Newman Quarrying Pty Ltd

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

Environmental Management Strategy

August 2022

List of Abbreviations	
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System
BCD	Biodiversity and Conservation Division (formerly Office of Environment and Heritage)
DA	Development Application
DCP	Development Control Plan
DPE	Department of Planning and Environment (formerly Department of Planning, Industry and Environment)
ECRTN	Environmental Criteria for Road Traffic Noise
EIS	Environmental Impact Statement
EMS	Environmental Management Strategy
ENCM	Environment Noise Control Manual
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
GDE	Groundwater dependant ecosystems
INP	Industrial Noise Policy
KTP	Key threatening process
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LOS	Level of service
mgbs	Meters below ground surface
MHRDC	Maximum Harvestable Rights Dam Capacity
MNES	Matters of National Environmental Significance
NPI	National Pollution Inventory
PEA	Preliminary Environmental Assessment
POEO Act	*Protection of the Environment Operations Act 1997*
Roads and Maritime	NSW Roads and Maritime Service
SEARs	Secretary Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SIS	Species Impact Statement
SISD	Safe Intersection Sight Distance
TEC	Threatened Ecological Community
tpa	Tonnes per annum
TSC Act	*Threatened Species Conservation Act 1995*
vtpd	Vehicle trips per day
WIRES	Wildlife Information Rescue and Education Service

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1. Introduction

Newman Quarrying Pty Ltd (Newman Quarrying) proposes to expand its operations at Sly's Quarry (the proposal) in Mororo, NSW. The sandstone quarry is located at Lot 2 in DP 1055044, on land with frontage to the Tullymorgan-Jackybulbin Road. The site is approximately 2.6 kilometres west of the Pacific Highway. The primary purpose of the quarry would be to supply quarry materials required for current and proposed Pacific Highway works, and for supply to local councils and contractors.

The proposed quarry expansion was considered to be State Significant Development under Clause 7 of Schedule 1 of State Environmental Planning Policy (SEPP) (State and Regional Development) 2011 and therefore required development consent from the Minister of Planning under Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act). An environmental impact statement (EIS) was prepared to support the project application (GHD May 2015) and included consultation with a range of government agencies and community stakeholders. Any issues raised during consultation were addressed and appropriate mitigation measures identified. Development Consent (SSD 6624) was granted for the project on 5 May 2016 and is subject to certain conditions of approval.

A modification was approved on 19 October 2017 which increased the daily truck numbers to 150 during the Woolgoolga to Ballina Pacific Highway Upgrade, amend the benching details and revise the wording of some conditions.

This Environmental Management Strategy (EMS) has been prepared to provide the framework for environmental management for regular site operations. The EMS identifies and documents the key environmental risks and mitigation measures outlined in the Development Consent and the EIS that must be implemented to ensure that the environmental objectives and legal obligations are met.

This EMS has been prepared with reference to the following documentation:

- Proposed Quarry Expansion at Lot 2 DP 1055044, Tullymorgan-Jackybulbin Road, Mororo. Environmental Impact Statement (GHD, May 2015)
- Development Consent (SSD 6624)
- Notice of Modification
- Local and state government agencies submissions
- ISO14001:2004 – Environmental Management Systems
- Department of Infrastructure, Planning and Natural Resources (DIPNR) (2004) Guidelines for the preparation of Environmental Management Plans

1.1 EMS purpose

The EMS outlines the environmental management practices and procedures to be followed during the operation of the quarry. The primary purpose of this EMS is to document the environmental setting, quarry operations, environmental risks, environmental management, implementation, monitoring and reporting. This is to guide the quarry's environmental performance to meet its regulatory and policy requirements in a systematic manner and facilitate continual improvement.

1.2 EMS objectives

The key environmental performance objectives for this EMS are:

- Compliance with relevant environmental legislation and regulations

- Compliance with the conditions of Development Consent SSD 6624 and Notice of Modification
- Minimising pollution, waste generation, and environmental impacts

Key environmental objectives and targets for the quarry are shown in Table 1, which also indicates where the key environmental objectives are addressed in the EMS.

Table 1 EMS objectives & targets

Aspect	Objective	Target	Section
Soil & Water	• To minimise impacts on soil and water quality during operations to within the scope permitted by the development consent	• Full compliance with the relevant legislative requirements and CoA. • Meet Environment Protection Licence (EPL) water quality discharge parameters for all planned discharges. • Provide training on soil and water management to all relevant personnel through site inductions.	Appendix E
Biodiversity and Rehabilitation	• Maintain significant habitat and minimise vegetation disturbance. • Minimise the spread of weeds and soil pathogens.	• No fauna fatalities. • No unapproved disturbance of vegetation. • No new occurrences of weeds or pathogens on site.	Appendix F
Noise	• Identify sensitive receivers and implement appropriate environmental controls and procedures during operational activities. • Minimise potential adverse noise impacts to the environment and community.	• Full compliance with the relevant legislative requirements and CoA. • No exceedance of the operation noise limits. • No justified complaints from adjacent residents in relation to noise generation. • No unapproved out of hours work.	Appendix G
Blasting	• Identify sensitive receivers and implement appropriate environmental controls and procedures during operational activities. • Minimise potential adverse blasting impacts to the environment and community.	• Full compliance with the relevant legislative requirements and CoA. • No exceedance of the blasting criteria. • No justified complaints from adjacent residents in relation to blasting and vibrations.	Appendix H
Air Quality	• Implement appropriate controls and procedures during the operation of the quarry to avoid or minimise dust generation, air quality impacts and potential adverse impacts to sensitive receivers.	• Minimise and manage potential air quality/dust impacts from the development in accordance with relevant legislative requirements at CoA. • Control dust and exhaust emissions of plant and equipment from quarrying activities. • Achieve particulate matter and dust concentrations that meet the approved air quality criteria. • No visible offsite dust emissions as a result of site operations. • No justified complaints related to air quality attributable to site operation.	Appendix I
Traffic	• Minimise impacts to local residents and public infrastructure from quarry traffic.	• Full compliance with the relevant legislative requirements and CoA.	Appendix J

Aspect	Objective	Target	Section
		• No justified complaints related to quarry traffic. • No road damage from quarry vehicle movements beyond normal wear and tear.	
Bushfire	• To minimise the risk of bushfire to people and property.	• Full compliance with the relevant legislative requirements and CoA. • No loss of life or property from bushfire • No ignition of bushfire from site operations	Appendix K
Heritage	• Avoid damage or disturbance of heritage items.	• Full compliance with the relevant legislative requirements and CoA. • No damage to heritage items • All site staff and contractors trained on unexpected finds protocol.	Appendix L
Waste	• Minimise the volume of waste generated from site operations.	• Full compliance with the relevant legislative requirements and CoA. • Waste generation minimised through the hierarchy of waste management priorities. • Separable waste bins provided.	Appendix M

2. Project description

2.1 Key site information

Feature	Details
Approved extraction rate	500,000 tonnes / annum
Estimated available resource	7,000,000 tonnes
Estimated operating period	15-40 years (demand driven). Approved until 31 May 2041
Extraction depth	44 m AHD
Site area	374 hectares
Quarry area	18 hectares
LGA	Clarence Valley Local Government Area

2.2 Project overview

Newman Quarrying proposes to expand a sandstone quarry at Lot 2 DP 1055044, Tullymorgan-Jackybulbin Road, Mororo, known as Sly's Quarry. The project is to expand one portion (Site A) of the approved sandstone quarry by 11.1 hectares, close and rehabilitate two portions (Sites B and C) and increase the extraction rate up to 500,000 tonnes per annum from a total resource of 7 million tonnes. Compared to the currently approved quarry, the net area of the quarry would reduce by 49 hectares and the rate of extraction would increase from 100,000 tonnes per annum.

The quarry is located approximately 2.6 kilometres west of the Pacific Highway. The close proximity to the Highway and isolation means that Sly's Quarry presents economic and environmental benefits to supply material for the Pacific Highway upgrade.

Maintaining the current Pacific Highway and constructing the proposed Pacific Highway upgrade will require a considerable volume of imported quarry materials. Depending on a range of factors, including funding, these works could extend over a period of approximately five years. After completion of the Highway works, the quarry would continue to supply material for maintenance of the Pacific Highway as well as to CVC and private contractors.

To assist with the rehabilitation of Site B, Site C and the proposed quarry expansion, it is also intended to import unsuitable virgin excavated natural material (VENM), excavated natural material (ENM) and mulch from the highway upgrade works.

2.3 Site characteristics

The site is accessed from Tullymorgan-Jackybulbin Road via a gravel access road that travels in a northerly direction. A site office and weighbridge are located approximately 200 m along the access road with a car parking area and maintenance shed located to the east. A generator and fuel storage/fuel bowser are also in this location.

The centre of the existing and proposed quarry is located approximately 150 m north of the site office. This area is also the main stockpiling area, with an additional stockpile area located to the east. The proposed quarry will extend in a northerly and southerly direction from the centre of the current quarry.

The current floor of the quarry is approximately 44 m Australian Height Datum (AHD) with a second level to the east at approximately 58 m AHD. The centre of the existing quarry has active faces to the north, east and west, as shown in the photograph below.

Figure 2-1 Existing Quarry

Another stockpile area is located to the south west of the quarry which also includes a bunded oil storage shed, generator and wash plant.

Stormwater from the quarry is directed to the south into a settling pond and overflows into an open drain that leads to the main sediment basin, located to the south. Runoff from the wash plant travels through a series of small basins located west of the entrance road before entering the main sediment basin. The sediment basin discharges to a wetland to the south.

2.4 Extraction methodology

The quarry operation would be carried out in stages and in response to demand. It is therefore difficult to predict exactly how the extraction would progress. In general, the extraction is proposed to move north and east initially, to the extent of the currently approved quarry. The eastern extent of the excavation would remain 10 m from the road reserve located along the eastern boundary and a safety fence would be installed. A 5 m wide buffer would be established around the remaining perimeter of the quarry to cater for access and stormwater controls. The excavation would be to the current floor level of 44 m AHD. Stage 1 would cover an area of 6.9 hectares and extract approximately 2.3 million tonnes. Stage 1 encompasses the area previously approved for a quarry.

Stage 2 would involve expanding the quarry to the north and south and to a depth of 44 m AHD. This would expand the quarry by 5.7 hectares and involve the extraction of approximately 2.8 million tonnes of material. Stage 2 (south) would be exhausted prior to Stage 2 (north) being developed.

Stage 3 would be the final stage and would expand the quarry further north and south. Stage 3 would involve an expansion of 5.4 hectares to a depth of 44 m AHD. This would involve extracting approximately 1.8 million tonnes of material. Stage 3 (south) would be exhausted prior to Stage 3 (north) being developed.

A summary of the area and volumes of each stage are presented in Table 2 and the proposed extraction plans are provided in Appendix C. The extraction plans include extraction area, cross sections, long sections, site layout and final levels.

Table 2 Quarry area and extraction volumes

Stage	Area (Ha)	Volume (tonnes)
1 (previously approved)	6.9	2,300,000
2 (north)	2.7	1,600,000
2 (south)	3.0	1,200,000
3 (north)	2.2	720,000
3 (south)	3.2	1,040,000
Total	**18.0**	**6,880,000**

The extraction of all stages would progress in 10 m by 10 m benches to a final depth of 44 m AHD.

Following extraction, the material would be crushed, screened and where necessary blended with other materials from the quarry, or material imported to the quarry. The materials would be stockpiled on the quarry floor in numbered stockpiles of approximately 4,000 tonnes each. Samples from each stockpile would be analysed for compliance with Roads and Maritime specifications before being transported offsite. This process takes approximately 20 days, per stockpile.

The quarry would operate as efficiently and effectively as possible to maximise the returns of the investment to the operator. It is anticipated that none of the extracted material would be wasted, with the material either sold in its raw state or blended with other products to generate a suitable product for the market. The proposed sequence of operations for each stage would generally be:

- Establish the sediment and erosion control measures and other environmental safeguards.
- Clear vegetation, if necessary. The bulk of cleared vegetative wastes would be stockpiled in a suitable location, clear of adjacent vegetated areas and mulched for future revegetation works.
- Strip and stockpile topsoil and protect it against erosion for use in revegetation works.
- Excavate the weathered rock material, where possible. The deeper layers would be excavated in a similar manner but would also include blasting. Blasting is anticipated to be carried out at a frequency of between two blasts per month to one blast per year, depending on demand and the material encountered. The blasting would be undertaken by a specialist contractor in accordance with regulatory requirements.
- Rock hammer where required, to break large rocks into smaller pieces.
- Crush the rock using an excavator and a jaw crusher. The crusher produces an output of various sizes of fill or aggregate which are separated by a screening machine into various piles based on size. Sand is also produced in this process. The crusher and screener are moved around the quarry floor as necessary to be close to the quarry face and accumulated, excavated stone.
- Load the material directly from the stockpile onto trucks for removal from site.
- Continued excavation, as described above, within each stage until it reaches the ultimate depth of 44 m AHD. During the excavation, 10 m high by 10 m wide benches will be established at the quarry face. At the top of each bench, a safety bund/wall will be constructed to prevent people or machinery falling over the bench. The

benches and quarry floor will be graded to the sediment basin located in the south-western end of the quarry area.

- Rehabilitation once the extraction is complete. Topsoil would be respread on the disturbed areas and revegetated, where possible. The established erosion and sediment control measures would be maintained until the rehabilitated surface is adequately stabilised.
- Other details relating to quarry operations include:
  - If there is a special order for large boulders, for example for breakwater or river or sea wall repair or construction, these are set aside and transported as such.
  - Occasionally, in order to comply with Roads and Maritime specifications, materials won from the quarry would be blended with other materials won from the quarry, or with imported materials (e.g., sand, clay), prior to being stockpiled on the floor of the quarry.
  - Some sand is transported to the onsite wash plant for processing.

A detailed list of equipment to be used in the operation is provided in Section 2.6 (type of machinery) below.

2.4.1 Imported materials

As outlined above, following the extraction of the raw material from the quarry and screening, additional material may be required for blending to satisfy client specifications. This material may need to be imported to the quarry and could include rock, sand, clay, topsoil or landscaping products. The quantity of this material would be dependent upon the material's end use and is difficult to predict. It is likely that some of the blending materials would be stockpiled on site.

To rehabilitate Area B, Area C and the proposed quarry, topsoil and mulch would be imported to site from the Pacific Highway upgrade works. The topsoil would consist of VENM or ENM that is of an unsuitable quality for use on the highway and the mulch would be from the clearing of native vegetation during highway works. The volumes of topsoil and mulch to be imported and stored onsite are presently unknown but is estimated to be in the order of:

- Topsoil - 10,000 tonnes per year
- Mulch – 5,000 m3 per year

The blending material, topsoil and mulch would be brought to site via trucks returning from their delivery of quarried materials and stored in the same location where it is currently stored. The area would have appropriate sediment erosion controls and tannin management measures installed and maintained.

2.5 Hours of operation

The hours of operation would depend on demand with some periods of high activity and other times when activity is limited to the occasional loading of haulage trucks. The proposed hours of operation are outlined in Table 3.

Table 3 Hours of operation

Activity	Permissible Hours
Employee arrival	• From 6:30 am Monday to Saturday inclusive • From 7:30 am Sundays or public holidays if engaged in maintenance, site security or other similar activities
Quarrying operations including loading and dispatch of laden trucks	7 am to 6 pm Monday to Friday 7 am to 1 pm Saturday • 7 am to 4 pm if fulfilling a contract for the supply of quarry products to the Pacific Highway upgrade project At no time on Sundays or Public holidays
Blasting	• 9 am to 3 pm Monday to Friday (except public holidays)
Maintenance	• May be conducted at any time, provided that these activities are not audible at any privately-owned residence

2.6 Plant and equipment

Table 4 identifies the items of plant and equipment that are necessary for the operation of the quarry.

Table 4 Plant and equipment

Type	Typical Make/Model	Approx. Number	Typical Frequency of use	Description
Excavators	Komatsu pc350 – 8 Komatsu pc710-5	2 1	12- 40 hrs/ week	Excavating material and stockpiling Clearing and grubbing of vegetation and stripping of topsoil
Screen	Sandvik qe440 Sandvik qa340	1 1	20 – 40 hrs/ week	Aggregate/gravel production and overburden screening
Front-end Loader	Komatsu wa400-3 Komatsu wa470-3 Kawazaki 90zv	1 1 1	10 hrs/week 30 hrs/week 45 hrs/week	Loading material onto the haul trucks and stockpiling material within the pit floor
Crusher	McCloskey j50 Komatsu br380jg-1	1 1	20 – 40 hrs/ week	Crushing rock main jaw crusher Crushing rock spare jaw crusher
Haul Trucks	Truck and dog Contractors	1 Up to 150/day	45 hrs/week Up to 150/day	Delivery of materials to customers and stockpiling in pit if needed and carting unsuitable to rehabilitation areas.
Water Cart	Isuzu	1	10 hrs/week	Water haul roads and stockpiles
Water Pump	Honda	3	10 hrs/week	Dewater excavation/basin and to fill watercart from standpipe Water stockpiles and put moisture in products
Generator	Cummins Able	1 1	5 hrs/week 9 hrs/day	Provide electricity to washplant and dam pump Provide power to weighbridge and fuel pump
Hand tools	Various	5	2 hrs/week	General activities maintaining plant

2.7 Employment

Currently there are three employees at the existing quarry but it is anticipated to require a further five full time employees during periods of maximum extraction. Haulage of the material would also provide employment for truck drivers. Haulage trucks would be engaged and operated by contractors external to the quarry operations.

Additional off site employment would also be generated, in the maintenance and support services for equipment and machinery.

2.8 Site facilities

The site currently consists of a small site office, machinery shed, bunded oil shed, weighbridge, 12,000 L TransTank fuel bowser and pump-out toilet. Water for the site office and amenities is supplied via water tanks and electricity via a generator. No addition or alteration to the existing facilities is proposed as part of this application.

The existing sediment basins will continue to treat stormwater runoff and provide water for dust control, crusher sprinklers and screen. Any excess water will be treated, as required by the site's Environmental Protection Licence, prior to discharge to the wetland. No water will be extracted from the ephemeral waterways traversing the site for any reason in respect of the operation of the quarry.

The site layout is shown in Appendix C.

3. Legislative framework

3.1 Legislation

Commonwealth and NSW legislation that is relevant to the environmental management and operation of the quarry are detailed in Table 5. The legislation summary will be reviewed in accordance with the review schedule in Section 9 to ensure legal obligations related to environmental management of the site are current.

Table 5 Legislation summary

Legislation	Relevance	Requirements
Environmental Protection & Biodiversity Conservation Act 1999	The EPBC Act identifies Matters of National Environmental Significance (MNES), which if site operations have the potential to impact upon requires approval from the Federal Environment Minister.	Site operations are deemed to have a medium impact on a 'listed threatened species or community', with the project containing known or potential habitat for three threatened flora species, three threated fauna species and four migratory bird species listed under the EPBC Act. The project was referred to the Federal Minister for the Environment for approval under the EPBC Act, based on the potential impact to *Hibbertia marginata*.
Environmental Planning & Assessment Act 1979	All development in NSW is assessed in accordance with the provisions of the EP&A Act.	Site operations are subject to the conditions of Development Consent SDD 6624 and the Notice of Modification. Requirements of the EP&A Act were considered in the development application.
Statement Environmental Planning Policies (SEPP)	SEPPs are planning instruments developed for specific planning issues in NSW. SEPPs that are relevant to site operations are: SEPP (Planning Systems) 2021 SEPP (Resources and Energy) 2021 SEPP (Primary Production) 2021 SEPP(Resilience and Hazards) 2021 SEPP (Biodiversity and Conservation) 2021.	Requirements of relevant SEPPs were considered during the development application.
Protection of the Environment Operations Act 1997	The POEO Act regulates pollution and waste management in NSW through issuing Environmental Protection Licenses (EPL) for scheduled activities.	Slys Quarry has an approved extraction rate of 500,000 tonnes / year. Extractive industries which exceed 30,000 tonnes / year are defined as scheduled activities and require an EPL.

Legislation	Relevance	Requirements
		Site operations are subject to the conditions of EPL 11649.
National Parks & Wildlife Act 1974	The NPW Act provides the protection of Aboriginal objects and places.	There are no known Aboriginal objects or places at the site. It is highly unlikely that any significant cultural deposits are at the site. Any unexpected finds during site operations will be managed in accordance with the Act.
Biodiversity Conservation Act 2016	The purpose of the BC Act is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development.	The project may have direct and indirect impacts on threatened biota listed under the BC Act. Impacts on threatened biota listed under the BC Act were assessed via BioBanking.
Roads Act 1993	The Roads Act sets out requirements for approval to carry out certain works undertaken within the vicinity of a road.	The proposal involves the upgrade of the intersection, therefore a Section 138 approval is required.

Legislation	Relevance	Requirements
Water Act 1912	The Water Act controls the extraction and use of water and carrying out activities near water sources, where a water sharing plan is not in place.	It is considered unlikely that quarry operations will intercept an aquifer, therefore a licence under Part 5 of the Water Act is not required. However, installation of a monitoring well is proposed.
Water Management Act 2000	The WM Act controls all activities undertaken within 40 m of a waterway through controlled activity approvals.	The water collected in the sediment basins may be in excess of the "maximum harvestable right dam capacity" (MHRDC) for the site, however a Water Access Licence (WAL) would not be required because under the WM Act sediment basins do not require a licence. It is also envisaged that a Controlled Activity Approval (CAA) will not be required because the proposal does not impact any drainage lines that meet the definition of a "river" under this Act.
Rural Fires Act 1997	The Rural Fires Act outlines requirements to be in place to minimise the likelihood of fire.	Given that the site is mapped at Vegetation Category 1 bushfire prone land, a bushfire risk assessment was undertaken in the EIS.
Clarence Valley Local Environmental Plan 2011	The Clarence Valley LEP (CVLEP) defines the zoning for the site which prescribes land use objectives	Requirements of the CVLEP 2011 were considered in the development application.

3.2 Operational approvals

Approvals, licences or permits required by the legislation listed in Table 5 are detailed in Table 6.

Table 6 Approval summary

Approval	Regulator	Expiry / Review Date
Development Consent (SSD 6624)	Department of Planning and Environment (DPE)	31 May 2041
Environmental Protection Licence (EPL No. 11649)	Environment Protection Authority (EPA)	12 June
Section 138 approval	Clarence Valley Council (Council)	-

3.3 Conditions of consent

The Development Consent (SSD 6624) conditions relating to the EMS are outlined in Table 7.:

Table 7 Relevant conditions of consent

Condition	Requirement	Reference
Schedule 4, Condition 1,	**Notification of Landowners** As soon as practicable after obtaining monitoring results showing: a) an exceedance of any relevant criteria in Schedule 3, the Applicant must notify the affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the development is again complying with the relevant criteria; and	Section 6.3
Schedule 4, Condition 2,	**Independent Review** If an owner of privately-owned land considers the development to be exceeding the relevant criteria in Schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the development on his/her land. If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision, the Applicant must: a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to: • consult with the landowner to determine his/her concerns; • conduct monitoring to determine whether the development is complying with the relevant criteria in Schedule 3; and • if the development is not complying with these criteria, then identify measures that could be implemented to ensure compliance with the relevant criteria; and b) give the Secretary and landowner a copy of the independent review.	Section 8.4.1
Schedule 5, Condition 1,	**Environmental Management Strategy** If the Secretary requires, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:	
	a) be submitted to the Secretary for approval within 6 months of the Secretary requiring preparation of the strategy by notice to the Applicant;	Noted
	(b) be prepared in consultation with Council;	Appendix D
	(c) provide the strategic framework for environmental management of the development;	This document
	(d) identify the statutory approvals that apply to the development;	Section 3
	(e) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	Section 4.3
	(f) describe the procedures that would be implemented to: • keep the local community and relevant agencies informed about the operation and environmental performance of the development;	Section 7.3

	• receive, record, handle and respond to complaints;	
	• resolve any disputes that may arise during the course of the development;	
	• respond to any non-compliance;	
	• respond to emergencies; and	
	(g) include: • copies of any strategies, plans and programs approved under the conditions of this consent; and • a clear plan depicting all the monitoring to be carried out under the conditions of this consent.	Appendices
Schedule 5, Condition 1A	Where consultation with any public authority is required by the conditions of this consent, the Applicant must:	Appendix D
	(a) consult with the relevant public authority prior to submitting the required document to the Secretary for approval;	
	(b) submit evidence of this consultation as part of the relevant document;	
	(c) describe how matters raised by the authority have been addressed and any matters not resolved; and	
	(d) include details of any outstanding issues raised by the authority and an explanation of disagreement between any public authority and the Applicant.	
Schedule 5, Condition 2	The Applicant must implement any Environmental Management Strategy as approved from time to time by the Secretary.	Noted
Schedule 5, Condition 4,	**Revision of Strategies, Plans and Programs** Within 3 months of the submission of an: a) Annual Review under condition 9 below; b) incident report under condition 7 below; c) audit report under condition 10 below; and d) any modifications to this consent, the Applicant must review the strategies, plans and programs required under this consent, to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted for the approval of the Secretary.	Section 9.1
Schedule 5, Condition 5	**Updating and Staging of Strategies, Plans or Programs** To ensure that strategies, plans or programs required under this consent are updated on a regular basis, and that they incorporate any appropriate additional measures to improve the environmental performance of the development, the Applicant may at any time submit revised strategies, plans or programs for the approval of the Secretary. With the agreement of the Secretary, the Applicant may also submit any strategy, plan or program required by this consent on a staged basis. The Secretary may approve a revised strategy, plan or program required under this consent, or the staged submission of any of these documents, at any time. With the agreement of the Secretary, the Applicant may prepare a revision of or a stage of a strategy, plan or program without undertaking consultation with all parties nominated under the applicable condition in this consent. While any strategy, plan or program may be submitted on a staged basis, the Applicant will need to ensure that the operations associated with the development are covered by suitable strategies, plans or programs at all times. If the submission of any strategy, plan or program is to be staged; then the relevant strategy, plan or program must	Section 9.2

	clearly describe the specific stage/s of the development to which the strategy, plan or program applies; the relationship of this stage/s to any future stages; and the trigger for updating the strategy, plan or program. Notes: While any strategy, plan or program may be submitted on a staged basis, the Applicant will need to ensure that the operations associated with the development are covered by suitable strategies, plans or programs at all times. If the submission of any strategy, plan or program is to be staged; then the relevant strategy, plan or program must clearly describe the specific stage/s of the development to which the strategy, plan or program applies; the relationship of this stage/s to any future stages; and the trigger for updating the strategy, plan or program.	
Schedule 5, Condition 6,	**Adaptive Management** The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation. Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must, at the earliest opportunity: a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not reoccur; b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; c) within 14 days of the exceedance occurring, submit a report to the Secretary describing these remediation options and any preferred remediation measures or other course of action; and d) implement remediation measures as directed by the Secretary; to the satisfaction of the Secretary	Section 8.4
Schedule 7, Condition 8	**Community Consultative Committee** If directed by the Secretary, the Applicant must establish and operate a Community Consultative Committee (CCC) for the development to the satisfaction of the Secretary. Any such CCC must be operated in general accordance with the Department's Community Consultative Committee Guidelines, November 2016 (or its latest version). Notes: • The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent. • In accordance with the guidelines, the Committee should comprise an independent chair and appropriate representation from the Applicant, Council and the local community.	Section 7.3
Schedule 5, Condition 8	**Reporting** **Incident Reporting** The Applicant must immediately notify the Secretary (using the contact name, email address and phone number provided by the Department from time to time) and any other relevant agencies of any incident.	Section 6.3

Schedule 5, Condition 8A	Within 7 days of the date of the incident, the Applicant must provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested. This report must include the time and date of the incident, details of the incident, measures implemented to prevent re-occurrence and must identify and non-compliance with this consent.	Section 6.3
Schedule 5, Condition 9	**Regular Reporting** The Applicant must provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.	Section 7.3
Schedule 5, Condition 10	**Annual Review** By the end of September each year, or other timing as may be agreed by the Secretary, the Applicant must review the environmental performance of the development to the satisfaction of the Secretary. This review must:	Section 8.5
	a) describe the development (including any rehabilitation) that was carried out in the previous financial year, and the development that is proposed to be carried out over the current financial year;	
	b) include a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, which includes a comparison of these results against the: • relevant statutory requirements, limits or performance measures/criteria; • requirements of any plan or program required under this consent; • monitoring results of previous years; and • relevant predictions in the documents listed in condition 2(a) of Schedule 2;	
	c) identify any non-compliance over the past financial year, and describe what actions were (or are being) taken to ensure compliance;	
	d) identify any trends in the monitoring data over the life of the development;	
	e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and	
	f) describe what measures will be implemented over the current financial year to improve the environmental performance of the development.	
Schedule 5, Condition 11	**Independent Environmental Audit** Within a year of the date of this consent, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant must commission, commence and pay the full cost of an Independent Environmental Audit of the development. This audit must:	Section 8.3.2
	a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;	
	b) include consultation with the relevant agencies and (if established) the CCC;	
	c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL or necessary water licences for the development (including any assessment, strategy, plan or program required under these approvals);	

	d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; e) recommend appropriate measures or actions to improve the environmental performance of the development, and/or any assessment, strategy, plan or program required under the abovementioned approvals; and	
Schedule 5, Condition 12	Within 12 weeks of commencing this audit, or as otherwise agreed by the Secretary, the Applicant must submit a copy of the audit report to the Secretary, Council, the EPA and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report. The Applicant must implement these recommendations, to the satisfaction of the Secretary.	Section 8.3.2
Schedule 5, Condition 13	**Access to information** Within 6 months of the date of this consent, the Applicant must: a) make the following information publicly available on its website: • the documents listed in condition 2(a) of Schedule 2; • current statutory approvals for the development; • all approved strategies, plans and programs required under the conditions of this consent; • a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs; • a complaints register, updated monthly; • the annual reviews of the development; • any independent environmental audit, and the Applicant's response to the recommendations in any audit; and any other matter required by the Secretary; and b) keep this information up-to-date, to the satisfaction of the Secretary.	Section 7.3

3.4 Relevant Environment Protection Licence Conditions

The conditions of the EPL relating to the EMS are outlined in Table 8 and a copy of the EPL is kept on site, which is available to any authorised officer of the EPA.

Table 8 Relevant EPL conditions

Condition	Requirement	Reference
Condition L1, Schedule 3	L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	Table 5
Condition O4, Schedule 4	Emergency Response: Note: The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises. Details of the requirements can be found on the EPA website via the following link http://www.epa.nsw.gov.au/legislation/poefaqspirmps.htm	Appendix N
Condition M1, Schedule 5	M1 Monitoring Records M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	Section 8.5.1
	M1.2 All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be	Section 8.5.1

	reduced to a legible form; b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.	
	M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken; b) the time(s) at which the sample was collected; c) the point at which the sample was taken; and d) the name of the person who collected the sample.	Section 8.2
Condition M5, Schedule 5	M5 Recording of pollution complaints M5.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	Section 7.3
	M5.2 The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the licensee, the reasons why no action was taken.	
	M5.3 The record of a complaint must be kept for at least 4 years after the complaint was made.	
	M5.4 The record must be produced to any authorised officer of the EPA who asks to see them.	
Condition M6, Schedule 5	M6.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	Section 7.3
	M6.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	
	M6.3 The preceding two conditions do not apply until 3 months after the date of issue of this license	
Condition R1, Schedule 6	R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: 1. a Statement of Compliance, 2. a Monitoring and Complaints Summary, 3. a Statement of Compliance - Licence Conditions, 4. a Statement of Compliance - Load based Fee, 5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan, 6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and 7. a Statement of Compliance - Environmental Management Systems and Practices. At the end of each reporting period, the EPA will provide to the licensee notification that the Annual Return is due.	Section 8.5
	R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.	

	R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	
	R1.7 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: a) the licence holder; or b) by a person approved in writing by the EPA to sign on behalf of the licence holder.	
	R1.8 The licensee must report any exceedence of the licence blasting limits to the regional office of the EPA as soon as practicable after the exceedence becomes known to the licensee or to one of the licensee's employees or agents.	
	R1.9 The licensee must also include the following information with the Annual Return: • A statement detailing the total volume of material extracted from the quarry for the reporting period; and • The total volume of extracted material transported from the premises for the reporting period.	
Condition R2, Schedule 6	R2 Notification of environmental harm R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.	Section 6.3
	R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred. Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.	
Condition R3, Schedule 6	R3 Written report R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that: a) where this licence applies to premises, an event has occurred at the premises; or b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	Section 6.3
	R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	
	R3.3 The request may require a report which includes any or all of the following information: a) the cause, time and duration of the event; b) the type, volume and concentration of every pollutant discharged as a result of the event; c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort; e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;	

	f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and g) any other relevant matters.	
	R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.	
Condition G1, Schedule 7	Copy of licence kept at the premises or plant G1.1 A copy of this licence must be kept at the premises to which the licence applies.	*Section 3.4*
	G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.	

3.5 Environmental policy

A copy of Newman Quarrying Pty Ltd Environmental Policy is included in Appendix A.

3.6 Environmental risk assessment

The environmental risks have been assessed by examining all site activities associated with quarry operations to determine their potential impacts on the environment. The risk rating is determined by considering the likelihood and consequence of an activity impacting upon the selected environmental aspect, using the matrix shown in Table 9.

Table 9 Risk matrix

Likelihood	Consequence		
	Low	Medium	High
Will occur	M	H	H
Likely to occur	L/M	M	H
Unlikely to occur	L	L/M	M
Will not occur	L	L	L/M

The results of this broad risk assessment are shown in Table 10.

Table 10 Risk assessment

	Clearing & Grubbing	Excavation & Blasting	Crushing / Screening / Blending	Material Transport	Rehabilitation
Surface Water	H	M	L/M	L/M	M
Groundwater	L	L	L	L	L
Contamination	L/M	L/M	L/M	L	L
Ecology	H	L/M	L/M	L	L
Noise & Vibration	M	H	H	M	L
Air	L/M	M	M	M	L
Land Use & Transport	L	L/M	L/M	M	L
Bushfire	M	L	L	L	L
Heritage	L/M	L	L	L	L
Waste	M	M	M	L	L

4. Implementation

This EMS is the overarching management plan for a suite of environmental management documents to be implemented during the operation of the quarry. It provides a structured and systematic approach to environmental management. Figure 4-1 illustrates the structure of the environmental management framework for the quarry.

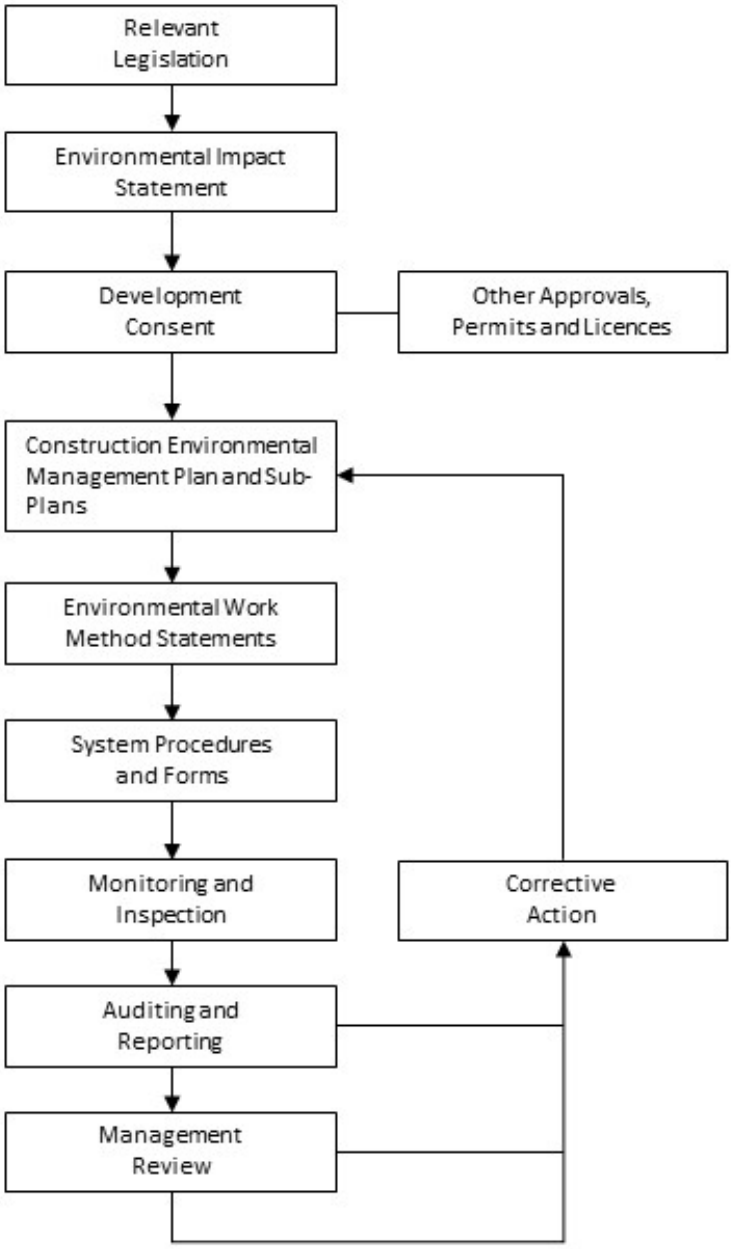

Figure 4-1 Key EMS Elements

4.1 Environmental management system documentation

The key environmental management system documents and their interrelationships are described in the following subsections.

4.1.1 Environmental Management Plan

This EMS provides the system to manage and control the environmental aspects of the quarry. It identifies all requirements applicable to activities described in Section 2. It also provides the overall framework for the system and procedures to ensure environmental impacts are minimised and legislative and other requirements are fulfilled. The strategies defined in this EMS have been developed with consideration of the development consent requirements, and environmental management mitigation measures presented in the EIS and other relevant permits, licences and approvals. This EMS establishes the system for implementation, monitoring and continuous improvement to minimise impacts from the quarry on the environment.

4.1.2 Environmental Management Sub-plans

A number of environmental management Sub-Plans support the EMS. These documents have been prepared to identify requirements and processes applicable to specific impacts or aspects of the activities described in Section 3. Environmental strategies may also be developed as required throughout the Project. These will also guide environmental management of potential impacts on site. A list of Policies, construction Sub-Plans and strategies for the Project, are provided in Table 11.

Table 11 Environmental Management Sub-Plans

Document Title	Document Location
Soil and Water Management Plan	Appendix E
Biodiversity and Rehabilitation Management Plan	Appendix F
Noise Management Plan	Appendix G
Blast Management Plan	Appendix H
Air Quality Management Plan	Appendix I
Traffic Management Plan	Appendix J
Bushfire Management Plan	Appendix K
Heritage Management Plan	Appendix L
Waste and Hazardous Materials Management Plan	Appendix M
Pollution Incident Response Management Plan	Appendix N

4.2 Organisation chart

The management structure for implementation of this EMS is illustrated in Figure 4-2.

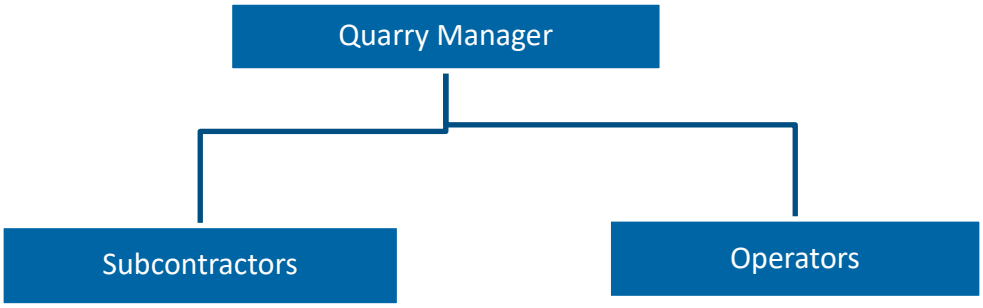

Figure 4-2 Environmental management structure

4.3 Roles & responsibilities

Key site personnel and environmental management responsibilities are outlined in Table 12.

Table 12 Roles & responsibilities

Role	Responsibilities
Quarry Manager	The quarry manager is accountable for the overall implementation of the EMS and environmental management on site. Key responsibilities include: • Reviewing and endorsing the EMS as required • Maintaining compliance with relevant legislation, conditions of approval and any licences • Communicating environmental objectives, targets and commitments to site personnel, including contractors • Delivering environmental training • Leading environmental incident investigations and reporting to regulatory authorities where appropriate • Responding to community complaints and enquiries • Liaison with stakeholder agencies and community groups where required • Approving any environmental reports required to be submitted to relevant authorities
Operators	Site workers and operators are responsible for implementing environmental control measures associated with their daily work. This includes: • Minimising their impact on the environment while undertaking works • Implementing and maintaining environmental controls • Reporting to the site manager when an incident occurs and taking measures to respond to the incident • Completing any reporting and monitoring requirements for their specific role

4.3.1 Subcontractors

As a minimum, subcontractors and their employees will comply in full with the requirements of this EMS as it applies to site environmental management and controls. Subcontractors personnel are considered equivalent to site personnel in all aspects of environmental management and control and their responsibilities in this respect are the same as site personnel.

5. Environmental training & awareness

All members of the Project workforce will receive general environmental training regarding the implementation of environmental management strategies in accordance with the requirements of this EMS and supporting documentation. Environment and community training will include, but may not be limited to, the following:

- Environmental induction training
- Toolbox talks
- Other specific training as required (e.g. environment spill control and management)

To ensure effective implementation of the environmental management obligations, the quarry manager is responsible for ensuring that all site personnel aware of the requirements of this EMS and supporting documentation.

5.1 Induction

Site environmental management requirements are communicated in the site induction to all staff, subcontractors and visitors. The induction includes the following information:

- Environmental legal context including due diligence and duty of care
- Site environmental objectives and targets
- Site environmental setting and sensitive environmental aspects
- Environmental incident response and management procedure
- Overview of environmental control measures – dust and air quality, noise management, water quality, vegetation protection, and waste management

Other environmental issues are communicated to site staff through toolbox talks and other meetings.

5.2 Toolbox talks

Toolbox talks will be one method of raising awareness and educating personnel regarding issues related to environment and community. Relevant environmental issues include (but will not be limited to):

- Noise mitigation
- Erosion and sedimentation control
- Hours of work
- Traffic
- Incident response
- Housekeeping
- Aboriginal and non-Aboriginal heritage
- Vegetation clearing controls and protection
- Dust and odour control

5.3 Targeted environmental training

Targeted environmental training will be provided to individuals or groups of workers with a specific authority or responsibility for environmental management, or those undertaking an activity with a high risk of environmental impact. Topics covered include those detailed above, or others deemed necessary in the lead up to a particular scope of work. For example:

- Dewatering basins
- Vegetation clearing
- Noise and vibration from certain activities

5.4 Training records

Training records are maintained in a site training register which includes:

- Details of the person being trained (name, role, company)
- Training date
- Type of training

6. Incidents and emergencies

Incidents and near misses may occur with potential or actual environmental harm. Incidents resulting from normal operations are likely to include:

- Spills or leaks of hazardous substances (oils, fuels, chemicals)
- Release of contaminated stormwater from the site

Environmental control measures are established to minimise the risk of environmental harm occurring.

The site's Pollution Incident Response Management Plan (PIRMP) is a regulatory requirement which includes the emergency response procedures to be implemented. The PIRMP is provided in Appendix N.

6.1 Emergency contacts

Details for organisations that may be contacted to respond to an environmental emergency are provided below in Table 13. These details are available to all site personnel on site signage and induction material.

Table 13 Emergency contact details

Agency	Contact
Police / Fire / Ambulance	000
Hospital	21 Union Street, Maclean 02 6640 0111
NSW Health	02 6588 2750 1300 555 555
NSW WorkCover	131 050
EPA	131 555
Clarence Valley Council	02 6643 0200
WIRES Wildlife Rescue	1300 094 737

6.2 Incident investigation

All incidents are documented, investigations conducted and action plans established in order that the incident does not occur again. Where lessons are learnt from the investigation or current procedures are identified as being ineffective, the EMS will be revised to include the improved procedures or requirement.

An incident investigation includes the following basic elements:

- The cause, time and duration of the event
- Contact details for all personnel involved in the incident and subsequent response
- Action taken in relation to the event with respect to containment, notification, and residual effects
- Details of any measure taken or proposed to be taken to prevent a recurrence of such an event
- Identification if the incident resulted in non-compliance with the conditions of consent or EPL.

All personnel are required to report all incidents, as it is regarded as a valuable method of addressing shortcomings in procedures, training or equipment, and is an opportunity for improvement.

6.3 Notification

The Quarry Manger will immediately (within 24 hours) notify DPE and any other relevant agency of any incident. Within 7 days of the incident, a detailed report summarising the incident investigation (as outlined in Section 6.2) is to be submitted to the DPE and any other relevant agency.

The Quarry Manager will immediately notify the EPA (via the Environment Line 131 555) of pollution incidents on or around the site which have occurred in the course of activities in the following circumstances:

- If the actual or potential harm to the health or safety of human beings or ecosystems is not trivial
- If actual or potential loss or property damage (including clean-up costs) associated with a pollution incident exceeds $10,000

Written details of the notification are to be submitted to the EPA within 7 days of the date on which the incident occurred.

Additionally, if there is an exceedance of the blasting limits, Newman Quarrying will notify the EPA soon as practicable after the exceedance becomes known.

If the EPA suspects on reasonable grounds an event has occurred, they may request a written report of the event. In this case, Newman Quarrying will make all reasonable enquiries in relation to the event and supply a report to the EPA within the timeframe specified in the request. The request may require a report which includes any or all of the following information:

a) the cause, time and duration of the event

b) the type, volume and concentration of every pollutant discharged as a result of the event

c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the even

d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort

e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants

f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event

g) any other relevant matters

If the EPA requests further information in relation to the event, Newman Quarrying will provide the information to the EPA within the time specified in the request.

In the event of an exceedance of any relevant criteria, the Quarry Manager will notify the affected landowners in writing of the exceedance and provide regular monitoring results to each affected landowner until the operations are again complying with the relevant criteria.

7. Communication

7.1 Internal communication

Clear lines of communication throughout all levels and functions (e.g. management, staff and sub-contractors), is key to minimising environmental impacts and achieving continual improvements in environmental performance. Weekly meetings or toolbox talks will be scheduled with the staff. The purpose of these meetings will be to communicate ongoing environmental performance, to advise on any upcoming sensitive environmental matters for future work areas and to receive feedback from on-site personnel.

7.2 Agency communication

The Quarry Manager will be the main point of contact with regulatory agencies regarding environment and community issues. The Quarry Manager will be responsible for reporting on the ongoing environmental performance of the project to regulatory agencies such as EPA, DRE, DPIE and Council.

7.3 Community communication

To keep the community informed about the environmental performance of the operations, the Quarry Manager will keep the Newman Quarrying website up to date with the following information:

- Documents listed in condition 2(a) of Schedule 2;
- Current statutory approvals for the development
- All approved strategies, plans and programs required under the conditions of the consent
- A comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of the consent, or any approved plans and programs
- A complaints register, updated monthly
- The annual reviews (refer to Section 8.5);
- Any independent environmental audit, and the Applicant's response to the recommendations in any audit (refer to Section 8.3.2)
- any other matter required by DPE.

Alternatively, the Quarry Manager is contactable via phone. The phone number is displayed on the sign at the front gate and on the website.

If directed by DPE, Newman Quarrying will establish and operate a Community Consultative Committee (CCC) to the satisfaction of the Secretary. Any such CCC must be operated in general accordance with the Department's Community Consultative Committee Guidelines, November 2016.

7.4 Complaints

A telephone complaint line (02 6645 1150) and email (newmanquarrying@gmail.com) is established to receive complaints from members of the public in relation to activities conducted at the quarry. The complaints line is publicly available, advertised on signage at the site entry and the Newman Quarrying website (www.newmanquarrying.com.au).

A legible record of all complaints in relation to pollution arising from any activity must include:

- The date and time of the complaint
- The method by which the complaint was made
- Any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect
- The nature of the complaint
- The action taken in relation to the complaint, including any follow-up contact with the complainant
- If no action was taken, the reason why no action was taken

The record must be kept for at least 4 years after the complaint was made and be made available to any EPA authorised officer if requested.

In the case of a dispute, Newman Quarrying will attempt to resolve the issue by:

- Modify operations to address the issue, if practical
- Providing any relevant monitoring data
- Undertaking additional monitoring, if considered necessary

If the above actions do not resolve the issue, Newman Quarrying will refer the other party to DPE and Condition 2, Schedule 4, as outlined in Section 8.4.1.

8. Inspections, monitoring and auditing

8.1 Environmental inspections

8.1.1 Weekly and post-rainfall inspections

The Quarry Manager will undertake weekly and post-rainfall (after 10 mm of rainfall or where runoff has been generated) inspections of work sites to evaluate the effectiveness of environmental controls and specify required corrective actions. The Quarry Manager will record inspection findings on an inspection checklist form. If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance are observed, they will be recorded on the checklist form. Records will also include details of any maintenance required, the nature of the deficiency, any actions required and an implementation priority.

8.2 Environmental monitoring

Monitoring will be undertaken to validate the impacts predicted for the Project, to measure the effectiveness of environmental controls and implementation of this EMS, and to address approval requirements. Physical environmental monitoring procedures are detailed in the relevant EMS sub-plans, with a summary of the monitoring requirements detailed in Table 14.

Table 14 Monitoring schedule

Sub plan	Monitoring	Frequency
Soil and Water Management Plan	• Weather • Rainfall • Erosion and sediment • Baseline monitoring • Basin monitoring • Basin capacity • Spill kit • Groundwater	• Daily • Daily • Weekly and following rain • Quarterly following rain • During discharging • Following rain • Monthly and following use • Annually
Biodiversity and Rehabilitation Plan	• Routine monitoring • Clearing monitoring • Rehabilitation monitoring	• Weekly • During and post clearing • Quarterly
Noise Management Plan	• Routine observations • Noise compliance monitoring	• Weekly • Following a complaint or change in operating conditions
Blast Management Plan	• Blast monitoring	• Every blast, following a complaint or change in operating conditions
Air Management Plan	• Routine observations • Dust monitoring	• Weekly • Following a complaint or change in operating conditions
Traffic Management Plan	• Routine monitoring	• Weekly
Bushfire Management Plan	• Asset Protection Zones • Access trails	• Annually • Prior to bushfire season
Waste Management Plan	• Routine monitoring	• Weekly

Monitoring records are to be kept of all samples collected including:

- The date(s) of the monitoring
- The time(s) of the monitoring
- The location of the monitoring
- Who collected the sample

The Quarry Manager will be advised of any non-compliance from monitoring and details will be documented. Where a non-conformance is detected or monitoring results are outside of the expected range and are directly attributable to the Project (i.e. are influenced by factors under the direct control of the Project e.g. noise from construction equipment), the process described in Section 8.4 will be implemented. Steps in the process will typically include:

- An analysis of the results in more detail to identify possible causes for the non-conformance
- A site inspection
- Notifying relevant personnel of the issue
- Identifying and agreeing on actions to resolve or mitigate the non-conformance
- Implementing actions to rectify or mitigate the non-conformance

The timing for any improvement will be agreed between the relevant parties (i.e., Quarry Manager, resident, authorities) based on the level of risk (e.g. a significant risk will require immediate action).

8.3 Environmental auditing

Site auditing is the best way to measure environmental performance, review operating effectiveness of environmental protection measures and the best way to achieve satisfactory environmental outcomes through continual improvement.

8.3.1 Internal audit

Internal auditing will be undertaken by the Quarry Manager (or delegate), generally within the first six months of operation and then on a twelve monthly basis. The frequency of the internal audit could be relaxed, if no issues are identified in the first few audits. The purpose of such auditing will be to verify compliance with:

- This EMS and Sub-Plans
- Approval requirements
- Any relevant legal and other requirements (e.g. EPL, permits, regulations, contract documentation)

8.3.2 External audit

In accordance with the development consent, an independent environmental audit will be undertaken within a year of the consent approval and every 3 years thereafter. The audit must:

- Be conducted by a suitable qualified, experienced and independent team of experts who have been endorsed by the Secretary
- Include consultation with relevant agencies
- Assess the environmental performance of the quarry expansion and whether or not it is complying with:
  - The Conditions of Consent

  - The EPL or necessary water licences
- Review the adequacy of required strategies, plans or programs
- Recommend appropriate measures or actions to improve the environmental performance of the quarry and/or any assessment, strategy, plan or program

Within 12 weeks of commencing this audit, or as otherwise agreed by DPE, Newman Quarrying will submit a copy of the audit report to DPE, Council, the EPA and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report.

Newman Quarrying will implement the recommendations, to the satisfaction of DPE.

8.4 Non-compliance, corrective and preventative actions

A non-compliance is the failure or refusal to comply with regulatory requirements or the requirements of this EMS and supporting documentation.

For each non-compliance identified all reasonable and feasible corrective/preventative action (or actions) must be considered. In addition, any environmental management improvement opportunities can be initiated as a result of incidents or emergencies, monitoring and measurement, audit findings or other reviews. Improvement opportunities may also result in the implementation of corrective/preventative actions.

Corrective/preventative actions and improvement opportunities will be recorded in weekly environmental inspection reports and include detail of the issue, action required and timing and responsibilities. Weekly reports will be updated with date of close out and any necessary notes.

Within 14 days of an exceedance, a report is also to be submitted to DPE describing the issue, options considered, the preferred option or other course of action and justification.

Newman Quarrying will implement any measures as directed by DPE to the satisfaction of DPE.

8.4.1 Independent review

If an owner of privately-owned land considers the development to be exceeding the relevant criteria, then he/she may ask DPE in writing for an independent review of the impacts of the development on his/her land.

If the DPE is satisfied that an independent review is warranted, then within 2 months of the DPE decision, the Newman Quarrying will:

a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the DPE, to:

- Consult with the landowner to determine his/her concerns
- Conduct monitoring to determine whether the development is complying with the relevant criteria
- If the development is not complying with the criteria, then identify measures that could be implemented to ensure compliance with the relevant criteria.

b) give the DPE and landowner a copy of the independent review.

8.5 Reporting and records

Environmental reporting requirements for site operations are primarily derived from the development consent and applicable licenses or permits. For all reporting required, the Quarry Manager is responsible for managing the preparation and submission of the report.

Table 15 Environmental reporting

Type	Frequency	Recipient
Annual Return	Annually	EPA
Annual Review	Annually	DPE
Notification of pollution incident where material harm to the environment is caused or threatened	Immediately upon becoming aware of an incident	EPA and DPE
Full written report of a pollution incident with potential or actual offsite impacts	Within 7 days of the pollution incident	EPA and DPE

The content of the Annual Return is as specified in the EPL.

The Annual Review will include:

- A description of the activities undertaken in the previous financial year and the proposed activities for the next 12 months
- Outline of relevant statutory requirements, limits or performance measures/criteria
- A comprehensive review of the monitoring results and complaints
- Identification of any non-compliance and actions taken to ensure compliance
- Identification of any trends in the monitoring data from previous years
- Identification and assessment of any discrepancies between the predicted in the EIS and actual impacts
- A description of measure to be implemented over the next year to improve environmental performance

Reporting requirements in relation to incidents are outlined in Section 6.

8.5.1 Records

Environmental records are maintained that demonstrate compliance with the EMS in a dedicated filing system / digital location. Records to maintain include:

- This EMS and associated sub-plans
- All licenses and permits detailed in Section 3.2
- Induction and training register
- Environmental inspection and monitoring reports / results
- Incident reports and register
- Complaints register
- Waste transfer receipts and waste movement register
- All regulatory correspondence

All records required by the EMS are:

- Maintained in a legible form
- Kept for at least 4 years
- Produced to any authorised officer of the EPA upon request

9. Review and improvement

9.1 EMS Review

The Quarry Manager will review the EMS and its operation and implementation at least every twelve months. The purpose of the review is to ensure that the system is meeting the requirements of the standards, policies and objectives. Between the scheduled reviews, a register of issues will be maintained to ensure that any issue raised by internal and external personnel associated with the quarry is recorded.

The review will consider (where available or applicable):

- Changes to the operation
- Site personnel comments
- Agency comments
- Audit findings
- Environmental monitoring records
- Complaints
- Details of corrective and preventative actions taken
- Environmental non-compliance, environmental inspection notices, inspection reports, and non-compliance reports
- Incident reports
- Changes in organisation structures and responsibilities
- The extent of compliance with objectives and targets
- The effect of changes in standards and legislation
- Co-ordination of environmental management of sub-contractors

A review will also be completed within 3 months of the submission of an:

- Annual Review
- Incident report
- Audit report
- Any modifications

9.2 EMS Updates

The outcomes of the above reviews may include amendments to this EMS and supporting documentation, updates to the Project aspects and impacts register, re-evaluation of the Project objectives and targets, or reallocation of Project resources. If any amendments are considered necessary, these need to be approved by DPE.

With the agreement of DPE, the EMS may be revised without undertaking consultation with all parties nominated under the applicable condition in the consent.

Until approved by DPE, the existing EMS and associated controls need to be implemented.

Any amendments made to Project systems or processes will be communicated to relevant personnel as required following completion of the review.

Appendices

Appendix A – Environmental Policy

Appendix B – Development Consent SSD 6624

Appendix C – Site Plans

Appendix D – Agency correspondence

Appendix E – Soil & Water Management Plan

Appendix F – Biodiversity and Rehabilitation Management Plan

Appendix G – Noise Management Plan

Appendix H – Blast Management Plan

Appendix I – Air Quality Management Plan

Appendix J – Traffic Management Plan

Appendix K – Bushfire Management Plan

Appendix L – Heritage Management Plan

Appendix M – Waste Management Plan

Appendix N – Pollution Incident Response Management Plan

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		Name	Signature	Name	Signature	Date
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