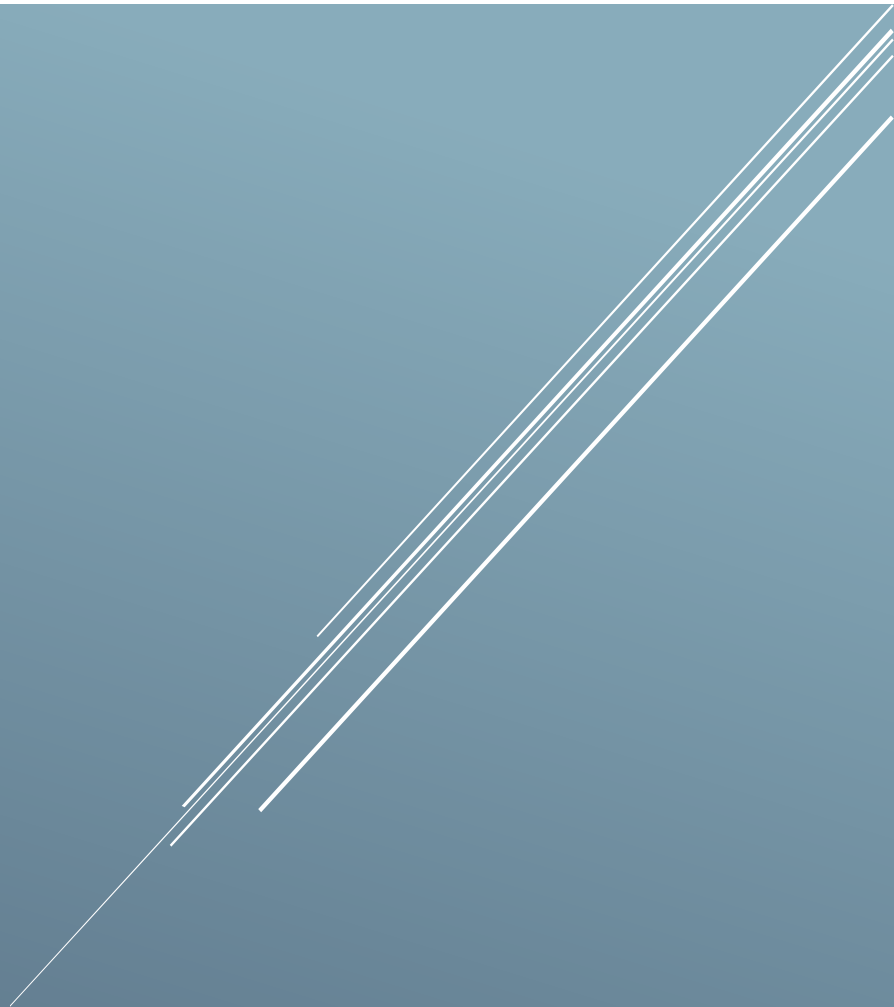




WASTE MANAGEMENT PLAN

BLUESTONE HARDROCK QUARRY PROJECT

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Glossary

Terminology	Definition
AS	Australian Standard
SDCP	Singleton Development Control Plan
DPHI	Department of Planning, Housing and Infrastructure
EPA	Environment Protection Agency
LGA	Local Government Area
PoEO Act	Protection of the Environment Operations Act 1997
SEARs	Planning Secretary's Environmental Assessment Requirements
SLEP	Singleton Local Environmental Plan 2013
WARR Act	The Waste Avoidance and Resource Recovery Act 2001
WMP	Waste Management Plan

1. Introduction.

This Waste Management Plan (WMP) has been prepared for Bluestone Hardrock Pty Ltd in support of the State Significant Development (SSD-76210271) application for the Bluestone Hard Rock Quarry Project. The purpose of this WMP is to demonstrate that waste generated during the construction and operational phases of the Proposal will be managed in accordance with applicable legislation and best practice environmental standards.

This WMP has been prepared in response to the Planning Secretary's Environmental Assessment Requirements (SEARs) and demonstrates alignment with the following statutory and policy instruments:

- **NSW EPA Waste Classification Guidelines**, and
- **NSW Waste and Sustainable Materials Strategy 2041**.

This WMP establishes management measures to ensure waste avoidance, resource recovery, lawful disposal, and prevention of environmental harm.

1.1 Summary of SEARs Requirements

Table 1: Waste Management SEARs

Waste Management SEARs	
DPHI	
9. Waste management - Including • estimates of the quantity and nature of the waste streams that would be generated or received by the development and any measures that would be implemented to minimise, manage or dispose of these waste streams.	Section 4.1 and 5.3
Singleton Council	
Waste Management • Details of types of waste and method of disposal (including recycling and reuse) • Minimising impacts to neighbouring properties and water streams • Chemical storage and management • Sewage management – discussions with Council in particular Section 68 approvals.	Section 4.1 and 5.3 Section 6.3 Section 5.2 Section 5.3

2. Background

2.1 Project Summary

The Project is a quarry for the extraction of hard rock and gravel to supply aggregate and conglomerate suitable for road base and concrete batching in the local region. The Project site is within the locality of Elderslie and Glendon Brook, approximately 10km northwest of the community of East Branxton, NSW. The total area of the Project site is approximately 186ha however the total disturbance area is considerably smaller comprising approximately 63.4ha.

The Project includes:

- Vegetation clearing, earthworks and installation of surface water management controls to facilitate construction of the first section of Haul Road 1 which will be a sealed road approximately 600m in length from the northern end of Springvale Road to the western end of the proposed Weighbridge and Office Area. Construction of Haul Road 1 along this section will include a minor culvert crossing of a third order un-named drainage line.
- Vegetation clearing, earthworks and installation of surface water management controls for the construction of the Weighbridge and Office Area. Construction works will include erection of temporary buildings and facilities, installation of a weighbridge, installation of necessary infrastructure and other supporting services to facilitate operations at the site.
- Vegetation clearing, earthworks and installation of surface water management controls to facilitate construction of the second section of Haul Road 1 which will be unsealed and will extend approximately 150m from the Weighbridge and Office Area to the Processing Area. Construction of Haul Road 1 along this section will include minor culvert crossings of two un-named drainage lines, one being a first order and the second being a third order drainage line.
- Clearing of vegetation, installation of surface water management controls and overburden removal for the creation of the Processing Area. Establishment of the Processing Area may require extraction of hard rock from to achieve finished design levels. Extraction in these parts will be undertaken through a combination of drilling and blasting with the resultant material, once processed, suitable for commercial sale.
- A mobile crusher and screening plant will be located in the Processing Area to process extracted material from within the Processing Area and ultimately the resource material from within the Pit Area. Once operations within the Pit Area are fully established the mobile crusher and screening plant will become fixed plant.
- Vegetation clearing, earthworks and installation of surface water management controls to facilitate construction of Haul Road 2, approximately 1,620m in length, from the Processing Area to a point approximately 750m within the Pit Area.
- Vegetation clearing, earthworks and installation of surface water management controls to facilitate construction of the Stockpile and Laydown Area immediately southwest of the Pit Area.
- Progressive vegetation clearing and extraction of the Pit Area with the high-quality resource being drilled, blasted and extracted, prior to transporting to the Processing Area.
- Installation of surface water management controls to manage runoff within the Pit Area and the Processing Area.
- Stripping and stockpiling of topsoil for future rehabilitation will be carried out during all stages of construction and operation. Topsoil will be stockpiled in the Stockpile Area immediately southwest of the Pit Area.
- Extraction and processing of up to 1 million tonnes of resource per annum, for 30 years.
- Transport of processed material along Springvale Road, Stanhope Road, Elderslie Road to the New England Highway, Wine Country Drive, the Hunter Expressway and the local region.
- Progressive rehabilitation works within the Pit Area.

The Project has been designed to facilitate the efficient and economically viable extraction of the identified hard rock resource, while ensuring that potential environmental and community impacts are avoided or minimised wherever practicable. In addition, the Project is expected to generate a range of socio-economic benefits that will support regional development.

The key aspects of the Project are provided in Table 2.

Table 2 - Key Aspects of the Project

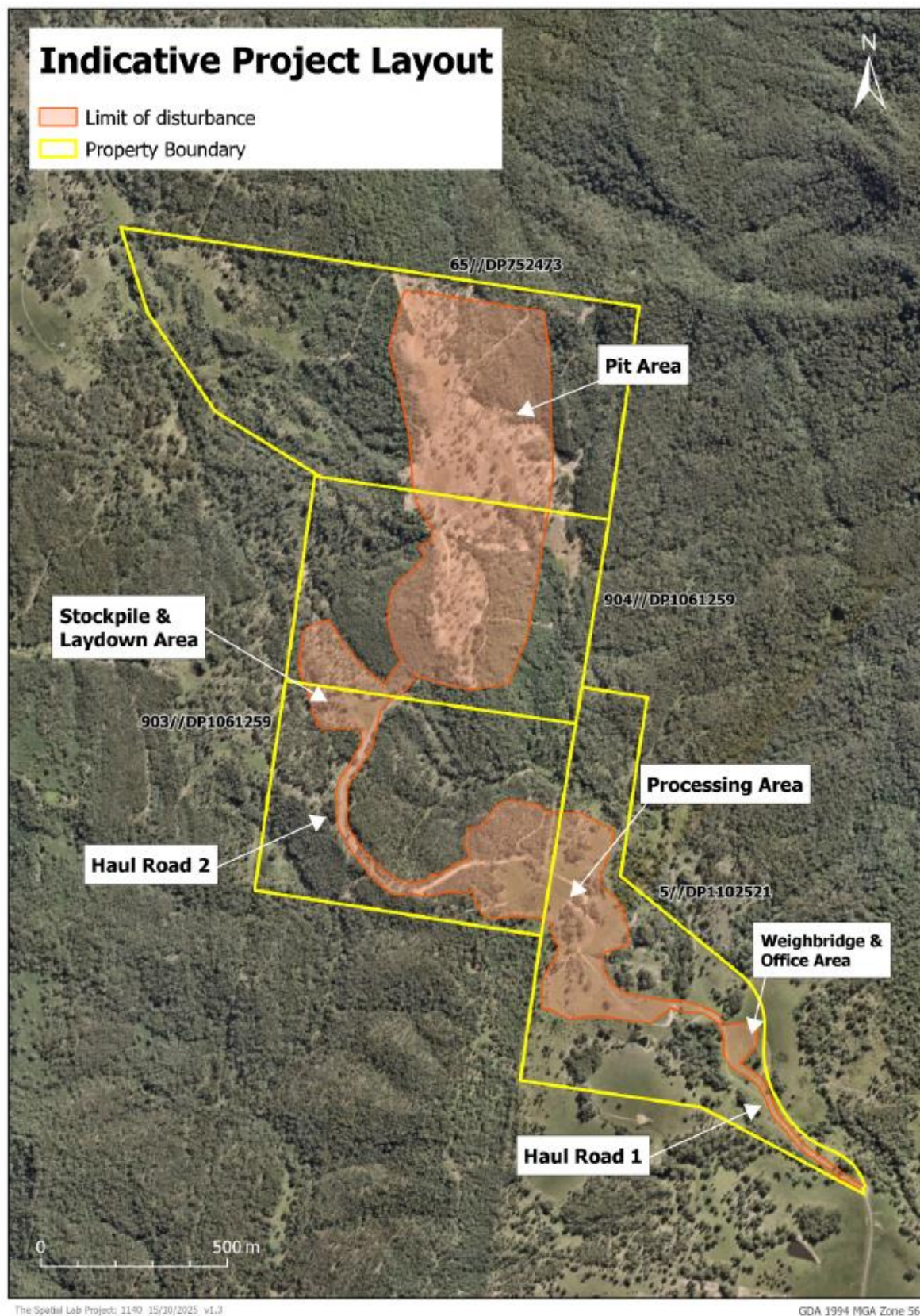
Project Element	Summary of the Project
Proposed Development	Hard Rock Quarry
Legal Property Description	- Lot 65 DP 752473, Blind Creek Road, Glendon Brook. - Lot 904 DP 1061259, Blind Creek Road, Elderslie. - Lot 903 DP 1061259, Blind Creek Road, Elderslie. - Lot 5 DP 1102521, 253 Springvale Road, Elderslie.
Resource Extraction Method	Traditional drilling and blasting
Resource	Quarry extraction of high-quality Tuff and Agglomerate from a reduced level (RL) of 215m AHD down to RL 110m AHD.
Project Site Area	186ha.
Disturbance Areas	Total Disturbance Area – 63.4ha, broken down as per below.
	37.8ha - Pit Area.
	4.3ha – Stockpile and Laydown Area
	16.2ha - Processing Area.
	0.5ha - Weighbridge and Office Area
	1.3ha – Haul Road 1
	3.3ha – Haul Road 2
Annual Production	Up to 1,000,000 tonnes.
Quarry Life	Up to 30 Years (under this application).
Potential Resource Life	Up to 50 years.
Hours of Operation	<u>Extraction and processing operations</u> - Monday to Friday: 7:00am to 5:00pm. - Saturday: 8:00am to 1:00pm.
	<u>Internal product transfers to stockpiles</u> - Monday to Friday: 7:00am to 5:00pm. - Saturday: 8:00am to 1:00pm.
	<u>Haulage from the development site</u> 6:30am to 4:00pm Monday to Friday. - No haulage on Saturday, Sunday or a Public Holiday.
	<u>Drilling and Blasting activities</u> Blasting between 9:00am to 5:00pm Monday to Friday only. On average one (1) blast per week, carried out by an external contractor.
	<u>Maintenance activities</u> 6:00am to 6:00pm (Monday to Saturday). - No work on Sundays and Public Holidays.
	<u>Construction hours</u> 7:00am to 5:00pm (Monday to Friday). 8:00am to 3:00pm (Saturday). - No work on Sundays and Public Holidays.
Operational Workforce	At full operation, up to 15 full-time staff, with further support from the local and regional construction industry and associated haulage contractors.
Product Transport	- Road haulage of product via semi-trailer / truck and dog trailer. - On average 110 laden trucks per day in order to meet peak production. - Maximum of 30 laden trucks per hour at peak rates.

Project Element	Summary of the Project
	Maximum daily extraction rate of 7,000 tonnes per day.
Transport Route	- The road transport route from the site extends over approximately 13km from the site entrance to the Hunter Expressway interchange at Branxton. The road transport route incorporates Springvale Road, Stanhope Road, Elderslie Road and the New England Highway. Elderslie Road was previously used by the Great Greta Coal Mine to haul coal. - The road transport route includes use of the Elderslie Bridge which crosses the Hunter River. The bridge is located 600m south of the intersection of Elderslie Road and Stanhope Road and has a mass restriction of 50 tonnes.
Water Management	Erosion and sediment control devices such as catch drains, road drainage, dirty water dams and clean water dams.
Utilities	- Power supply from existing electricity network and diesel generators. - Water supply sourced from onsite dams, surface water runoff, and rainwater tanks. Potable water imported as needed
Operational Activities and Areas	- Site office and employee facilities. - Car parking. - Existing site access from Springvale Road via Haul Road 1 (sealed) to Weighbridge and Office Area. - Use of Haul Road 1 and Haul Road 2. - Workshop and fuel storage – to be initially located at the Weighbridge and Office Area. - Fuel and supply deliveries. - Equipment storage. - Waste management. - Equipment parking areas. - Processing Area including crusher and screening plant. - Raw material stockpiles. - Product stockpiles and truck loading areas. - Truck parking. - Weighbridge. - Environmental management measures including road watering, site rehabilitation, etc. - Use of ancillary plant and equipment.
Rehabilitation	Rehabilitation will initially be limited to areas of immediate disturbance such as road batters, access road construction and sediment dams. Progressive rehabilitation of the quarry benches will occur as they become available, with the majority of the rehabilitation taking place at the completion of resource extraction when the quarry floor, stockpile areas, and portions of the infrastructure areas will be rehabilitated.

2.2 Project Site and Disturbance Area

The Project Site covers approximately 186ha and is located north of Springvale Road, Elderslie. The Project Site is located approximately 10km north of the community of East Branxton and 16km east of Singleton, within the local government area (LGA) of Singleton in NSW.

Figure 1 – Indicative Project Layout



2.3 Zoning and Land Use

The Subject site is zoned in the Singleton Local Environmental Plan 2013 as RU1 – Primary Production.

Objectives of zone are-

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To encourage diversity in primary industry enterprises and systems appropriate for the area.
- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.

Extractive Industries are permissible in the zoning with consent.

The current and historical use of the land has been for cattle grazing and used ancillary to other property holdings in the area. Surrounding land to the south and west are zoned **RU1 – Primary Production** and of similar uses with the land to the north and east zoned **C2 – Environmental Conservation** and is known as Tangory Nature Reserve. Residential dwellings on rural lands are primarily located south of the site along Springvale and Stanhope Road.

3. Legislative Requirements and Guidelines

Waste management associated with the Proposal will be undertaken in strict accordance with all relevant New South Wales legislation and EPA guidelines. The key statutory instruments applicable to the development include:

- *Protection of the Environment Operations Act 1997 (POEO Act)*
- *Protection of the Environment Operations (Waste) Regulation 2014*
- *Waste Avoidance and Resource Recovery Act 2001 (WARR Act)*
- *NSW Waste and Sustainable Materials Strategy 2041*

Adherence to these instruments will ensure that waste generated on-site is managed responsibly and in accordance with best practice environmental standards.

3.1 Protection of the Environment Operations Act 1997

The **Protection of the Environment Operations Act 1997 (PoEO Act)** establishes the primary regulatory framework for waste management in NSW.

An objective of the PoEO Act is to reduce risks to human health and prevent environmental degradation through mechanisms that promote:

- Pollution prevention and cleaner production;
- The reduction to harmless levels of discharges likely to cause environmental harm;
- The elimination of harmful wastes;
- The reduction in the use of materials and the reuse, recovery and recycling of materials;
- Progressive environmental improvement, including the reduction of pollution at its source; and
- The regular monitoring and reporting of environmental quality.

The PoEO Act defines 'waste' for regulatory purposes and establishes licensing, management and offence provisions to ensure environmentally responsible outcomes. The Act also enables the setting of specific waste management requirements through the **Protection of the Environment Operations (Waste) Regulation 2014**.

3.2 Protection of the Environment (Waste) Regulation 2014

The **Protection of the Environment Operations (Waste) Regulation 2014** (PoEO Waste Regulation) sets out specific requirements for the classification, storage, transportation and disposal of waste in NSW. It also establishes reporting and record-keeping obligations for waste generators, transporters and waste management facilities to ensure waste is managed in an environmentally responsible manner.

All waste generated by the Proposal will be classified prior to off-site transport in accordance with the NSW EPA Waste Classification Guidelines and the PoEO Waste Regulation and transported by appropriately licensed contractors to authorised facilities. Record keeping and tracking requirements will be implemented as required to ensure compliance with the Regulation.

3.3 Waste Avoidance and Resource Recovery Act 2001

The **Waste Avoidance and Resource Recovery Act 2001** (WARR Act) sets out the key objectives and guiding principles underpinning waste avoidance and resource recovery in NSW.

The WARR Act promotes waste avoidance and resource recovery by providing a framework for the development of strategies and programs. It defines the waste hierarchy which is a set of priorities for the efficient use of resources

which underpin the objectives of the WARR Act. The waste hierarchy ensures that resource management options are considered against the following priorities:

- Avoidance including action taken to reduce the amount of waste generated, to maximise efficiency and avoid unnecessary consumption.
- Resource recovery including reuse, recycling, reprocessing and energy recovery. Where avoiding and reducing waste is not possible, the next most preferred option is to reuse the materials without further processing, avoiding the costs of energy and other resources required for recycling.
- Disposal including management of all disposal options in the most environmentally sensitive manner. Disposal is the least preferred option, and is appropriate for materials such as asbestos that cannot be safely reused or recycled.

This legislative framework guides waste management practices associated with the proposal

3.4 NSW Waste and Sustainable Materials Strategy 2041

The Proposal has been assessed against the **NSW Waste and Sustainable Materials Strategy 2041** (2041 Strategy).

The proposed on-site waste management for the Bluestone Hardrock Quarry Project is consistent with the objectives of the 2041 Strategy, particularly in relation to landfill diversion and resource recovery and circular economy principles.

Where practicable, materials with ongoing value will be reused on-site. This includes wastewater, soil, mulch derived from vegetation, and overburden. These materials will support operational activities and progressive rehabilitation throughout the life of the quarry.

Waste streams that present environmental risks — including oils, greases, tyres, batteries, and sewage — will be stored in appropriately designed and covered areas, and in tanks where required. These materials will be collected by licensed contractors and transported to authorised facilities for recycling or lawful disposal.

Through the implementation of these measures, the proposal contributes to state and national objectives aimed at reducing landfill disposal and increasing recovery rates.

3.5 Local Government Requirements — Singleton Council

The Singleton Local Environmental Plan 2013 (SLEP 2013) establishes land use zones and development standards for land within the Local Government Area but does not prescribe specific statutory waste management requirements. The Singleton Development Control Plan 2014 (DCP) requires that waste generation and management measures be considered in development where significant external impacts may occur, including the identification of waste types and management measures during assessment. This Waste Management Plan has been prepared having regard to these local planning controls and Council's strategic direction on sustainable waste management as set out in the Singleton Waste Strategy 2023–2033.

4. Construction Waste Management

Construction activities associated with the quarry development will generate a range of waste streams arising from site establishment, vegetation clearing, earthworks, infrastructure installation, plant and equipment mobilisation, and site amenities. Effective waste management during construction is required to prevent environmental harm and ensure compliance with statutory obligations, maximise resource recovery opportunities, and ensure compliance with applicable legislation, including the Protection of the Environment Operations Act 1997 and associated waste regulations.

Waste management during construction will be undertaken in accordance with the waste hierarchy, prioritising avoidance, reuse and recycling ahead of disposal.

4.1 Construction-Phase Waste Generation

The principal waste streams expected during construction include:

- Vegetation cleared during site preparation
- Topsoil and subsoil
- Overburden and excess excavated material
- Construction materials (e.g. timber, packaging, scrap metal, pallets)
- Concrete, masonry and aggregate materials
- Recyclable materials (cardboard, plastics, metals)
- General putrescible waste from site amenities
- Sewage from site amenities

All wastes will be classified in accordance with the NSW EPA Waste Classification Guidelines prior to off-site transport, where required.

Materials suitable for reuse will be retained on-site wherever feasible to minimise disposal volumes. This includes:

- Reuse of topsoil and subsoil for progressive rehabilitation and landscaping;
- Reuse of overburden and suitable excavated material for landform shaping, bund construction and infrastructure development;
- Mulching of cleared vegetation for erosion and sediment control or rehabilitation purposes; and
- Segregation of recyclable materials for off-site recycling.

Procurement practices will minimise waste generation through efficient material ordering and selection of reusable or recyclable products where feasible.

Table 3 outlines the expected construction waste quantities for materials through the construction of haul road 1, office, weighbridge area and a portion of the processing area. This is an area of approximately 7.5 Hectares

Table 3 Estimated construction waste

Type of Material	Estimated Quantity (m3)	Re-use	Recycling	Disposal	Method of re-use, recycling or disposal
Vegetation	150m3	✓			On site: Cleared vegetation will be stockpiled, mulched, and reused onsite where practicable for landscaping, rehabilitation, and erosion control purposes
Excavated Material	4500m3	✓			On site: Suitable excavated material will be reused onsite for the construction of earth mounds, visual/acoustic screening, and haul road bunding where practicable. Excess materials will be stockpiled for future rehabilitation use
Timber (specify)	10m3		✓	✓	Timber will be source-separated onsite to maximise resource recovery. Untreated timber will be sent for recycling where available. Treated or unsuitable timber will be disposed of at a licensed waste facility. Where feasible, surplus materials may be returned to the supplier.
Concrete	12m3	✓	✓		To be separated on site to enhance resource recovery, disposal at licenced recycling facility
Metals (specify)	6m3		✓		Metal waste (e.g. steel, aluminium, copper) will be segregated onsite and collected by a licensed recycling contractor.
Plasterboard	1m3	✓	✓		Plasterboard will be separated onsite where practicable for recycling. Surplus or offcut material may be returned to the manufacturer where available. Unrecoverable material will be disposed of at a licensed facility.
Glass	<1m3	✓	✓		On site: to be separated wherever possible to enhance resource recovery. Reuse: surplus and offcut material returned to manufacturer for reuse where possible. Glass recycler: recovery and recycling.

Fixture and fittings	2m3	✓	✓		Fixtures and fittings to be reused wherever possible or returned to manufacturer
Packaging	15m3		✓	✓	Cardboard, plastics and other packaging materials will be source-separated onsite for recycling where facilities exist. Residual packaging waste will be disposed of at a licensed facility.
Residual Waste (general refuse)	25m3			✓	General waste will be collected in covered bins and removed by a licensed contractor for disposal at an approved waste facility.
Hazardous/special waste	unknown			✓	Any hazardous or special waste encountered will be managed in accordance with applicable environmental legislation and EPA guidelines. Such waste will be handled by appropriately licensed contractors and transported to an approved facility.

4.2 Collection and Storage

During the construction phase, waste will be segregated at the point of generation where practicable to maximise resource recovery and recycling.

Dedicated bins or designated storage areas will be provided for:

- General construction waste
- Recyclable materials (e.g. cardboard, plastics and packaging)
- Scrap metal
- Timber
- Hazardous and regulated wastes

All waste storage areas will be located within designated construction areas and managed to prevent environmental impacts, including wind-blown litter, dust generation, and stormwater contamination.

Hazardous wastes associated with plant and equipment (e.g. oils, greases, fuels, oily rags, filters and batteries) will be stored in sealed, clearly labelled containers within bunded and covered areas in accordance with applicable environmental legislation and relevant Australian Standards. Spill kits will be maintained onsite, and any spills will be managed immediately in accordance with site procedures.

Putrescible waste generated by construction personnel will be stored in covered bins and removed regularly to prevent litter, vermin access and odour impacts.

All waste will be removed from site by appropriately licensed contractors and transported to approved recycling or disposal facilities.

4.3 Transport and Disposal

Waste that cannot be reused or recycled on-site will be transported by appropriately licensed waste contractors to authorised recycling or disposal facilities in accordance with the PoEO Act. Waste tracking documentation and record keeping will be maintained as required under the PoEO Act and PoEO Waste Regulation.

Environmental Protection Measures

Construction waste management measures will be supported by:

- Regular site inspections to ensure appropriate segregation and storage;
- Monitoring of stockpile volumes to prevent excessive accumulation;
- Implementation of erosion and sediment controls around stockpiles;
- Spill response procedures for hazardous materials; and
- Induction and training of construction personnel in waste management requirements.

Through the implementation of these measures, construction waste will be managed in a manner that minimises environmental risk, maximises resource recovery, and ensures compliance with statutory obligations.

4.4 Waste Contractors and Facilities

Contractors engaged for the collection and transportation of waste generated during the demolition and construction phases will be selected with consideration given to their environmental performance history, relevant qualifications and licences, and the proposed destination and management pathway of the waste. Preference will be given to contractors who demonstrate a strong commitment to resource recovery, including the reuse and recycling of materials.

The construction contractor will be responsible for maintaining accurate records of waste disposal, including retaining all waste dockets and tracking documentation provided by waste transport contractors.

Where waste facility selection is at the discretion of the developer, facilities will be chosen with regard to recovery rates, environmental performance standards, regulatory compliance, and proximity to the site to minimise transport-related impacts.

Potential waste receiving facilities may include appropriately licensed resource recovery and waste management centres such as Recycle Central / Central Waste (Kurri Kurri) and Singleton Waste Management Facility (Fern Gully) , subject to confirmation of capacity and licensing at the time of disposal.

4.5 Construction Waste Documentation

To ensure regulatory compliance and traceability of waste materials, the following documentation will be maintained throughout the construction phase:

- Waste transport certificates and tracking documentation, where required under applicable EPA legislation
- Receipts and weighbridge dockets from licensed disposal and recycling facilities
- Records of onsite reuse, stockpiling or reprocessing of materials
- Safety Data Sheets (SDS) for hazardous materials stored or handled onsite
- Waste tracking registers and periodic summary reports

All documentation will be retained by the construction contractor and made available to regulatory authorities upon request.

Maintaining accurate and up-to-date records will support transparent auditing and enable the project to demonstrate compliance with applicable environmental legislation, EPA requirements and relevant conditions of consent.

5. Operational Waste Management

5.1 General Overview

During operation of the Bluestone Hardrock Quarry Project, waste will be generated from extraction, processing, plant and equipment maintenance, site administration, and employee amenities.

While operational waste volumes are minor relative to total material extraction and processing activities, all waste streams will be managed in accordance with statutory requirements to minimise environmental risk and maximise resource recovery.

Operational waste management will be undertaken in accordance with:

- The waste hierarchy (avoid, reuse, recycle, dispose);
- The Protection of the Environment Operations Act 1997 (PoEO Act);
- The Protection of the Environment Operations (Waste) Regulation 2014;
- The Waste Avoidance and Resource Recovery Act 2001; and
- The NSW Waste and Sustainable Materials Strategy 2041.

The operational waste framework aims to:

- Minimise waste generation at source;
- Maximise on-site reuse of materials;
- Promote off-site recycling where practicable;
- Prevent pollution and environmental harm; and
- Ensure lawful transport and disposal of residual wastes.

All waste streams generated during operations will be identified, classified (where required), and managed through approved storage, handling and disposal pathways.

5.2 On-Site Waste Handling

Waste generated during quarry operations will be segregated at source to maximise resource recovery and minimise landfill disposal.

General and Recyclable Waste

- Separate bins will be provided for general waste and recyclable materials.
- Recyclables (e.g. paper, cardboard, plastics, scrap metal) will be collected and transported to authorised recycling facilities.
- Putrescible waste from amenities will be stored in covered bins to prevent odour, litter and vermin access.
- Waste collection frequency will be aligned with operational needs to prevent overflow or stockpile accumulation.

Maintenance and Regulated Waste

Waste generated from plant and equipment maintenance may generate:

- Used oils and greases;
- Oil filters and absorbent materials;
- Waste tyres;
- Batteries; and
- Minor quantities of contaminated materials.

These materials will be:

- Stored in sealed and clearly labelled containers;
- Kept within bunded and covered storage areas;
- Managed to prevent spills or contamination of soil and water; and
- Collected by appropriately licensed contractors and transported to authorised facilities for recycling or lawful disposal.

Chemical Storage and Management

Chemicals used during quarry operations will primarily include fuels, lubricants, hydraulic oils, greases and minor maintenance chemicals associated with plant and equipment servicing.

These substances will be stored in clearly labelled containers within designated bunded areas designed to prevent spills and environmental contamination, in accordance with relevant Australian Standards including AS 1940 – *Storage and Handling of Flammable and Combustible Liquids*. Storage areas will be located away from drainage lines and sensitive environmental areas where practicable.

Safety Data Sheets (SDS) will be maintained for all chemicals stored on site, and spill kits will be available in areas where fuels or chemicals are handled. Any waste chemicals or contaminated materials will be collected by appropriately licensed contractors and transported to authorised recycling or disposal facilities.

Excavated Materials and Overburden

Excavated materials and overburden generated during operations will, where suitable, be reused on-site for:

- Landform shaping;
- Construction of bunds;
- Road maintenance; and
- Progressive rehabilitation.

Material unsuitable for on-site reuse will be classified and disposed of in accordance with EPA requirements.

5.3 Predicted Operational Waste Streams

Operational waste generation has been estimated based on the anticipated workforce (up to 15 staff), further development of the quarry site including the remainder of the processing area, haul road 2 and main pit establishment, quarry processing activities, plant and equipment maintenance requirements, and site amenities.

Table 4 summarises the expected operational waste streams and proposed management methods. The Waste Classification Guidelines – Part 1: Classifying Waste (NSW EPA, 2014) identifies six waste categories which include:

1. Special Waste;
2. Liquid waste;

3. Hazardous waste;
4. Restricted solid waste;
5. General solid waste (putrescible); and
6. General solid waste (non-putrescible).

Wastes anticipated to be generated by the Proposal have been classified according to these waste categories.

Table 4 Anticipated operational waste

Type of Material	Waste Classification	Estimated Quantity / annum*	Re use	Recycle	Disposal	Method of re-use, recycling or disposal
Vegetation including topsoil	General solid waste (putrescible)	150m3**	✓			On site: Cleared vegetation will be stockpiled, mulched, and reused onsite where practicable for landscaping, rehabilitation, and erosion control purposes
Excavated Material	General solid waste (putrescible)	5500m3**	✓			On site: Suitable excavated material will be reused onsite for the construction of earth mounds, and haul road bunding where practicable. Excess materials will be stockpiled for future rehabilitation use
General Office/ Amenity Waste	General solid waste (putrescible)	Up to 25m3		✓	✓	Stored in covered bins and collected regularly by licensed contractor for recycling (where applicable) and disposal at approved facility.
Recyclables (cardboard, plastics, paper)	General solid waste (non-putrescible)	Up to 15m3		✓		Stored in covered bins and collected regularly by licensed contractor for recycling (where applicable) and disposal at approved facility.
Scrap Metal	General solid waste (non-putrescible)	4 tonnes		✓		Stored in designated area and collected on regular basis by licensed contractor for recycling
Used Oils and Greases	Liquid waste	1800ltr		✓		Stored in sealed, bunded containers

						and collected regularly by authorized waste oil recycler.
Tyres	Special Waste	5-10		✓	✓	Stored in designated area and removed by licensed contractor for recycling or lawful disposal.
Batteries	Hazardous waste	5-10		✓		Stored in designated area and collected on regular basis by licensed contractor for recycling
Sewage	Liquid waste/ General solid waste (putrescible	3-5kL / week			✓	Sewage will be treated via an approved on-site sewage management system designed in accordance with Council's Section 68 requirements. Treated effluent will be managed via a dedicated irrigation or disposal area in accordance with approved design parameters. Sludge will be removed periodically by a licensed contractor.

*Quantities are indicative and based on anticipated operational scale. Actual volumes may vary depending on maintenance schedules, workforce numbers and production rates.

**Quantities will reduce once quarry footprint is fully established.

6. Waste Management Systems

6.1 Deliveries, Collection Procedures and Loading Areas

Waste collection and material deliveries will occur within designated operational areas designed to prevent environmental harm, ensure safe vehicle manoeuvring, and minimise conflict with quarry operations.

Waste storage and collection areas will:

- Be located on stable, all-weather surfaces;
- Provide adequate manoeuvring space for heavy vehicles;
- Be separated from active traffic routes where practicable;
- Include impervious surfaces in areas where hazardous materials are handled;
- Incorporate spill containment measures in refuelling and maintenance areas; and
- Be designed to prevent stormwater ingress and contaminated runoff.

Waste collection will be undertaken by appropriately licensed contractors. Collection frequency will be determined based on waste generation rates to prevent overflow, odour generation or environmental risk.

6.2 Waste Responsibilities and Management Structure

Clear responsibilities are established to ensure effective implementation and ongoing compliance with this (WMP). Table 5 Outlines the roles and responsibilities.

Table 5 Operational waste roles and responsibilities

Role	Responsibility
Role Responsibility Environmental Management Representative	• Compliance with applicable environmental licences, legislation and project conditions. Ensure environmental management plan(s) across the site are adhered to and accurate to site conditions. • Undertake inspections to ensure compliance.
Construction Site Manager	• Ensuring workers and subcontractors are inducted into the WMP along with other applicable management plans. • Responsible for undertaking procurement of construction materials in accordance with the waste management hierarchy. • Segregation of waste streams where required to ensure appropriate use, treatment and/or disposal.
Health and Safety Manager	• Safety inductions for all staff, workers and visitors. • Work with Construction Site Manager to determine safe handling of asbestos waste in compliance with regulatory requirements.
Site Workers	• Responsible for acting in accordance with the WMP and site inductions. • Informing the Construction Site Manager of any waste management incidences and Health and Safety Manager of any safety issues associated with on-site activities.

Regular inspections will be undertaken by site management and/or the Environmental Manager to ensure compliance with waste storage, segregation, housekeeping, and environmental protection requirements. Corrective actions will be implemented where non-compliances are identified

6.3 Waste Storage Area Standards

Waste storage areas will:

- Be located away from drainage lines and sensitive environmental areas
- Be maintained in a clean and orderly condition
- Include covered bins for putrescible waste
- Include bunding for hazardous liquids with capacity consistent with relevant Australian Standards
- Prevent access by vermin and minimise wind-blown litter

Hazardous substances will be stored in accordance with AS 1940 – Storage and Handling of Flammable and Combustible Liquids, including provision of secondary containment with minimum capacity of 110% of the largest storage vessel.

6.4 Signage and Staff Education

Clear signage will be installed to:

- Identify waste streams and appropriate disposal pathways;
- Designate hazardous material storage areas;
- Provide spill response instructions; and
- Identify emergency contact information.

All personnel will receive induction training covering:

- Waste segregation requirements;
- Environmental responsibilities;
- Spill response procedures; and
- Environmental incident reporting obligations.

Refresher training will be provided as required.

6.5 Pollution Prevention and Litter Control

Measures to prevent pollution and litter will include, but are not limited to:

- Routine housekeeping and site inspections
- Secure storage of waste materials
- Covering of bins where appropriate
- Maintenance of erosion and sediment controls
- Immediate clean-up of spills
- Monitoring of stockpile stability and runoff controls

These measures will minimise the potential for off-site impacts to surrounding land uses and waterways.

Any environmental incident involving waste will be managed and reported in accordance with the PoEO Act notification requirements.

7. References

- Protection of the Environment Operations Act 1997 (NSW)
- Protection of the Environment Operations (Waste) Regulation 2014 (NSW)
- Waste Avoidance and Resource Recovery Act 2001 (NSW)
- NSW EPA Waste Classification Guidelines
- NSW Waste and Sustainable Materials Strategy 2041
- Singleton Local Environmental Plan 2013
- Singleton Development Control Plan 2014 Singleton Waste Strategy 2023–2033.
- AS 1940 – Storage and Handling of Flammable and Combustible Liquids