

COAL & ALLIED

Managed by Rio Tinto Coal Australia

Mount Pleasant Project

Waste Management Plan

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Approvals	Name	Position	Signed	Date
Originator	K Macmillan	Specialist Environment		
Checked by	S Simonotti	Advisor Environment		
Approved by	L Kissane	Principal Advisor HSE		
Approved by	M Nolan	Manager Project Approvals NSW		

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1 Introduction

1.1 Description

The Mount Pleasant Project (the Project) is located in the Upper Hunter Valley of New South Wales, approximately 3 kilometres west of Muswellbrook (Figure 1). The Mount Pleasant Project is located within Mining Lease ML 1645.

A modification to the existing Development Consent (DA 92/97) was approved on 19th September 2011. As permitted by Schedule 2, Section 13 of the Development Consent, the waste management plan is submitted in a staged process. The Construction Waste Management Plan (CWMP) will cover the construction stage, which will last approximately the 18 to 24 months. This stage will cover the construction of all infrastructure but excludes any coal extraction, handling or processing.

2 Scope

This CWMP has been developed to comply with the relevant conditions of DA 92/97, specifically schedule 3, conditions 49 to 52, and schedule 5, condition 2, and Table 1 shows where these conditions are addressed within this document.

The scope of the CWMP applies to the development consent boundary and all construction activities within it. This includes:

- upgrade of Wybong Road from Bengalla Link Road through to the mine access;
- installation of the Hunter River water supply and associated pipeline;
- establishment of site access roads and haul roads;
- temporary facilities required for construction activities (e.g. offices, workshops, laydown areas);
- construction of all permanent infrastructure, including but not limited to the CHPP, administration buildings, workshops, sediment dams, powerlines, haul roads, light vehicle access roads, dam walls, diversion drains, storage areas and fuel farms;
- construction of the stand-alone rail loop from the Ulan line, and associated load out structures; and
- installation of appropriate fencing and barriers to ensure public safety and security for mining and construction.

The CWMP does not cover any coal extraction, handling or processing, and therefore this plan does not include information on the management of fines emplacement. The management plan will be updated in advance of any coal extraction, in consultation with relevant stakeholders, to include the requirements of conditions 52 (c) and (d).

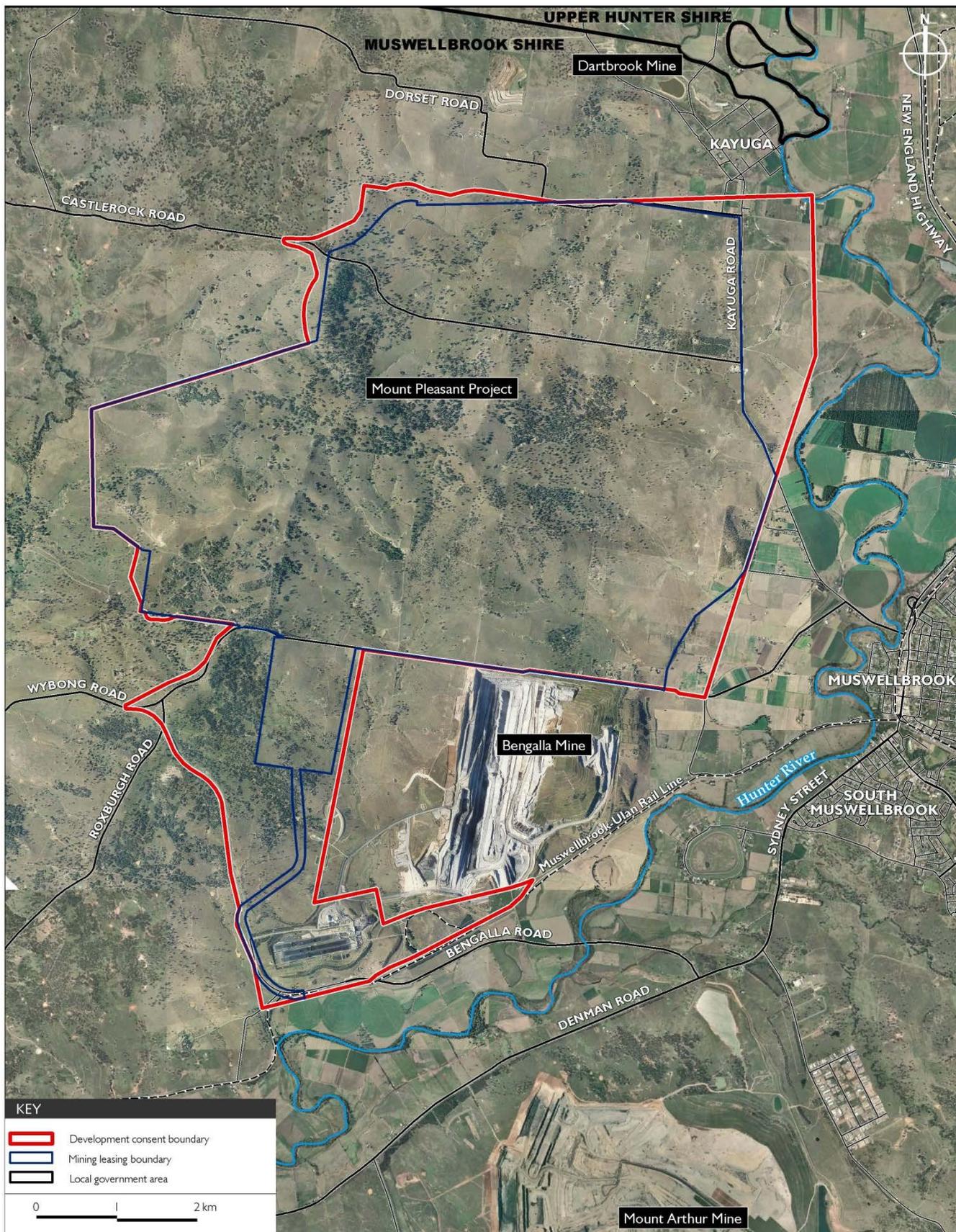


Figure 1 Location of Mount Pleasant Project

Table 1: Consent conditions relevant to Waste Management

Consent condition		Section
Schedule 3, Condition 49 - Waste Minimisation & Disposal		
49	The Applicant shall: <ul style="list-style-type: none"> (a) minimise the waste (including coal reject) generated by the development; and (b) ensure that the waste generated by the development is appropriately stored, handled and disposed of in a lawful manner. 	Section 4
Schedule 3, Condition 50- On-site Sewage		
50	The Applicant shall ensure that all sewage generated on site is treated and disposed of to the satisfaction of Council.	Section 4
Schedule 3, Condition 51 - Disposal of Fine Rejects		
51	The Applicant shall not emplace fine rejects in the southern catchment without the written approval of the Director-General	<i>To be covered in Operations Plan</i>
Schedule 3, Condition 52 -Waste Management Plan		
52	The Applicant shall prepare and implement a Waste Management Plan for the development to the satisfaction of the Director-General. This plan must: <ul style="list-style-type: none"> (a) be prepared in consultation with NOW and DRE, and submitted to the Director-General for approval prior to carrying any development on site; (b) describe the measures that would be implemented to avoid, minimise, reuse and recycle all waste streams generated by the development; (c) include a fines emplacement plan; and (d) a program to evaluate the fines emplacement plan and methods, with a view to emplacing fines within active mining areas. 	Section 4 <i>To be covered in Operations Plan</i>
Schedule 5, Condition 2 - Management Plan requirements		
	The Applicant shall ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include:	Section 2
	(a) detailed baseline data;	N/A
	(b) a description of: <ul style="list-style-type: none"> • the relevant statutory requirements (including any relevant consent, licence or lease conditions); • any relevant limits or performance measures/criteria; • the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of the development or any management measures; 	Section 1 Section 6 Section 6
	(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance	Section 4

Consent condition		Section
	measures/criteria;	
	(d) a program to monitor and report on the: <ul style="list-style-type: none"> • impacts and environmental performance of the development; • effectiveness of any management measures (see c above); 	Section 5
	(e) a contingency plan to manage any unpredicted impacts and their consequences;	<i>To be covered in Operations Plan</i>
	(f) a program to investigate and implement ways to improve the environmental performance of the development over time;	Section 7
	(g) a protocol for managing and reporting any: <ul style="list-style-type: none"> • incidents; • complaints; • non-compliances with statutory requirements; and • exceedances of the impact assessment criteria and/or performance criteria; and 	Section 6
	(h) a protocol for periodic review of the plan.	Section 7

3 Environmental aspects

Managing wastes correctly can result in benefits such as reducing contamination of landfills, prolonging the life of landfills, and reducing the costs associated with disposal.

There will be no landfill developed on site, and all wastes will be removed from site and disposed of at relevant licenced facilities.

Waste generated during construction will be managed in accordance with the relevant legislation, specifically the *Protection of the Environment Operations (Waste) Regulation 2005* (POEO(Waste)), the *Waste Avoidance and Resource Recovery Act 2001*, and the Office of Environment and Heritage (OEH) *Waste Classification Guidelines*.

The waste streams expected to be produced at Mount Pleasant Project during construction include:

- General waste:
 - scrap food
 - packaging including crates and pallets
 - water based paints
 - garden waste
 - building and demolition waste (except any asbestos contaminated materials)
- Recyclable waste:
 - glass
 - aluminium cans
 - paper
 - cardboard
 - scrap metals
- Special wastes:
 - clinical
 - asbestos wastes
 - waste tyres
- Liquid waste:
 - sewage
- Hazardous wastes:
 - batteries
 - corrosives
 - flammable liquids

4 Objectives and performance targets

The objectives of the Waste Management Plan are:

- Maintain compliance with conditions of Development Consent, Environment Protection Licence and related legislation with regards to waste;
- Minimise waste generation and encourage and facilitate re-use and recycling of waste streams where possible;
- Ensure appropriate segregation, storage, transportation and disposal of waste generated onsite;
- Ensure proper hydrocarbon management and storage of wastewater and sewage; and
- Provide education and training programs to all personnel regarding waste minimisation measures and proper waste handling and disposal.

The effectiveness of the implementation of the management actions will be determined by a series of key performance indicators (KPI) set for each parameter. Table 2 defines the objectives and performance criteria for waste management.

Table 2: Performance criteria

Parameter	Target	KPI
Avoidance at source	Avoid generation of waste through adoption of innovative purchasing practices	Initiatives adopted by suppliers to prevent or reduce generation of waste (e.g. packaging)
Reducing toxicity in products and materials	Avoid using toxic product and material where possible	Identify safer alternatives to toxic products and materials when they are requested.
Segregation at source	All wastes segregated appropriately	Correct bins provided at suitable locations around site Receptacles found to be contaminated
Storage of waste	Wastes are stored in appropriate facilities	Storage areas bunded and or lined as required to prevent contamination.
Minimisation of waste to landfill	Recycling or reuse of waste is maximised	Preferential use products that can be reused or recycled Correct segregation of waste Identification of recycling opportunities
Compliance with regulations	All wastes are managed in accordance with relevant legislation	Correct segregation of wastes Tracking and recording of regulated wastes Additional education for roles managing regulated wastes.

5 Management actions

In line with current practices at the other Coal & Allied sites, the Project will engage a licenced contractor to provide waste management services.

Wastes will be segregated at source, and stored and transported appropriately. The segregation of wastes ensures different waste streams are appropriately managed based on their level of risk to the environment, and in accordance with any legal requirements. Segregation at source reduces the contamination of waste streams, improves the ease of storage, handling, disposal and tracking and reduces the potential disposal costs for some items. Labelled and numbered bins will be provided at the point where wastes are produced to improve segregation.

Regulated wastes as classified under Schedule 1 of the POEO (Waste) Regulation 2005 will be managed in line with these regulations, ensuring tracking and recording requirements are complied with.

All wastes will be removed directly from site, although larger quantities of waste will be stored in secure locations on site until they can be removed. Adequate containment, such as bunding, will be provided to ensure that there is no leaching from wastes onto the ground which could affect surface water quality or cause soil contamination. Wastes will also be managed to ensure that they are safe from likely ignition sources and the risk of fire is minimised.

Throughout the construction, commissioning and operation of the Project, particular emphasis will be placed on:

- Preferential purchase and use of products that generate minimal waste (including packaging) and pollution;
- Preferential purchase and use of less toxic or hazardous products and materials;
- Preferential purchase and use of products and materials that can be more efficiently (e.g. limit disassembling) reused and recycled or are more readily disposed of;
- Avoiding oversupply or wastage of materials and products;
- Regular review of re-use and recycling options;
- All non-mineral waste will be transported offsite for treatment or disposal; and
- All wastes disposed offsite which are required to be tracked will be transported by a licensed contractor for disposal at a suitably licenced destination using the mandated tracking tools such as the waste data form.

The management actions for each waste stream are listed in Table 3.

Table 3: Management Actions

Parameter	Action	Monitoring
General Waste	Separate at source Disposal at Muswellbrook Shire Landfill	Monitor monthly volumes to ensure the use of this waste stream is minimised

Parameter	Action	Monitoring
		Contamination of this waste stream with other recyclable and regulated waste
Green waste	During clearing – assess potential for re-use as habitat. Mulch and use for rehabilitation and landscaping	Identify location of disposal of mulch and other green waste to avoid impacts on the environment (e.g. siltation of waterways)
Wood waste	Promote segregation of this waste stream and transport to recycling facility	Monitor monthly volumes to ensure the use of this waste stream is maximised
Building and demolition waste	Transport and disposal by licensed operators and facility Disposal of some wastes (e.g. concrete) onsite	Maintain an up to date register (volume, location) of concrete disposed onsite
Recyclable wastes	Provide bins for recyclables and educate personnel for their correct use Promote use of recyclable materials and products Transport to Muswellbrook Recycling Facility	Monitor monthly volumes to ensure the use of this waste stream is maximised Contamination of this waste stream with other general and regulated waste
Scrap metal	Provide bins to separate scrap metal. Recycled through a metal recycling company	Ensure that products are appropriately disassembled to minimise contamination of this stream
Biological waste	Transport and disposal by licensed operators and facility	Avoid spills and contamination of soil and waterways Minimise exposure of unauthorised personnel to this waste stream
Tyre waste	Dispose all used HME tyres at approved onsite locations (i.e. pit)	Ensure disposal in accordance with applicable regulations and industry best practice Maintain an up to date register (type, number, location) of this waste stream
Asbestos waste	Handling, transport and disposal by licensed operators and facility in accordance with regulatory requirements	Ensure identification and treatment (e.g. encapsulation) of any asbestos related products and materials
Sewage	Handling, transport and disposal by licensed operators and facility	Avoid spills and contamination of soil and waterways, and exposure to personnel
Corrosives, oxidising agents and flammable liquids	Handling, transport and disposal by licensed operators and facility	Avoid spills and contamination of soil and waterways, and exposure to personnel
Regulated waste	Correct segregation and storage Transport and disposal by licensed operators and facility	Contamination of this waste stream with other recyclable and general waste Avoid spills and contamination of soil and waterways

6 Monitoring actions

In order to meet the objectives outlined in Section 3 for waste management, monitoring of a number of parameters is required. This monitoring is outlined in Table 4.

Table 4: Monitoring Actions

Parameter	Monitoring	Timing
Maintain compliance with DC conditions and relevant regulatory requirements	Inspect the waste management system to ensure correct segregation of waste streams and avoidance of cross contamination	Weekly
	Audit the waste operator and treatment / disposal facilities	Twice a year
Minimise waste generation and encourage reuse and recycling	Maximise use of correct receptacles to minimise landfill disposal	Monthly
	Review waste streams volumes to identify improvement opportunities	Monthly
Ensure appropriate segregation, storage, transportation and disposal of waste generated onsite	Inspect the waste management system to ensure correct segregation of waste streams and avoidance of cross contamination	Weekly
	Audit the waste operator and treatment / disposal facilities	Bi-annual
Ensure proper hydrocarbon management and wastewater and sewage treatment	Ensure that storage areas are constructed and operated in accordance with applicable regulations and industry best practice	Ongoing
Provide education and training programs to all personnel	Test understanding of waste segregation principles and practices	Quarterly

7 Reporting

The *Protection of the Environment Operations Act 1997* (NSW), requires pollution incidents causing or threatening material environmental harm to be reported to the appropriate regulatory authority. The appropriate regulatory authority for all activities licensed under the Environment Protective Licence (EPL) is the Office of Environment and Heritage (OEH).

An Annual Return will be provided to the OEH within 60 days of the end of the reporting period as specified in the EPL.

8 Review

Condition 5.4 of the Development Consent (92/97) ensures this WMP is updated on a regular basis, and incorporates any recommended measures to improve the environmental performance of the development. This Plan shall be reviewed and if necessary revised, within 3 months of:

- the submission of an annual review under condition 5.3 of the Development Consent;
- the submission of an incident report under condition 5.7 of the Development Consent;
- the submission of an audit under condition 5.9 of the Development Consent; and
- any modification to the conditions of this consent,

9 References

Waste Avoidance and Resource Recovery Act 2001 (NSW)

Protection of the Environment Operations Act, 1997 (NSW)

Protection of the Environment Operations (Waste) Regulation 2005 (NSW)

Environmentally Hazardous Chemicals Act 1985

Australian Standard 1940-2004 The storage and handling of flammable and combustible liquids