



Holcim (Australia) Pty Ltd

Dunloe Sand Quarry Waste Management Plan

July 2020

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1. Introduction

This Waste Management Plan (WMP) forms part of the Environmental Management Strategy (EMS) for Dunloe Sand Quarry. This WMP has been prepared to meet the requirements of the Minister's Conditions of Approval (CoA) outlined in Development Consent No. 06_0030, the mitigation measures outlined in MOD2 (GHD 2017), the Environmental Impact Statement (EIS) (Planit 2007), the Environment Protection Licence 13077 (EPL) and 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 Dunloe Sand Quarry:

- Ensure full compliance with the relevant legislative requirements and CoA
- Waste generation minimised through the hierarchy of waste management priorities
- All waste is managed in accordance with the *Waste Classification Guidelines* (EPA, 2014)

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 2014*
- *Waste Avoidance and Resource Recovery Act 2001*

Further discussion of the above legislation is provided in the EMS, as well as the EIS and MOD2.

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 CoA 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 12	The Proponent must manage on-site sewage to the satisfaction of Council and EPA. The facility must comply with the requirements of the Environment and Health Protection Guidelines – On-site Sewage Management for Single Households (1998).	Section 4 and Appendix A
Schedule 3, Condition 41	The Proponent must minimise the amount of waste generated by the project to the satisfaction of the Secretary.	Section 4
Schedule 5, Condition 1A	The Proponent must ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:	
	(a) a summary relevant background or baseline data;	Section 3
	(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 project or any management measures; 	Section 1.2 and Section 2.1
	(c) a description of the measures that to be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;	Section 4

Condition No.	Requirement	Reference
	(d) a program to monitor and report on the: <ul style="list-style-type: none"> • impacts and environmental performance of the project; and • effectiveness of any management measures (see (c) above); 	Section 5
	(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 project 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 	Refer to the EMS
	(h) a protocol for periodic review of the plan.	Section 6

2.4 Environment protection licence

The EPL conditions, relevant to this WMP, are listed in Table 2-2. A cross reference is also included to indicate where the condition is addressed in this WMP or other environmental management documents.

Table 2-2 EPL conditions relevant to the WMP

Condition No.	Requirement	Reference
L3.1	The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.	Section 4

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 as well as office-based (domestic) waste. 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 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
- Stormwater 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 Conditions of Approval, EIS, MOD2 and EPL. As specified by the EPL, Holcim must not cause, permit or allow any waste generated outside the site to be received for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the site. Other specific measures and requirements to address waste impacts are outlined in Table 4-1.

Table 4-1 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	Minimise excess excavated material to be disposed offsite
Green waste	Avoid clearing vegetation where not required for each stage of operation	Mulch cleared vegetation and use on site e.g. in soil stabilisation, planted areas	Minimise green waste to be disposed offsite
General construction waste	Materials to be sourced and ordered in appropriate quantities / materials to be pre-fabricated where possible	Reuse excess material on-site e.g. in maintenance works or other projects. If not reused, recycle as follows: <ul style="list-style-type: none"> Metals – to be removed by contractor for recycling Paper & cardboard, glass, recyclable plastic – to be removed by contractor for recycling Batteries – stored on battery pallet in maintenance shed for removal by contractor for recycling 	Non recyclable material is to be removed by contractor, for disposal in accordance with the Waste Classification Guidelines
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 to be carried out where required under legislation	Place small contaminated materials in the Contaminated Waste Bin to be removed by contractor. 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 (e.g. in other machinery or future maintenance work). If not reused, place in oil tank which is removed by contractor for recycling	Excess liquid waste that cannot be reused on site or recycled by a contractor will be disposed of offsite, in accordance with the Waste Classification Guidelines, by a contractor

Waste Type	Waste Management Hierarchy		
	Avoid	Reuse/ Recycle/Recover	Dispose
Wastewater	Divert clean water from the site through stormwater management e.g. diversion drains	Wastewater 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 the onsite treatment system, see approval in Appendix A
Domestic waste	Materials to be sourced and ordered in appropriate quantities	Reuse excess material on-site wherever possible. If not reused, place in industrial recycling bulk bin to be removed by contractor for recycling	Non recyclable material is to be removed by contractor

5. Monitoring and reporting

5.1 Environmental inspections and monitoring

Routine weekly inspections by the Quarry Manager (or delegate) will occur throughout the operational lifetime of the quarry, using the *Environmental Inspection Checklist* in the Environmental Monitoring and Management Plan, to ensure and record the site is left clean and tidy.

5.2 Contingency plan

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

In general, all issues will be investigated and corrective actions determined within 24 hours. The timeframe to implement the corrective actions will depend on the risk and consequence of the issue. The nature of the corrective action will also influence the implementation timeframe.

Table 5-1 Contingency plan

Trigger	Response
Waste and/or hazardous materials issue identified	<ul style="list-style-type: none">• Undertake management and mitigation measures in accordance with Table 4-1• Review management measures and update, if necessary
Complaint received by a member of the community regarding waste and hazardous materials management	<ul style="list-style-type: none">• Quarry Manager to confirm the cause of the management issue and agree on required corrective actions.• Quarry Manager to implement corrective actions to reduce/ improve management of waste.• Quarry Manager to initiate complaint response process as described in the EMS.

5.3 Reporting

The general reporting requirements are described in the EMS. Routine waste monitoring will be recorded on the *Environmental Inspection Checklist* in the Environmental Monitoring and Management Plan.

Waste removed from site will be recorded in a waste register along with the relevant docketts from the contractors removing the material.

A summary of the waste monitoring and management will be presented in the Annual Report (refer to the EMS).

6. Review and improvement

Continuous improvement of this WMP will be achieved by reviewing the plan in accordance with the EMS and 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.

Appendices

Appendix A – On-site sewage management system approval

Council Reference: OSSM02484 DA08/1247 LN: 10173 MB
Your Reference:



12 July 2017

Customer Service | 1300 292 872 | (02) 6670 2400

Ramtech Pty Ltd
30-32 Lundberg Drive
SOUTH MURWILLUMBAH NSW 2484

tsc@tweed.nsw.gov.au
www.tweed.nsw.gov.au

Fax (02) 6670 2429
PO Box 816
Murwillumbah NSW 2484

Please address all communications
to the General Manager

ABN: 90 178 732 496

Dear Sir/Madam

Approval Notice - Approval to Operate On-Site Sewage Management System OSSM02484 at Lot 162 DP 755721; Warwick Park Road WOYUNG

Further to Council's inspection carried out 11 July 2017 please find enclosed your Certificate of Approval to Operate.

The aerated wastewater treatment system and pressurised effluent irrigation system shall be serviced every three months by a qualified and approved service technician. A record of each service shall be provided by the service agent to Council after each service. Council maintains a database of service records for each system. Servicing the system is a legal requirement and penalties apply for non-compliance.

The electricity supply to the AWTS shall not be switched off and the system shall remain active at all times.

The pressurised sub subsurface effluent irrigation system shall be checked and flushed at each service and shall not be disconnected or altered without the approval of Council.

Yours faithfully

Ian Grimshaw
ENVIRONMENTAL COMPLIANCE OFFICER

CERTIFICATE OF APPROVAL TO OPERATE **a System of Sewage Management** *Local Government Act 1993*

Ramtech Pty Ltd
30-32 Lundberg Drive
SOUTH MURWILLUMBAH NSW 2484

Being the applicant in respect of Sewage Management Application No: **OSSM02484** for:

- **Econocycle AWTS with 200m² subsurface pressurised effluent irrigation area for Office on Lot 162//755721**
- **Risk assessment: Low**

Pursuant to Chapter 7 of the Local Government Act 1993, notice is hereby given of the determination by the Council, as Approval Authority, of the Sewage Management System Application relating to the land described as:

- **Lot 162 DP 755721; Warwick Park Road WOORYUNG**

The Application to Operate a System of Sewage Management has been determined by granting of Approval subject to compliance with conditions.

This approval operates from 12 July 2017 and expires on 12 July 2023 or upon transfer of this property to another party.

NOTE: This approval relates to the operation of a system of sewage management on land and the granting of this approval in no way authorises any ancillary activity on the land that may require approval under the Local Government Act 1993 and /or other legislation.

IMPORTANT NOTICE

THIS IS A LEGAL DOCUMENT. Please ensure that you read the document carefully, and particularly note all attendant instructions and conditions.

CONDITIONS

1. The owner/occupier shall maintain the system in accordance with the approved plans, specifications and conditions of approval.

[OSO0225]

2. The sewage management system shall be maintained in accordance with the attached management procedures.

NOTE: It is the owner's responsibility to ensure the sewage management system is operated and maintained at all times. The management procedures are relevant to the sewage management system on site and are required to be carried out to prevent detrimental environmental and public health risks.

If foul odours or ponding of effluent on ground surface occurs this indicates a malfunctioning system and requires immediate attention. Contact your local plumber and or Tweed Shire Council for advice.

[OSO0226]

3. This approval shall expire on the expiration date specified above, unless the approval is renewed or extended by Council.

NOTE: The Council may extend the period of an approval following an inspection or at any other time. The operator may apply for renewal at any time.

[OSO0227]

4. The person operating the system of sewage management shall provide details of operation and maintenance, and evidence of compliance with the conditions of this approval, to the Council whenever reasonably required to do so.

[OSO0228]

5. The Council may carry out an audit inspection of the sewage management system to determine compliance with conditions of approval and may charge the approved fee specified for the service in the Council's fees and charges. An approved fee may also be charged for follow up compliance inspections of rectification work.

[OSO0229]

6. Effluent arising from an on-site sewage management system shall not be permitted to discharge into any natural waterway or storm water drain.

[OSO0235]

7. The on-site sewage management system shall be operated and maintained in a sanitary condition and in accordance with the relevant requirements of the Local Government (General) Regulation 2005, and other relevant operating specifications.

[OSO0245]

8. Except in circumstances beyond the control of the operator, the system of sewage management shall be operated in a manner that achieves the following performance standards:

- (a) Prevention of the spread of disease by micro-organisms,
- (b) Prevention of the spread of foul odours,
- (c) Prevention of contamination of water,
- (d) Prevention of degradation of soil and vegetation,

- (e) Discouragement of insects and vermin,
- (f) Ensuring that persons do not come into contact with untreated sewage or effluent (whether treated or not) in their ordinary activities on the premises concerned,
- (g) Minimisation of any adverse impacts on the amenity of the premises and surrounding lands.

NOTE: Disease may be spread if there is any human contact with sewage wastewater. Water pollution may occur as a result of surface run off from failing land application areas, from percolation of effluent into ground water and by drainage to waterways. Components should be well maintained and monitored to eliminate disease risks and water pollution.

[OSO0255]

9. Maintenance and operating conditions of the system of sewage management specified in any certificate of accreditation issued by the Director-General of NSW Health, in relation to the Aerated Wastewater Treatment System (AWTS) shall be complied with, including:

- (a) The owner of the AWTS shall enter into an annual contract with the manufacturer or another suitably qualified or experienced person requiring the system to be **serviced every quarter** in accordance with the Department's requirements,
- (b) The effluent shall at all times comply with the following standard;
 - (i) Biological Oxygen Demand (BOD⁵) - less than 20 mg/L,
 - (ii) Suspended Solids - less than 30 mg/L,
 - (iii) Free Residual Chlorine - 0.5mg/L (min) to 2.0 mg/L (max)
 - (iv) Thermotolerant Coliforms - less than 30 cfu/100ml
- (c) A Telephone number for emergency service shall be fixed and located in or near the alarm control panel so as to be easily visible.

[OSO0265]

10. The effluent land application area shall not be used for the production of low growing crops that are eaten without cooking for human consumption.

[OSO0625]

11. Soaker hoses and standard household sprinklers and attachments shall not be used for the irrigation of effluent from any on-site sewage management system.

[OSO0645]

12. The irrigation system shall be operated in such a way as to prevent any run-off of effluent from the land application area.

[OSO0655]

13. All effluent land application areas are to be kept clear of weeds and the plants trimmed so as to prevent the area from becoming overgrown.

[OSO0665]

14. Vehicle traffic and livestock shall be excluded from the effluent land application area and this may involve fencing of the area.

[OSO0675]

15. The effluent land application area shall not be used for active recreational purposes.

16. Any alteration to existing sewage management facilities shall be approved by Council.

[OSO0686]

Failure to comply with these conditions may result in:

- Issuing Orders under Section 124 of the Local Government Act 1993; or
- Prosecution under Section 627 of the Local Government Act for failing to comply with conditions for Approval with a maximum penalty of \$2200; or
- Issuing of a Penalty Notice (on the spot fine) of \$330.

NOTE 1: If an owner or occupier of land is the holder of an approval to operate a system of sewage management on the land (being an approval that is in force), any other owner or occupier of that land may operate the system of sewage management (without obtaining a further approval) in accordance with the conditions of the approval.

NOTE 2: A person who purchases (or otherwise acquires) land on which any sewage management facilities are installed or constructed may operate a system of sewage management without the approval required under Section 68 of the Local Government Act for the period of 3 months after the date on which the land is transferred or otherwise conveyed to the person (whether or not an approval to operate a system of sewage management on that land is in force at that date). If an application for approval to operate a system of sewage management is submitted within 2 months of the transfer of the land to the new owner, any existing sewage management facilities may continue to be operated until the application is determined by Council.

REVIEW OF DETERMINATION

Under the provisions of Section 100 of the Local Government Act, 1993, an applicant may request the Council to review the determination of an application for approval. The request for a review must be made within twenty-eight (28) days after the date of the determination.

DISSATISFACTION WITH DETERMINATION-RIGHT OF APPEAL

Under the provisions of section 176 of the Local Government Act, 1993, an applicant who is dissatisfied with the determination of Council with respect to the application for an approval may appeal to the Land and Environment Court. The appeal must be made within 12 months after the date from which the approval operates.

FOR FURTHER INFORMATION

If you require further information in relation to this approval please contact Council's Building and Environmental Health Unit on the above number between the hours of 8.30am and 10.00am, Monday to Friday.

Signed on behalf of the Tweed Shire Council

Ian Grimshaw,
Environmental Compliance Officer

GHD

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7/[https://projects.ghd.com/oc/Newcastle3/holcimdunloesandquar/Delivery/Documents/2220056_RP T_Dunloe Waste Management Plan.docx](https://projects.ghd.com/oc/Newcastle3/holcimdunloesandquar/Delivery/Documents/2220056_RP_T_Dunloe%20Waste%20Management%20Plan.docx)

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