Northern Rivers QUARRY

Mine Safety Management Plan (MSMP)

Blakebrook Quarry

July 2023

DOCUMENT HISTORY

Date	Prepared by (Name)	Reviewed by (Name)	Change Remarks
08/05/14	Quarry Manager (KB)		Legislative updates
28/08/14	Cruse Partnership Aust		Replaces previous MSMP to form part of the integrated system - legislation & compliance to AS 4801
15/10/14	Cruse Partnership Aust		Referencing the Blast Management Plan throughout the IMS
14/01/16	Quarry Manager (KB)	Quarry Manager (KB)	Update legislation
14/01/16	Administration Officer (LL)	Administration Officer (LL)	Update organizational structure and Australian Standards
24/06/17	COR Australia	[redacted]	Heavy Vehicle National Law Chain of Responsibility RMS GC 21 Contract
17/7/17	Quarry Manager (KB)	Quarry Manager (KB)	Add DOP+E reporting number Removal of Prescribed Hazard and replace with Principle Hazards and Control Plans
15/5/2019	Quarry Operations Coordinator (JL)	Quarry Operations Coordinator (JL)	Position description and organizational structure changes, revision of MSMP
17/6/2019	Compliance Officer (EB)	Quarry Operations Coordinator (JL)	Updated roles & responsibilities
12/12/2019	Compliance Officer (SS)	Quarry Operations Coordinator (JL)	Updated organisational chart
14/5/2020	Compliance Officer (SS)	Quarry Operations Coordinator (JL)	Updated organisational chart and Responsibilities table for Relief Quarry Manager.
30/6/2020	Quarry Operations Coordinator (JL)	Quarry Operations Coordinator (JL)	Review of MSMP and addition of WH&S Amendment Bill 2020
09/03/2021	Compliance Officer (LL) Compliance Officer (SS)	Quarry Operations Coordinator (JL)	Review and revise MSMP in alignment with regulations and new ISO 45001.
October 2022	Compliance Officer (LL)	Quarry Operations Coordinator (JL)	Update following change in NSW WHS Regulations, Procedures and general document review
May 2023	Compliance Officer (SL)	Quarry Operations Coordinator Compliance Manager	Update Org structure
July 2023	[redacted] Compliance Officer (CL)	[redacted] Compliance Manager (LL)	Update AS 4024.3611 diagram (p.16)

CONTENTS

Definitions

Hazard	Anything (including work practices or procedures) that has the potential to harm the health or safety of a person
Hazard Identification	The process of recognizing that a hazard exists and defining its characteristics
Risk	The likelihood and consequence of potential injury or harm arising from a hazard
HIRAC	Hazard identification, risk assessment and risk control process
IMS	Integrated Management System
Job Safety Analysis	Breaks the job down into manageable steps to identify assess and control the hazards of non-standard jobs or jobs that have no SWMS relating to it
Safe Work Method Statement (SWMS)	(in accordance with WHS Regs 2017 (Div 2, cl 299) is a document that sets out the high risk construction work activities to be carried out at a workplace, the hazards arising from these activities and the measures to be put in place to control the risks.
Policy	A directive developed for the site
Procedure	An established method of doing something, that is more general in nature and doesn't have the same specific job risk, as a job that would require a SWMS e.g example a site First Aid Procedure

SCOPE OF MSMP

AS ISO 45001:2018
4.1 Understanding the organisation and its context
4.3 Determining the scope of the OH&S management system
4.4 OH&S management system

Blakebrook Quarry (the Quarry) is operated by Northern Rivers Quarry (NRQ) which is a commercial entity owned by Lismore City Council (LCC). The Quarry is located at 550 Nimbin Road, Blakebrook, approximately seven (7) kilometres northwest of Lismore on Lot 53 DP 1254990 for Extraction Areas and Lot 54 DP 1254990 for Asphalt Plant an ancillary activity. The Quarry and Asphalt plant are situated on separate lots within the same deposited plan (DP) and operate within the same site footprint.

The site occupies an area of approximately 128 ha (incorporating 45ha rezoned to C2 Environmental Conservation (gazetted on 18 December 2020), providing long term security for the biodiversity offset area). Surrounding land is used for agricultural and rural purposes.

The Quarry is identified as a State Significant Development (SSD) under Major Project Approval MP07_0020 (Mod 3), and undertakes activities relating (but not limited to):

- site grubbing and clearing
- topsoil and overburden removal
- extraction of quarry product
- processing
- stockpiling
- Loading and dispatch of plant, equipment and materials from site
- Operation of heavy vehicles with or without goods, plant, equipment and materials
- Receival of plant, equipment and materials to site

The Quarry provides a range of quarry products to northern NSW on behalf of LCC including:

- Aggregates
- Drainage rock
- Road base
- Basalt products
- Metal dust
- Fill material
- Bituminous products including hot mix and cold mix – blended according to mix design

The Quarry supplies materials to the asphalt plant, including laboratory services and weighbridge operations. The MSMP does not include any documentation associated with the operation of the Asphalt plant. RPQ operate the Asphalt plant, and their own safety management system or operate under the Quarry's SMS with task specific SWPs etc for their operations.

LCC laboratory is located within the Quarry boundary and therefore staff and laboratory operations are subject to the requirements of the MSMP.

The Quarry holds accreditation to the following ISO standards under an Integrated Management System (IMS):

- ISO 9001:2015 - Quality Management Systems
- ISO 14001:2015 - Environmental Management Systems
- ISO 45001:2018 - Occupational Health and Safety Systems

The IMS incorporates all aspects of operational planning, extraction, production and sale of Quarry materials, specifically:

- Management of the site as per the *NSW WHS (Mines and Petroleum sites) Act 2013* and associated regulation.
- Adherence with the Major Project Approval MP 07_0020.
- Environmental management as per the EPL 3384 and associated Management Plans.

Exemptions

ISO 9001:2015 8.3 - Design and Development of Products and Services

No other exemptions apply regarding licences or approvals.

1. Strategies, Policies, Objectives and Targets

ISO 45001:2018		
5.1 Leadership and commitment		
5.2 OH&S Policy		
6.2 OH&S Objectives and planning to achieve them		
10.3 Continual improvement		
Support documentation		
Policy section of IMS Manual	Objectives and Targets Procedure	Non-Conformance and Continuous Improvement Procedure
Corporate WHS Policy	Quality, Safety and Environment Policy	Safety Risk Management Procedure

Operating Approval Conditions

The Northern Rivers Quarry is a State Significant Development (SSD) and operates under Major Project Approval 07_0020, issued by the NSW Department of Planning & Environment (DPE). Further, the Quarry holds Environment Protection Licence (EPL) 3384 regulated by the Environment Protection Authority.

A condition of the approval to operate the Quarry is to ensure that a copy of any approved strategies, plans, programs and a summary of environmental monitoring results are made publicly available on the LCC website.

Refer: http://www.lismore.nsw.gov.au/cp_themes/default/page.asp?p=DOC-RAI-45-38-11

Policies

The Quarry is committed to the ongoing achievement of workplace health and safety objectives at all levels and has developed systems and procedures to ensure work practices reflect this commitment.

Lismore City Council (LCC) as the PCBU has ultimate responsibility for the implementation of the Quarry's safety system and for reviewing the overall WHS performance. The Manager Commercial Services and Quarry Operations Coordinator have a joint responsibility to exercise 'due diligence' to ensure that the Quarry complies with that duty of obligation. The General Manager has ultimate responsibility for the implementation of LCC 's WHS systems and for reviewing the overall safety performance of the organisation.

All Quarry personnel have a responsibility for implementation and continuous improvement of workplace health and safety with reference to LCC policies and the Non-Conformance and Continuous Improvement Procedure.

Policies applicable to the MSMP are referenced in the IMS manual.

Objectives & Targets

Safety objectives and targets derived from project approvals, licence conditions, strategies, plans and polices are documented in the Objectives and Targets Procedure.

The Quarry is dedicated to continuous improvement of systems and processes relevant to the MSMP, as stated in the *Non Conformance and Continuous Improvement Procedure* and captured in the *Register - Non conformance and Continuous Improvement*.

Refer to the *Register – Document Index* for TRIM references.

2. Regulatory and Standards

ISO 45001:2018		
4.2 Understanding the needs and expectations of workers and other interested parties 6.1 Actions to address risks and opportunities		
Support documentation		
Register – Interested Parties	Communication & Consultation Procedure	Applying Legal and Regulatory Requirements to the IMS Procedure
Ongoing IMS Compliance Schedule	Chain of Responsibility (CoR) Management Plan	Mining Design Guidelines (MDG)

Interested Parties

Refer to the *Register – Interested Parties* for safety compliance and reporting obligations, our communication protocols, the applicable regulations, legislation and Australian standards and how we monitor and review these requirements in the context of Quarry operations and the MSMP.

Regulator

The Resources Regulator (DPE) is the state's work health and safety regulator for mines and petroleum sites. The Resources Regulator also undertakes compliance and enforcement activities in relation to the *Mining Act 1992,* with a key focus on mine rehabilitation.

Legal & Regulatory Requirements – On-site Safety

The *Applying Legal and Regulatory Requirements to the IMS Procedure* describes how the Quarry determines what regulations apply to the relative sections of the MSMP, and when they apply.

Identification of legal and regulatory requirements is undertaken with reference to:

- WHS (Mines & Petroleum Sites) Act (2013) & Regulation (2022)
- WHS Act (2011) & Regulation (2017)
- Work Health and Safety Amendment (Review) Bill 2020
- Mine Safety Design Guidelines
- DA (PA 07_0020)

Mining Design Guidelines (MDGs) are the essential criteria to be met for all quarry infrastructure and process matters. MDGs must be referred to when any new development or changes to current quarry systems and infrastructure are made or intended to be made.

Always access the direct website for the most current information. Refer to the *Applying Legal and Regulatory Compliance to the IMS Procedure* for a summary list of key weblinks.

Legislation – Heavy Vehicle Safety (Chain of Responsibility)

The National Heavy Vehicle Regulator administers the Heavy Vehicle National Law (NSW) with TfNSW being the enforcement agency in NSW. Refer to the *Chain of Responsibility Management Plan* for details.

Australian Standards

Australian Standards set out the specifications and provide minimum requirements for selection, maintenance, construction and safe operation for a broad range of equipment and work practices in compliance with industry and legislative standards. Standards are legally binding if referenced by legislation and when incorporated into a contract, purchase order or agreement entered by Northern Rivers Quarry.

Australian Standards are purchased and copies maintained in the Australian Standards folder stored in TRIM. The NATA Certified laboratory maintains a separate folder and register.

Refer to the *Applying Legal and Regulatory Compliance to the IMS Procedure* for a list of Australian Standards applicable to the Quarry including monitoring and review processes and records management.

Management of Changes to Legal & Regulatory Requirements or Australian Standards

Should the Quarry identify (or become aware of) a change in Australian Standards, legislative or regulatory requirements as part of a review or otherwise, the *Register – Interested Parties* and weblinks will be updated (where applicable) and the implications communicated as per change management processes in the *Management of Change Procedure.*

Safety Alerts from the Resources Regulator should be printed and displayed on notice boards and also tabled at safety meetings.

Implementation, Monitoring & Review

NRQ ensures ongoing compliance of legal and regulatory compliance by undertaking site inspections, holding daily and monthly meetings with Quarry staff, monitoring newsletters from the regulators and attending workshops and training where possible.

Legal and regulatory requirements and compliance with the MSMP are discussed at Fortnightly Quarry Coordinator Meetings and Management Meetings with follow up actions noted for completion. Managers are made aware of worker and public welfare, and any safety matters, to ensure these are actioned in a timely manner.

Timing for review of legislative and regulatory requirements and associated documentation, is captured in the *Register - Ongoing IMS Compliance Schedule* and monitored and maintained by the IMS Compliance Representative.

NRQ has an extensive audit and review program in place to capture any changes to legal and regulatory requirements and Australian Standards as documented in the *Applying Legal and Regulatory Compliance to the IMS Procedure*.

3. The Mine Safety Management Plan (MSMP)

ISO 45001:2018		
4.4 OH&S management system		
Support documentation		
IMS Manual	Mine Safety Management Plan	Register – Document Index

Structure of the MSMP System

This MSMP is the key reference document that enables the effective management of the safety aspects of operations at NRQ. The MSMP references the Integrated Management System (IMS) Manual in compliance with ISO 45001:2018 plus mine safety management planning. The MSMP is developed in accordance with the 'Plan-Do-Check-Act' framework.

LCC safety policies and procedures applicable to the Quarry are incorporated into the MSMP where applicable.

Safety management plans are developed in compliance with recognised legislative and product/service needs and referenced within the MSMP.

Risk management, communication and consultation, training, monitoring and review and all other processes and procedures, forms and templates pertinent to safety management, MSMP and the IMS are referenced throughout the plans.

Refer to *Register – Document Index* for a full list of safety documentation included or referenced within the MSMP and IMS.

4. Document and Records Management

ISO 45001:2018		
7.5.1 Documented information - General		
7.5.2 Creating and updating		
7.5.3 Control of documented information		
Support documentation		
Register – Document Index	Communication & Consultation Procedure	Laboratory Quality Manual
Document, Data Control and Record Keeping Procedure	Management of Change Procedure	Register – Management of Change

The *Document, Data Control and Record Keeping Procedure* describes how NRQ manages the identification, storage, retrieval and retention of records pertinent to the IMS.

Such records include, but are not limited to:

- Safety performance – all aspects of safety performance related to NRQ activities
- Plant and equipment records including maintenance, calibration, inspection and testing
- Staff and contractor records as stipulated for employment and as per subcontractor agreements
- All emergency situations including incidents and investigations, first aid, injuries and others as stipulated in the various plans.
- Objectives and targets monitoring and measurement, including environmental monitoring.
- Records of meetings related to product, service, operational and safety standards.

Refer to *Register – Document Index* for a full list of documents included or referenced within the IMS.

All new documents or amendments to documents of the MSMP shall be first approved by the Manager Commercial Services or Quarry Operations Coordinator, then the final document to be stored in TRIM and circulated according to the *Communication & Consultation Procedure.* Changes made to processes, procedures, policies, infrastructure and equipment etc will be made in consideration to the *Management of Change Procedure*.

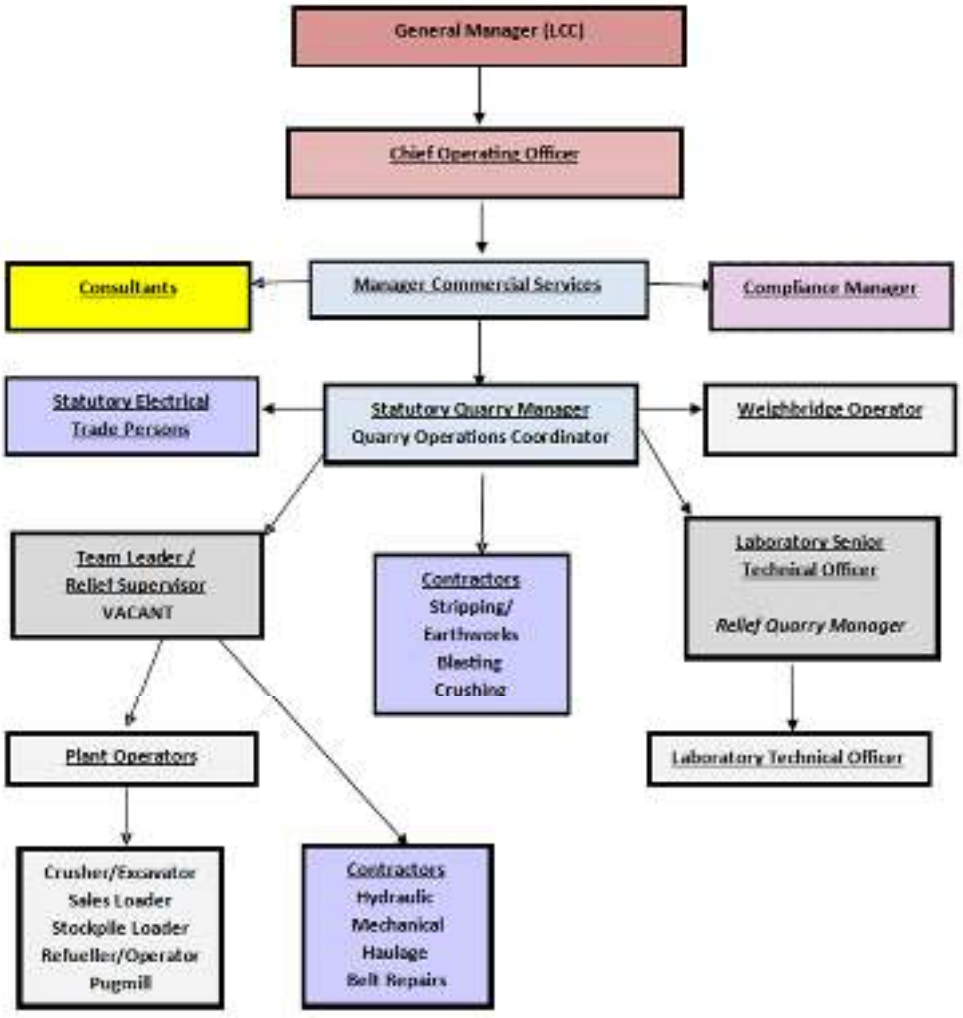
Record retention periods are detailed in the *Document, Data Control and Record Keeping Procedure*.

Records relating to laboratory operations are maintained as per the *Laboratory Quality Manual*. Documents or records held outside of the Northern Rivers Quarry that are the responsibility of LCC are not updated as part of the MSMP, however, approximate Corporate review dates are tracked in the *Register – Document Index*.

5. Resources Provision and Management

ISO 45001:2018		
5.3 Organisational roles, responsibilities, and authorities		
7.1 Resources		
Support documentation		
Authorities, Responsibilities and Delegations Procedure	Position Descriptions	Contractor Management Procedure
Safety Risk Management Procedure	Section 5 of the IMS Manual	Emergency Response Plan
Ongoing IMS Compliance Schedule	Trigger Action Response Plan (TARP)	Chemicals Management Procedure
Health Control Plan	Corporate WHS Procedure – Fitness for Work	Chain of Responsibility Management Plan
Corporate WHS Procedure – Health Monitoring	Corporate WHS Procedure - Alcohol and Other Drugs	ISO & Australian Standards List
Explosive Control Plan		

Organisational Interfaces



Authorities, Responsibility and Delegations

All employers are required under the NSW *WHS (Mines & Petroleum Sites) Act 2013*, NSW *WHS (Mines & Petroleum Sites) Regulation 2022*, and the *Work Health & Safety Act 2011* to ensure the health and safety of all people at the site. These Acts and Regulations hold employers accountable for the health and safety of their employees while at work.

Employees also have a legal obligation to carry out their duties in a safe and proper manner in conjunction with procedures laid down by the employer.

Filling of Vacancies and Acting Positions

Vacancies will be filled based on budget availability and resource needs. Recruitment is undertaken in accordance with the Corporate 1.2.31 *Staff Movements and Recruitment Procedure*.

Refer to the *Authorities, Responsibilities and Delegations Procedure* and Section 5 of the IMS Manual for detailed information.

Position Descriptions

Position descriptions (PD) are held for all personnel working within LCC . Refer to People Services Department. Employees may request a copy of their PD. Managers may refer to the PD's as part of a position review/update or for training requirements.

Refer Section 6: Training and Competence for staff performance management.

Contractor Management

Contractors may be engaged directly by the Quarry or indirectly through other LCC sections (e.g. Fleet).

The *Contractor Management Procedure* describes:

- how contractors are selected and appointed
- how Contractor activities are managed on site (including requirements prior to commencing work) and how Contractors will be supervised during the undertaking of those activities
- the standards that Contractors must deliver to
- how performance is assessed, and
- how records are maintained.

Training & Inductions

Training and induction are managed by the Manager Commercial Services, the Quarry Operations Coordinator and People Services Department. Please refer to Section 6 below for training and induction procedures.

Visitors

All visitors are to report to the Weighbridge Office on arrival. Please refer to Section 6 below for induction procedures.

Fitness for Work

NRQ has a duty to provide a safe & healthy workplace for all employees. The welfare of all personnel is a primary consideration in developing this policy. The consumption or possession of alcoholic substances, or any other substance prior to, or during the worker rostered shift that impairs or is likely to impair the workers' ability to carry out their duties in the workplace is strictly forbidden.

Random Drug and alcohol testing may be carried out if a worker is observed displaying indicators of being affected by drugs/alcohol, after a Fitness for Work Assessment has been undertaken. Testing shall occur within 2 hrs post an incident by WHS staff or trained staff on site.

LCC's People Services Department administers pre-employment screening including drug and alcohol testing per the *Corporate WHS Procedure - Alcohol and Other Drugs* and *Corporate WHS Procedure – Fitness for Work*.

Personnel: Worker Exposure and Health Surveillance Monitoring & Awareness

Workers at NRQ could be exposed to potential health hazards including noise, dust and hazardous chemicals as part of Quarry operations.

Where workers may be exposed to airborne contaminants, or other health risks, all possible preventative measures such as engineering, working methods, administrative or combination risk controls shall be implemented.

Refer to the *Health Control Plan* and *Trigger Action Response Plan (TARP)* for detailed information on exposure monitoring and health surveillance for NRQ staff.

Physical Resources Responsibilities

A risk assessment will be undertaken in consultation with workers before any new product, plant or equipment is purchased to ensure appropriate consultation and risk management (refer *Safety Risk Management Procedure*).

Emergency Equipment including Fire Extinguishers

Information on the types of Emergency Equipment and Fire Extinguishers and their use are included in the *Mine Safety Management Plan* and *Emergency Response Plan*.

Purchase of New plant and vehicles

Fleet Services manages the specifications, scope and procurement of heavy vehicle assets within LCC . The Quarry Operations Coordinator may be consulted regarding specification requirements as part of the consultation process.

New Plant, Vehicles & Equipment

Plant and vehicle registration and maintenance is managed through Fleet Services.

Maintenance is determined by Manufacturer's Recommendations and tracking through Fleet Services Workshop systems. This is assisted via daily pre starts with operators flagging any discrepancies requiring attention. Communications and training of operators and maintenance personnel is undertaken accordingly.

Maintenance Plan

A maintenance plan is managed by Fleet Services Workshop in conjunction with NRQ management and operators to ensure plant remains fit for purpose.

Daily checks

Plant daily start up checks are undertaken by operators and issues of maintenance or the need for immediate repair is flagged. This is communicated to Fleet Services Workshop for action. Daily checks include safety and environmental aspects as well as operational fit for purpose checks.

Aging Plant

In consultation with Fleet Services Workshop, as plant ages the maintenance program shall be reviewed and the need for additional maintenance or increased frequency of maintenance shall be considered.

Other equipment subject to safety and quality controls includes:

- Lifting Chains and Slings - Lifting equipment calibration and checks
- Pressure Vessels – registration and checks as per requirement
- Electrical leads – electrical safety periodic checks
- Fire Fighting Equipment - periodic check
- First Aid Facilities - periodic check
- Air conditioners - periodic check and maintenance
- Bulk fuel storage – periodic inspection
- Precoat tank – periodic inspection

Registers are kept on file in the weighbridge and maintenance due dates tracked using the *Ongoing IMS Compliance Schedule*.

Hired Equipment

Hiring in of mobile plant on long term hire shall be undertaken through the tender process. LCC shall take control of the maintenance for long term arrangements. Short-term arrangements on a needs basis requires equipment to be maintained by the hire company.

Hazardous Chemicals (incl. blasting)

NRQ is committed to eliminating or minimising exposure of workers, visitors and the environment when handling, using and storing hazardous substances and dangerous goods.

The Quarry Operations Coordinator shall manage and monitor the purchasing, storage, use and disposal of hazardous substances and dangerous goods in consultation with workers. They shall ensure through operational management that workers do not exceed exposure standards (refer *Health Control Plan*).

Workers are responsible for complying with instruction on the management of hazardous substances and dangerous goods and ensure controls are used to enable the safe handling and storage.

A list of hazardous chemicals, quantities and Safety Data Sheets (SDS) are kept in ChemAlert, in hardcopy near the chemical storage (e.g. Weighbridge, Laboratory) and in the Emergency Box at the front gate as required. Refer *Chemicals Management Procedure*.

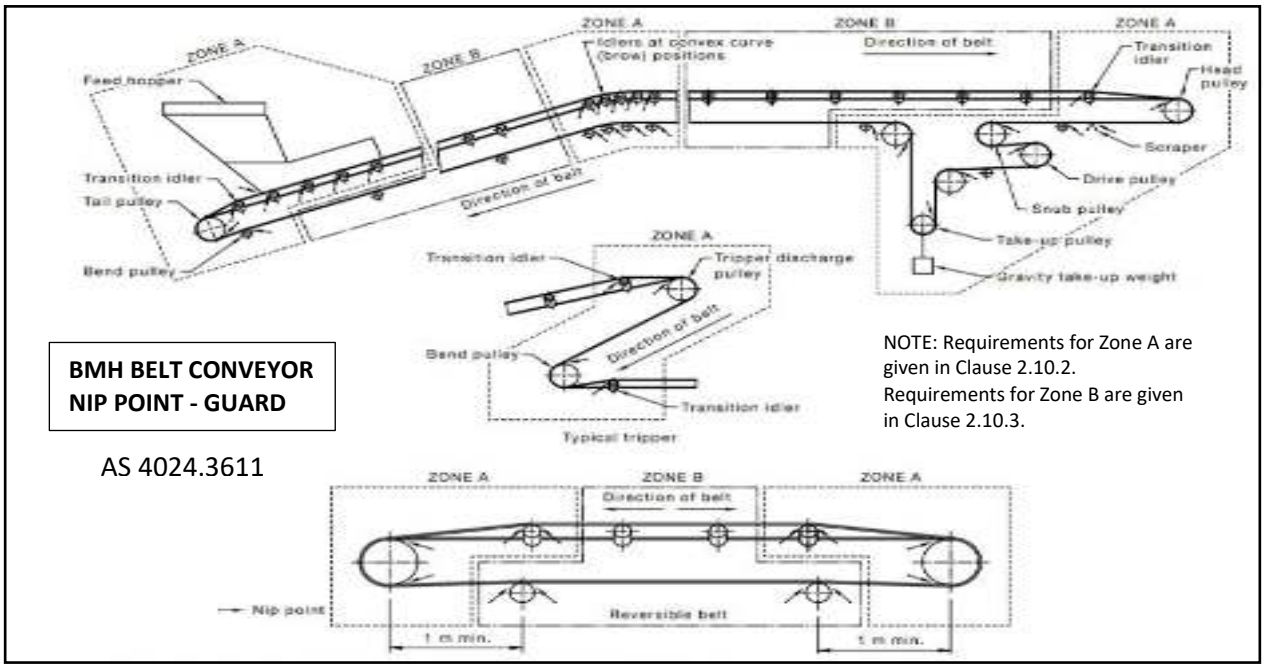
Refer *Explosive Control Plan* for resourcing and management associated with drill and blasting activities.

SAFETY ASPECTS – PLANT AND EQUIPMENT OPERATIONS

General

- Machines must be stable and secure with all moving parts properly guarded.
- The blades on power driven saws and similar equipment must be properly guarded.
- Controls must be accessible and properly labelled. In particular, ensure that emergency stop buttons are fitted to all power-driven machinery.
- Where excess dust is generated, extraction and collection systems should be installed and maintained.
- Power driven machinery shall be serviced and maintained as per any applicable maintenance service requirements or standards.
- Noise generated by plant and machinery shall be kept to a minimum through purchasing control and good design techniques (note the national standard of 85 dB(A) should be applied when purchasing new equipment).
- Conveyors must be fitted with emergency stop systems and guarded in accordance with *AS 4024.3610 'Safety of Machinery - Conveyors – General Requirements'* and *AS 4024.3614 'Safety of machinery Conveyors – Mobile and transportable conveyors'.*

- Guarding of nip points on all movable parts is a requirement of plant regulations and must be undertaken in accordance with *AS 4024.3610 'Safety of Machinery - Conveyors – General Requirements'* and *AS 4024.3614 'Safety of machinery Conveyors – Mobile and transportable conveyors'.*



The Quarry use contractors for crushing and stockpiling operations through LCCs procurement process.

Emergency Stop Controls

AS 4024.3610 requires that conveyors be fitted with emergency stop controls.

- Inaccessible conveyors which are 2.5m above ground or walkway levels should have emergency stop controls at ground or walkway level with no more than 100m spacing's between emergency stop controls.
- Conveyors closer than 2.5m from the floor or normally accessible walkways or platforms shall have emergency stop controls at spacing's of no more than 30m or a pull wire/lanyard type stop control.

The pull wire/lanyard stop control is appropriate for most situations as regardless of where a person is standing by the conveyor, they can usually reach the lanyard. In some cases the conveyor is used to raise material for a crushing, screening or stockpiling process. In this case, provided less than 30m of the conveyor is below 2.5m above 'access' level, then one emergency stop button is adequate.

Where access is provided on both sides of a conveyor, stop controls are also required on each side. Emergency stop controls should also stop all downstream feed conveyors or processes.

Lanyards shall be supported at a minimum of every 4.5m. Breaking, slackening or removal of the lanyard shall automatically stop the conveyor. Emergency stop buttons must conform to the following:

- Coloured red
- Suitably and prominently marked
- Readily accessible
- Mushroom head latch in or lock in with manual reset.

Guarding

- Moving machinery should be guarded to protect against the possibility of injury. The guards must be fixtures of the machinery, interlocked where possible, or needling tooling for removal. 'Interlocked' means the removal of the guard preventing the equipment from running or being started.
- Appropriate clothing should always be worn when working with this equipment. Loose clothing, long hair and jewellery easily become caught in the moving parts of machinery.
- Machine/conveyor guards can range from a simple wire mesh cover, to a complicated system preventing access through physical locks and/or electrical interlocks. The problem with guards is that, if they are poorly designed and make the operation or maintenance of the machinery difficult in any way, employees will remove or override them.
- Guards fitted to new machinery and in-house built guards are commonly found to be inadequate, particularly in respect to their design specifications, e.g. holes in mesh large enough to still allow access to the hazard.
- With regard to the legislation there is **no** specific requirement which says that a machine or conveyor must be guarded in any particular way. It is just required to be "effectively guarded". If the guard can be removed or overridden for employee convenience the machine is **not** considered to be effectively guarded.
- Where guards are fitted in the vicinity of the moving parts, mesh size and reach distances must be considered (refer *AS 4024.3610* and *AS4024.3614*).

Live Access – Moving/starting during maintenance

- In certain circumstances movement of machinery may be needed during maintenance. Live access procedures should always be followed.
- The person in charge of maintenance must ensure all staff are in a safe position, and tools and locks are removed.
- Warning devices should be sounded.
- When movement is completed (even temporarily) ensure that power is switched off, and the machinery is locked out again.
- No work is to begin before the all clear is given by the person in charge.

Isolation – Plant and equipment

Isolation and/or "lock-out" procedures are closely associated with machinery guarding.

Whenever a guard is to be removed from a machine or conveyor, specific procedures must be in place to ensure that the machine/conveyor cannot be started while a person is working on the unguarded hazard.

These procedures can incorporate a combination of:

- Interlock switches on the guard
- Isolation and locking or tagging procedures on the switches
- Standard written isolation procedures
- Written "Special Circumstances Procedures" (where the machine/conveyor may have to be run for testing or adjusting without the guard being operative).

Interlocks may in some instances prove impractical as they frequently fail in the harsh conditions of a quarry environment, and furthermore, they can be quite easily overridden, either intentionally or unintentionally.

Mobile Plant – Under and Overhead Power Lines

Overhead power line contact is one of the largest single causes of fatalities associated with mobile plant and equipment.

Contact with live electricity can be fatal and also cause serious burns arising from the discharge of electrical energy. Other risks include fires and explosions that may immobilise the equipment involved.

You don't have to have a direct contact with a high voltage overhead power line to receive a fatal electric shock. Simply being too close can kill.

SafeWork NSW Work Near Overhead Power Lines Code of Practice provides guidance on the risk control measures, competency requirements and approach distances to live electrical conductors, including no go zones for cranes and plant (and their loads), vehicles, individuals and handheld tools. It applies to persons with varying levels of qualification, training or knowledge.

https://www.safework.nsw.gov.au/__data/assets/pdf_file/0020/52832/Work-near-overhead-power-lines-code-of-practice.pdf

Table 1: Approach distances for work performed by Ordinary Persons (ie: not received training)

Nominal phase to phase a.c. voltage (volts)	Approach distance (m)
Up to and including 132,000	3.0
Above 132,000 up to and including 330,000	6.0
Above 330,000	8.0
Nominal pole to earth d.c. voltage (volts)	Approach distance (m)
Up to and including +/- 1500 Volts	3.0

Lower clearance may be allowed where the movement of the vehicle or plant is supervised by a competent person and where the vehicle or plant does not remain stationery or work under the overhead conductors.

Material should not be stockpiled or pushed up by equipment close to power lines. Remember to allow for full extension of booms and maximum tray height.

Table 2: Reduced approach distances for accredited persons (ie: completed training)

Nominal phase to phase a.c. voltage (volts)	Approach distance (m)
Insulated low voltage cables up to 1000, including LV ABC	0.5
Un-insulated low voltage conductors up to 1000	1.0
Above 1000 up to and including 33,000	1.2
Above 33,000 up to and including 66,000	1.4
Above 66,000 up to and including 132,000	1.8
Above 132,000 up to and including 220,000	2.4
330,000	3.7
500,000	4.6
Nominal pole to earth d.c. voltage (volts)	Approach distance (m)
Up to +/- 1,500	1.0

SAFETY ASPECTS - LADDERS, STAIRS, PLATFORMS AND WALKWAYS

Walkways and Platforms

There are specific requirements that apply to walkways and platforms:

- The clear width of any walkway with guardrails shall not be less than 550mm.
- Walkways and platforms should be fitted with guard railings of between 900mm and 1.1m in height.
- Toe boards of at least 100mm should be fitted to elevated walkways or platforms.
- Walkways with an angle of between 7 and 20 degrees should be constructed of expanded metal mesh or cleated. Where the angle exceeds 20 degrees, steps with landings should be installed.
- Elevated walkway and platform floors should be slip resistant, even and be designed so that objects cannot fall through to the area below. Gaps in metal plates should not exceed 100mm.

Stairways

Stairways should be constructed as follows.

- Have a minimum clear width of 600mm.
- An angle of between 26.5 and 45 degrees.
- A rise of no less than 150mm and no more than 215mm.
- A going of no less than 215mm and not more than 305mm.
- Have an actual tread depth of at least 10mm greater than the going.
- All stairs must be fitted with a handrail between 800 and 1000mm when measured from the nosing of any tread. Stairways greater than 1000mm in width must be fitted with a handrail to both sides.

Ladders

Ladders are used throughout the workplace as:

- Fixed ladders (rung and step)
- Single ladders (portable metal/timber)
- Extension ladders (portable metal/timber)
- Step ladders (portable metal/timber)

Portable ladders should comply with Australian Standards:

- *AS 1892.5* section 3– Portable Ladders – Metal
- *AS 1892.5* section 5– Portable Ladders – Timber

Fixed ladders

Fixed ladders and their installation should comply with the requirements of *AS 1657 'Fixed Platforms, Walkways, Stairways and Ladders'.*

Rung Ladders

- Angle of slope between 60 and 75 degrees, although rung ladders go beyond 75 degrees to 90 degrees, these are not in breach of the standard. Ladders with a slope of greater than 75 degrees are not universally accepted and the need for a vertical ladder should be reviewed.
- The ladder shall not be less than 375mm wide and not more than 525mm wide.
- Rungs should be spaced no less than 250mm and no more than 300mm apart, except in ladders shorter than 1.5m, where the minimum spacing may be 200mm. All spacing's must be equal.
- Rungs shall be of solid material not less than 20mm diameter.

- Where the ladder provides access to a platform or walkway, the styles of the ladder shall extend no less than 900mm above the opening. The width between the extended styles should be no less than 525mm and the top rung should be level with the landing.
- Where a person may fall 6m or more, a ladder cage should be fitted or the ladder have a fall protection safety device installed. Access to ladders where safety devices are provided should be restricted to authorised personnel.
- The clearance behind ladders affixed to walls etc, shall be no less than 200mm.
- Timber ladders shall not be used in situations where they are constantly exposed to weather or other conditions likely to promote decay.

Step Ladders

- Angle of slope between 60 and 70 degrees.
- Minimum clear width of 450mm.
- Treads shall be no less than 100mm deep and multi-rung treads are not acceptable.
- The rise should not be less than 200mm and not more than 250mm.
- The vertical distance between and landings should not exceed 6m.
- Where a person can fall more than 6m, the ladder system should be enclosed.

Portable Ladders

- The top three rungs should not be stood upon when using the ladder.
- All ladders should be “tied off” at the top to prevent them slipping down or off, or sliding along, supporting structures.
- When a ladder is being used to gain access to work platforms, mezzanine floors or the like, they must extend at least 1 metre above the platform or landing.
- Ladders should have a secure non-slip feet fitted.
- When placing a ladder for use it should always be at a slope of approximately 1 in 4 (75 degrees), eg. 1 metre out from the wall for every 4 metres up
- Damaged ladders should be removed from service and tagged or preferably destroyed

Chain Of Responsibility

All parties in the supply chain are required to ensure that they do not by their actions or inactions breach the HVN Laws to ensure the safety of all people that might be affected by heavy vehicles. These Laws hold all parties in the chain of responsibility accountable for their actions as the transport operator, consignor, consignee, loaders, unloaders, packers, schedulers. This extends to include the supervisors, managers and executives who are responsible for the people that undertake these tasks (whether included in the position description or not).

Accordingly, the commitment to chain of responsibility extends to the health and safety of people on our sites and travelling to or from our sites or undertaking heavy vehicle activities to or from third party sites.

Heavy vehicles and drivers on site (inbound or outbound) will be assessed for compliance with the LCC CoR including, these records will be maintained by the Quarry where relevant.

- Driver Licence – currency
- Other licences required for the Task (high risk, plant, etc) – currency and/or evidence of competency
- Load Mass requirements
- Load Dimension requirements (as per HVNL charts)
- Site conditions

Mass

NRQ is committed to eliminating over mass vehicles from its roads. All materials, plant and equipment leaving the site will be weighed using the weighbridge to ensure compliance with the HVNL or an approval under that law.

Where a non-conformance is detected:

- The weighbridge software system will suspend the transaction
- Excess material will be tipped off
- Plant and equipment will be either moved or loaded onto an appropriate combination
- Heavy vehicle will re-weigh onto the weighbridge to confirm correct mass
- The suspended transaction will be completed
- Reports can be generated from the weighbridge software system identifying any overloaded or breach of mass vehicles
- The site Supervisor is notified, and the offending company is contacted of the breach

Dimension

NRQ is committed to eliminating unnecessary over dimension vehicles from its roads. All materials, plant and equipment leaving the site will be assessed for dimensions to ensure compliance with the HVNL or an approval under that law.

Load

NRQ is committed to ensuring safe loads on vehicles on its roads. All materials leaving the site will comply with HVNL loading responsibilities and verified through the weighbridge computer system, so that the load can be safely transported and unloaded without any delays imposed on the driver.

Unload

NRQ is committed to ensuring safe unloading of vehicles on its sites. All materials, plant and equipment arriving on site will be unloaded to comply with HVNL so that the load can be safely unloaded without any delays imposed on the driver.

Load Restraint

The Load Restraint Guide provides truck drivers, operators in the transport chain of responsibility with basic safety principles for the safe carriage of loads. Load restraint guidelines are applicable where plant is being transported (by contractor or LCC float i.e. Fleet Services)

The Load Restraint Guide provided by the National Transport Commission is available from https://www.ntc.gov.au/codes-and-guidelines/load-restraint-guide

NRQ is committed to ensuring safe loads on vehicles on its roads. NRQ material loads are within rigid bodies and validated via the weighbridge prior to leaving the site.

Load Unload Exclusion Zones

NRQ is committed to eliminating or minimising exposure of workers, visitors when on site. The site plan sets out permanent exclusion zones. No person is to approach moving vehicles on site. UHF 15 (Quarry) and UHF 12 (Asphalt Plant) channels have been designated for communication.

Maintenance

Plant and vehicle maintenance are managed through the LCC Fleet Services to current asset management standards.

Route

NRQ is committed to ensuring safety on its roads. It is driver's responsibility to ensure they travel on the correct road networks suitable for their vehicle. Civic Services are the LCC Road Managers regarding granting permits relating to HNVL exceptions (PBS, higher mass limits etc) and various

routes within the LGA. Fleet Services manages plant and fleet telematics and exception reporting monitoring utilization, speed and maintenance.

Scheduling

NRQ is committed to ensuring safety on its roads. Fleet Services act as the Scheduler. Prequalification is done through procurement process and managed by the Casual Plant Hire tender. LCC trucks are scheduled through Fleet Services to undertake internal work on the Quarry site from time to time

Speed

NRQ is committed to ensuring safety on its roads. Our trucks are fitted with speed limiters and GPS coupled with telematics to identify driving habits and to flag any non-conformance which is managed by Fleet Services.

6. Inductions, Training and Competencies

ISO 45001:2018		
7.2 Competence		
Support documentation		
Induction Procedure	Training and Competency Procedure	Contractor Management Procedure
Position Descriptions	Corporate Training Register	Register – Training Plan and Records
Visitors Register	TRIM Induction records	Safe Work Method Statements

Staff Development and Identification of Training Needs

LCC provides a staff performance discussion and planning process (refer to Informer>HR procedures). This is further enhanced by NRQ activities including inductions and competency assessment.

Training needs are identified:

- When workers initially commence work with NRQ
- As a regulatory requirement
- When developing Safe Work Method Statements or undertaking risk assessments
- When the operation of plant, equipment, hazardous processes or materials identify a competency
- During performance discussion and reviews of resource requirements

Licences and permits to undertake specific tasks including mobile and fixed plant operations will form part of the review and specific planning needs.

Evaluation and feedback for training provided by a Registered Training Organisation (RTO) is held with People Services. Evaluation from in-house training is noted on the competency record as per the *Training and Competency Procedure.*

Inductions

NRQ inductions are undertaken for all persons entering the site specific to their role on site. There are four primary levels of induction to LCC and the NRQ site per the *Induction Procedure*.

Level 1 – Corporate Induction

Induction into LCC is required by every employee (regardless of their work location) and every contractor as part of their pre-qualification as a supplier to LCC.

Level 2 – Visitor/Driver Induction

Visitors and drivers who are entering the site are required to undertake a short induction acknowledging that they understand and will abide by the rules and conditions of the site and will obey instructions from Quarry Staff.

This induction is used for the induction of persons entering NRQ for the purpose of obtaining or purchasing goods or services including those having an element of transportation services. This induction is to compliment the Work Health & Safety Regulations and site safety instructions of NRQ.

- Visitor / Driver Induction completed, signed off and filed.
- Driver licences etc. photocopied and retained in hard copy file
- Register of persons inducted maintained on TRIM.

All visitors on site are required to sign a *Visitors Register Form* and will be informed of relevant safety compliance requirements.

1. Visitor arrives on site →	✓ Checks into weighbridge
2. Visitor signs on Register →	✓ Weighbridge Staff monitor
3. Visitor needs to enter site past weighbridge? →	✓ If not escorted by an employee - undertakes the Visitor/Driver Induction. ✓ If escorted by an employee then appropriate PPE is provided and the visitor remains with the employee at all times.
4. Staff member MUST escort visitor around Quarry →	✓ On return to weighbridge, visitor signs out, leaves site.

Should a circumstance occur where it is deemed safe and necessary for a visitor to move around the site unescorted then a Drivers/Visitors induction is required.

Level 3 – Employee / Contractor Induction

The Quarry site induction is required for workers or contractors undertaking operational activities on the site. The site induction involves a more detailed Induction PowerPoint presentation and Induction Questionnaire about the site and its activities. This applies to every worker on site regardless of employee or contractor status.

An Employee Induction is conducted to ensure that all new employees are fully inducted into the site prior to the commencement of work, so as to minimise the risk of accidents and injuries occurring.

1. New employee arrives on site →	✓ Checks into weighbridge
2. New employee inducted →	✓ Weighbridge Staff
3. Site orientation – site walkthrough	✓ Responsible Supervisor
4. New employee inducted into relevant SWMS →	✓ Weighbridge Staff or Responsible Supervisor
5. Quarry Manager sign off on checklist →	✓ Signed checklist filed by weighbridge Staff

Contractors and Employees undertake a digital induction which involves site and regulatory information and questions to confirm understanding of such. The standard procedure for employee induction is shown below.

Refer to the *Contractor Management Procedure* for additional information on contractor requirements for operating on the NRQ site.

Level 4 - High-risk work Inductions

Additional induction into the *Mine Safety Management Plan* is required for high-risk work. This applies to either employee or contractor depending on the work to be undertaken or job role and includes SWMS and Permits to Work.

Refer to the *Induction Procedure* for detailed information.

Training, Licences & Competencies

The NRQ *Register – Training Plan and Records* details the training, licences and competencies required and obtained for workers on the NRQ site.

The Corporate Training Register records all staff training completed and the renewal dates if applicable and also keeps all current and historical training records.

Verification of Competency is undertaken every two (2) years (in line with LCC's Corporate *Verification of Competency Procedure*), for load shifting plant being operated on the site, specifically the Front-End Loader and Excavator.

Operational competencies are key to work safety on the NRQ site.

Practical assessment of competency for plant and key skill requirements shall be undertaken for all new or existing worker abilities to operate plant in a safe and effective manner.

- Assessment shall be undertaken by the Quarry Supervisor (or designated person) who maintains licenses or competency and has extensive experience with the use of the plant or process.
- Assessor to determine whether the worker is competent to operate the plant or process on the results of this assessment.
- If areas of competency are not achieved and are considered high risk, the worker will require retraining and assessment. If considered low risk, the assessor shall provide immediate training and reassess the worker's competency.
- Completed Competency Records are filed in TRIM.

Refer to the *Training and Competency Procedure* for detailed information.

Load Shifting Equipment

Operators of particular types of mobile plant, load shifting equipment, must obtain a 'High Risk Work Licence (HRW)' from a Registered Assessor. Load shifting equipment is mobile plant that is used to move material of any sort, be it rubble, or any other product or substance etc.

A high risk work licence is required to operate some machinery, erect scaffolding or undertake dogging or rigging work such as:

- cranes
- forklifts
- hoists
- pressure equipment
- reach stackers
- scaffolding

- dogging
- rigging

Operation of other types of mobile plant and load shifting equipment need to be assessed through on-site competency by a verified operator. NRQ conduct operator competencies for relevant plant and equipment on site.

Schedule 3 & Schedule 4, WHS Regulation 2017 (NSW) lists plant and equipment that requires a High Risk Work licence. VOC's are undertaken by plant operators and verified by the Quarry Operations Coordinator with records kept in TRIM

Electrical Services Supplier Competencies

NRQ has a qualified electrical tradesperson (Concept Engineering Pty Ltd) to ensure that:

- Electrical installations and electrical plant for which the total connected power at the operation exceeds 1,000kW, or for which high voltage is utilised, are designed and periodically reviewed by a qualified electrical engineer, and
- Installation, commissioning, maintenance and repair of all electrical installations and electrical plant (other than extra low voltage automotive plant or electrical plant fed via plug and socket outlets operating at a voltage no greater than 240V) are undertaken or supervised by a qualified electrical tradesperson or qualified electrical engineer, and
- Installation, commissioning, maintenance and repair of extra low voltage automotive plant or electrical plant, fed via plug and socket outlets operating at a voltage no greater than 240V, are undertaken by a competent person or a person supervised by a qualified electrical tradesperson or qualified electrical engineer.

NRQ shall co-operate with an electricity supply authority (has the same meaning as in the *Gas and Electricity (Consumer Safety) Act 2017*) to ensure the health, safety and welfare of persons undertaking maintenance of an electricity supply authority's infrastructure at a mine.

Emergency Response Personnel

Onsite emergency responder's roles require training in:

- First Attack fire fighting
- First aid
- Operation of emergency equipment

Chain of Responsibility

NRQ will identify all people that will require training and or verification of competency across:

- Load & unload
- Driving a heavy vehicle
- Awareness of Chain of Responsibility
- Fatigue management

7. Consultation, Co-operation and Co-ordination

ISO 45001:2018		
5.4 Consultation and participation of workers		
7.3 Awareness		
7.4 Communication		
8.1 Operational planning and control – management of change		
Support documentation		
Communication and Consultation Procedure	Toolbox Meeting Records	Meeting Agenda and Minutes
Register – Interested Parties	Management of Change Procedure	Safety Risk Management Procedure
Corporate Grievance and Dispute Resolution Procedure	Corporate Psychosocial Hazards Procedure	

PCBU and IMS Representative Co-operation and Coordination

The Manager Commercial Services is both the PCBU and the IMS Compliance Representative for NRQ. The Quarry Operations Coordinator (Statutory Quarry Manager) is an Officer for the purposes of notifiable incidents.

Procedure

The *Communication & Consultation Procedure* describes how and when NRQ consults with interested parties including workers, other LCC staff and external stakeholders (refer *Register – Interested Parties*).

Workers include all operational staff and LCC staff who visit the site for recurring meetings. Workers will be consulted when:

- Identifying hazards, assessing risks and deciding on control measures (refer *Safety Risk Management Procedure*).
- Making decisions about what facilities are needed.
- Planning to make changes that may affect safety, quality or environment.
- Developing procedures.

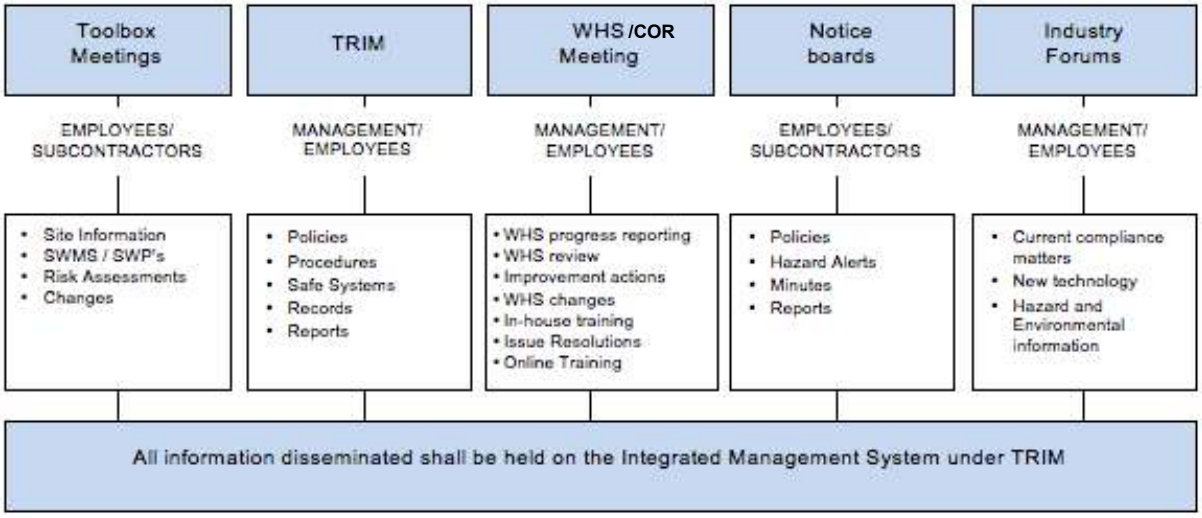
Workers are also provided information such as technical guidance about workplace hazards/aspects and risks (plant, equipment and substances).

External stakeholders include:

- Government agencies and Regulators
- Customers
- Neighbours and community members
- Invited Suppliers and Contractors
- Visitors
- Emergency Services

Communication Pathways

NRQ communicates safety information to workers and external stakeholders and senior management offsite. This may include meeting minutes, legislation changes, policy and procedure updates, annual reports and significant incident and injury trends and information relating to WHS training and CoR compliance. All records are stored in TRIM.



Program of Regular Communication, Consultation, Coordination and Cooperation

Communication and consultation are undertaken in the following meetings.

MEETING	Stakeholder Groups	Frequency
Quarry Toolbox meeting – Safety / Enviro	Quarry Operations Coordinator Involved persons on the day including contactors	Daily
Quarry Fortnightly Coordinators Meeting	Manager Commercial Services Quarry Operations Coordinator Compliance Lab Manager Sales	Fortnightly
Quarry - WHS / Enviro meeting	All Quarry personnel including contractors when on site	Monthly
Quarry – Management Review meeting	Manager Commercial Services Quarry Operations Coordinator Lab Manager Compliance Sales	Six monthly
Quarry - Community Consultative Committee Meetings	Community Committee Chairperson & Members Manager Commercial Services Quarry Operations Coordinator Compliance	Annually
LCC – WHS meetings	Quarry Health & Safety representative attends	At least Quarterly
Quarry Operations meeting	Quarry Operations Coordinator Lab Manager	As required

Management of Change

The *Management of Change Procedure* describes how changes will be managed and communicated. The Quarry has identified three (3) levels of change management. Each level requires a different response to management and communication of change.

Changes to Regulatory and / or Legislative requirements are generally identified via industry emails, training events, internal or external audits or direct communication with the Resources Regulator and other Government agencies. Where a change to regulatory or legislative requirements will have

an impact on Quarry operations, MSMP or the IMS, the scope of change will be assessed, and the level of change management required determined as per the above.

Grievance & Dispute Resolution

The *Corporate Grievance and Dispute Resolution Procedure* are used by NRQ for the management of a grievances. This procedure is used in conjunction with *Work Health and Safety Act 2011*, Part 5 Division 5.

Psychosocial Hazards Procedure

The *Corporate Psychosocial Hazards Procedure* is used by NRQ for the identification and management of psychological injury or impact in the workplace, such as:

- Psychological harm or injuries from psychosocial hazards include conditions such as anxiety, depression, post-traumatic stress disorder (PTSD) and sleep disorders.
- Physical injuries from psychosocial hazards include musculoskeletal injury, chronic disease, and physical injury following fatigue-related workplace incidents.

Consultation and communication is undertaken with staff at toolbox and safety meetings, as appropriate. Identification and review is undertaken six (6) monthly by Quarry and Compliance staff through the Site Safety Risk Assessment.

The *Managing Psychosocial Hazards at Work Code of Practice* is approved under the *Work Health and Safety Act 2011*, section 274.

8. Risk Planning & Hazard Identification, Risk Assessment and Controls

ISO 45001:2018		
6.1 Actions to address risks and opportunities 8.1 Operational planning and control ISO 31000 Risk Management		
Support documentation		
Project Approval Conditions PA MP07_0020	Safety Risk Management Procedure	Principle Hazard Management Plan & assoc. Control Plan
Register – Site Safety Risk Assessment	Communication & Consultation Procedure	Electrical Safety Registers
Non-conformance & Continuous Improvement Procedure	Register - Non-conformance & Improvement	Chemicals Management Procedure
Laboratory Quality Manual	SWMS Procedure	Hot Work Procedure
Authorities, Responsibilities and Delegations Procedure	SWMS & SWPs	Register - EMS Environment and QMS Quality Risk Assessment
Induction Procedure	Monitoring, Audit, Inspection and Review Procedure	Management of Change Procedure & Checklist

Legislative Requirements of the Officers and PCBU

Risk management is fundamental to complying with safety legislation and regulations.

NRQ safety activities are managed within the ISO 45001 framework, and as per the requirements of the WHS Act & Regulation, WHS (Mines and Petroleum Sites) Act & Regulations, Heavy Vehicle National (HVN) Law and Project Approval Conditions PA MP07_0020.

To ensure compliance with the above standards and legislation, NRQ has developed a risk management program to manage, reduce and eliminate safety, quality, and environmental risks wherever practicable as per the *Safety Risk Management Procedure*.

The program follows the typical Plan/Do/Check/Act (PDCA) cycle as recommended by regulators and ISO Standards to achieve continual improvement in the elimination of risk. The *Site Safety Risk Register* documents the hazards, risks and controls associated with site activities. The overall risk management approach is detailed in the IMS Manual.

PLAN – Resources & Review
- Identify stakeholders & train personnel
- Identify agreed HIRAC process, periodic review & improvement method

DO - HIRAC
- Identify HAZARDS in each step of process
- Undertake risk assessment proof each hazard
- Agree on risk control measures

CHECK - HIRAC
- Confirm controls against legislation
- Assign responsibilities & authorities to implement & monitor
- Implement control measures

ACT – Implement & Monitor
- Complete risk assessment & document SWMS
- Monitor & test controls
- Continually review for improvement – review planning process

Hazard identification, Risk Assessment and Control (HIRAC) Process

Legislation requires a systematic approach to the identification of hazards, the assessment (valuating) of risk levels, the implementation of control measures and review to ensure they are working as planned. The HIRAC process for the Quarry is documented in the *Safety Risk Management Procedure* and considers the relevant legislative requirements as referenced.

The six-step HIRAC process is:

- Step 1: Hazard identification
- Step 2: Risk assessment
- Step 3: Determine and implement risk controls
- Step 4: Review control measures
- Step 5. Monitor control measures
- Step 6. Hazard close out

Hazards may or may not be obvious e.g. broken earth-wire, a chemical, a gas leak, etc., or may be a potentially developing hazard e.g. worn brakes in vehicles, worn slings, ropes, hooks, clamps in lifting equipment.

Principle Mining Hazards

The *Principle Hazard Management Plan* is the core document in managing principle hazards as identified in the *WHS (Mines and Petroleum Sites) Regulation 2022*. The WHS (MPS) Regulation defines a principal hazard as an activity, process, procedure, plant, structure, substance, situation or other circumstance relating to mining operations that has a reasonable potential to result in multiple deaths in a single incident or a series of recurring incidents".

Principle mining hazards at the Quarry are:

1) Roads and other vehicle operating areas including moving plant, machinery and vehicles
2) Air quality or dust or other airborne contaminants including chemicals and dangerous goods
3) Fire and explosion including blasting
4) Ground or strata failure

High Risk Activities

High risk activities are defined under the *WHS (Mines and Petroleum Sites) Regulation* and includes:

- Electrical work on energised electrical equipment
- Roadways
- Shotfiring
- Secondary extraction (crushing and conveyors)
- Use of explosives

High Risk Construction Work

High risk construction work activities are defined under the *Work Health and Safety Regulation*. These activities require the preparation of a SWMS before commencing. High risk construction works includes:

(a) involves a risk of a person falling more than 2 metres, or
(b) is carried out on a telecommunication tower, or
(c) involves demolition of an element of a structure that is load-bearing or otherwise related to the physical integrity of the structure, or
(d) involves, or is likely to involve, the disturbance of asbestos, or
(e) involves structural alterations or repairs that require temporary support to prevent collapse, or

(f) is carried out in or near a confined space, or
(g) is carried out in or near—
(i) a shaft or trench with an excavated depth greater than 1.5 metres, or
(ii) a tunnel, or
(h) involves the use of explosives, or
(i) is carried out on or near pressurised gas distribution mains or piping, or
(j) is carried out on or near chemical, fuel or refrigerant lines, or
(k) is carried out on or near energised electrical installations or services, or
(l) is carried out in an area that may have a contaminated or flammable atmosphere, or
(m) involves tilt-up or precast concrete, or
(n) is carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor that is in use by traffic other than pedestrians, or
(o) is carried out in an area at a workplace in which there is any movement of powered mobile plant, or
(p) is carried out in an area in which there are artificial extremes of temperature, or
(q) is carried out in or near water or other liquid that involves a risk of drowning, or
(r) involves diving work.

High Risk Work Licences

Licencing and competency requirements for carrying out high risk work are prescribed in the *Work Health and Safety Regulation* and include:

- Dogging and rigging
- Crane and hoist operation
- Boom type elevated work platforms.

Other Common Hazards

Other potential hazards that need to be considered according to WHS legislation and/or that have been identified are shown in Table 3.

Table 3. Other potential hazards identified on site and/or included in WHS legislation.

Other Common Hazard Categories	
Manual Handling	Slips, Trips and Falls
Lifting/Slings	Natural Vegetation / Bushfire
Compressed air or fluids	Heritage & Fauna Disturbance
Ionising and electromagnetic radiation	Nip, Crush & Pinch Points
General Housekeeping	Chain of Responsibility Loading Unloading Load Restraint Over Mass Over Dimension Maintenance Speed issues Fatigue issues
Lighting & Visibility	
Machinery and tools	
Temperature hazards	
Work Environment (Noise, Vibration, Dust, Fumes)	
Work related stressors	
Drilling associated with blasting	
Alcohol and other Drugs	

Specific Electrical Risk Controls

Electrical Safety - Risk Controls

Electrical installations at the quarry comply with the requirements of *AS 3000 Wiring Rules* & *AS 3007 Electrical equipment in mines and quarries* per the *Electrical Engineering Control Plan*. Audits to ensure compliance with the *AS 3000 & AS 3007* are carried out on every 2 years as part of normal electrical maintenance schedule.

The following minimum standards apply:

- All electrical work carried out on site is compliant with *AS 3000 & AS 3007* & undertaken by fully qualified electrical contractors. Testing to these standards by a qualified/licenced operator is mandatory.
- Residual Current Device protection (RCD), also referred to as an Earth Leakage Circuit Breaker (ELCB), is recommended for all general purpose 240v power outlets. If tools and equipment trigger an RCD unit, contact a qualified electrician for further advice.
- Fixed RCD's must be tested with the built in test facility every three (3) months, and at least once every three years in accordance with *AS 3760*.
- Installed RCD's set to protect machinery usually have too slow a shut off speed and too high a current setting to protect human life.
- Fixed power-driven machinery must be maintained in a safe operable condition and serviced on a regular basis. Any electrical repairs of maintenance must be carried out by a qualified electrician.
- Never use any tool or machine if the power cord is damaged. Turn the power off at the main switch and remove the plug. Notify the Supervisor, who must ensure necessary repairs are completed before reuse. Ensure that power cords do not create a tripping hazard.
- All electrical equipment must be effectively earthed unless of the "double insulated" or "all insulated" type.

Maintenance – General Risk Controls

- All electrical works are subject to planned periodic inspection and maintenance to prevent impairment through wear and tear.
- Live parts of the installations shall be periodically inspected to ensure it remains insulated, or protected, against inadvertent contact with any person.
- Earthing systems are subject to periodic inspection and testing and not used beyond their operating limits or is a fire or environmental risk.
- Electrical protection shall be provided and inspected on all electric circuits to ensure it has the capacity to interrupt supply of electricity in the event of a fault.

Portable Electrical Equipment - Risk Controls

- Hand held power tools must be maintained in a safe working condition and checked on a regular basis. All maintenance and repairs of hand-held power tools must be carried out by a qualified electrician. All power tools should be recorded in an appropriate register.
- Ensure all electrical extension cords and portable electrical tool are in a sound condition and tagged appropriately prior to use.
- Portable electrical equipment and flexible extension leads are required to be inspected and tested on a regular 6 monthly basis to ensure that it complies with AS 3760 and is in a safe condition. Each item is then to be tagged with an appropriate colour tag and test results recorded.

- All portable electrical equipment shall be used in conjunction with a fixed or portable Residual Current Device (RCD). These protection devices must be used wherever mains electricity is supplied to moveable electrical equipment through a flexible extension cord.
- When using a portable RCD ensure that it is tested each time that it is used with the in-built switch and on a six-monthly basis as required by Regulations and AS 3760. Portable units must be fitted with a tag showing the last inspection date.
- Records must be kept for the testing of fixed and portable RCD's. These must be retained for 5 years.

Out of Service Tags - Risk Controls

- "Out of Service" or "Do Not Start" tags are commonly used to identify plant or equipment that is not to be used or started under any circumstances.
- These are not suitable for an isolating padlock. Do not remove a tag or padlock placed by another person, only the person who placed the padlock can remove the padlock. In any case, they can serve as a warning where danger exists.
- Under emergency or exceptional circumstances, the Quarry Manager or his appointee will have the authority to remove an isolating padlock to move an item of plant.

9. Management Plans, Control Plans and Programs

ISO 45001:2018		
6.1 Actions to address risks and opportunities		
8.1 Operational planning and control		
Support documentation		
Mine Safety Management Plan	Traffic Management Plan Site Map	Emergency Response Plan ERP
Explosive Control Plan	Health Control Plan	Electrical Engineering Control Plan
Principal Hazard Management Plan	Trigger Action Response Plan	Register – Document Index
Mechanical Engineering Control Plan	Pollution Incident Response Management Plan PIRMP	Compliance Task Register

Mine Safety Management Plan (MSMP)

The Mine Safety Management Plan (this document) is the core document in managing safety in accordance with the legislation. The MSMP is the responsibility of the Manager Commercial Services with delegations to the Quarry Operations Coordinator. The MSMP details:

- Legislative compliance needs, including objectives and targets
- Chain of Responsibility for Transporting requirements
- Assigned roles, responsibilities and authorities in relation to mine safety and associated risk management practices
- Identification of hazards and high-risk activities
- Risk management methodologies
- Training and competency requirements
- Inter-relationships with Lismore City LCC safety and Quarry safety
- Communication and consultation protocols
- Incident and emergency management
- Safety reporting and continual improvement

The MSMP references supporting documents throughout and designates record keeping obligations as required under *WHS (Mines and Petroleum Sites) Regulation*.

Principal Hazard Management Plan (PHMP)

The Principal Hazard Management Plan is the core document in managing principle hazards as identified in the *WHS (Mines and Petroleum Sites) Regulation*. The definition of a principal hazard is “any hazard on a mine site that has the potential to cause multiple fatalities”. Principal hazards are:

1) Roads and other vehicle operating areas
2) Ground stability
3) Fire and explosion
4) Dust and other airborne contaminants

Explosive Control Plan

The Explosive Control Plan (ECP) provide for a safe and standardised method of handling and using explosives at the Quarry. It identifies and allocates each individual’s WHS accountabilities and responsibilities, specifies competencies for each of the roles defined and ensures compliance with the *WHS (Mines and Petroleum Sites) Regulation* and *AS 2187 (storage and use of explosives).*

This plan incorporates all aspects of explosives handling including planning, transport, shot preparation, charging and stemming, tie up, firing, dealing with misfires, reporting and records, competencies and emergencies.

Items related to the Explosive Control Plan are the following:

- Blast set up area
- Loading and stemming blast holes
- Planning – drill and blast
- Decontamination and maintenance of explosives handling equipment
- Transport of explosives

Blasting activities at the Quarry are contracted out to industry specialists via LCC's procurement process.

Emergency Response Plan

The Emergency Response Plan (ERP) has been developed in accordance with *AS: 3745-2010 (Planning for Emergencies in Facilities)* to establish an effective systematic process for the management of emergency situations and response to protect life, property and plant and to comply with the *WHS (Mines and Petroleum Sites) Regulation* which states a mine site must have in place an emergency plan.

The ERP considers the hazards identified in the risk assessment process and their associated controls. Where a risk remains, the ERP shall consider the need for a planned emergency response. Also refer to the 'Explosives Safety Emergency Response' in the Explosive Control Plan

Mechanical Engineering Control Plan

The Mechanical Engineering Control Plan (MECP) has been developed in accordance with the requirements contained in the *WHS (Mines and Petroleum Sites) Regulation* for the management of mechanical structures and plant be it fixed or mobile. Its main aim is to protect life to ensure that controls are in place to manage the design, use and maintenance of mechanical machinery and infrastructure on site.

The MCP considers the hazards identified in the risk assessment process and their associated controls.

Electrical Engineering Control Plan

The Electrical Control Plan (EECP) has been developed in accordance with the requirements contained in the *WHS (Mines and Petroleum Sites) Regulation* for the management of electrical installation and management of existing electrical infrastructure. Its main aim is to protect life to ensure that controls are in place to manage the design, use and maintenance of electrical installations and infrastructure on site.

The EECP considers the hazards identified in the risk assessment process and their associated controls.

Health Control Plan

The Health Control Plan (HCP) has been developed in accordance with the requirements contained in the *WHS (Mines and Petroleum Sites) Regulation* for the management of issues relating to the health of personnel working on site. Its main aim is to protect life to ensure that controls are in place to manage risk relating to the contact and ingestion of hazardous substances and situations that are harmful to the human body or the body's senses.

The HCP considers the hazards identified in the risk assessment process and their associated controls.

Trigger Action Response Plan

The purpose of a Trigger Action Response Plan (TARP) is to detect a slowly deteriorating trend and identifies triggers for a planned early response. This approach ensures risk controls can be reviewed and amended prior to any incident or exceedance event and prevents a situation where a delay may result in hazards that cannot be easily managed or controlled. The Quarry TARP includes planned actions ready to implement when certain trigger points are detected by monitoring and addresses hazards requiring worker exposure monitoring or health surveillance. Refer to the Trigger Action Response Plan (TARP) for action investigation criteria even if worker exposure or health surveillance exposure standards are not exceeded.

Traffic Management site map

The Traffic Management site map shows the requirements for safety entry, traffic flow and exit following minimum standards required for quarries as specified by the *WHS (Mines and Petroleum Sites) Regulation*, LCC requirements and taking into consideration local community needs.

Traffic management is the responsibility of the Quarry Operations Coordinator as delegated by the Manager Commercial Services. The Resource Regulator '*Health and Safety at Quarries' Guide* takes into account factors relevant to '*Sch 1, Part 2.4 Roads or other Vehicle Operating Areas*' of the legislation, and shall be considered in the development, maintenance and review of traffic management on site.

Document Access

All documents are stored in TRIM. Refer to the *Register - Document Index* for the TRIM reference number.

10. Operational Controls – Service Delivery

ISO 45001:2018		
8.1 Operational planning and control Refer Section 8: Risk Planning – HIRAC		
Support documentation		
Corporate Procurement Policy & Guidelines	Principal Control Plans	Environmental Monitoring Procedures (Dust, Noise, Groundwater, Surface water, Wild Dog Baiting)
Communication and Consultation Procedure	Laboratory Quality Manual	Products & Services Procedure
Safety Risk Management Procedure	Chain of Responsibility Management Plan	Contractor Management Procedure
SWMS Procedure	Chemical Management Procedure	

Purchasing – Health and Safety and Chain of Responsibility

Northern Rivers Quarry requires any new product to be subject to a safety review process in consultation with users prior to any purchase. This process shall include:

- Need for a new product to be introduced – replacing more hazardous product
- Risk assessment to be undertaken prior to purchase to determine introduction of additional hazards or the need for storage, handling, PPE, training or other changes.
- The purchasing procedure to be followed that takes into account health and safety and CoR requirements from the supplier.

As a result of the risk assessment, the need to proceed to purchase is made and a change management process initiated.

	PURCHASING & DESIGN MINES LEGISLATION RISK FACTORS	PROPOSED PURCHASE NEW EQUIPMENT PRODUCT	
1	**Work Environment** Space, noise, lighting, temperature, contaminants, dust, radiation, vehicles	Involve Managers, Supervisors and "end users" of product or equipment in discussions.	Consult with employees, managers/supervisors, safety personnel, & other key personnel to consider the application of the Mines legislative factors to purchases & the construction or installation of plant/machinery.
2	**Ergonomics** Manual handling, office layout, work station design.	↓	
3	**Maintenance** Cleaning, plant & equipment, waste disposal.	**List potential hazards and risks to employees**	
4	**Operational Systems** Work processes, CoR requirements and methods.	Ensure product/equipment complies with all Mines legislation/CoR and Statutory requirements and SDS provided if necessary	
5	**Protection** Engineering, CoR conformance, admin controls & PPE	↓	
6	**Organisational Systems** Overtime, training, supervision and resourcing for health and safety and CoR compliance.	**Discuss requirements with Suppliers** ↓	
	Note: Each of the above six requirements should be considered with equal merit.	Agreement & Mines legislative/CoR requirements can be met. ↓	
		Decision to purchase	
		Place order, ensuring that all Statutory and Mines legislative/CoR requirements are included in purchase order/contract.	

Production Processes

NRQ Management recognises that a preventative approach is the most effective means of controlling an IMS. Therefore, a strong commitment to a proactive incident prevention strategy is necessary through the integration of workplace safety and health as part of the overall management process, where it ranks equally with all other activities of the organisation.

NRQ operates in the extractive industry which includes the undertaking of hazardous work requiring particular emphasis on the control of risks associated with:

- Operation of heavy plant (fixed and mobile)
- Moving equipment and work platforms
- Work at height
- Blasting and explosives
- On ground working environment
- Dust
- Hazardous substances
- Manual handling

OPERATIONS	SAFETY HAZARDOUS SITUATIONS
ASPHALT PRODUCTION and OPERATIONS (undertaken by RPQ/TRICO)	• Operation of heavy plant (fixed and mobile) • Moving equipment and work platforms • Work at heights • On ground working environment • Dust generation • Manual handling activities related to lifting, weights, awkward positions and repetitive work
QUARRY PRODUCTION and OPERATIONS	• Operation of heavy plant (fixed and mobile) • Moving equipment and work platforms • Blasting operations • Work at heights • On ground working environment • Dust generation • Hazardous substances use • Manual handling activities related to lifting, weights, awkward positions and repetitive work
LABORATORY and TESTING FUNCTIONS	• On ground working environment • Dust generation • Hazardous substances use
LOADING for TRANSPORT to/from Quarry by customer	• On ground working environment including traffic management • Dust generation • Work at heights • Operation of mobile plant • Hazardous substances use • Manual handling activities

11. Performance Monitoring, Measurement, Analysis, Review & Reporting – Audits, Inspections & Other Monitoring

ISO 45001:2018		
9.1 Monitoring, measurement, analysis and performance evaluation		
9.2 Internal audit		
9.3 Management review		
Support documentation		
Monitoring, Audit, Inspection and Review Procedure	Customer Satisfaction Survey	Laboratory Quality Manual
Communication and Consultation Procedure	Contractor Progress & Performance Report	Complaints Register
Contractor Management Procedure	Non-Conformance & Improvement Register	TRIM Calibration Register
Authorities, Responsibilities and Delegations Procedure	Compliance Task Register	Monthly Workplace & Quarry/Open Pit Inspections
Non-conformance and Continuous Improvement Procedure	Register – Interested Parties	Internal Audit Schedule
Management Review Meeting Procedure		

Inspection Responsibility

The Quarry Operations Coordinator (or delegate) is responsible for ensuring that all inspection, measuring and testing equipment needed to measure required accuracy's, is maintained, registered and calibrated (as appropriate) at regular intervals and the results are recorded.

Performance Monitoring

Performance monitoring of the IMS, regulatory compliance and contract specifications is undertaken using the following tools:

- Internal and external site inspections including Monthly Workplace & Quarry/Open Pit Inspections
- Hazard identification, risk assessment, control and monitoring
- Internal audits of
  - IMS systems and procedures
  - Safety Management System
  - Laboratory systems and processes
- External audits
  - IMS standards - ISO 45001
  - NATA accreditation
- Management Review Meeting
  - Audit and inspection outcomes
  - Customer feedback
  - Non-conformances & improvement opportunities
  - Objectives & targets
- Non-conformance & improvement opportunities and incident investigations.

Refer to the *Monitoring, Audit, Inspection and Review Procedure* for detailed information. Refer to the Laboratory Quality Manual for processes relating to monitoring, inspection and calibration of equipment related to product delivery.

Performance Monitoring and Measurement – all stages of production

Inspection, Test and Monitoring – Goods / Services Received

- Inwards purchased goods / services / equipment are checked to ensure they comply with the purchase order specifications
- Subcontracted services received shall be supervised to ensure they comply with specified contract requirements and that services are carried out in the most effective and efficient manner available
- Repair of company plant, equipment and premises including repair work / services carried out by subcontractors on a continuing basis

The Manager Commercial Services is ultimately responsible for service performance. Certain duties are delegated to specific managers to ensure that all inspection and testing is carried out in accordance with company / contract and safety requirements.

Devices – Calibration, Inspection and Test

The following protocols for the control of monitoring and measurement devices shall be adhered to:

- A calibration database will be maintained. All other equipment as per the Calibration Register shall be calibrated by the laboratory as per the appropriate standard.
- The scheduled service / calibration is completed to ensure tools, equipment and instruments are kept in or returned to service with minimal disruption to operations workplace health and safety, and to ensure that records associated with this process are updated or created, as necessary,

Customer Satisfaction

- NRQ analyses sales data to provide an indication of customer satisfaction. Periodic surveys of customers and suppliers' expectations are central to our program for continuous improvements to meet NRQ objectives. A follow-up telephone call may be made to new customers or new product sales to test customer satisfaction or the *Customer Satisfaction Survey* sent out following a sale.
- Both positive and negative customer feedback will be discussed in the Fortnightly Coordinators Meeting, Monthly Safety/Enviro Meeting or Manager's meeting as appropriate.
- A *Complaints Register* is maintained for customer and public complaints relating to environmental aspects of operations (e.g. noise). These are addressed as received and responses noted in the Register. The Complaints Register is available on the website.

Management Review Meeting

Review of NRQ performance is an ongoing process. The management review of the MSMP is undertaken as an annual review process incorporating all facets of the IMS.

General MSMP review is undertaken during operational meetings as part of the general NRQ meeting processes, conducted by the NRQ management. Minutes are kept.

Additionally, an annual management review of the integrated management system (IMS) shall be undertaken. This review meeting may include all aspects of the IMS for effectiveness and compliance.

The Manager Commercial Services shall ensure that management review occurs at least annually.

The annual review meeting shall include the following:

- Legal and regulatory compliance status – currency and changes
- Australian Standards compliance status – currency and changes
- Policies – compliance with regulations, LCC and NRQ systems

- Objectives and targets – measure of success and opportunities for improvement
- Mine Safety Management Plan – Need for review or additional support plans
- Reportable incidents – 12 months review, regulator feedback
- Non-conformance reports and trends – 12 months review
- Subcontractor and supplier safety performance reviews – issues and changes
- Plant and equipment resources – maintenance status, review, fit for purpose, safety
- Training and competency – resources effectiveness and need for review of competencies
- Documented systems – review to date, need for review, assigned responsibilities
- Subcontractor performance and feedback
- Legal and statutory compliance status – currency and changes for HVN Law
- Review of and collation of CAI's relating to CoR non-conformances.

WHS Performance Measurement Rates

SafeWork Australia Workplace Injury and Disease Recording Standard (as per *AS 1885.1*) is the measure for WHS statistical analysis.

Lost Time Incident (LTI)

An incident resulting in an injury causing death or permanent disability or prevents an employee from working for one day/shift or more.

Medically Treated Incident (MTI)

An incident resulting in an injury that requires an employee to obtain first aid or medical assistance for an injury (ambulance, doctor or hospital outpatient), but there is not lost time (ie, the employee returns to work before a whole day/shift is lost).

The *Objectives and Targets Procedure* outlines how and when LTI and MTI data is collected and analysed. Worksafe Australia Workplace Injury and Disease Recording Standard (as per *AS 1885.1*) is a guide for data collection relating to injury and disease occurrences.

Chain of Responsibility Reporting and Metrics

CoR performance issues shall be reported through management meetings to offsite senior management. Information will be gathered and presented by the Quarry Operations Coordinator at this meeting and discussed between the business management staff to provide strategic direction.

- Fatigue – In accordance with the *Fatigue Management Policy* as outlined in the IMS system and the Corporate WHS Procedure. It is a shared responsibility between Management and staff to identify and be proactive to monitor fatigue levels.
- Speed - Fleet Services manages plant and fleet telematics and exception reporting monitoring utilization, speed and maintenance.
- Mass Management - The weighbridge software system will suspend the transaction
    - Excess material will be tipped off
    - Plant and equipment will be either moved or loaded onto an appropriate combination
    - Heavy vehicle will re-weigh onto the weighbridge to confirm correct mass
    - The suspended transaction will be completed
    - Reports can be generated from the weighbridge software system identifying any overloaded or breach of mass vehicles
    - The site Supervisor is notified and the offending company is contacted of the breach
- Load Restraint - Relevant to Fleet Services and Contractors for transporting of plant & equipment. Adherence to NTC Load Restraint Guide.

- Maintenance - Maintenance is managed by Fleet Services Workshop and specialist contractors for mobile plant. A maintenance plan is managed by the Workshop in conjunction with NRQ management and operators to ensure plant remains fit for purpose.

  Exception reporting is identified through Workshop maintenance systems.

Performance Reporting

Critical product characteristics and process methods shall be measured against relevant product specifications and Standards, managed by qualified staff within the Quarry lab.

Formal workplace safety inspections and audits shall be conducted as per the agreed *Internal Audit Schedule* contained within the IMS system in TRIM.

Corrective actions shall be documented in the *Non-Conformance Register* in the IMS system in TRIM and undergo review after completion.

Reports are provided to LCC and Regulators according to agreed arrangements in the *Register – Interested Parties* and *Compliance Task Register* – refer agenda of management meetings for reporting requirements.

External Reporting

Safety

Under clause 130 of the *Work Health and Safety (Mines and Petroleum Sites) Regulation*, NRQ shall provide an annual WHS Report via the Regulator Portal https://nswresourcesregulator.service-now.com/regulator. Information is collated quarterly from the Quarry office summarizing hours worked by staff and contractors.

The report will including the following:

- Total no. Injuries
- Total employee and total contractor injuries
- Total employee hours worked
- Total contractor hours worked
- No. employees and total contractors receiving medical treatment
- No. employees and total contractors undertaking suitable duties
- No. employees and total contractors LTI's

A copy of the reports shall also be held by NRQ for internal review and improvement process and saved in TRIM.

12. Emergency Management

ISO 45001:2018		
8.2 Emergency preparedness and response		
Support documentation		
Corporate Emergency Preparedness Procedure	Emergency Response Plan	Pollution Incident Response Management Plan
Explosive Control Plan	Mine Safety Management Plan (this document)	

Emergency Preparedness and Response

The *Emergency Response Plan (ERP)* details how the Quarry plans for emergencies scenarios at the site. The ERP contains emergency maps designating clear exit paths and locations of emergency equipment including fire extinguishers, hoses, first aid equipment as appropriate.

Evacuation drills and testing of emergency protocols are conducted annually (may be conducted more frequently at the discretion of Management). All observations and actions shall be documented on the *Emergency Drill Evacuation Record* form.

A copy is kept at the in the emergency services information cabinet at the entrance to the Quarry.

In planning for Quarry safety emergencies NRQ:

- Identifies potential emergency situations relevant to the NRQ site and initiate emergency response protocols for each perceived situation.
- Provides and maintains the equipment resources necessary to meet site emergency needs.
- Provides competent personnel to enact the emergency response arrangements.
- Develops and coordinates emergency response as deemed appropriate to activities.
- Refer to the *Corporate Emergency Preparedness Procedure* for detailed information.

As a result of the above, an *Emergency Response Plan* (ERP) is developed for the quarry location. The plan is approved by the managers and Health and Safety Representatives (HSR) in consultation with other site stakeholders.

The principles of the ERP are:

1. PROTECTION OF LIFE

2. PREVENTION OF HAZARD EXPANSION

3. DAMAGE MINIMISATION TO ASSETS IN AFFECTED AREA

- First person to the scene or to notice the emergency threat shall notify their immediate Supervisor or Manager. They will state "*this is an emergency*" and give their name, the nature and location of the accident or emergency. This will be done by himself or herself or another person they can immediately contact. Alert other personnel in the immediate area to the emergency.
- In the event of an emergency, the Site Manager or person appointed will supervise the arrival of emergency services. A competent person will be stationed at the weighbridge to ensure that only emergency services and authorised personnel are admitted to the quarry.
- No person shall become involved at the scene unless they are requested to do so or can offer genuine assistance. The site shall not be disturbed unless necessary to render assistance to an injured person or reduce the risk of an escalation of the emergency until the all clear is given by the Quarry Operations Coordinator or delegate.

Refer to the *Explosive Control Plan* and associated documents for specific responses to emergencies associated with blasting activities.

Pollution Incident Response Management Plan (PIRMP)

The *Pollution Incident Response Management Plan (PIRMP)* Blakebrook Quarry has been developed in accordance with the requirements of the *Protection of the Environment Operations (General) Regulation 2022*.

Emergency Equipment including Fire Extinguishers

Fire extinguishers are fitted to all mobile equipment and are clearly identified. They are also fitted throughout the crushing and screening plant, in the workshops, offices and near flammable fuel and chemical stores. Emergency equipment is tested and calibrated annually via contract arrange arrangements with suppliers.

This equipment must be used for fire protection only. Any use of such equipment must be reported to the Quarry Operations Coordinator or delegate.

Type of Extinguisher

Type	CLASS A Combustible materials (e.g. paper & wood)	CLASS B Flammable liquids (e.g. paint & petrol)	CLASS C Flammable gases (e.g. butane and methane)	CLASS D Flammable metals (e.g. lithium & potassium)	Electrical Electrical equipment (e.g. computers & generators)	CLASS F Deep fat fryers (e.g. chip pans)	Comments
Water	✓	✗	✗	✗	✗	✗	Do not use on liquid or electric fires
Foam	✓	✓	✗	✗	✗	✗	Not suited to domestic use
Dry Powder	✓	✓	✓	✓	✓	✗	Can be used safely up to 1000 volts
CO2	✗	✓	✗	✗	✓	✗	Safe on both high and low voltage
Wet Chemical	✓	✗	✗	✗	✗	✓	Use on extremely high temperatures

Classification

Extinguishers shall be classified by letter(s) designating the general class or classes of fire for which the extinguisher has been found to be effective. For the purpose of classification, the following letters apply:

Class A Ordinary combustible materials such as wood, cloth, paper, rubber and plastics.

Class B Flammable and combustible liquids and greases. Where an extinguisher has been shown to be electrically non-conductive as discharged from a given extinguisher, the extinguisher shall be identified with the marking (E).

Class C Flammable gases like hydrogen, butane or methane

Dry Powder multipurpose dry chemical that is effective on Class A, B, and C fires. This agent also works by creating a barrier between the oxygen element and the fuel element on Class A fires.

Fire related signs are maintained throughout the sites and indicate the location of fire alarms and firefighting equipment and facilities.

13. Incident Reporting, Investigation, Corrective and Preventive Measures

ISO 45001:2018		
10.2 Incident nonconformity and corrective action		
10.3 Continual improvement		
Support documentation		
Non-conformance and Continuous Improvement Procedure	Non-conformance and Improvements Register	Mine Safety Management Plan (this document)
Corporate WHS Incident Reporting and Investigation Procedure	Incident Reporting Investigation & Notification Procedure	

Nonconformance, Corrective Actions and Improvements

Refer to the *Non-conformance and Continuous Improvement Procedure* for detail on how the Quarry manages non-conformances, corrective and preventative actions and continual improvements. Laboratory non-conformances are maintained within the laboratory system. This information is captured via the *Non-conformance and Improvements Register*.

Incident Reporting, Investigation and Notification

The *Incident Reporting Investigation & Notification Procedure* describes in detail the internal procedure for reporting all incidents and injuries including a near miss, (even if there is no damage or harm to people, plant or the environment) and the external procedure for reporting notifiable incidents to the relevant regulatory authority, i.e.. Resources Regulator and the EPA. The procedure also describes the types of notifiable incidents and how investigations are undertaken.

The *Incident Reporting Investigation & Notification Procedure* provides a summary of how the Quarry complies with the *Work Health and Safety (Mines and Petroleum Sites) Act 2013* and LCC policy and procedures.

The *Corporate WHS Incident Reporting and Investigation Procedure* describes the 5 Whys investigation procedure in detail.

Incident Reporting, Investigation and Notification – Resource Regulator

The WHS (Mines and Petroleum Sites) laws apply to all workplaces that are mines. A mine is a workplace at which mining operations are carried out. Section 125 of the *Work Health and Safety (Mines and Petroleum Sites) Regulation 2022* sets out requirements on the mine operator to notify the Regulator of certain events referred to as *'reportable events'.*

The following represents Reportable Events to the Resource Regulator. **NSW Resources Regulator - 24 hour reporting number on 1300 814 609.**

<u>Types of Notifiable Incidents</u>

There are six types of incidents that must be reported to the NSW Resources Regulator if they arise out of conducting business or performing any activity at a mine or petroleum site. These are:

- the death of a person
- a 'serious injury or illness'
- a 'dangerous incident', as defined in the regulations
- an incident that results in injury or illness requiring medical treatment
- a high potential incident
- certain incidents relating to explosives.

The *Work Health and Safety (Mines and Petroleum Sites) Regulation 2022* was amended on 1 September 2022 to

- establish a safer and more modern work health and safety system that aligns with developments in industry best practice and the features of the mining industry in NSW
- improve clarity and transparency for industry and the Resources Regulator
- improve the flexibility of how the regulation is applied and decreasing regulatory burden.

Events that occur at mines can be classified as either '*dangerous incidents'* (section 190 of WHS Mines Regs) or '*high potential incidents'* (section 124 of WHS Mines Regs). If either event occurs the Resource Regulator must be notified as soon as reasonably practicable (but no later than:

- 7 days after becoming aware of the incident,
- 48 hours after becoming aware the incident resulted in an illness or injury.

Notification Steps

Steps to be taken in the event of an incident are:

1. If there is a **serious injury or illness**, a **death** or a **dangerous incident**, you must:
   - provide first aid and make the area safe if needed
   - report the incident immediately by calling **1300 814 609 (24 hours a day, 7 days a week)**.
   - preserve the site where the incident occurred until an Inspector releases it
   - log in to the Regulator Portal to access the incident lodged by the Resources Regulator and provide further information if required.

2. Submit an online incident notification

   If there is an **incident that results in illness or injury** that requires medical treatment, other than diagnostic procedures, observation, counselling, first aid or therapeutic measures taken solely for preventative purposes, you must:
   - make the area safe, if needed
   - notify Resources Regulator as soon as possible (but no later than 48 hours) by completing the form on the Regulator Portal. You are able to access this form at any time after you have submitted it to add further information.

   If there is a **high potential incident**:
   - make the area safe, if needed
   - notify Resources Regulator as soon as possible (but no later than 48 hours) by completing the form on the Regulator Portal. You are able to access this form at any time after you have submitted it to add further information

End.