p> <ul style="list-style-type: none">• Ensure that regular inspections and maintenance program for the site are maintained during care and maintenance.• Review this plan on an annual basis and revise if required.
All Employees	<ul style="list-style-type: none">• Ensure that all wastes are placed into appropriate storage receptacles.• Utilise resources / consumables efficiently and reduce waste generation where possible.• Ensure that wastes are not disposed of on site or accept any wastes to site.

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