



Newman Quarrying Pty Ltd

Quarry Expansion at Lot 2 DP 1055044, Tullymorgan-
Jackybulbin Road, Mororo
Waste Management Plan

May 2017

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1. Introduction

This Waste Management Plan (WMP) forms part of the Environmental Management Strategy (EMS) for Sly's Quarry located at Lot 2 DP 1055044, Tullymorgan – Jackbulbin Road, Mororo. This WMP has been prepared to meet the requirements of the Ministers Conditions of Approval (CoA) outlined in Development Consent SSD 6624, the mitigation measures outlined in the Environmental Impact Statement (EIS) for Sly's Quarry and all relevant legislation.

1.1 Objectives

The key objective of the WMP is to ensure appropriate controls and procedures are implemented in order to minimise the impacts to the local environment and community from waste.

1.2 Targets

The following targets have been established for the management of waste during the operational lifetime of Sly's Quarry:

- Ensure full compliance with the relevant legislative requirements and CoA
- Waste generation minimised through the hierarchy of waste management priorities
- Separable waste bins provided

2. Environmental requirements

2.1 Legislation

Legislation relevant to waste management includes:

- *Protection of the Environment Operations Act 1997*
- *Protection of the Environment Operations (Waste) Regulation 2005*
- *Waste Avoidance and Resource Recovery Act 2001*

Further discussion of the above legislation is covered in Section 2 of the EMS, as well as the EIS.

2.2 Guidelines

The following guidelines have been reviewed during development of this WMP:

- Waste Classification Guidelines (EPA, 2014)
- Australian Standard AS 1940-2004: The Storage and Handling of Flammable and Combustible Liquids

2.3 Conditions of Approval

The consent conditions from Development Consent SSD 6624 relevant to this WMP are listed in Table 2-1. A cross reference is also included to indicate where the condition is addressed in this WMP or other environmental management documents.

Table 2-1 Consent conditions relevant to the WMP

Condition No.	Requirement	Reference
Schedule 3, Condition 36	The Applicant must:	Section 3 Section 5 Section 5.3
	(a) manage on-site sewage treatment and disposal in accordance with the requirements of its EPL, and to the satisfaction of the EPA and Council	
	(b) minimise the waste generated by the development	Section 4
	(c) ensure that the waste generated by the development is appropriately stored, handled, and disposed of and	Section 4
	(d) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary	Section 5.3
Schedule 3, Condition 37	Except as expressly permitted in an EPL, the Applicant must not receive waste at the site for storage, treatment, processing, reprocessing or disposal.	Section 4 Section 6
Schedule 5, Condition 3	The Applicant must ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include:	
	(a) detailed baseline data	Section 3

Condition No.	Requirement	Reference
	(b) a description of: <ul style="list-style-type: none"> • the relevant statutory requirements (including any relevant approval, licence or lease conditions) • any relevant limits or performance measures/criteria; and • 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 2.1 Section 5
	(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria	Section 4
	(d) a program to monitor and report on the: <ul style="list-style-type: none"> ○ impacts and environmental performance of the development; and ○ effectiveness of any management measures (see (c) above) 	Section 5.1
	(e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible	Section 5.2
	(f) a program to investigate and implement ways to improve the environmental performance of the development over time	Section 6
	(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 of the EMS
	(h) a protocol for periodic review of the plan. Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.	Section 6

3. Existing environment and impacts

3.1 Existing environment

The existing quarry would generate various waste streams including construction and excavation waste, vegetation waste, packaging materials and liquid wastes. The volumes of solid wastes are expected to be relatively small as most waste would be reused or recycled on site e.g. excavation waste and vegetation waste. General construction waste is likely to be the most significant and this is currently managed, where possible, in accordance with the waste management hierarchy of avoid, reuse, recycle and dispose.

Liquid wastes consist of oil, paint, lubricants, glue, toilets and stormwater. The oil, paint, lubricants and glue are minor sources of waste. Significant volumes of stormwater would be generated from the site and is addressed in the Soil and Water Management Plan.

3.2 Impacts

Quarrying involves the stripping and emplacement of topsoil and overburden, extraction, screening and stockpiling of the raw materials and product loading and distribution. The types of waste generated are not expected to change as a result of the quarry but the volumes of some wastes would increase.

The operation of the quarry would generate the following waste types:

- Excavated material (topsoil and overburden not suitable for sale)
- Domestic waste
- Green waste
- Construction waste
- Effluent from toilet facilities
- Used lubricants and oils
- Contaminated soil
- Runoff from disturbed areas and the processing plant

Potential impacts from the production and inappropriate disposal of waste generated from the proposal includes:

- Contamination of land
- Pollution of waterways
- Air pollution
- Overuse of scarce resources
- Human and animal health impacts

4. Environmental control measures

Environmental requirements and control measures are identified in the CoA of Development Consent SSD 6624 and the EIS. All waste would continue to be managed in accordance with the requirements of the *Waste Avoidance and Resource Recovery Act 2001*, the *POEO Act 1997*, the *Waste Classification Guidelines* (EPA, 2014) and the principles of the waste management hierarchy.

Management measures are summarised in Table 4-1 for the types of wastes likely to be produced on site.

Table 4-1 Proposed waste management measures

Waste Type	Waste Management Hierarchy		
	Avoid	Reuse/ Recycle/Recover	Dispose
Excavated material	Avoid excess excavation	Use excess material on site as fill and/or in rehabilitation works	No excavated material to be disposed
Green waste	Minimise clearing	Mulch cleared vegetation and use on site	No green waste to be disposed
General construction waste	Materials to be sourced and ordered in appropriate quantities	Reuse excess material on-site wherever possible. If not reused, recycle as follows: Metals – in scrap metal bin to be removed by contractor for recycling, as required Paper & cardboard, glass, recyclable plastic – place in industrial recycling bulk bin to be removed by contractor for recycling, as required Batteries – stored on battery pallet in maintenance shed for removal by contractor for recycling, as required	Non recyclable material is to be disposed in industrial bulk bin to be removed by contractor, as required
Contaminated soil	Proper storage of all chemicals and fuels (e.g. bunded areas with 110% capacity)	Utilise bioremediation for large quantities of fuel-impacted soil. Tracking during transportation would be carried out where required	Place small contaminated materials in the Contaminated Waste Bin to be removed by contractor, as required. Dispose contaminated waste in accordance with the Waste Classification Guidelines
Liquid waste	Materials to be sourced and ordered in appropriate quantities	Reuse excess material on-site wherever possible. If not reused, place in oil tank which is removed by contractor for recycling, as required	No liquid waste to be disposed
Wastewater	Divert clean water from the site	Waste water to be pumped to a holding pond and used on-site e.g. for dust suppression/ plant watering etc	Discharge wastewater, in accordance with EPL requirements
Biological (sewage) waste	Minimise use of site facilities e.g. toilets	Consider using composting toilet	Sewage waste to be disposed via an onsite treatment system
Domestic waste	Materials to be sourced and	Reuse excess material on-site wherever possible. If not	Non recyclable material is to be disposed in industrial

Waste Type	Waste Management Hierarchy		
	Avoid	Reuse/ Recycle/Recover	Dispose
	ordered in appropriate quantities	reused, place in industrial recycling bulk bin to be removed by contractor for recycling, as required	bulk bin to be removed by contractor, as required

5. Monitoring and reporting

5.1 Environmental inspections and monitoring

Routine weekly inspections will be undertaken to ensure that the site is left in a clean and tidy manner.

5.2 Contingency plan

If the above monitoring detects an impact or there is a justified community or a waste related complaint, a contingency plan or trigger and response plan is to be implemented, as shown below.

Aspect	Trigger	Response
Routine monitoring	Waste and/or hazardous materials issue identified	Undertake management and mitigation measures in accordance with Table 4-1 Review management measures and update, if necessary
Community complaint	Complaint received by a member of the community regarding construction-related waste and hazardous materials management	Quarry Manager to confirm the cause for the management issue and agree on required corrective actions. Quarry Manager to implement corrective actions to reduce/ improve management of waste and hazardous materials. Quarry Manager to initiate complaint response process as described in Section 7.3 of the EMS.

5.3 Reporting

The general reporting requirements are described in Section 8.5 of the EMS. In relation to the waste monitoring, the routine monitoring will be recorded on the *Environmental Inspection Checklist*.

6. Review and improvement

Continuous improvement of this WMP will be achieved in accordance with Section 9 of the EMS, through the ongoing evaluation of environmental management performance against environmental policies, objectives and targets.

The continuous improvement process is designed to:

- Identify areas of opportunity for improvement of environmental management and performance.
- Determine the cause or causes of non-conformances and deficiencies.
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies.
- Verify the effectiveness of the corrective and preventative actions.
- Document any changes in procedures resulting from process improvement; and make comparisons with objectives and targets.

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