

KIWI POINT QUARRY

Quarry Management Plan
June 2014

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EXECUTIVE SUMMARY

The Wellington City Council's (WCC or Council) Kiwi Point Quarry (KPQ or Quarry) is a strategic Council asset and operates as a permitted activity under the Suburban Centre provisions of the Wellington City District Plan with its core business being supplying a key infrastructural resource to the City and Region. The quarry is located in the Ngauranga Gorge, adjacent to State Highway 1. The site is within an industrial area, which is located at the bottom of a basin surrounded by high ridges.

In December 2004, the Council approved a District Plan Change (Plan Change 25) for the expansion of the quarry into a previously quarried area to the south of the original quarry operation. A further plan change in December 2008 (Plan Change 64) has consolidated the provisions for the quarry area as a whole and brings the whole of the quarry operation under a single regime in the District Plan.

The Plan Changes ensure the Council and the City has continued access to a quality quarry rock resource. Included in the Plan Changes are strict conditions to ensure adverse effects will be avoided, remedied or mitigated and sets out the requirements for a Quarry Management Plan (QMP) (this document) and how the site is to be progressively rehabilitated as quarrying operations proceed.

The quarry currently produces around 350,000 tonnes, with production expected to increase to 500,000 tonnes per year over the term of this plan, of crushed greywacke comprising a full range of products from low grade to high quality sealing and asphalt aggregates for the Wellington roading and infrastructure market.

Since 2006 the quarry has been operated by an independent contractor under a long term Quarry Development Services Contract. Holcim (New Zealand) Ltd is the current contractor.

The quarry resource available at current extraction rates is estimated to provide for a further 50 years plus.

This document has been prepared in accordance with the requirements of the Wellington City District Plan.

This version of the plan is to be effective as from 01 July 2014 and supersedes all earlier versions.

1. INTRODUCTION

1.1 KIWI POINT QUARRY

The Kiwi Point Quarry (KPQ) operates as a permitted activity under the Suburban Centre provisions in the Wellington City District Plan and is one of the City and region's key resources for development. Rock material from quarries is essential to providing and maintaining housing, building and infrastructure.

In December 2004 the Council approved a District Plan Change (Plan Change 25) to extend the quarry into a formerly-worked area in Ngauranga Gorge to the south of the present quarry. The development of this area is expected to provide a supply of rock material and aggregates for a further 50 years.

As part of the Plan Change 25 process, considerable investigations into all aspects of the future development of KPQ were undertaken so that the Council and community could be assured that the quarry activity could be extended into the new area proposed without significant adverse effects. The quarry extension area is to be used for the extraction of the rock resource, the temporary storage of material prior to transport to the crushing, screening and sale areas, and in the longer term for a temporary clean filling activity to restore the more deeply excavated areas back to a development level. A Quarry Management Plan (QMP) was identified as necessary as part of this process.

In December 2008, the Council undertook another plan change, Plan Change 64, to consolidate the provisions of the District Plan so that the whole of the quarry operated under one set of rules. Further modification of the quarry boundaries and rezoning of land allowed for the facilitation of the ongoing quarry operation. The 2009 QMP update reflected the amended provisions of the District Plan Change 64 process.

This version of the QMP is to be effective as from 01 July 2014, and supersedes all earlier QMP versions from that date.

1.2 SITE LOCATION

KPQ is located in the Ngauranga Gorge to the west of State Highway One, prior to the Newlands off-ramp at or about map reference NZMS 260: R27; 611.952. Figure 1 shows the general location of KPQ.

1.3 LEGAL DESCRIPTION

The legal descriptions of the land are Lot 1, and Lot 2 DP 72995, Lot 2 DP 91179, Lot 4, Lot 5 and Lot 6 DP72996, Lot 1 DP34015 and Sec1 SO36728 Ngauranga Gorge. Wellington City Council owns the quarry land as well as surrounding land occupied by Taylor Preston Limited, Allied Concrete and Downer NZ Ltd. Please refer to Figure 1.

1.4 QUARRY AREA ACTIVITIES

Not all areas of the site will be subject to quarry activities. The areas subject to quarrying and therefore this QMP are discussed in section 5 and depicted in Appendices 4 and 5.

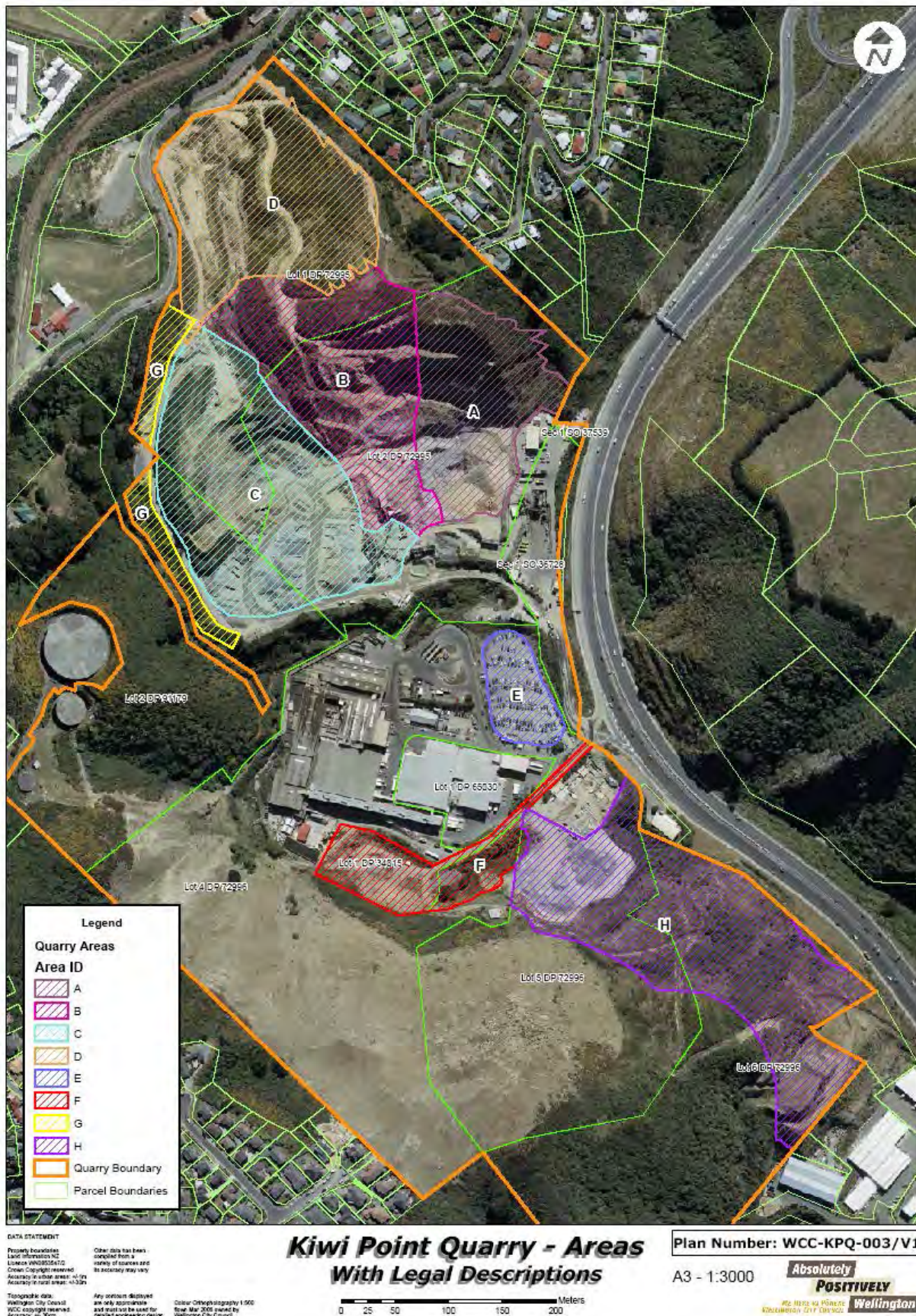


Figure 1

1.5 LAND USE ZONING

KPQ is predominantly zoned as Suburban Centre with some areas zoned Open Space B. The surrounding land is zoned Open Space B. Rule 7.1.3 of the Wellington District Plan allows for quarrying and cleanfilling as permitted activity within specified parts of the KPQ area, subject to conditions. The full wording of the relevant rules is included in Appendix 1.

Policy 6.2.3.3A of the District Plan provides for the development and site rehabilitation of the quarry. A method to achieve this policy is a requirement for a QMP to be developed and for the operation of the quarry to be in accordance with that Plan. The Method states:

A QMP shall be prepared and regularly updated, which sets out:

- *intended staging of the excavation and cleanfilling activities*
- *the means of management of surface and groundwater*
- *management of on-site traffic*
- *provision for any onsite processing and temporary storage of quarry material*
- *any specific provisions relating to onsite management of noise, dust, vibration, visual impact, water quality*
- *a procedure for addressing any complaints*
- *objectives and principles for the rehabilitation of the site, including:*
 - *a timetable for the rehabilitation of prominent quarry faces*
 - *measures to create soil conditions which will support plant growth*
 - *measures to create a variety of site conditions to support a range of species*
 - *means of controlling runoff to avoid erosion*
 - *means of control of plant and animal pests*
 - *measures to avoid fire risks*
 - *means to assist native vegetation to regenerate on grazing land*
 - *rehabilitation which is compatible with Open Space strategy for adjacent areas of land*
- *management of buffer areas*
- *practices and methods that will be adopted to ensure that all permitted activity conditions applying to the activities will be met.*

The QMP will complement the other rules applying to the quarry activity and will provide additional management details. It will be reviewed at least every five years and any necessary adjustments will be made.

As progressive rehabilitation of the area is an important aspect of quarry management, the QMP includes rehabilitation provisions. As quarrying and cleanfilling activities are completed on the site, an implementation plan shall be prepared annually in accordance with the QMP.

The requirement that regular monitoring is undertaken and regular progress reports are completed and submitted to the Council is a key element. This requirement is included because successful rehabilitation of any disturbed area requires constant monitoring as site conditions vary considerably and evolve over time. Regular observation and recording of results is an essential part of managing the process.

A vegetated buffer area is included within the Suburban Centres Area as part of the development of the southern part of the quarry. At the northern end, the necessary buffer area is within the Open Space B Area.

It is important also that rehabilitation of the quarry area should recognise and in the longer term be able to be integrated as appropriate with the Open Space strategy developed by the Council for adjacent areas of land. Current Council policy is for the creation of further Green Belt areas on the steep hill sides of the Ngauranga Gorge and, for instance, it may be possible to allow continuation or linking of proposed walkways.

Overall, the environmental result will be the availability of quarry materials for the City and wider region in the short and medium term, and long-term achievement of well-vegetated quarry faces with the appearance of a natural landform which will be integrated with Council development of open space areas in this vicinity.

This QMP has been prepared in accordance with these requirements of the Wellington City District Plan.

1.6 PURPOSE OF THE QUARRY MANAGEMENT PLAN

The purpose of this QMP is to provide an overall framework that outlines how the Council will operate, manage and develop all the land area at Kiwi Point, which is owned by the Council for the purpose of quarrying and cleanfilling in order to:

- Ensure compliance with the specific planning provisions contained within the Wellington City District Plan; and
- Guide management of the KPQ and rehabilitate quarried areas in accordance with the District Plan requirements.

1.7 SCOPE OF THE PLAN

The scope of this plan includes:

All the land within Ngauranga Gorge related to quarrying, cleanfilling and associated rehabilitation as indicated on the Plan in Figure 1:

- The carrying out of the quarry operations in a prescribed manner
- The items and detail necessary to achieve the District Plan objectives. Cross-links to other management documents are provided when these deal with an issue in more detail.

The QMP is intended to be a practical working document to:

- ✓ *Ensure that the KPQ site is operated in a safe manner, and that environmental effects are properly controlled.*

1.8 CONSULTATION TO DATE

The Council undertook consultation on the KPQ during 2003 and 2004 as part of Plan Change 25.

The consultation involved the general public, neighbours and stakeholders such as community groups through media releases, public notices, and the Council's web site. Substantial information was made available through these mechanisms, and also through a brochure and an information pack sent out to stakeholders, potentially affected residents and any others who requested it.

Consultation was also undertaken with the general public, neighbours and stakeholders as part of Plan Change 64. Consultation related to the proposed amendment of the provisions of Chapters 6 and 7 of the Suburban Centres chapter of the District Plan, the modification of the quarry boundaries, and the rezoning of land.

Ongoing consultation will be conducted as and when it becomes necessary. Current lines of communication are directly with the Quarry Operations Manager or through regular emails to residents. A community liaison group is currently not considered necessary due to the absence of issues associated with the quarry activities in relation to the surrounding residents.

1.9 CHANGES TO QUARRY MANAGEMENT PLAN – JUNE 2009

The QMP is intended to be a practical working document to:

- ✓ *Ensure that the KPQ site is operated in a safe manner, and that environmental effects are properly controlled. KPQ is currently operated in accordance with the QMP adopted in June 2009.*

The June 2014 QMP (this document) will become effective from 01 July 2014. This covers all the land area at Kiwi Point which is owned by the Council for the purpose of quarrying and cleanfilling and will replace the June 2009 QMP.

The key change provided for in this revised plan are.

1. The changes in operational process documents and Quarry Operator;

1.10 RELATIONSHIP WITH OTHER COUNCIL DOCUMENTS

Document	Purpose
Wellington City District Plan	<ul style="list-style-type: none"> ▪ Imposes conditions under which the quarry must operate
Stormwater Management Plan - July 2005 <i>The present Stormwater Management Plan is being reviewed</i>	<ul style="list-style-type: none"> ▪ Demonstrates how quarry stormwater is managed on site
Wellington City Council Kiwi Point Quarry Design – February 2006	<ul style="list-style-type: none"> ▪ Design of northern face
Kiwi Point Quarry Development Service contract between the Council and the Quarry Operator	<ul style="list-style-type: none"> ▪ Contract terms and conditions (Confidential and commercially sensitive)
Quarry Quality & Procedures Manual (This manual is owned by the quarry operator and it is a requirement of the Council)	<ul style="list-style-type: none"> ▪ Quarry operator's Business Management System (ISO 14001 and 9001 accredited) Provides operational procedures for the quarry operations including environmental management

1.11 FACILITIES NOT INCLUDED IN PLAN

The following facilities are hosted within the land area at Kiwi Point on Council leased land and are not subject to this QMP:

- Downers NZ Ltd – Asphalt Plant
- Taylor Preston's – Meat Processing Plant
- Allied Concrete – Concrete Plant

1.12 PLAN REVIEW

This QMP will be reviewed every five years as required by the District Plan and Quarry License provisions. The review will include (without limitation):

- (1) Updates to satisfy the District Plan requirements;
- (2) Resource extraction rates in relation to Site Development projections;
- (3) Site Development issues that may have arisen;
- (4) Changes in Best Industry Practice or relevant Standards and Codes of Practice;
- (5) Quarry Health & Safety;
- (6) Quarry Operations Complaints;
- (7) Any other relevant matters in relation to the KPQ site and the carrying out of quarrying and cleanfilling operations;

(8) Updates to matters covered in the QMP which are no longer required or changed.

The results of each review will be reported back to the Council.

2. LEGISLATIVE INFLUENCES

2.1 LEGISLATIVE INFLUENCES

The following external documents, studies and legislative changes have been identified as having an influence on the development of the QMP.

- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013 Health and Safety in employment amendment Act 2013
- Health and Safety in Employment amendment Act 2013
- Electricity (Safety) Regulations 2010
- Hazardous Substances & New Organisms (HSNO) Act 1996 and related regulations (and subsequent reviews)
- Resource Management Act 1991

2.2 NON STATUTORY DOCUMENTS

- Holcim (New Zealand) Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim Business Management System
- A Guide to the Management of Cleanfills
- Australian Standard – Explosives – Storage, transport and use – Part 1: Storage and Part 2 Use of Explosives
- Industry Code of Practice Surface Mining and Quarrying Industries (and subsequent reviews) www.minex.co.nz.

3. QUARRY ASSET

3.1 QUARRY ASSET DESCRIPTION

The KPQ was established in the 1930s and has always been owned by the Council. Originally, the Council simply utilised the quarry for its own roading needs. However, since 1995 quarry products have been available to the public. Due to change in Health and Safety regulations, public trailer sales have ceased from May 2014.

The site is within an industrial area, which is located at the bottom of a basin surrounded by high ridges. Residential areas are situated at the top of these ridges.

The current rock resource available for extraction on the current northern face is estimated to be 8mT with the volume of rock available on the southern face is estimated to be 10mT. Both volumes are based on pit quarry operations.

Quarrying of all areas within the KPQ site will release both valuable commercial site opportunities and space for cleanfill activities.

The KPQ site contains the following infrastructure assets owned by the Council:

- 0.5 km of roads (sealed)
- 3 km of roads (unsealed)
- 1 office administration building
- 1 staff facility
- 1 workshop building
- 1 x transformer room
- Road bridge
- Boundary fences
- Stormwater sumps

In addition to these infrastructure assets, the quarry operator owns and operates a range of fixed and mobile equipment on site.

3.2 DEVELOPMENT

To maximise efficiency of quarrying and cleanfilling operations, site work to be completed will include filling in the current culvert flume and stream area at least to a point where a suitably graded road for truck access to the nominated quarry stockpile areas can be achieved and will also include:

- The culverting of the Ngauranga Stream within the quarry and abattoir boundaries.
- Infilling the upper gully area from Fraser Avenue, down and through the quarry operation area. This infilling will effectively provide further industrial land. The stream has been partly piped from Fraser Avenue to the existing quarry road and partly in-filled. This upper filled area (area D) is expected to release approximately 19,500 sq. metres.

4. QUARRY OPERATIONS

4.1 GENERAL

Current annual production from the quarry is about 350,000 tonnes of material. Of this, around 150,000 is high grade stone used in infrastructural projects such as roading and building.

4.1.1 HOURS OF OPERATION

- KPQ operational hours are not restricted but have to comply with noise emitted and received standards.
- Quarry product sale hours are Monday to Saturday 0600 to 1800 hrs (but is subject to change to meet sales demands); and
- Quarry extraction and processing hours are set to meet operational demands and can be over 24/7 days per week subject to noise and dust restrictions.

4.2 QUARRY OPERATIONS – EXTRACTION AND PROCESSING

4.2.1 OVERBURDEN STRIPPING

The quarry operator or his/her delegated representative shall ensure that soil stripping within the quarry is a controlled activity and carried out in line with the quarry Development Plans and that best practice guidelines are referenced.

4.2.2 ROCK EXCAVATIONS AND TIP AREAS

The quarry operator or his/her delegated representative shall ensure that excavations and tip areas are designed, constructed, operated and maintained so as to ensure that -

- (1) instability; or
- (2) movement,

which is likely to give rise to a risk to the health and safety of any person, is avoided.

Reference

- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System

4.2.3 EXTRACTION

Extraction of rock from the quarry is carried out by firstly drilling and blasting (where required) and then removal by excavators. Extracted rock is then delivered to the crushing plant(s) by loaders or dumpers depending on requirements of the crushing plant(s).

It is the duty of the quarry operator or his/her delegated representative to develop and ensure compliance with suitable and sufficient rules covering excavation to ensure the safe construction and operation of excavations. Such rules shall in particular specify the following matters -

- (1) the manner in which such activities are to be carried out;
- (2) the nature and extent of supervision of such activities; and
- (3) the precautions to be taken during such activities to properly avoid, mitigate or minimise risks to the health and safety of any person and the safety and stability of the excavation.

Reference

- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz

4.2.4 APPRAISAL OF EXCAVATION

The quarry operator or his/her delegated representative shall ensure that a suitable and sufficient appraisal of all proposed or existing excavations at the quarry is undertaken by a competent person in order to determine whether any such excavation is a significant hazard.

- (1) The quarry operator or his/her delegated representative shall ensure that -
 - (a) any significant findings made during an appraisal, any conclusions reached and the reasons for those conclusions are recorded by the competent person undertaking the appraisal;
 - (b) the competent person signs and dates any such record; and
 - (c) the record made in accordance with sub-paragraph (a) is made available to each employer of persons at work at the quarry and to all persons at work at the quarry.
- (2) Where the conclusion reached by the competent person following an appraisal is that the excavation presents no significant hazard then further such appraisals shall be carried out by a competent person -
 - (a) at appropriate intervals;
 - (b) whenever there is any reason to suspect that there has been or will be a significant change to -
 - (i) the matters to which the appraisal relates, or
 - (ii) any neighbouring land which may be affected by movement by or instability of the excavation to which the appraisal relates; and
 - (c) whenever there is any reason to doubt the validity of the conclusion of the current appraisal.
- (3) Where the conclusion reached by the competent person following an appraisal is that the excavation represents a significant hazard, the quarry operator or his/her delegated

representative shall close the excavations down as soon as is reasonably practicable pending an assessment of the site and or a geotechnical assessment.

The quarry operator or his/her delegated representative shall ensure that -

- (a) any significant findings made during an assessment or geotechnical assessment are recorded; and
- (b) any remedial works identified during the assessment are undertaken by the date specified.

Reference

- Quarry operator's Log Book
- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System
- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz

4.2.5 DUTIES IN RELATION TO A SIGNIFICANT HAZARD – EXCAVATIONS

Where the conclusion recorded following an assessment of a proposed or existing excavation is that the excavation represents a significant hazard by way of instability or movement, the quarry operator or his/her delegated representative shall ensure, that a geotechnical assessment of the excavation is carried out as soon as is reasonably practicable.

Reference:

- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System
- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz

4.3 ROCK PROCESSING (CRUSHING, SCREENING AND WASHING)

4.3.1 GENERAL

This section describes the current mode and scope of the quarrying operations carried out at the Quarry. Quarry operations will vary over time in accordance with operational requirements and changes in quarrying technology and methods.

4.3.2 PROCESS

The process begins with the loosening of rock by blasting and excavation on the quarry face. This material is then transferred to the crushing plant by front-end loader or dump truck.

4.3.3 PRIMARY CRUSHING

Aggregate transferred to the primary feed bin passes over a primary scalping screen where oversize material is processed through a Jaw Crusher. Undersized aggregate from the scalping screen bypasses the primary crusher and is transferred to produce by-products. The use of this screen reduces the overall load on the primary crusher. Aggregate is then passed to the main feed belt where it is transferred into the secondary feed bin.

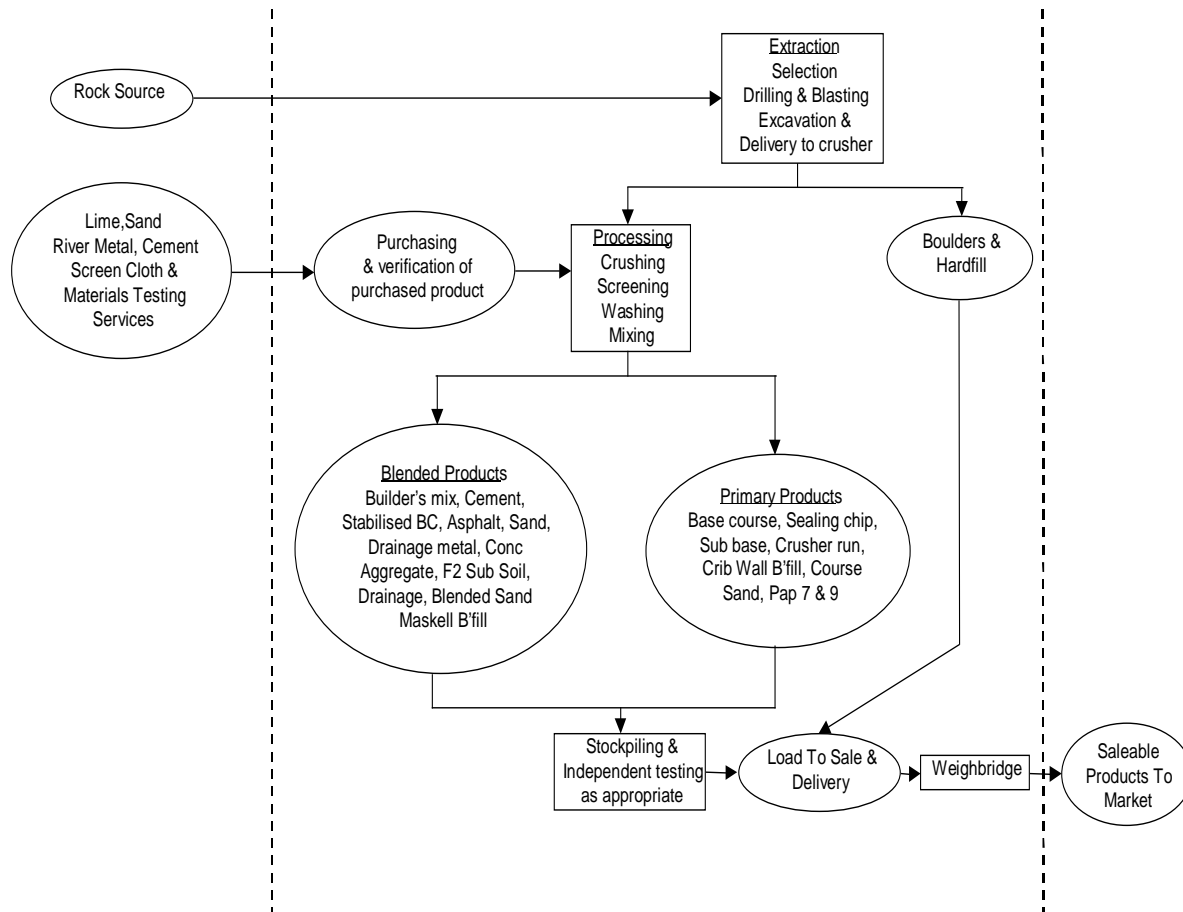
4.3.4 SECONDARY CRUSHING

Aggregate from the secondary feed bin passes over a scalping screen, with the undersized bypassing the crusher, again reducing the load on the secondary crusher. The remaining aggregate passes through a cone crusher. Product is then conveyed to a Barmac for shaping before screening and or return to the Barmac for further reduction.

4.3.5 AGGREGATE WASHING

Aggregate is fed to the wash screen where it is washed and graded to the required product size. All products having been processed are then transported to specified storage areas for stockpiling.

4.3.6 PROCESS FLOW



Reference:

- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System
- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz

4.4 CLEANFILLING

4.4.1 CLEANFILLING SITES

The quarry operator or his/her delegated representative shall ensure that a suitable and sufficient appraisal of all proposed or existing cleanfilling sites at the quarry is undertaken by a competent person in order to determine whether any such cleanfilling site is a significant hazard.

- (1) The quarry operator or his/her delegated representative shall ensure that -
 - (a) any significant findings made during an appraisal, any conclusions and the reasons for those conclusions are recorded by the competent person undertaking the appraisal;
 - (b) the competent person signs and dates any such record; and
 - (c) the record made in accordance with sub-paragraph (a) is made available to each employer of persons at work at the Quarry and to all persons at work at the Quarry.
- (2) Where the conclusion reached by the competent person following an appraisal is that the cleanfill site presents no significant hazard, then further such appraisals shall be carried out by a competent person;
 - (a) at appropriate intervals

4.4.2 POTENTIAL EFFECTS OF CLEANFILLING ACTIVITIES

The main effect of any cleanfill which is not immediately used or restored is to:

- occupy space within or outside the working area,
- be visible,
- be a source of dust,
- be a source of sediment and other contamination in run-off,
- affect the surface water regime, e.g. by changing surface water flow in a flood plain.

The implications of carrying out cleanfilling activities can be minimised by Good Practice.

Greater Wellington Regional Council approved a resource consent application to discharge dust in association with cleanfill activities on 6 July 2005. A copy of the discharge permit is included in Appendix 4.

Reference:

- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System
- A guide to the Management of Cleanfills
- Quarry operator's log book

4.5 QUARRY OPERATIONS – SAFETY

4.5.1 INSPECTIONS

The quarry operator or his/her delegated representative shall prepare and keep an up to date written log of complaints, inspection, maintenance and, where appropriate, testing of -

- (1) all complaints (environmental, operational and other),
- (2) all buildings (whether temporary or permanent) at the quarry,
- (3) any plant at the quarry; and
- (4) the carrying out of quarry operations.

Reference:

- Quarry operator's log book
- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013
- Health and Safety in Employment amendment Act 2013
- Holcim NZ Ltd Incident Management System (INX)
- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System and QMP Section 9, Management of Complaints
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews)

4.5.2 BENCHES AND HAUL ROADS

The quarry operator or his/her delegated representative shall ensure that -

- (1) Benches and haul roads are investigated, designed, constructed and monitored by a competent person so as to allow vehicles and plant to be used and moved upon them safely -
 - (a) a written report by a competent person that includes the statement that the intended height is safe and water discharge and collection is managed.
 - (b) each working bench should have separate loading arrangements and of sufficient length and breadth to provide safe working conditions for the vehicles and equipment used on it as determined by a competent person.
 - (c) working benches shall be designed in such a way that no water is discharged over a lower face bench.
- (2) The overburden or top of the quarry shall be cleared far enough back from the edge of the quarry to provide safe working environment
- (3) All vehicle access roads within the quarry shall be so constructed and maintained that the width and surface of the carriageways are safe for the purpose for which they are to be

used. Where access roads to benches are used to transport the quarried product by vehicle down a gradient, then the maximum gradient shall be 1 in 10 and in no case shall it exceed a gradient of 1 in 5.

- (4) Where necessary, effective precautions shall be taken, by the installation of barriers or otherwise, to prevent vehicles or plant accidentally leaving any bench or haul road.

Reference:

- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System
- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.n

4.5.3 QUARRY OPERATIONAL AND FINISHED FACES

The quarry operator or his/her delegated representative shall ensure, so far as is reasonably practicable, that -

- (1) a face should not be worked in a manner that will create an overhang of the face
- (2) where unconsolidated ground is quarried, the face and sides should be battered to prevent collapse
- (3) a face should not be undercut by excavation of a slot at the toe of the face
- (4) where a person is required to work at the toe of a quarry face or on the face itself, the face must be safely scaled of loose rock that could fall on the person
- (5) faces should be left in a safe condition at the end of each day's work
- (6) finished slope of quarry faces shall not exceed 55 degrees from the horizontal
- (7) maximum height of finished batters shall not exceed 15 meters (excludes working batters)

Reference:

- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz
- District Plan Rules 7.1.3.3.4 and 7.1.3.3.5

4.5.4 BARRIERS AND/OR FENCES

The quarry operator or his/her delegated representative shall ensure that, where appropriate, a barrier suitable for the purpose of discouraging trespass is placed around the boundary of the quarry and is properly maintained. Please also refer to sections 4.5.10 and 5.2.2 of this QMP.

Reference:

- District Plan Rules 7.1.3.3.7 and 7.1.3.3.8

4.5.5 SIGNS

The quarry operator or his/her delegated representative shall ensure that signs are positioned throughout the Quarry site providing safety and general site information.

4.5.6 ESCAPE AND RESCUE FACILITIES AT THE QUARRY

The quarry operator or his/her delegated representative shall ensure that -

- (1) adequate means of escape and rescue are provided and maintained so as to permit persons in the quarry to leave the quarry promptly and safely in the event of danger;
- (2) adequate means of communication and warning are provided to enable assistance, escape and rescue operations to be launched at once when required;
- (3) written instructions concerning the use of emergency equipment and the action to be taken in the event of an emergency at or near the quarry are prepared;
- (4) persons at work at the quarry are trained in appropriate action to be taken in the event of an emergency; and
- (5) rescue equipment is provided at readily accessible, appropriately sited and clearly sign-posted places and kept ready for use.

Reference

- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System
- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz

4.5.7 SAFETY DRILLS

The quarry operator or his/her delegated representative shall ensure that safety drills are held at regular intervals for persons at work at the quarry, and that the results of the safety drills are recorded.

Such safety drills shall be for the following purposes -

- (1) to train the persons who work at the quarry in the appropriate actions to be taken in an emergency including, where appropriate, the correct use, handling or operation of emergency equipment; and
- (2) to train and check the skills of such persons to whom specific duties involving the use, handling or operation of such equipment have been assigned in the event of an emergency.

Reference:

- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System
- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz

4.5.8 FIRE AND EXPLOSION HAZARDS

The quarry operator or his/her delegated representative shall ensure that -

- (1) No person at work at the quarry uses a naked flame or carries out any work which could give rise to a risk of an unintended explosion or fire unless sufficient measures to prevent such an explosion or fire are taken.
- (2) No person shall smoke in any part of the quarry where there is a risk of fire or explosion.

4.5.9 CONTROL OF HARMFUL AND EXPLOSIVE ATMOSPHERES

- (1) It is the duty of the quarry operator or his/her delegated representative shall ensure that -
 - (a) steps are taken in order to determine whether potentially explosive substances are present in the atmosphere and, where such substances are present,
 - (b) at any place in the quarry where there is a risk of the occurrence or accumulation of an explosive atmosphere, all necessary measures are taken with a view to -
 - (i) preventing such occurrence and accumulation, or, where this is not practicable,
 - (ii) preventing the ignition of such an atmosphere; and
 - (c) at any place in the quarry where there is a risk of the occurrence or accumulation of a substance harmful to health in the atmosphere, appropriate measures are taken in order to -
 - (i) prevent such occurrence and accumulation, or, where this is not practicable,
 - (ii) extract or disperse that harmful substance,in such a way that persons are not placed at risk.

- (2) Whenever persons at work are present at any place in the quarry where they may be exposed to a substance harmful to health in the atmosphere -
 - (a) appropriate and sufficient breathing and resuscitation equipment shall be made available; and
 - (b) a sufficient number of persons trained in the use of such equipment shall be present.
- (3) The quarry operator or his/her delegated representative shall ensure that equipment referred to a paragraph (2) (a) is suitably stored and maintained.

4.5.10 DANGER AREAS

The quarry operator or his/her delegated representative shall ensure that -

- (1) any danger areas in the quarry are clearly marked;
- (2) equipment or barriers designed to prevent inadvertent entry by any unauthorised person are installed at any danger area in the quarry in which, because of the nature of the work being carried out there or for any other reason there is -
 - (a) risk of a person falling a distance likely to cause personal injury,
 - (b) risk of a person being struck by a falling object likely to cause personal injury, or
 - (c) a significant risk to the health and safety of persons; and
 - (d) where any person at work is authorised to enter a danger area, appropriate measures are taken to protect his/her Health and Safety.

Reference:

- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System
- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz

4.6 QUARRY OPERATIONS – EXPLOSIVES, DRILLING AND BLASTING

This section shall apply to the storage, transport and use of explosives at the quarry.

Reference:

- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System
- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013
- Health and Safety in Employment amendment Act 2013
- Australian Standard – Explosives – Storage, transport and use – Part 1: Storage and Part 2 Use of explosives
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz

4.6.1 QUARRY OPERATOR OR HIS/HER DELEGATED REPRESENTATIVE - DUTIES

- (1) The quarry operator or his/her delegated representative shall ensure that -
 - (a) so far as is reasonably practicable, that all explosives are stored, transported and used safely and securely; Refer 4.6.4
 - (b) the appointment of one or more qualified (Approved Handlers) to organise and supervise all work at the quarry involving the use of explosives ("the Shot-Firer "); and
 - (c) that at no time is there more than one person acting as the Shot-Firer at the Quarry.
- (2) It shall be the duty of the quarry operator or his/her delegated representative to ensure that -
 - (a) suitable and sufficient rules are made which lay down in writing procedures for –
 - (i) shot-firing operations at the quarry, Refer 4.6.2
 - (ii) appointing shot-firer, and trainee shot-firer,
 - (iii) authorising other persons who will be involved with the storage, transport or use of explosives,
 - (iv) dealing with misfires, Refer 4.6.3 and
 - (v) ensuring, so far as is reasonably practicable, that such rules are complied with;

- (b) an adequate written design (whether produced by him/her or not) is prepared for each shot-firing operation at the quarry to ensure, so far as is reasonably practicable, that when such firing occurs it will not give rise to danger (Ref: Blast log form QF 3.1; and
 - (c) a copy of the specification referred to in sub-paragraph (b) is given to any person upon whom it imposes duties.
- (3) The quarry operator or his/her delegated representative shall ensure that operations involving the storage, transport or use of explosives are carried out by -
- (a) a duly authorised and qualified (Approved Handlers); or
 - (b) a trainee under the close supervision of a qualified (Approved Handlers).
- (4) The Quarry Operator or his/her delegated representative shall ensure that -
- (a) such facilities and equipment as are necessary to enable shot-firing operations to be carried out safely are provided;
 - (b) any vehicle which is provided for use in relation to shot-firing operations is so marked as to be readily identifiable from a distance;
 - (c) detonators are stored in separate containers from other explosives; and
 - (d) explosives are kept at all times either in a locked explosives store or under the constant supervision of a suitable person.
- (5) The quarry operator or his/her delegated representative shall ensure -
- so far as is reasonably practicable, that each shot-firing operation is carried out safely and in accordance with the rules required to be made in pursuance of paragraph (2)(a) and any specification required to be prepared in pursuance of paragraph (2)(b).

Reference:

- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System
- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013
- Health and Safety in employment amendment Act 2013
- Australian Standard – Explosives – Storage, transport and use – Part 1: Storage and Part 2 Use of explosives
- Hazardous Substances & New Organisms Act (HSNO) 1996 and related regulations
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz
- Blast Permit

4.6.2 SHOT FIRES – DUTIES

Before a shot is fired, the shot-firer shall -

- (1) check the shot-firing system or circuit to ensure that it has been connected correctly
- (2) where appropriate, ensure that the electrical integrity of the shotfiring system or circuit is such as to make a misfire unlikely; and
- (3) ensure that the shot is fired from a safe place.

Reference:

- Holcim NZ Ltd Fatality Prevention elements (FPE's) and subsequent reviews
- Holcim NZ Ltd Business Management System
- Blast Permit
- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013
- Health and Safety in employment amendment Act 2013
- Australian Standard – Explosives – Storage, transport and use – Part 1: Storage and Part 2 Use of explosives• Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz

4.6.3 MISFIRES

In the event of a misfire the quarry operator shall consult the individual appointed as the Shot-Firer and ensure, so far as is reasonably practicable, that -

- (1) apart from him/herself, no person other than the shot-firer or any other person authorised by him/her enters the misfire area -
 - (a) where the shot was fired by means of safety fuse, wait until a period of 30 minutes has elapsed since the misfire, or
 - (b) where the shot was fired by other means, wait until a period of 5 minutes has elapsed since the misfire and any shot-firing apparatus has been disconnected from the shot;
- (2) appropriate steps are taken to determine the cause of and to deal with the misfire; and
- (3) a suitable record is kept of the misfire in Blast Permit and Holcim NZ Ltd Incident Management System (INX).

Reference:

- Blast Permit
- Holcim NZ Ltd Incident Management System (INX)

- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz
- Australian Standard – Explosives – Storage, transport and use – Part 1: Storage and Part 2 Use of explosives

4.6.4 TRANSPORT OF EXPLOSIVES

- (1) No person (other than a person engaged in the transport of explosives to or from the quarry, a shot-firer, trainee shot-firer, a person authorised to handle explosives at a quarry, or a person appointed to be in charge of the explosives store) shall handle explosives at the quarry.
- (2) No person shall bring any substance or article (other than explosives) likely to cause an unintended explosion or fire within 10 metres of any explosives or (except for the purpose of lighting igniter cord or safety fuse) take any naked flame within 10 metres of any explosives.
- (3) No person shall forcibly remove any detonator lead, safety fuse or other system for initiating shots from a shot-hole after the shot-hole has been charged and primed.
- (4) No person shall charge or fire a shot -
 - (a) unless there is sufficient visibility to ensure that work preparatory to shot-firing, the shot-firing operation and any site inspection after the shot is fired can be carried out safely;
 - (b) in a shot-hole which has previously been fired, unless he is dealing with a misfire in accordance with action taken in pursuance of regulation 28(b); or
 - (c) in any tunnel or other excavation (not being merely a shot-hole) in the face or side of the quarry for the purpose of extracting minerals or products of minerals.
- (5) No person shall fire a shot -
 - (a) unless he/she is a shot-firer or trainee shot-firer; and
 - (b) other than by means of a suitable exploder or suitable safety fuse.
- (6) No person shall cap a safety fuse with a detonator unless he is using equipment designed for the purpose and he is in a suitably sheltered place designated by the operator for the purpose.

Reference:

- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz

- Australian Standard – Explosives – Storage, transport and use – Part 1: Storage and Part 2 Use of explosives
- Hazardous Substance & New Organisms Act (HSNO) 1996 and related regulations (and subsequent reviews)

4.6.5 BLAST TIMING

Blasting of quarry workings/faces for extraction of rock for production shall be carried out in accordance with the District Plan rules between 10.00am and 2.00pm, Monday to Friday only using approved industry practices.

- (1) In all cases applicable property owners shall be notified as required by the District Plan by mail one week in advance or through an agreed system between the Quarry Operator and the property owners.
- (2) The owners of the following properties shall be notified:
 - 9 and 14 Plumer Street, Johnsonville
 - 73 and 75 Tarawera Road, Johnsonville
 - 84 and 86 Tarawera Road, Johnsonville
 - 113, 130, 170 and 175 Fraser Avenue, Johnsonville
 - 87 Burma Road, Johnsonville
 - 146 Burma Road, Johnsonville

Where required they will also be advised by phone 5 minutes before firing of the blast. And

- (3) Immediately preceding all blasts and following the all clear being given by the “shot-firer ” the shot fire shall activate an all clear siren. The siren sound shall distinguish it from normal Police, Ambulance or Fire Service sirens.
- (4) Adjoining business operations of Downer, Allied Concrete and Taylor Preston shall also be notified by mail one week in advance or through an agreed system between the quarry operator and the businesses.

Immediately preceding all blasts and following the all clear being given by the " shot-firer " the shot-firer shall activate an all clear siren.

Reference:

- Blast Permit
- District Plan Rules 7.1.3.3.2 and 7.1.3.3.3
- Holcim NZ Ltd Business Management System
- Australian Standard – Explosives – Storage, transport and use – Part 1: Storage and Part 2 Use of explosives
- Hazardous Substance & New Organisms Act (HSNO) 1996 and related regulations (and subsequent reviews)

4.6.6 BLAST DESIGN

In general, the blast design is determined by the geology of the material at the quarry to be broken and the fragmentation required. The degree of fragmentation required is related to the type and size of both the loading equipment and primary crusher(s).

A written design shall be prepared for each blasting operation to ensure, so far as is reasonably practicable, that when blasting occurs it will not give rise to danger to persons or property.

Reference

- Blasting Permit
- Holcim NZ Ltd Business Management System
- Australian Standard – Explosives – Storage, transport and use – Part 1: Storage and Part 2 Use of explosives
- Hazardous Substance & New Organisms Act (HSNO) 1996 and related regulations (and subsequent reviews)

4.6.7 BLAST IMPACT ON ENVIRONMENT

To reduce the effects of blasting (noise, flyrock, vibration) on the environment blast impacts shall be controlled by good design and operations.

To reduce the effects of blasting operations the following planning conditions relating to blasting in most cases will reduce the effects. These conditions include:

- no blasting outside the permitted blasting hours (see 4.6.5 above)

Reference:

- Blasting Permit
- Holcim NZ Ltd Business Management System
- Australian Standard – Explosives – Storage, transport and use – Part 1: Storage and Part 2 Use of explosives

5. QUARRY DEVELOPMENT PLANS

5.1 SITE & QUARRY DEVELOPMENT PLANS

5.1.1 STAGING PLANS

Detailed staging plans have been produced to:

- Ensure staging is progressed in a manner that will be consistent with the requirements of the District Plan, including the final finished contour levels;
- Provide detailed engineering guidance for the quarry activities; and
- Be used in determining the visual impact assessment of the quarry.

The quarry operations are designed to minimise the working face visible to the public at any time, and reduce the extent of visible modification to the prominent ridge. It aims to minimise the area that will be disturbed and create a final landform of comparatively natural appearance, finished to facilitate rehabilitation, while also maximising quarried rock volumes.

5.1.2 NORTHERN QUARRY AREA

The northern quarry area staging plans have been updated to reflect the finished design of this face of the quarry which is expected to close first. To that end cleanfilling is proposed to fill the extracted area such that suitable contours can be obtained for rehabilitation of the area. The north face staging plans are included in Appendix 5.

Reference

- Wellington City Council Kiwi Point Quarry Design – February 2006
- Kiwi Point Quarry Annual Work Plan

5.1.3 SOUTHERN QUARRY AREA

The concept staging plan through to finished design for the southern face indicates removal of the lower part of the spur that separates the abattoir from the industrial area on Tyers Road. This would eventually see the lower end of the spur entirely removed from 158m asl down to the bottom of the gorge where a platform resulting from the quarrying would be formed approximately 10 – 15 metres above the level of SH1. Then the quarrying would continue down to a platform level of 30m asl, before backfilling with cleanfill. The final finished ground level would form a platform sloping north south from 64 – 44m asl, which would vary between 0 and 10 metres above the level of SH1.

Quarrying would start on the south side of the spur and work progressively north. The following six representative stages are illustrated in Figures 2(a) 2(b) and 2(c) (Appendix 6) to show how the landform will progressively change during the quarry's life span. The figures show the large-scale landform modification and staging and show regular benching required for overall slope stability and working access during the quarry's operation. However, as the quarry face is completed the final finishing will be designed in detail and progressively implemented, as part of site rehabilitation, to stagger the benching, vary gradients and vary ground conditions to achieve a more natural appearance and to aid plant establishment.

- Stage 1:* Set-up stage: construction of an access road to a working platform at 94m asl with screening bunds around the outer edge, screen planting adjacent to the WRC pumping station.
- Stage 2:* Quarrying of the south face from 154m asl to an enlarged working platform at 94m asl (i.e. level of the preliminary working platform).
- Stage 3:* Quarrying of the south face from 94m asl down to the quarry pit platform by progressively excavating and lowering the level of the working platform.
- Stage 4:* Quarrying to remove the remainder of the spur landform within the site from 158m asl to the quarry pit platform, working from south to north and final contouring of the finished face.
- Stage 5:* Quarrying of the quarry pit to 30m asl into the quarry pit platform.
- Stage 6:* Backfilling of the quarry pit to the level of the finished platform sloping north south from 64 - 44m asl.

The staging plans are included in Appendix 6. Figure 2a covers Stages 1 – 2. Figure 2b covers Stages 3 – 4. Figure 2c covers Stages 5 – 6.

Note

Presently this concept staging plan through to finished design is being reviewed to carry out the quarrying operations efficiently and economically. Upon finalising the staging plan the QMP will be updated to reflect the revised plan.

5.2 BUFFER AREAS & ASSOCIATED FEATURES - NORTHERN AND SOUTHERN QUARRY AREAS

5.2.1 BUFFER AREAS – NORTHERN QUARRY AREA

A buffer area is to be maintained along the north-eastern boundary of the site near Plumer Street and Tarawera Road.

A 25 metre wide buffer area will be maintained on the uphill boundary of the site around the steep sides and top of the southern area to be excavated. This buffer area will be allowed to revegetate naturally except where additional planting is required.

5.2.2 FENCING – NORTHERN QUARRY AREA

The top boundary of the northern buffer area shall be fenced and will continue to be while the quarry is in operation, and pending any future use consideration.

A steel pole wire mesh fence must be maintained adjacent to any properties in the residential area along the quarry boundary to a height of 1.2 metres.

A security fence will be installed and maintained along the outer edge of the buffer area prior to commencement of operations in any area to exclude members of the public.

5.2.3 SCREENING – SOUTHERN QUARRY AREA

Screening of the southern face shall be provided by maintaining a bund on the site adjacent to State Highway 1 while carrying out operations.

Bunds on the outer edge of the access road and the main working platform (south to Tyers Road) will provide a visual screen, noise and dust buffer, and safety barrier during quarrying of the southern spur. The bunds will be a minimum of 2m height and will be created by excavating the road and working platform to a level 2m or more below the outer edge, which will be left in situ to form a 'rim'. As the working platform is lowered, the bund will be adjusted to maintain the minimum height above the working area.

The earth bunds formed on the outer edge of the access road and main working platform will reduce the visible extent of the working area and screen truck movement from viewpoints below – namely SH1 and industry in the gorge. The bunds will be formed by leaving the outer edge of the road and working platform in place as a 'rim' and will be gradually lowered as the level of quarrying descends. Forming them in this way not only reduces the risk of rock fall from road and platform construction but also minimises the amount of ground disturbance on the slope below the working area.

5.2.4 SCREEN PLANTING – SOUTHERN QUARRY AREA

Screen planting will be in place south of the pumping station during Stage 1 of development of the southern face. By the time the quarrying operations reaches end of stage 4, the plants would have grown tall enough to block views of the quarrying operations from southbound SH1 traffic. At this time the working platform is also expected to be at the level of SH1. The planting will consist of fast-growing eco-sourced trees, common to the area. This planting will complement the two existing karaka stands beside the pumping station that are to be retained.

The screen planting proposal will be included in the revised southern quarry area staging plan design.

5.2.5 BUILDINGS AND PLANT – NORTHERN & SOUTHERN QUARRY AREA

The existing northern site operational area at the quarry, including the processing plant, office, and temporary stockpiling and customer service area will be maintained. Consequently, no permanent buildings or fixed machinery will be located at the southern part of the quarry.

5.2.6 ACCESS ROAD SOUTHERN QUARRY AREA

An access road will be constructed around the lower part of the southern spur to enable machinery to reach the south face (which will be quarried first) and transport the rock material back to the existing quarry facilities for washing and stockpiling. This road will eventually be removed as the quarrying excavates below its level.

The revised southern quarry area staging plan will address the access road.

5.2.7 TEMPORARY HYDROSEEDING

As the access road is likely to be in place for at least 10 years, and the batters will be noticeable to southbound SH1 travellers, the batters will be hydroseeded to reduce the degree of contrast with the adjacent hillside. Machine access tracks to the working face of the southern part of the Quarry will be progressively constructed, removed and reconstructed as the landform is excavated.

The revised southern quarry area staging plan will address temporary screening of batters to the southbound SH1 travellers.

5.2.8 STOCKPILES

Stock piling of quarry material will be provided for in the southern part of the quarry as part of daily operations. Quarry material will be stockpiled only for short periods.

5.2.9 LOCATION OF CRUSHING PLANT AND STOCKPILES - CURRENT AREA

The crushing plant is intended to be maintained at its existing location.

Future options for processing will be determined as required. However any processing plant used in the southern part of the quarry shall be relocatable.

The existing stockpiles in the northern part of the quarry will continue to be used for quarry sales. Temporary stockpiles (pre-processing) may be used within the southern part of the quarry in accordance with the provisions of the District Plan.

6. QUARRY MANAGEMENT MEASURES

6.1 DISTRICT PLAN PROVISIONS

The following table cross-references how requirements of the District Plan outlined in Section 1.5 of this plan are in practice achieved through operational practice.

REQUIREMENT	DP REF's	MANAGEMENT PLAN & OTHER DOCUMENT LINKS
<i>Provide for the development and site rehabilitation of the Kiwi Point Quarry to the extent specified in the Plan in a way that avoids, mitigates, or remedies adverse effects</i>	6.2.3.3A	Staging Plans as included in this document The District Plan (including rehabilitation provisions) as a method, as provided for in this document Other effects as dealt with in this document
Practices and methods that will be adopted to ensure that all permitted activity conditions applying to the activities will be met	6.2.3.3A Method	Holcim NZ Ltd Business Management System Resource Consents (Regional Council) Compliance
Staging of the excavation and cleanfilling activities	6.2.3.3A Method	Staging Plans as included in this document
Management of surface and groundwater	6.2.3.3A Method	This document Resource Consents (Regional Council) Compliance Storm-water Management Plan (<i>The 2005 version of the Storm-water Management Plan is being reviewed</i>)
Management of on-site traffic	6.2.3.3A Method	Fatality Prevention Element (FPE) #3 – Vehicle & Traffic Safety Site Specific Guideline
Management of any on-site processing and temporary storage of Quarry materials	6.2.3.3A Method	This document Resource Consent (Regional Council) Compliance Hlocim NZ Ltd Business Management System
Specific provisions relating to on-site management of noise, dust, vibration, visual impact and water quality	6.2.3.3A Method	Resource Consent (Regional Council) Compliance Holcim NZ Ltd Business Management System
Rehabilitation objectives and principles for the rehabilitation of the site	6.2.3.3A Method 7.1.3.7	This document Annual Implementation Plan
Complaints procedure	6.2.3.3A Method	Holcim NZ Ltd Business Management System
Blasting times and notification	7.1.3.3.2	This document
Review the Quarry Management Plan every 5 years	6.2.3.3A Method	As per this document

6.2 GREATER WELLINGTON REGIONAL COUNCIL CONSENTS

The following activities are subject to Greater Wellington Regional Council (WRC) consents that will be maintained during the life of quarry operations:

- Permit to take Surface Water (WGN130058 [31916]): For aggregate washing and dust suppression. Expires 08 November 2022.
- Permit to Discharge to Stream (WGN110099 [30687]): To intermittently discharge a mix of treated and settled storm water run-off and wash water into Ngauranga Stream. Expires October 2020.
- Permit to Discharge to Air (WGN 050352 [24540]): To discharge contaminants to air from the operation of cleanfill. Expires 6 July 2020.
- Land Use Consent (WGN 050352 [24518]) and Water Permit (WGN050352 [24519]): To pipe and divert watercourses within Kiwi Point Quarry. Lapse 22 August 2010 unless implemented. Expires 22 Aug 2040.
- Land Use Consent (WGN 060255 [25159]); To undertake soil disturbance and vegetation clearance on erosion-prone land. Expires 26 November 2016
- Land Use Consent (WGN 060255 [25260]): To pipe a 20-metre section of a tributary of the Ngauranga Stream and carry out associated disturbance of the stream bed. Expires 26 November 2041.

All resource consents are attached in Appendix 4.

6.3 STORMWATER MANAGEMENT

A storm-water management plan has been established for the KPQ and submitted to WRC in June 2005 by WCC. This plan provides for appropriate storm-water controls such as sediment ponds and maintenance schedules. These measures ensure that any sediment laden run-off is adequately treated prior to leaving the site. In addition to these measures, two watercourses flowing through the site will be piped, further reducing the likelihood of downstream sedimentation.

The 2005 version of the Stormwater Management Plan is being reviewed

Reference

- Appendix 9 – Storm-water Management Plan

6.4 FUEL & SPILL CONTAINMENT MANAGEMENT

The operation of the quarry shall be undertaken in a way that ensures that -

- refuelling of equipment shall only be done within the established fuelling station structure;
- a spill contingency plan to deal with any spills of fuel, oil, lubricants or hydraulic fluids shall be maintained;
- an emergency spill containment kit shall be maintained on site;

- any spill of fuel, oil, lubricants or hydraulic fluids or other deleterious substances shall be immediately contained, reported and remediated.

6.5 DUST MANAGEMENT

Dust from the operation of the quarry and Cleanfilling operations shall be managed in line with the requirements of Resource Consent WGN 050352 [24540] attached in Appendix 4.

Reference:

- District Plan Rule 7.1.3.2
- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz
- GWRC Permit to Discharge to Air (WGN 050352 [24540]): To discharge contaminants to air from the operation of the cleanfill.

6.6 NOISE MANAGEMENT

6.6.1 NOISE

In order to ensure that noise emissions from the quarry site remains acceptable, it is of fundamental importance that the equipment on site is well maintained.

Reference

- District Plan Rule 7.1.1.1

6.6.2 EQUIPMENT NOISE

All equipment used on site will be regularly maintained and of high standard to assist reduce noise.

6.6.3 VEHICLE REVERSING ALARMS

One specific item of equipment that can cause complaints is the use of vehicle reversing alarms. These are provided for safety reasons for the workforce, and need to generate a certain level of noise to achieve this. However, all items of plant operating at the Quarry will be fitted with reversing alarms such as directional and adjustable systems, which can help to minimise the noise impact.

6.6.4 BLASTING NOISE

As previously stated in this QMP, times where blasting is permitted to be undertaken is restricted to certain times of the day to help minimise the impact of noise.

Reference:

- Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013

- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz
- Australian Standard – Explosives – Storage, transport and use – Part 1: Storage and Part 2 Use of explosives

6.7 MANAGEMENT OF OTHER EFFECTS

6.7.1 MANAGEMENT OF TRAFFIC

There are two entry points to the quarry. However, the entry/exit on Fraser Avenue has been closed (temporarily) to reduce heavy truck traffic within the community.

The main entry to the quarry is from State Highway 1 and shall during the period of this QMP be maintained to a standard required for industrial use. As per the District Plan this is the only access point for quarry vehicles. This access is also the main access route for Taylor Preston's meat works, Allied Concrete and the Downer Asphalt complex.

During the period covered by this plan it is intended to upgrade the Fraser Avenue entrance. This will allow more use to be made of the site for development once quarrying is completed.

Access routes for the cartage of quarry materials from both the northern and southern quarry operations will be maintained to a standard that complies with the requirements for the operation of heavy earth moving equipment.

Other than the access point, there are no restrictions on traffic movement to or from the quarry.

Reference:

- District Plan Rules 7.1.3.6
- Holcim (NZ) Ltd Fatality Prevention Element (FPE) #3 – Vehicle & Traffic

7. KIWI POINT QUARRY REHABILITATION

7.1 INTRODUCTION AND REHABILITATION APPROACH

The rehabilitation of the quarry will extend to all areas within the boundaries of the site, which are located within both the Suburban Centres and Open Space Activity Areas under the District Plan, including the grazing areas, Ngauranga Gorge (Waitohi) stream, and buffer areas above the north and south quarry faces. (Refer to Appendix 9).

This section of the QMP establishes an objective, a set of principles and a process for the rehabilitation of KPQ. Each of the principles will be integrated within planning, design and management as each stage of the quarry operation is completed. Detailed plans and budgets will be prepared annually to ensure the integrated and ongoing coordination of rehabilitation and quarry operations.

The quarry requires substantial site modification over time. Therefore specific rehabilitation activities are to be planned and carried out on an annual basis as part of an implementation plan. Each implementation plan will be tailored to the progress of quarry face closures, incorporating knowledge gained from ongoing monitoring. Each implementation plan will guide contract documentation for the physical works involved in the rehabilitation of the site. This will ensure maximum flexibility to respond to new situations as the excavations continue.

The implementation plans will be adequately funded on an ongoing basis as part of the quarry operation, as there is little or no value in commencing rehabilitation unless there are resources available to implement and complete successive stages and monitor results. The rehabilitation of KPQ is to be monitored, and re-evaluated annually for the remaining life of the quarry, anticipated to be approximately 50 years, and followed by several years of maintenance.

The long period of quarry operations allows for a substantial element of trialling and testing in finding solutions to best meet the rehabilitation specifics of the site. Because the precise nature of the final landform can only be determined for each section of the quarry once the variations in rock type become evident, the preparation of a detailed quarry rehabilitation implementation plan is not practicable in advance. However, the Quarry Staging Plans in Appendices 5 and 6 will provide a starting point for rehabilitation.

The overall objective of the proposed rehabilitation is to establish native vegetation cover that contributes to the Council's vision of Ngauranga Gorge as part of the City's inner green belt network. Rehabilitation will focus on bringing all areas where quarry operations have ceased to a state where native vegetation will re-establish. It is intended that all land encompassed within the KPQ Boundary in Figure 1 will be progressively rehabilitated, other than areas which are to be used in future for permitted or consented activities.

These latter areas comprise areas of cleanfill north of the access road that will be hydroseeded and left to settle. No additional planting or rehabilitation of the cleanfill will be required. Elsewhere active revegetation through planting will be required for approximately 10% of the existing quarry site. It is intended that the 10% will be distributed across the site to act as "islands" of planted small hardwood shrubs to establish seed sources.

7.2 SITE DESCRIPTION

The site is located in the central part of Ngauranga Gorge, adjacent to SH1, a major transport corridor, and surrounded by industrial land use and open space areas. The site is overlooked by elevated residential suburbs. The landscape is highly modified, resulting from clearance of the original native forest cover followed by a long and ongoing history of major landform modification. The District Plan provides for the quarry to operate within this unique environment until the completion of the southern area, which will mark the end of quarry operations. The main areas of the quarry requiring rehabilitation work are listed below:

Main Rehabilitation Areas

- North Face
- South Face
- Grazing Area
- Buffers
- Stream

7.3 REHABILITATION OBJECTIVE AND PRINCIPLES

The overall objective of the KPQ rehabilitation *“is to establish native vegetation cover that contributes to the Council’s vision for Ngauranga Gorge to become part of the identified inner green belts”*.

While rehabilitation of the quarry does not imply restoration of the site to its original pre-quarry state, it is important that the specific landscape qualities of Ngauranga Gorge are reflected in the rehabilitation of the site. Quarrying dramatically alters landforms and disrupts ecological processes and habitats. The primary aim of rehabilitation is to provide the conditions that enable natural processes to resume functioning albeit in a modified form.

Prior planning, landscape and ecological assessments, and consultation, have identified the following five general rehabilitation principles:

- (1) To promote Wellington’s indigenous biodiversity and rehabilitate natural processes within the site.
- (2) To conduct rehabilitation concurrently with quarry operations, coordinating progressive completion with rehabilitation.
- (3) To finish the quarry faces to resemble the steep bluff landforms that would have occurred naturally in the Ngauranga Gorge.
- (4) To conduct rehabilitation in a manner that encourages rapid vegetation of the slopes, reducing the duration of adverse visual impacts.
- (5) To revegetate the quarry in a way that supports the vision of the City’s Inner Green Belts.

Most effective rehabilitation occurs when the work is integrated as part of the overall operation and is implemented progressively, as each section of the Quarry is completed. At the same time the creation of scree slopes, bench ripping, return of over-burden to soften excavated terraces and faces and importation of soils provides opportunities for re-vegetation. Coordination of these activities ensures a high success rate for re-vegetation and encourage rapid vegetation.

Rehabilitation attempts to maximise favourable environmental conditions for plant growth and hasten natural revegetation processes by controlling those factors that are able to be controlled, monitoring results, and where necessary, progressively adapting activities to improve results.

Initial planting must be considered using known effective methods and techniques, and locally proven, rapid growing and robust plant species with a high likelihood of survival in a range of site conditions. In time, when site conditions have been moderated by the initial nursery cover, other species can be introduced.

Key factors that are likely to influence the success of this rehabilitation project are:

- Width, height and stability of terraces, size of screens
- The proximity and condition of remaining areas of adjacent native vegetation
- Quality of topsoil, cleanfill or redistributed stockpile
- Control of plant and animal pests
- Contamination of water sources
- Prevention of fire
- Monitoring of progress

Rehabilitation measures for each area will vary according to the specific micro climate, exposure aspect and substrate of the different sites. Specific detail for the varying conditions and appropriate measures will be included in the annual implementation plans.

7.4 NGAURANGA GORGE VALUES

To determine how best to rehabilitate the site, the contextual values of the site must be described and understood so that the rehabilitation techniques can re-integrate the quarry into the Ngauranga gorge landscape, and so that natural systems can be re-established to allow revegetation that approximates to the original patterns.

The Ngauranga Gorge has been identified as an area of strategic significance to the city and is recognised as a ‘working’ city gateway containing industrial and commercial uses and a major transport corridor that is made memorable by the views of Wellington Harbour. The Council’s open space strategy, *Capital Spaces*, refers to the Ngauranga Gorge as one of four proposed inner green belts. The return of closed canopy forest to the Ngauranga Gorge hillsides will enhance and realise the Council’s vision for a green belt in the Ngauranga Gorge. It will also be a positive factor in creating plant and animal habitat, soil protection and enhancing indigenous biodiversity. The rehabilitation of the Quarry seeks to support this vision.

The values of Ngauranga Gorge, identified in *Capital Spaces*, and their contribution to the Gorge landscape are summarised as:

Ecological values: Coastal forest is under-represented in Wellington. There is potential for native forest to be gradually restored on the steep hillsides of the gorge increasing this uncommon forest type and providing an almost continuous green corridor between the Wellington fault escarpment (Hutt Road Scarp), Ngauranga Gorge bush, Tyers Bush and the lowland reserves in Khandallah and Johnsonville, and the regenerating native forest of Mt Kaukau and the outer green belt.

Landscape Values: The gorge is an important threshold in and out of Wellington Harbour, experienced by thousands of people every day, and the regenerating native vegetation is noted in the strategy as providing the basis for a “*striking gateway to the harbour in the future*”.

Recreational values: Recreational values in the Ngauranga Gorge are currently limited by the steep open space terrain; SH1, which is a major cross-gorge barrier for pedestrian and cycle

movement; and the dominance of industry on the valley floor. However, the Council has long term plans to develop more recreation routes along the western hills of the harbour, and opportunities to develop more recreational access through the gorge are likely to be explored further.

Heritage values: The entire gorge landscape is of historic interest, dating back to Maori settlement at the mouth of the gorge and then the history of the transport corridor and associated land uses, which have involved major modifications to the gorge landscape and the supply of quarry materials to the city and region for over 100 years.

7.5 IMPLEMENTATION TECHNIQUES

The quarry has a number of factors which will make its rehabilitation challenging. The techniques in this section are to be applied generically across the site to the greatest practicable extent. The annual implementation plan should progressively develop specific rehabilitation proposals for each of the areas to cater for the unique combination of soil, slope, exposure and aspect within the site to which revegetation activities must respond. The implementation plan shall be prepared annually. The responsibilities of each technique are outlined below:

7.5.1 PLANNING

Ideally rehabilitation planning should commence at an early enough stage to ensure that remaining values of the site that are not directly affected by quarrying are protected and that maximum opportunities are provided for future rehabilitation in the quarried areas. The annual implementation plan should demonstrate an appropriate level of planning in order to achieve the rehabilitation principles.

An annual implementation plan will be developed. Each part of the site will have unique limitations and opportunities, so planning should not be too rigid. Regular monitoring enables rehabilitation actions and management to be reviewed and revised in response to results. Implementation will evolve over time, and will be reviewed and refined each year. Achieving a final landform that reflects the earlier features and topography of the area will require further detail and developed design to be carried out through annual implementation plans closer to the time of each individual quarry face closure.

7.5.2 VEGETATION PROTECTION

Prior to commencement of operations the extent of earthworks adjacent to vegetated buffers and stream margins should be clearly marked on site along with areas of vegetation and topsoil that are to be stripped and areas of vegetation that are to be retained.

The vegetation that is to remain must be clearly marked to prevent accidental removal. These remnants of vegetation have a vital role in future rehabilitation, acting as a seed source, providing shelter and providing habitat for birds that will encourage natural seed dispersal.

The removal of pine trees and other pest species must be immediately initiated throughout the site. The buffer areas above the northern face have been identified for pine removal. This should be initiated and continued through the development of future implementation plans.

7.5.3 STOCKPILING

The quarry currently has on-site soil material stockpiled for re-spreading as areas are made available for rehabilitation within the annual implementation plans as appropriate.

In addition to topsoil and overburden stripped from quarried areas and the composted vegetation, other quarry by-products, such as grit and sludge, can potentially be used in the preparation of substrate. The addition of a 'blended' combination of these different materials to the uppermost layer of fill can improve both physical properties and fertility and thereby make these areas more suitable for plant establishment and growth.

7.5.4 ROCK FACE SHAPING

Rehabilitation will involve physical re-shaping of the quarry site to achieve the landform principle (Principle 3) and to support revegetation, before any planting is carried out. In accordance with the landform principle, the final shaping of the quarry faces is a critical phase of the rehabilitation of the quarry, in order to address the high visual prominence of the quarry and its location in an important gateway to the city and existing residential suburbs.

A series of benches and haul roads will remain at completion of quarry extraction activities. These platforms are one of the most distinctive features that indicate an area has been quarried. These benches run against the 'grain' of the landscape and removing some of them or breaking them up is the key to reducing their visibility.

Some benches can be fully or partly demolished as part of the planned face finishing, but some benching is likely to need to remain to ensure slope stability. With care, key components of the surrounding landscape can be mirrored in the modified quarry face including large rock bluffs, screes and gullies.

The rehabilitation works also need to ensure continued safe access across the site for staff undertaking ongoing rehabilitation works such as planting and pest management. Retaining some benching on a temporary or permanent basis can ensure this.

The implementation plans shall provide that the absolute maximum slope of a quarry face (batter) shall not exceed 55 degrees from the horizontal (ie between benched areas) and the maximum height of a batter shall be no more than 15 metres in height. However, variety and visual interest shall be provided for by varying the batter angle and heights and creating features as described above.

Reference:

- District Plan Rules 7.1.3.3.4 and 7.1.3.3.5

7.5.5 DRAINAGE

Care is needed in managing water and associated erosion. Benches direct and concentrate water flow and so drainage needs to be considered to prevent scouring and erosion. Cut-off drains are particularly important on the benches to prevent erosion and scouring of the replaced soils.

Routes for storm-water drains need to be determined in consultation with the rehabilitation adviser to ensure that routes are aligned to avoid tall trees and advanced native vegetation, and that appropriate remedial work is undertaken to prevent future erosion. This should be developed within the annual implementation plan.

7.5.6 SOIL PREPARATION

A fundamental process of rehabilitating the site will be the preparation of the substrate and the quality of topsoil for all planting areas, including areas left to regenerate naturally. Topsoil shall conform to the following specification:

Topsoil shall exhibit the presence of biological activity as evidenced by adequate aggregation and organic matter content. The material shall be acceptable for growing all of the appropriate species, given adequate management, and shall not contain any substances injurious to plant growth.

The mix of rubble, blended fill and topsoil needs to be determined for areas of both the north and south faces to reflect their unique climatic properties and planting requirements. Once laid, the exposed soils should be hydroseeded (or any other approved method) immediately to prevent erosion and dust problems, and also to limit germination of some pest plants.

The treatment of rock benches is important before re-spreading of onsite topsoil is possible. The surface of the bench usually needs to be ripped to create a zone of fractured rock which will allow the topsoil to be 'keyed in' and prevent the formation of extensive slip planes between the two materials. The fractured zone also serves to retain moisture and provides secure rooting.

7.5.7 REVEGETATION

The objective is to achieve a vegetation cover that relates to the existing vegetation remnants in the area. This provides continuity of habitat and linkages for wildlife movement.

There are three common methods appropriate for establishing vegetation cover on the earth-worked areas. Using a combination of methods at KPQ will mean that the most appropriate method can be used for the prevailing site conditions. There may be a need for fertilizing to enhance vegetation. The methods are:

- Hydroseeding (where appropriate)
- Natural regeneration by providing suitable conditions for vegetation establishment
- Planting with locally eco-sourced native species.

Planting will be co coordinated within the annual implementation plan to ensure appropriate plants species and numbers are available for the following planting season.

7.5.8 HYDROSEEDING

Hydroseeding or hydromulching of exposed soils will reduce run-off and erosion, bind soils preventing dust problems, and will inhibit some invasive pest plants. Hydroseeding will assist in stabilising loose soils primarily on benches and where appropriate some lower batter slopes; however its application to rock face and steep batter slopes is not yet proven as a reliable rehabilitation technique. Trials and development of new hydroseeding techniques should be initiated and monitored to find one or more solutions that meet the specifics of the site.

Hydroseeding and mulching shall be coordinated with quarrying, following the completion of earthworks. In areas allocated for natural regeneration, particular exotic grass mixes may inhibit native seed strike so further investigation of surface treatment will be needed to ensure the best balance of erosion and weed control while promoting native seed propagation. Some trialling has been completed locally and nationally with native shrub and grass species, and with some moss and lichen species. However, this technology is not yet reliable enough for large scale application. Some experimentation should be undertaken.

7.5.9 NATURAL REGENERATION

Sites left to regenerate naturally with local native vegetation can often be the most successful means of getting vegetation established. For this to be achieved optimum site conditions must prevail. That is, sites altered by earthworks must be left in a condition that allows natural regeneration to occur (i.e. runoff controlled, suitable substrate, good seed source nearby, pest management strategy, etc). This process will take longer than on those sites that are assisted by planting or laying brush.

7.5.10 PLANTING

The aim of revegetation is to create “islands” of planted vegetation which spread outwards and assists the natural regeneration of adjacent areas through shelter and seed dispersal. The most favourable sites (micro sites) are selected for this planting, and they need not cover more than 10% of the site.

On all areas that are revegetated, the following practices should be adopted:

- Plant sourcing will require proactive planning so that the right species are planted at the right time – usually a year’s lead time is required to enable sufficient quantities of appropriate locally-sourced plant species to be propagated.
- The extent of planting programmed for each year needs to be determined in relation to resources available for maintenance in successive years.
- Species should be sourced from local plant populations to ensure that they are ecologically compatible and suitable for the environs (i.e. eco-sourced).
- All plants should be suitably acclimatised to local conditions prior to planting. If plants are propagated outside the Wellington district this may involve bringing them to a suitable local holding area or nursery several months before they are planted.
- Small grade plants should be used because they will acclimatise and establish more readily than large grades.
- Plants should be densely planted with the object of attaining ‘canopy closure’ as quickly as possible (ie. the sooner plants coalesce the better, because this assists in their survival and also reduces competition from pest plants and other unwanted plants).

7.5.11 STAGING

KPQ site rehabilitation has a timeframe measured in several decades. Revegetation of the first sections should be well advanced by the time the south face quarry closes. Staging revegetation over several years is critical to its success, allowing flexibility to adapt to any unexpected seasonal events such as a particularly wet winter or particularly dry summer. It also enables adjustments to be made in terms of ongoing maintenance practice, species composition, pest management, timing, and methods of planting taking into account monitoring of previous planting. Staging revegetation work over several years also allows maintenance to be more easily accommodated.

7.5.12 TRIAL PLANTING

Each area will have unique features and combinations of soil, slope, moisture, sun and wind. Each annual implementation plan should contain some plant trials to test the efficacy of certain species and planting treatments.

The use of biodegradable geo-textile mats should be considered. These can be very effective in some situations but can be expensive relative to other methods. A number of suitable products are now available made from biodegradable materials such as coconut fibre. Mats should be considered and trialled but will generally be used as a supplementary rather than primary rehabilitation method.

7.5.13 MAINTENANCE

All areas of planting within the quarry (10% of the site) will require some maintenance and pest management. Maintenance should be programmed and costed for the first five years following each planting stage. At the completion of this time frame, planting should be well established and

self-sustaining. On exposed sites, maintenance work will involve replacing failed plants ('blanking') and cutting back / removing unwanted and competing species.

7.5.14 MONITORING

Commitment to ongoing monitoring of the rehabilitation progress and commitment to remedial maintenance is critical to the success of rehabilitation. Ongoing monitoring will be essential so that:

- trends can be recognised early and optimised (e.g. recognising most favourable micro-sites or the most successful species);
- pest problems (plant and animal) can be dealt to when signs are first observed (e.g. pull seedlings while still young);
- the effects of changeable climatic conditions can be managed (e.g. Delaying planting in drought years);
- trial plots can be set up and observed for improved overall results (hydroseeding, mulching, plant and material trials).

Monitoring and agreement to appropriate management responses will form part of the rehabilitation contract documentation. Whilst some management measures need to be in place at the outset, for others ongoing monitoring will be required to decide what action needs to be taken and when. This may simply be a matter of refining the rehabilitation method used but it may require significantly altering the method or the timing. Site management then becomes responsive and tailored to progress from year to year.

An annual monitoring inspection will be included within the implementation plan and associated reporting will cover:

- identification of successes of past and previous year
- identification of deficiencies or inadequacies
- identification of opportunities
- the programme for the coming year.

Comprehensive record keeping will be important to ensure the accumulation of knowledge, which will result in increased efficiency and reduced costs over the life of the rehabilitation project. Progress photographs, taken at key vantage points, will be used as a valuable monitoring tool.

7.6 ASSOCIATED REHABILITATION AREAS

Beyond the three main sites of the quarry (north and south faces and grazing area) a number of additional rehabilitation projects should be undertaken

7.6.1 BUFFER AREAS

- (1) Pines: pines should be removed from nearby areas regenerating to native vegetation, particularly in the native vegetation between the north face and Fraser Avenue. Branches and foliage can be mulched and utilised in soil rehabilitation on the finished quarry benches. Large logs can be placed and secured on benches to provide micro-sites for rehabilitation.
- (2) Management of invasive pest plants: such plants should be removed on an ongoing basis. In particular, continued efforts should be directed at vines such as old man's beard,

convolvulus, blackberry and ivy which are currently invading the stream margins and the regenerating forests between the northern quarry workings and Fraser Avenue.

Reference:

- District Plan Rules 7.1.3.3.6

7.6.2 NGAURANGA GORGE (WAITOHI) STREAM

Like the forests of Ngauranga Gorge, the stream which once dominated the narrow bottom of the gorge has also been substantially modified to the extent that much of it is piped underground and those vestiges still above ground are largely hidden behind industrial development. Watercourses extend from Fraser Avenue, running to the west of the north face and a large stormwater outlet from Johnsonville emerges at the existing quarry site. These feed the stream that flows behind the abattoir and is then piped underground and taken across SH1, north of the site.

It has been noted in previous investigations that this stream is seriously degraded. It would benefit from extensive rehabilitation. Stream rehabilitation is specialised and requires consultation with affected parties including the Taylor Preston management, Greater Wellington Regional Council and iwi, before specific rehabilitation is initiated under the annual implementation plan. Stream rehabilitation should address the removal of any introduced industrial waste from the streambed and slopes, diversion and treatment of contaminated runoff, pest plant removal and enhancement of riparian revegetation.

7.7 REHABILITATION SUMMARY

The principles for rehabilitation of the KPQ include all of the following steps.

- (1) Preparation of an annual implementation plan, including coordinated staging of works closure to achieve best ecological outcomes.
- (2) Programme for clearance of vegetation, mulching and composting and stockpiling.
- (3) Methods for limiting disruption to streams and freshwater habitat.
- (4) Vegetative screening of work areas.
- (5) At the completion of the quarry operation – the quarry landform shall be re-contoured to reflect the former landforms/ topography of the area. Achieving a combination of revegetated benches and more natural unvegetated landforms including large rock outcrops, bluffs, screes and gullies to reflect the surrounding topography is the desired outcome.
- (6) Creation of new soil substrate in all planting areas (benches, screes etc), to encourage rapid vegetation of the slopes, reducing the duration of visual impacts.
- (7) Trialling of a range of onsite revegetation methods for ensuring rapid vegetation cover, and maintenance of revegetated areas.
- (8) Preparation of pest plant, pest animal and fire control programme.
- (9) A monitoring and maintenance programme.

It is intended that experience and monitoring in early stages of rehabilitation will feed back into the continuing rehabilitation process.

8. LONG TERM USE

8.1 NORTHERN QUARRY AREA

The concept design for the existing northern quarry site has been based on the following staging plan:

- *Stage 1*, quarry area A and the area behind Downer
- *Stage 2*, quarry area C and fill areas A and F
- *Stage 3*, quarry area B and fill areas C and F
- *Stage 4*, quarry and fill area D
- *Stage 5*, quarry and fill area E (Taylor Preston Carpark)
- *Stage 6*, develop area G
- *Stage 7*, develop area J (reference 3.2)
- *Final Stage*, final quarrying/filling, creating level platforms, access road etc.

Appendix 5 details the staging plans for the Northern Quarry site. In the long term, a range of permitted or consented activities will be able to establish on the site.

8.2 SOUTHERN QUARRY-AREA

District Plan Change 25 changed the zoning to Suburban Centres but restricted development other than quarrying and cleanfilling.

Given the expected duration of up to 50 years for development of the southern part of the quarry, there is opportunity to consider the future use of the land through District Plan reviews and other Council strategies.

9. MANAGEMENT OF COMPLAINTS

9.1 MANAGEMENT OF COMPLAINTS

It is the responsibility of the quarry operator to record all complaints. The quarry operator is responsible for acting on and, rectifying the cause of complaints.

All complaints received in respect of the quarry operation shall be recorded in written form using the Holcim Information Management System (IMS):

- Date, event, name, address and contact details of the complainant (where provided)
- Action to resolve the issue/complaint and action to prevent similar complaints
- Date of oral response and date of written response
- Complaint reference number

The quarry operator shall respond to complaints within the following timeframes following receipt:

- 8 hours – oral response
- 24 hours - acknowledgement
- 5 working days – full written response, which confirms details of the complaint and indicates what action has been taken or is proposed to be taken.
- It shall be made clear that if the complainant is not satisfied; he or she can contact the Wellington City Council on 499 4444.
- A summary of all complaints received shall be presented in the monthly report to the Council.

Reference:

- Holcim NZ Ltd Incident Management System (INX)
- Holcim NZ Ltd Business Management System

10. FURTHER INFORMATION

If you would like any further information on the KPQ please, contact

THE COUNCIL

The Manager

City Networks

Wellington City Council

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Tel: (04) 499 4444

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THE QUARRY OPERATOR

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Web: <http://www.holcim.com/nz>

11. REFERENCES

- Health & Safety in Employment (Mining Operations and Quarrying Operations) regulations 2013
- Health & Safety in Employment amendment Act 2013
- Holcim NZ Ltd Health & Safety Plan
- Kiwi Point Quarry Management Plan – March 2006 and June 2009
- Rehabilitation Plan – Kiwi Point Quarry April 2005
- Kiwi Point Quarry - Quarry Storm-Water Management Plan June 2005; Opus Consultants
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews) www.minex.co.nz
- Australian Standard – Explosives – Storage, transport and use – Part 1: Storage and Part 2 Use of explosives
- Holcim NZ Ltd Business Management System
- Wellington City Council Kiwi Point Quarry Design Detail February 2006 Beca Infrastructure
- A Guide to the Management of Cleanfills
- Wellington City District Plan
- Hazardous Substances & New Organisms Act (HSNO) 1996 and related regulations (and subsequent reviews)
- Resource Management Act 1991
- Holcim NZ Ltd Fatality Prevention elements (FPE) and subsequent revisions
- Electricity (Safety) Regulations 2010
- GWRC Resource Consents

APPENDIX 1 DISTRICT PLAN RULES (DISTRICT PLAN CHANGE 64)



Council Decision on Proposed District Plan Change 64

Amendments to Kiwi Point Quarry provisions

November 2008

Plan Change Document

WELLINGTON CITY DISTRICT PLAN

PROPOSED DISTRICT PLAN CHANGE 64 – AMENDMENTS TO KIWI POINT QUARRY PROVISIONS

Includes the recommendations to Council. Text to be added is highlighted (abcdefghijkl). Text to be deleted is highlighted and struck through (abcdefghijkl).

Note – some consequential renumbering has taken place as a result of additions and deletions.

ALTERATIONS TO THE WELLINGTON CITY DISTRICT PLAN

Detailed below are the alterations to the Wellington City District Plan. To assist the understanding of the new provisions, an annotated copy of the Suburban Centre (Chapter 6) and Suburban Centre Rule (Chapter 7) chapters of the District Plan is provided as a separate document (Attachment 1).

A. ALTERATIONS TO VOLUME ONE, SUBURBAN CENTRES

Chapter 6, 'SUBURBAN CENTRES'. Delete and insert new provisions by making the following amendments:

6.1 Introduction

1. **Delete** the final paragraph under the 'Introduction' and **Replace** with a new final paragraph to the Introduction to read:

The Kiwi Point Quarry is also included within Suburban Centres. The quarry is subject to specific rules as well as to other relevant rules applying elsewhere in Suburban Centres to mitigate adverse effects. The provisions recognise the quarry's economic importance to the City and wider region. As the long term future of the southern part of the Kiwi Point Quarry (being the area south of the access point off State Highway One) has not yet been determined, the provisions of this Plan require that any use of this area other than quarrying and cleanfilling will require consent as a non-complying activity. It is expected that the long term future of this area will be addressed during a subsequent plan review or by a Plan Change in association with the City's open space strategy at that time.

Policy 6.2.1.2

2. **Delete** the sixth paragraph of explanatory text under Policy 6.2.1.2 and **Replace** with a new sixth paragraph of explanatory text under Policy 6.2.1.2 to read:

Specific rules apply to the Kiwi Point Quarry. These rules allow for quarrying and related activities, which are not otherwise provided for in the City, subject to specific rules. For the southern part of the Kiwi Point Quarry (being the area south of the access point from State Highway One), the rules restrict alternative future uses. As the area has a long life as a quarry, future uses will be evaluated at a later date as part of a plan review or by a Plan Change.

Policy 6.2.3.3A

3. **Delete** existing Policy 6.2.3.3A and **Replace** with a new Policy 6.2.3.3A to read:

6.2.3.3A Provide for the development and site rehabilitation of the Kiwi Point Quarry to the extent specified in the Plan in a way that avoids, mitigates or remedies adverse effects.

METHODS

- Rules (including Appendices showing the extent of quarry areas)
- A quarry management plan

Kiwi Point Quarry is an established quarry, involving ongoing extraction, processing, cleanfilling and rehabilitation. As the continuing availability of aggregate and other quarry materials is economically important for the City and wider region, the Plan makes specific provision for the ongoing use and development of the quarry. For both the older and newer areas of the quarry, specific rules and a development plan are incorporated. These provisions provide for the avoidance or mitigation of adverse effects from the quarry activity and the long-term mitigation of effects on landscape and landform following quarrying. It is the Council's intention that cut faces should be designed to yield a relatively natural landform in the long term and that rehabilitation of cut faces should begin as early as practicable. The staging of quarry development, and the day to day management of quarry activities are further detailed and controlled through the application of a quarry management plan.

A quarry management plan shall be prepared and regularly updated, which sets out:

- *intended staging of the excavation and cleanfilling activities*
- *the means of management of surface and groundwater*
- *management of on-site traffic*
- *provision for any onsite processing and temporary storage of quarry material*
- *any specific provisions relating to onsite management of noise, dust, vibration, visual impact, water quality*
- *a procedure for addressing any complaints*
- *objectives and principles for the rehabilitation of the site, including:*
 - *a timetable for the rehabilitation of prominent quarry faces*
 - *measures to create soil conditions which will support plant growth*
 - *measures to create a variety of site conditions to support a range of species*
 - *means of controlling runoff to avoid erosion*
 - *means of control of plant and animal pests*
 - *measures to avoid fire risks*
 - *means to assist native vegetation to regenerate on grazing land*
 - *rehabilitation which is compatible with Open Space strategy for adjacent areas of land*
- *management of buffer areas*
- *practices and methods that will be adopted to ensure that all permitted activity conditions applying to the activities will be met.*

The quarry management plan will complement the other rules applying to the quarry activity and will provide additional management details. It will be reviewed at least every five years and any necessary adjustments will be made.

As progressive rehabilitation of the area is an important aspect of quarry management, the Quarry Management Plan includes rehabilitation provisions. As quarrying and cleanfilling activities are completed on the site, an implementation plan shall be prepared annually in accordance with the Quarry Management Plan.

The requirement that regular monitoring is undertaken and regular progress reports are completed and submitted to the Council is a key element. This requirement is included because successful rehabilitation of any disturbed area requires constant monitoring as site conditions vary considerably and evolve over time. Regular observation and recording of results is an essential part of managing the process.

A vegetated buffer area is included within the Suburban Centres Area as part of the development of the southern part of the quarry. At the northern end, the necessary buffer area is within the Open Space B Area.

It is important also that rehabilitation of the quarry area should recognise and in the longer term be able to be integrated as appropriate with the Open Space strategy developed by the Council for adjacent areas of land. Current Council policy is for the creation of further Green Belt areas on the steep hill sides of the Ngauranga Gorge and, for instance, it may be possible to allow continuation or linking of proposed walkways.

Overall, the environmental result will be the availability of quarry materials for the City and wider region in the short and medium term, and long-term achievement of well-vegetated quarry faces with the appearance of natural landforms which will be integrated with Council development of Open Space areas in this vicinity.

B. ALTERATIONS TO VOLUME ONE, SUBURBAN CENTRE RULES

Chapter 7, 'SUBURBAN CENTRE RULES'. Delete and insert new provisions by making the following amendments:

Rule 7.1.1

4. **Delete** the following text from the sixth bullet point after the words 'rule 7.1.3':
"A in part of Extension"
5. **Insert** the following text into the sixth bullet point after the words 'Kiwi Point':
"Quarry"
6. **Delete** the following text from the end of the eighth bullet point:
"and 7.1.3A"
7. **Delete** the following text from the ninth bullet point after the words 'any activity in the'
"area defined as the Kiwi Point Quarry Extension Area"
8. **Insert** the following text into the ninth bullet point after the words 'any activity in the'
"southern part of the Kiwi Point Quarry (defined as the area south of the access point from State Highway One)"
9. **Delete** the letter "A" at the end of the ninth bullet point.

Rules 7.1.3 and 7.1.3A

10. **Delete** existing Rules 7.1.3 and 7.1.3A and **Replace** with the following new Rule 7.1.3 to read:

7.1.3 Quarrying and clean filling on part Lot 1, and part Lot 2 DP 72995, part Lot 4, part Lot 5 and part Lot 6 DP 72996, part Lot 1 DP 34015, part Lot 1 DP 65030 and part Lot 2 DP 91179 Ngauranga Gorge (known as Kiwi Point Quarry) is a Permitted Activity provided that it complies with the following conditions:

7.1.3.1 Any relevant provisions of rules 7.1.1 and 7.1.2 except that rule 7.1.1.6.2 does not apply to the temporary stockpiling or storage of quarried rock material.

7.1.3.2 Dust

7.1.3.2.1 Dust control measures shall be undertaken to avoid creating a dust nuisance beyond the Quarry Boundary.

7.1.3.3 Quarry activities

7.1.3.3.1 Quarry activities shall be restricted to the area within the Suburban Centre Area north of the abattoir and south of the access road, excluding the area shown as a buffer area, as identified on the plan included as Appendix 5.

7.1.3.3.2 Some blasting may be carried out as part of the normal quarrying operations. Blasting of faces for crushed rock production must take place between 10.00am and 2.00pm Monday to Friday only. ~~Other minor blasting and small shots fired for training purposes may be carried out at any time between 9am and 4pm Monday to Friday inclusive.~~

7.1.3.3.3 In all cases, residents of Tarawera Road, Plumer Street, 113, 130, 170 and 175 Fraser Avenue, and 146 Burma Road ~~the following property owners~~ must be notified by mail no less than one week in advance of blasting. ~~faces for crushed rock production, or through an agreed system between the quarry operator and the owners of the properties listed as follows:~~

- ~~9 and 14 Plumer Street, Johnsonville~~
- ~~73, 75, 84, and 86 Tarawera Road, Johnsonville~~
- ~~113, 130, 170 and 175 Fraser Avenue, Johnsonville~~
- ~~146 Burma Road, Johnsonville~~

Blasting must be immediately preceded by a siren or hooter with a sound which distinguishes it from normal Police, Ambulance or Fire Service sirens.

7.1.3.3.4 The ~~maximum finished~~ slope of quarry faces ~~a batter (i.e between benched areas)~~ shall not exceed 55 degrees from the horizontal

7.1.3.3.5 The maximum height of ~~a finished~~ batters shall ~~not exceed~~ ~~be no more than~~ 15 metres.

7.1.3.3.6 A buffer area with a minimum width of 25 metres shall be maintained on the uphill boundary of the site as shown on Appendix 5. This area will be allowed to revegetate naturally except where there is a need for additional planting.

Note: At the north end of the quarry near Plumer Street and Tarawera Road, the buffer area is within the Open Space B Area as shown in Appendix 5 and is governed by the Open Space provisions.

7.1.3.3.7 A fence must be maintained adjacent to any properties in the Residential Area along the quarry boundary to a height of 1.2m.

7.1.3.3.8 Prior to commencement of operations in any area, a security fence must be installed and maintained along the outer edge of the buffer area.

7.1.3.3.9 No quarry activities shall be undertaken within the buffer area unless agreed by Council.

7.1.3.4 Cleanfill activities

7.1.3.4.1 Cleanfill activities shall be restricted to the area shown on the plan included as Appendix 5.

7.1.3.4.2 The cleanfill shall comply with the definition of cleanfill in Section 3 (Definitions) of this District Plan.

7.1.3.5 Location of quarry plant

The primary crusher may be moved as the quarry face recedes and new faces are worked. Any processing plant or buildings within the southern part of the quarry shall be relocatable.

7.1.3.6 Traffic movement

There shall be one entry point to the quarry, via Crossing Place 22 from State Highway One (also the main access to the adjacent Abattoir). This must be the sole means of entry and exit for quarry vehicles. This access must be maintained to the standard of local streets.

7.1.3.7 Rehabilitation and treatment of stripped areas

7.1.3.7.1 All land encompassed within the quarry boundary shall be progressively rehabilitated (except where used for other permitted or consented activities). Any planting will take place as soon as practicable following the completion of the quarry or cleanfill activity. Planting will be undertaken using indigenous species from local sources, except where exotic species are required to provide erosion control and/or temporary nurse cover for revegetation with indigenous species.

~~7.1.3.6.2 When the stripping of vegetation and overburden is undertaken to expose rock, dust control measures shall be undertaken to avoid creating a dust nuisance outside quarry boundaries.~~

7.1.3.7.2 Excluding the Abattoir area, areas shown on Appendix 5 which are not shown as areas for quarrying and/or cleanfilling shall be allowed to revegetate.

7.1.3.7.3 All exposed surfaces of fill shall be hydro-seeded, or any other approved method, immediately following completion of works as a dust and erosion control measure.

Kiwi Point Quarry is an established quarry activity which is being developed in accordance with the plan in Appendix 5. Rock extraction and other activities associated with the quarry, such as processing and aggregate storage, and restoration of the cut faces will continue. The specific rules that apply to the quarry

area limit the effects of quarrying. The Quarry Management Plan will also ensure that any potential effects will be mitigated.

These provisions allow for the ongoing operation of the Kiwi Point Quarry to the extent shown in Appendix 5. As the potential visual and landscape effects of a quarry in this area have been in part mitigated by reducing the extent of hillside to be removed but allowing the quarry to excavate to below the level of the road, cleanfilling of part of the excavated areas, and site rehabilitation is also provided for.

As the long term future of the southern part of the Kiwi Point Quarry (i.e south of the access point on State Highway One) has not been determined, any other type of activity in this area will be a non-complying activity). At present the Council's Open Space strategy in Capital Spaces indicates that open space is a vital component of the future of the Ngauranga Gorge. It is important that any possible policy issues as to future uses of the southern part of the Kiwi Point Quarry once quarrying is completed are resolved by the Council and the community. Because of the long duration of the quarry activity, the plan leaves any decision on the future of the land to a plan review or future plan change.

Rule 7.3.10

11. **Delete** existing Rule 7.3.10 and Replace it with a new Rule 7.3.10 to read:

7.3.10 **Quarrying and cleanfilling activities in Ngauranga Gorge (Kiwi Point Quarry) that do not comply with one or more of the following conditions for Permitted Activities:**

7.3.10.1 **Matters in rules 7.1.3.1**

7.3.10.2 **Quarry activities**

7.3.10.3 **Cleanfill activities**

7.3.10.4 **Location of quarry plant**

7.3.10.5 **Traffic movement**

7.3.10.6 **Rehabilitation and treatment of stripped areas**

are Discretionary Activities (Restricted) in respect of the condition(s) not met.

Non-notification

The written approval of affected persons will not be necessary in respect of rules 7.3.10.1 – 7.3.10.6. Notice of applications need not be served on affected persons and applications need not be notified.

Standards and Terms

The standards and terms which apply in rules 7.3.1 and 7.3.2 shall apply to all applications under 7.3.10.1.

The duration of a consent granted for processing plant or buildings in the southern part under rule 7.3.10 shall not exceed 10 years.

Assessment Criteria

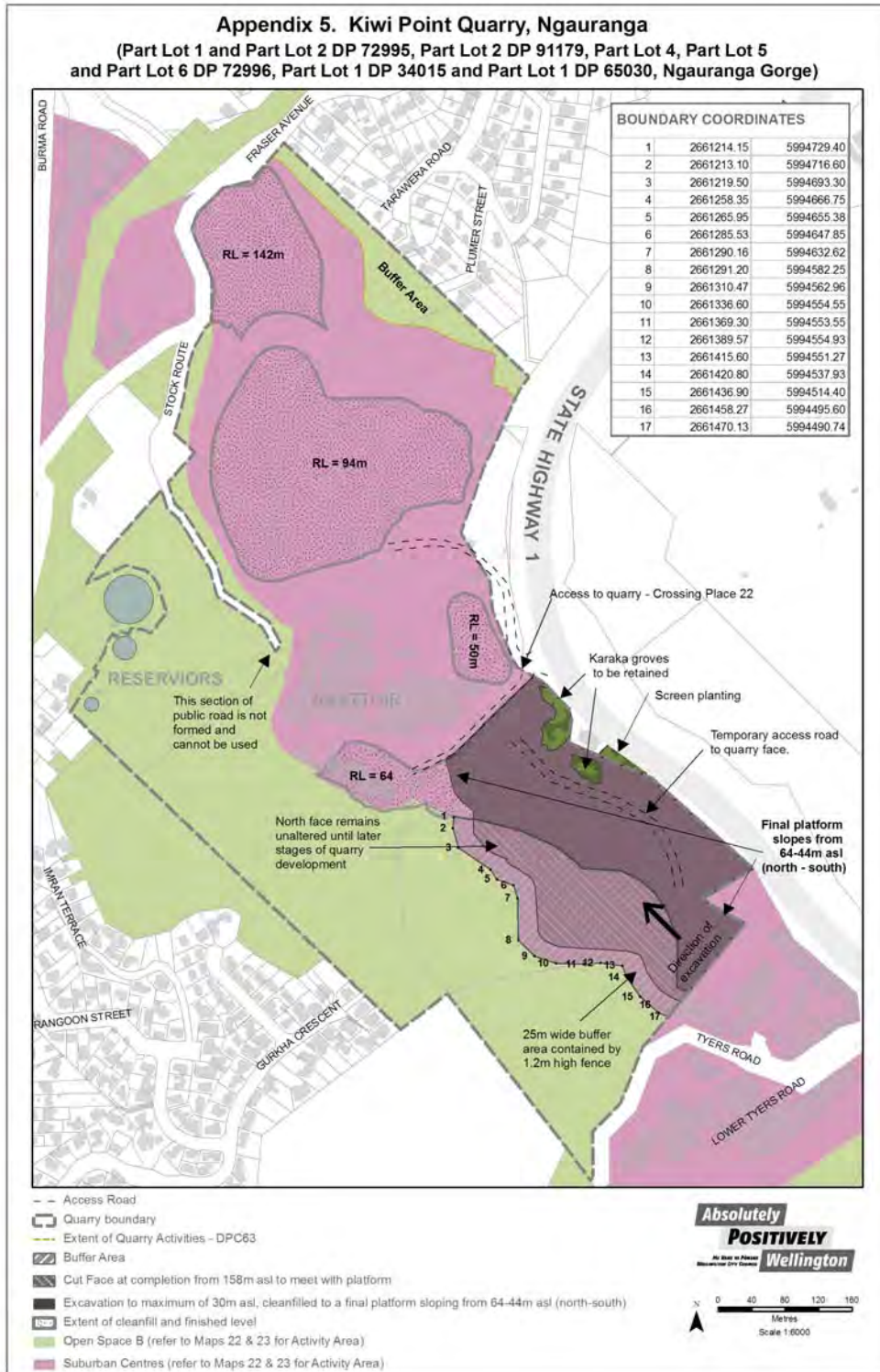
In determining whether to grant consent and what conditions, if any, to impose, Council will have regard to, but not be limited to, the following criteria:

7.3.10.7.1 Whether the activity is necessary to facilitate the effective and efficient use of the quarry.

7.3.10.7.2 The extent to which the proposal will result in adverse visual, amenity or safety and efficiency effects, including those effects on the State Highway, Fraser Avenue, Tyers Road, on nearby existing activities, and on occupants of nearby dwellings.

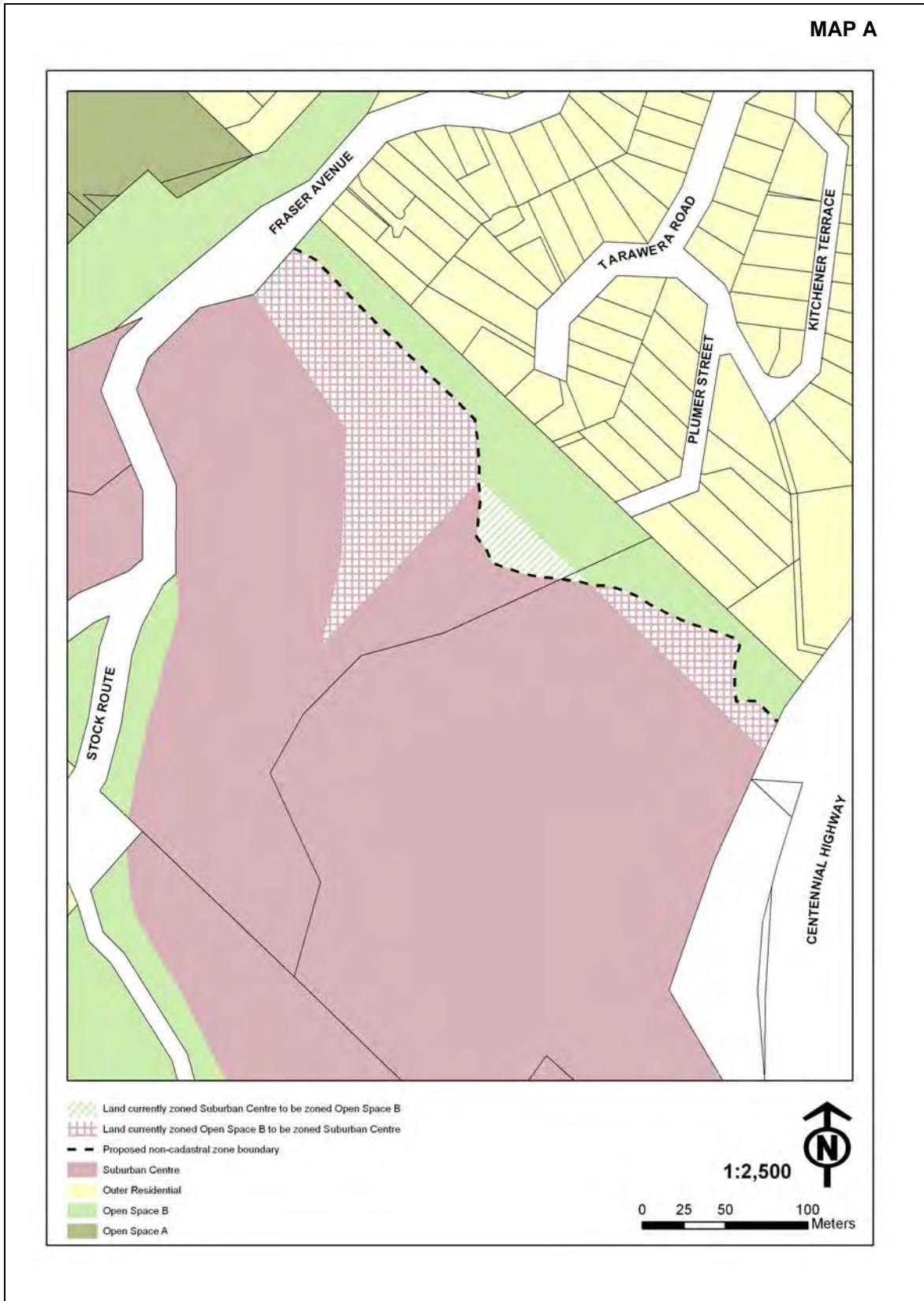
Chapter 7 - Appendix 5 & Appendix 5A

12. **Delete** the existing Appendix 5 and Appendix 5A maps and Replace with new Appendix 5 Map as shown below:



C. ALTERATIONS TO VOLUME THREE, MAPS

13. Provide for the **part rezoning** of sites shown on 'Map A' below:



**ANNOTATED CHAPTERS OF THE OPERATIVE DISTRICT PLAN
INCLUDING PROPOSED DISTRICT PLAN CHANGE
PROVISIONS**

Note: This annotated version does not form part of the plan change, and is included for information purposes to show the plan change proposal in context.

*Proposed **additions** to text are shown as underlined (abcdefghijkl) and proposed **deletions** are shown as struck through (~~abcdefghijkl~~).*

Includes the recommendations to Council. Text to be added is highlighted (abcdefghijkl). Text to be deleted is highlighted and struck through (~~abcdefghijkl~~).

6. SUBURBAN CENTRES

6.1 Introduction

The Suburban Centre provisions in the District Plan cover the more significant retail and industrial centres in the suburban areas of Wellington City. The Shelly Bay site which was a former military base is also included. These important areas provide a base for a wide range of economic activity essential for the City's growth and development. Note: The extent of the Shelly Bay Suburban Centre area is mapped in Appendix 6 to Chapter 7 for information purposes.

These centres have developed historically, many from the early days of colonial settlement, as either local shopping/service centres or industrial areas. Most of the industrial areas developed along with the major port, railway or airport functions in the City. Others were originally the location of particular industries such as quarries, abattoirs or gas works.

In more recent times the distinction between established retail and industrial centres has diminished markedly. Market forces have changed the focus of most industrial areas from purely industrial to mixed retail, service and industrial centres. Retailing in these centres is directed generally to the sale of heavy or bulky goods from drive-in locations.

The nature of retail centres has also changed, with the development of supermarkets and similar operations requiring extensive parking areas. Distinctions between retail and industrial uses within predominantly retail centres have also declined with the general commercialisation of industrial properties.

The District Plan recognises these changing patterns in Suburban Centres by enabling most activities (with limited exceptions) to be Permitted Activities. This will provide flexibility for centres to respond to changing market situations.

Council intends to promote the development of existing retail centres through its retail strategy and related initiatives. In this way the primary retail focus of these centres for their surrounding suburban communities should be retained.

To avoid, remedy or mitigate the adverse impacts on Residential Areas, the Plan provides for the general containment of Suburban Centres. Any expansion beyond the identified Suburban Centre boundaries requires a plan change. This will enable a full assessment of any environmental effects.

In addition, performance standards have been imposed on Suburban Centre activities to avoid, remedy or mitigate the impact of development on Residential Areas. More stringent standards apply in the interface between Suburban Centres and Residential Areas so that residents will have added protection. Maintaining the character, appearance and environment in and around Suburban Centres is an important objective of the Plan.

Specific provision is also made in the Plan for Suburban Centres which have special characteristics. Building development in the Newtown Centre has a predominantly nineteenth-century character, and this character will be maintained and enhanced through the use of design guidelines.

The Suburban Centres at Greta Point and Shelly Bay are special in that they abut the coastline. Additional provisions have been included at Greta Point to encourage opportunities for public access to the water's edge. At Shelly Bay design guidelines apply to promote new development generally in accordance with the quality and character of the area and that respects the special coastal location. The Shelly Bay provisions are in accordance with decisions of the Environment Court (refer Minister of Defence v Wellington City Council W66/99 and W85/99).

Council is particularly concerned to raise the general standards of design in Suburban Centres, and intends to promote urban design initiatives and further District Plan measures to achieve this end.

~~Kiwi Point Quarry and the Kiwi Point Quarry Extension Area are also included within Suburban Centres. Both areas are subject to specific rules as well as to other relevant rules applying elsewhere in Suburban Centres to mitigate adverse effects. This provision recognises both the existing quarry and its economic importance to the City and wider region, and the future importance of the extension area, which will be commenced within the life of this District Plan. As the long term future of the Kiwi Point Quarry Extension Area following completion of quarrying has not yet been determined, the provisions of this Plan require that any use of this area other than quarrying will require consent as a non-complying activity. It is expected that the long term future of this area will be addressed during a subsequent plan review or by a Plan Change in association with the City's open space strategy at that time.~~

The Kiwi Point Quarry is also included within Suburban Centres. The quarry is subject to specific rules as well as to other relevant rules applying elsewhere in Suburban Centres to mitigate adverse effects. The provisions recognise the quarry's economic importance to the City and wider region. As the long term future of the southern part of the Kiwi Point Quarry (being the area south of the access point off State Highway One) has not yet been determined, the provisions of this Plan require that any use of this area other than quarrying and cleanfilling will require consent as a non-complying activity. It is expected that the long term future of this area will be addressed during a subsequent plan review or by a Plan Change in association with the City's open space strategy at that time.

...

6.2 Suburban Centre Objectives and Policies

OBJECTIVE

- 6.2.1 To promote the efficient use and development of natural and physical resources within Suburban Centre areas.**

POLICIES

To achieve this objective, Council will:

- 6.2.1.1 Generally contain existing Suburban Centres within defined boundaries.**

METHOD

- Rules

Most Wellington Suburban Centres have existed for a long time and already contain the development and infrastructure necessary to fulfil their function as service, employment and social centres.

The majority of centres are also appropriately located on or near main arterial routes and are well situated to service their surrounding communities.

To permit their continued functioning and development with a minimum of regulation, Suburban Centres have been identified in the Plan.

Suburban Centres will also be contained to protect established residential neighbourhoods from the effects of non-residential encroachments. Future expansion of Suburban Centres is not prohibited, but extensions may be considered as a Plan Change so that a full assessment may be made of environmental effects.

The establishment of new Suburban Centres also requires a Plan Change. Council is particularly concerned to ensure that any new centres are suitably located and that surrounding Residential Areas are protected.

The environmental results will be the maintenance of Suburban Centres which provide for the servicing of local communities and help protect Residential Areas from adverse environmental effects.

- 6.2.1.2 Encourage a wide range of activities by allowing most uses or activities within a Suburban Centre provided that the conditions specified in the Plan are satisfied.**

METHOD

- Rules

A wide range of uses are permitted within Suburban Centres, as Council does not wish to direct activity through regulatory means. Where Council wishes to encourage activities such as retailing in particular locations, this will be promoted through strategic planning, urban design or related initiatives.

This flexible approach to the location of land use and activities is intended to enable owners or developers to respond swiftly and easily to meet market needs or other economic or technological changes. Performance standards are applied to ensure that activities have minimal unwanted side effects.

Activities under the Third Schedule of the Health Act are not permitted to be established in the Suburban Centres because of their offensive or noxious nature.

Within the Suburban Centre areas adjoining Wellington International Airport there is a need to recognise the potential effects of airport noise on new residential development and conversely, the potential constraints which new residential development have on the airport. The discretionary (unrestricted) rule relating to residential development in Suburban Centres near the airport (being the land inside the airnoise boundary depicted on Map 35) reflects these issues. Reference will also be made to the objectives and policies in Chapter 10 of this Plan when considering resource consent applications for residential development within that area.

Helicopter landing areas are included as Discretionary Activities (Unrestricted) to ensure that adverse noise effects and public safety issues can be addressed.

~~*Specific rules apply to Kiwi Point Quarry and the Kiwi Point Quarry Extension area. These rules allow for quarrying and related activities, which are not otherwise provided for in the City, subject to specific rules. For the Kiwi Point Quarry Extension Area, the rules restrict alternative future uses. As the area has a long life as a quarry, future uses will be evaluated at a later date as part of a plan review or by a Plan Change.*~~

Specific rules apply to the Kiwi Point Quarry. These rules allow for quarrying and related activities, which are not otherwise provided for in the City, subject to specific rules. For the southern part of the Kiwi Point Quarry (being the area south of the access point from State Highway One), the rules restrict alternative future uses. As the area has a long life as a quarry, future uses will be evaluated at a later date as part of a plan review or by a Plan Change.

The environmental results will be the development of Suburban Centres to provide the services, facilities and employment opportunities that the community wants without harming the surrounding environment.

...

NOTE – for the sake of this plan change, existing Policy 6.2.3.3A is to be deleted and replaced with the new Policy 6.2.3.3A outlined below.

OBJECTIVE

6.2.3 To maintain and enhance the physical character, townscape and streetscape of Suburban Centres.

POLICIES

To achieve this objective, Council will:

6.2.3.1 Maintain and enhance the streetscape by controlling the siting and design of structures on or over roads, and through continuing programmes of street improvements.

METHODS

- Rules
- Operational activities (Urban Design Strategies)

The appearance of buildings on or over streets, and of the streets themselves, has a significant bearing on the visual quality of Suburban Centres. Council intends to improve the quality of Suburban Centre streetscapes. Council, through its Urban Design Unit, will work to improve the quality of Suburban Centre environments by implementing urban design strategies for streetscapes that will include some Suburban Centres. This will coordinate Council action.

Council also undertakes a wide range of works which improve the City's streetscape. Priority has been given to enhancing areas with high pedestrian counts. This focus will continue.

Where building in the air space above roads is proposed, particular consideration will be given to the impact on the streetscape. Such development is controlled and carefully assessed.

The environmental result will be improvement of the quality of Suburban Centre streetscapes.

6.2.3.2 Maintain the particular nineteenth-century character of the main commercial centres of Newtown and Tinakori Road in Thorndon by requiring that all new building work, alterations and additions to existing buildings are assessed against Design Guides.

METHODS

- Rules
- Design Guides (Newtown, Thorndon)

The shopping areas of Newtown and Tinakori Road in Thorndon have a nineteenth-century character which Council seeks to protect and enhance. The Newtown Suburban Centre Design Guide and the Thorndon Design Guide identify major elements that characterise the existing commercial developments. It is Council's desire to see that these elements are reflected when development is undertaken. New buildings will not have to duplicate nineteenth-century building forms.

The environmental result will be the maintenance and enhancement of the character of the Newtown and Tinakori Road shopping centres.

6.2.3.3 Ensure that any new development at Shelly Bay generally reflects the quality and character of the area and has regard to the site's special coastal location.

METHODS

- Rules
- Design Guide (Shelly Bay)

Shelly Bay is a special Suburban Centre site covering the former military base. Development on the site is characterised by a collection of individual buildings of one or two storeys above ground level. It is council's intention that new building development at Shelly Bay should reflect the character of established development on both sides of the main road through the site, and provide for a pedestrian promenade along the water's edge.

The environmental result will be the development of Shelly Bay in a manner that reflects the sensitive nature of the site between the sea and the open space of the Miramar headland.

6.2.3.3A Provide for the development and site rehabilitation of the Kiwi Point Quarry to the extent specified in the Plan in a way that avoids, mitigates or remedies adverse effects.

METHODS

- Rules (including Appendices showing the extent of quarry areas)
- A quarry management plan

Kiwi Point Quarry is an established quarry, involving ongoing extraction, processing, cleanfilling and rehabilitation. As the continuing availability of aggregate and other quarry materials is economically important for the City and wider region, the Plan makes specific provision for the ongoing use and development of the quarry. For both the older and newer areas of the quarry, specific rules and a development plan are incorporated. These provisions provide for the avoidance or mitigation of adverse effects from the quarry activity and the long-term mitigation of effects on landscape and landform following quarrying. It is the Council's intention that cut faces should be designed to yield a relatively natural landform in the long term and that rehabilitation of cut faces should begin as early as practicable. The staging of quarry development, and the day to day management of quarry activities are further detailed and controlled through the application of a quarry management plan.

A quarry management plan shall be prepared and regularly updated, which sets out:

- intended staging of the excavation and cleanfilling activities
- the means of management of surface and groundwater
- management of on-site traffic
- provision for any onsite processing and temporary storage of quarry material
- any specific provisions relating to onsite management of noise, dust, vibration, visual impact, water quality
- a procedure for addressing any complaints
- objectives and principles for the rehabilitation of the site, including:
 - a timetable for the rehabilitation of prominent quarry faces
 - measures to create soil conditions which will support plant growth
 - measures to create a variety of site conditions to support a range of species
 - means of controlling runoff to avoid erosion
 - means of control of plant and animal pests
 - measures to avoid fire risks
 - means to assist native vegetation to regenerate on grazing land
 - rehabilitation which is compatible with Open Space strategy for adjacent areas of land
- management of buffer areas
- practices and methods that will be adopted to ensure that all permitted activity conditions applying to the activities will be met.

The quarry management plan will complement the other rules applying to the quarry activity and will provide additional management details. It will be reviewed at least every five years and any necessary adjustments will be made.

As progressive rehabilitation of the area is an important aspect of quarry management, the Quarry Management Plan includes rehabilitation provisions. As quarrying and cleanfilling activities are completed on the site, an implementation plan shall be prepared annually in accordance with the Quarry Management Plan.

The requirement that regular monitoring is undertaken and regular progress reports are completed and submitted to the Council is a key element. This requirement is included because successful rehabilitation of any disturbed area requires constant monitoring as site conditions vary considerably and evolve over time. Regular observation and recording of results is an essential part of managing the process.

A vegetated buffer area is included within the Suburban Centres Area as part of the development of the southern part of the quarry. At the northern end, the necessary buffer area is within the Open Space B Area.

It is important also that rehabilitation of the quarry area should recognise and in the longer term be able to be integrated as appropriate with the Open Space strategy developed by the Council for adjacent areas of land. Current Council policy is for the creation of further Green Belt areas on the steep hill sides of the Ngauranga Gorge and, for instance, it may be possible to allow continuation or linking of proposed walkways.

Overall, the environmental result will be the availability of quarry materials for the City and wider region in the short and medium term, and long-term achievement of well-vegetated quarry faces with the appearance of natural landforms which will be integrated with Council development of Open Space areas in this vicinity.

...

Chapter 7. Suburban Centre Rules

Guide to Rules

NOTE: The following table is intended as a guide only and does not form part of the District Plan. Refer to specified rules for detailed requirements.

P refers to Permitted Activities, C to Controlled Activities, DR to Discretionary Activities (Restricted) and DU to Discretionary Activities (Unrestricted).

Uses/Activities	Rule	P	C	DR	DU
Any activity (with some exceptions) subject to conditions	7.1.1	●			
Activities not complying with conditions	7.3.1			●	
Any activity or building involving the provision of more than 120 parking spaces	7.3.4			●	
Quarrying and cleanfilling - Kiwi Point Quarry or Kiwi Point Quarry Extension Area (Ngauranga Gorge) subject to conditions	7.1.3	●			
Quarrying and cleanfilling - Kiwi Point Quarry or Kiwi Point Quarry Extension Area (Ngauranga Gorge) not complying with conditions	7.3.10			●	
Critical facilities in a Hazard Area	7.3.6			●	
Any use of a contaminated site	7.4.3				●
Any activity listed in Section 3.5.2.2 (hazardous substances)	7.2.4		●		
Earthworks Tawa Hazard (Flooding) Area	7.2.5		●		
Earthworks Tawa Hazard (Flooding) Area	7.3.7			●	
Earthworks Takapu Hazard (Flooding) Area	7.3.8			●	
Earthworks Takapu Hazard (Flooding) Tawa Hazard (Flooding) Area	7.4.7				●
Helicopter landing areas	7.4.6				●
Buildings	Rule	P	C	DR	DU
Construction of, alteration of and addition to buildings and structures subject to conditions	7.1.2	●			
Construction of three or more residential dwellings at ground level	7.3.5			●	
Construction of new residential buildings within the airnoise boundary	7.4.4				●
Construction of, alteration of and addition to buildings and structures in the Thorndon Character Area or the Newtown Suburban Centre Character Area	7.2.1		●		
Construction, alteration of, and addition to buildings, including accessory buildings in the Tawa Hazard (Flooding) Area	7.2.5		●		
Construction, alteration of, and addition to buildings, including accessory buildings in the Tawa Hazard (Flooding) Area	7.3.7			●	
Construction, alteration of, and addition to buildings, including accessory buildings in the Takapua Hazard (Flooding) Area	7.3.8			●	
Construction, alteration and addition to buildings or structures in the Hazard (Fault Line) Area	7.3.9			●	
Construction, alteration of, and addition to buildings, including accessory buildings, less than 5 metres from Porirua Stream within the Tawa Hazard (Flooding) Area, and the Takapua Stream within the Takapua Hazard (Flooding) Area	7.4.7				●
Construction, alteration of and addition to buildings and structures not complying with conditions or standards and terms	7.3.2			●	

Pedestrian bridges, buildings and structures over roads	7.4.1				●
Demolition or removal of pre-1930s buildings in the Thorndon Character Area	7.4.2				●
Construction of, alteration of, and addition to buildings and structures in the Shelly Bay Suburban Centre subject to conditions	7.2.2		●		
Construction of, alteration of, and addition to buildings and structures in the Shelly Bay Suburban Centre that do not meet conditions	7.3.3			●	
Section 1.01 Subdivision	Rule	P	C	DR	DU
Subdivision except for company lease, cross lease and unit title subdivision, subject to conditions	7.1.4	●			
Company lease, cross lease and unit title subdivision	7.2.3		●		
Subdivision not being Permitted or Controlled Activities	7.4.5				●
Section 1.02 Heritage	Rule	P	C	DR	DU
Activities affecting heritage items	21.0	●	●		●
Section 1.03 Utilities	Rule	P	C	DR	DU
Utilities	23.0	●	●	●	●

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2	Vehicle Parking Standards
3	Loading Standards
4	Site Access for Vehicles
5	Kiwi Point Quarry (Ngauranga Gorge)
5A	Kiwi Point Quarry Extension Area (Ngauranga Gorge)
6	Shelley Bay Suburban Centre – Boundary Location
7	The Area in Grenada situated between the Northern (Mid Grenada) Landfill and the Motorway (Lincolnshire Farm)

7. SUBURBAN CENTRE RULES

7.1 Permitted Activities

The following activities are permitted in the Suburban Centres provided that they comply with any specified conditions and the payment of any financial contribution (refer to rule 3.4):

7.1.1 Any activity, except for:

- those specified as **Controlled Activities, Discretionary Activities (Restricted) or Discretionary Activities (Unrestricted)**
- **new residential activities, within the airnoise boundary depicted on Map 35 (refer to rule 7.4.4)**
- **those activities listed under the Third Schedule to the Health Act 1956**
- **helicopter landing areas**
- **the total or partial demolition, destruction or removal of any building constructed prior to 1930 in the Thorndon Character Area**
- **cleanfills greater than 100m³ [, except as provided for in rule 7.1.3, ~~A in part of the Kiwi Point Extension Quarry~~ Area in Ngauranga Gorge.]**
- **landfills**
- **[quarrying, other than that provided for in Ngauranga Gorge under rules 7.1.3 and ~~7.1.3A.~~**
- **any activity in the ~~area defined as the Kiwi Point Quarry Extension Area~~ southern part of the Kiwi Point Quarry (defined as the area south of the access point from State Highway One) in Ngauranga Gorge, other than that provided for in rule 7.1.3A.]**

Refer to District Plan Maps 17 and 18

is a Permitted Activity provided that it complies with the following conditions:

...

NOTE – for the sake of this plan change, existing Rules 7.1.3 and 7.1.3A are to be deleted and replaced with the following Rule 7.1.3

7.1.3 Quarrying and clean filling on part Lot 1, and part Lot 2 DP 72995, part Lot 4, part Lot 5 and part Lot 6 DP 72996, part Lot 1 DP 34015, part Lot 1 DP 65030 and part Lot 2 DP 91179 Ngauranga Gorge (known as Kiwi Point Quarry) is a Permitted Activity provided that it complies with the following conditions:

7.1.3.1 Any relevant provisions of rules 7.1.1 and 7.1.2 except that rule 7.1.1.6.2 does not apply to the temporary stockpiling or storage of quarried rock material.

7.1.3.2 Dust

7.1.3.2.1 Dust control measures shall be undertaken to avoid creating a dust nuisance beyond the Quarry Boundary.

7.1.3.3 Quarry activities

7.1.3.3.1 Quarry activities shall be restricted to the area within the Suburban Centre Area north of the abattoir and south of the access road, excluding the area shown as a buffer area, as identified on the plan included as Appendix 5.

7.1.3.3.2 Some blasting may be carried out as part of the normal quarrying operations. Blasting of faces for crushed rock production must take place between 10.00am and 2.00pm Monday to Friday only. ~~Other minor blasting and small shots fired for training purposes may be carried out at any time between 9am and 4pm Monday to Friday inclusive.~~

7.1.3.3.3 In all cases, residents of Tarawera Road, Plumer Street, 113, 130, 170 and 175 Fraser Avenue, and 146 Burma Road ~~the following property owners~~ must be notified by mail no less than one week in advance of blasting. ~~faces for crushed rock production, or through an agreed system between the quarry operator and the owners of the properties listed as follows:~~

- ~~• 9 and 14 Plumer Street, Johnsonville~~
- ~~• 73, 75, 84, and 86 Tarawera Road, Johnsonville~~
- ~~• 113, 130, 170 and 175 Fraser Avenue, Johnsonville~~
- ~~• 146 Burma Road, Johnsonville~~

Blasting must be immediately preceded by a siren or hooter with a sound which distinguishes it from normal Police, Ambulance or Fire Service sirens.

7.1.3.3.4 The ~~maximum~~ finished slope of quarry faces ~~a batter (i.e between benched areas)~~ shall not exceed 55 degrees from the horizontal

7.1.3.3.5 The maximum height of ~~a finished~~ batters shall ~~not exceed~~ ~~be no more than~~ 15 metres.

7.1.3.3.6 A buffer area with a minimum width of 25 metres shall be maintained on the uphill boundary of the site as shown on Appendix 5. This area will be allowed to revegetate naturally except where there is a need for additional planting.

Note: At the north end of the quarry near Plumer Street and Tarawera Road, the buffer area is within the Open Space B Area as shown in Appendix 5 and is governed by the Open Space provisions.

7.1.3.3.7 A fence must be maintained adjacent to any properties in the Residential Area along the quarry boundary to a height of 1.2m.

7.1.3.3.8 Prior to commencement of operations in any area, a security fence must be installed and maintained along the outer edge of the buffer area.

7.1.3.3.9 No quarry activities shall be undertaken within the buffer area unless agreed by Council.

7.1.3.4 Cleanfill activities

7.1.3.4.1 Cleanfill activities shall be restricted to the area shown on the plan included as Appendix 5.

7.1.3.4.2 The cleanfill shall comply with the definition of cleanfill in Section 3 (Definitions) of this District Plan.

7.1.3.5 Location of quarry plant

The primary crusher may be moved as the quarry face recedes and new faces are worked. Any processing plant or buildings within the southern part of the quarry shall be relocatable.

7.1.3.6 Traffic movement

There shall be one entry point to the quarry, via Crossing Place 22 from State Highway One (also the main access to the adjacent Abattoir). This must be the sole means of entry and exit for quarry vehicles. This access must be maintained to the standard of local streets.

7.1.3.7 Rehabilitation and treatment of stripped areas

7.1.3.7.1 All land encompassed within the quarry boundary shall be progressively rehabilitated (except where used for other permitted or consented activities). Any planting will take place as soon as practicable following the completion of the quarry or cleanfill activity. Planting will be undertaken using indigenous species from local sources, except where exotic species are required to provide erosion control and/or temporary nurse cover for revegetation with indigenous species.

7.1.3.6.2 When the stripping of vegetation and overburden is undertaken to expose rock, dust control measures shall be undertaken to avoid creating a dust nuisance outside quarry boundaries.

7.1.3.7.2 Excluding the Abattoir area, areas shown on Appendix 5 which are not shown as areas for quarrying and/or cleanfilling shall be allowed to revegetate.

7.1.3.7.3 All exposed surfaces of fill shall be hydro-seeded, or any other approved method, immediately following completion of works as a dust and erosion control measure.

Kiwi Point Quarry is an established quarry activity which is being developed in accordance with the plan in Appendix 5. Rock extraction and other activities associated with the quarry, such as processing and aggregate storage, and restoration of the cut faces will continue. The specific rules that apply to the quarry area limit the effects of quarrying. The Quarry Management Plan will also ensure that any potential effects will be mitigated.

These provisions allow for the ongoing operation of the Kiwi Point Quarry to the extent shown in Appendix 5. As the potential visual and landscape effects of a quarry in this area have been in part mitigated by reducing the extent of hillside to be removed but allowing the quarry to excavate to below the level of the road, cleanfilling of part of the excavated areas, and site rehabilitation is also provided for.

As the long term future of the southern part of the Kiwi Point Quarry (i.e south of the access point on State Highway One) has not been determined, any other type of activity in this area will be a non-complying activity. At present the Council's open space strategy in Capital Spaces indicates that Open Space is a vital component of the future of the Ngauranga Gorge. It is important that any possible policy issues as to future uses of the southern part of the Kiwi Point Quarry once quarrying is completed are resolved by the Council and the community. Because of the long duration of the quarry activity, the plan leaves any decision on the future of the land to a plan review or future plan change.

...

NOTE – for the sake of this plan change, existing Rule 7.3.10 is to be deleted and replaced with the following Rule 7.3.10

7.3 Discretionary Activities (Restricted)

Section 7.3 describes which activities are Discretionary Activities (Restricted) in Suburban Centres. Consent may be refused or granted subject to conditions. Grounds for refusal and conditions will be restricted to the matters specified in rules 7.3.1 – 7.3.[10.]¹ The decision on whether or not a resource consent application will be notified will be made in accordance with the provisions on notification in the Act.

...

7.3.10 **Quarrying and cleanfilling activities in Ngauranga Gorge (Kiwi Point Quarry) that do not comply with one or more of the following conditions for Permitted Activities:**

7.3.10.1 **Matters in rules 7.1.3.1**

7.3.10.2 **Quarry activities**

7.3.10.3 **Cleanfill activities**

7.3.10.4 **Location of quarry plant**

7.3.10.5 **Traffic movement**

7.3.10.6 **Rehabilitation and treatment of stripped areas**

are Discretionary Activities (Restricted) in respect of the condition(s) not met.

Non-notification

The written approval of affected persons will not be necessary in respect of rules 7.3.10.1 – 7.3.10.6. Notice of applications need not be served on affected persons and applications need not be notified.

Standards and Terms

The standards and terms which apply in rules 7.3.1 and 7.3.2 shall apply to all applications under 7.3.10.1.

The duration of a consent granted for processing plant or buildings in the southern part under rule 7.3.10 shall not exceed 10 years.

Assessment Criteria

In determining whether to grant consent and what conditions, if any, to impose, Council will have regard to, but not be limited to, the following criteria:

7.3.10.7.1 Whether the activity is necessary to facilitate the effective and efficient use of the quarry.

7.3.10.7.2 The extent to which the proposal will result in adverse visual, amenity or safety and efficiency effects, including those effects on the State Highway, Fraser Avenue, Tyers Road, on nearby existing activities, and on occupants of nearby dwellings.

...

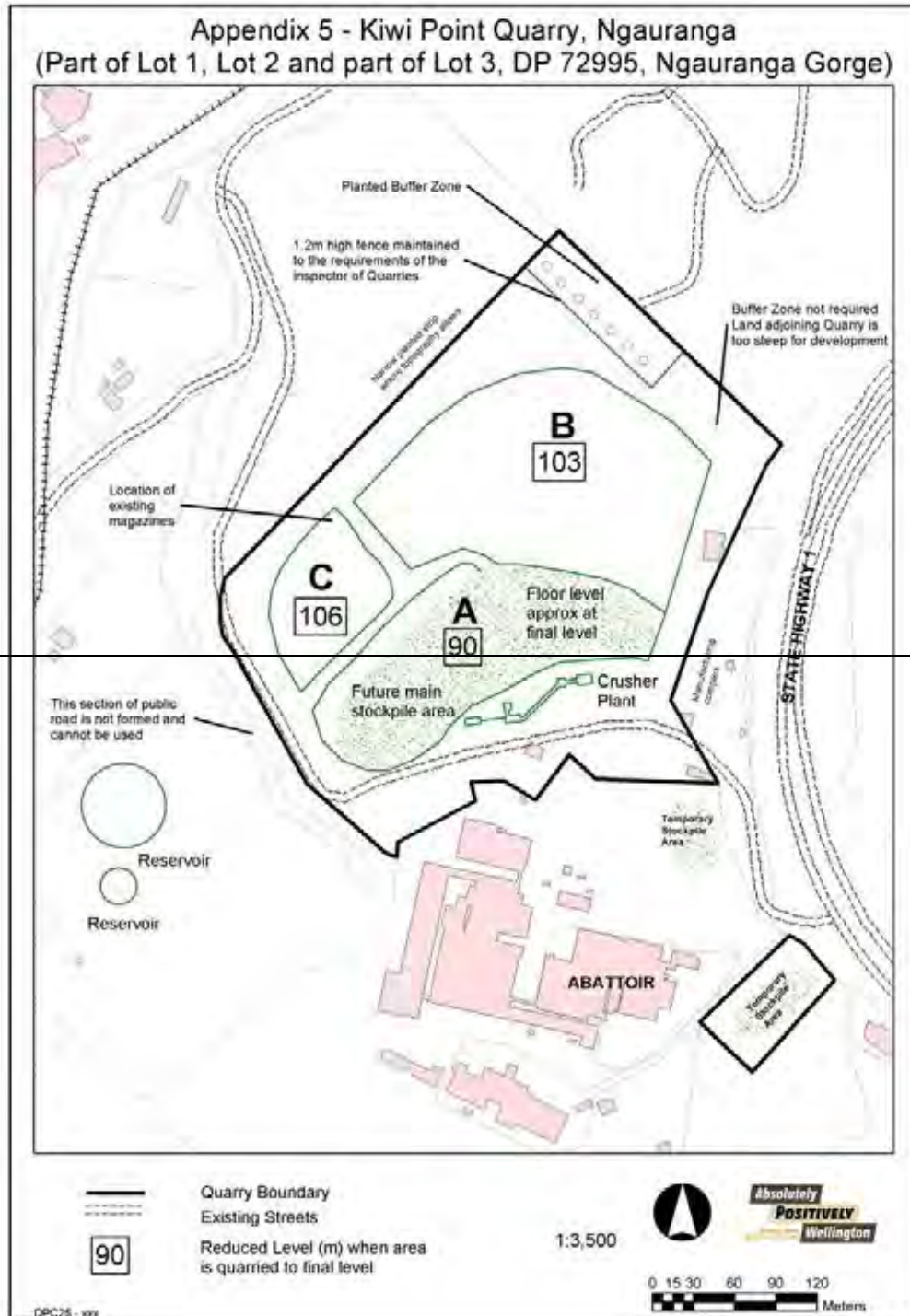
7.5 Non-Complying Activities

Activities that contravene a rule in the Plan, and which have not been provided for as Discretionary Activities (Restricted) or Discretionary Activities (Unrestricted) are Non-Complying Activities. Resource consents will be assessed in terms of section 105(2A)(b) of the Resource Management Act.

The decision on whether or not a resource consent application will be notified will be made in accordance with the provisions on notification in the Act.

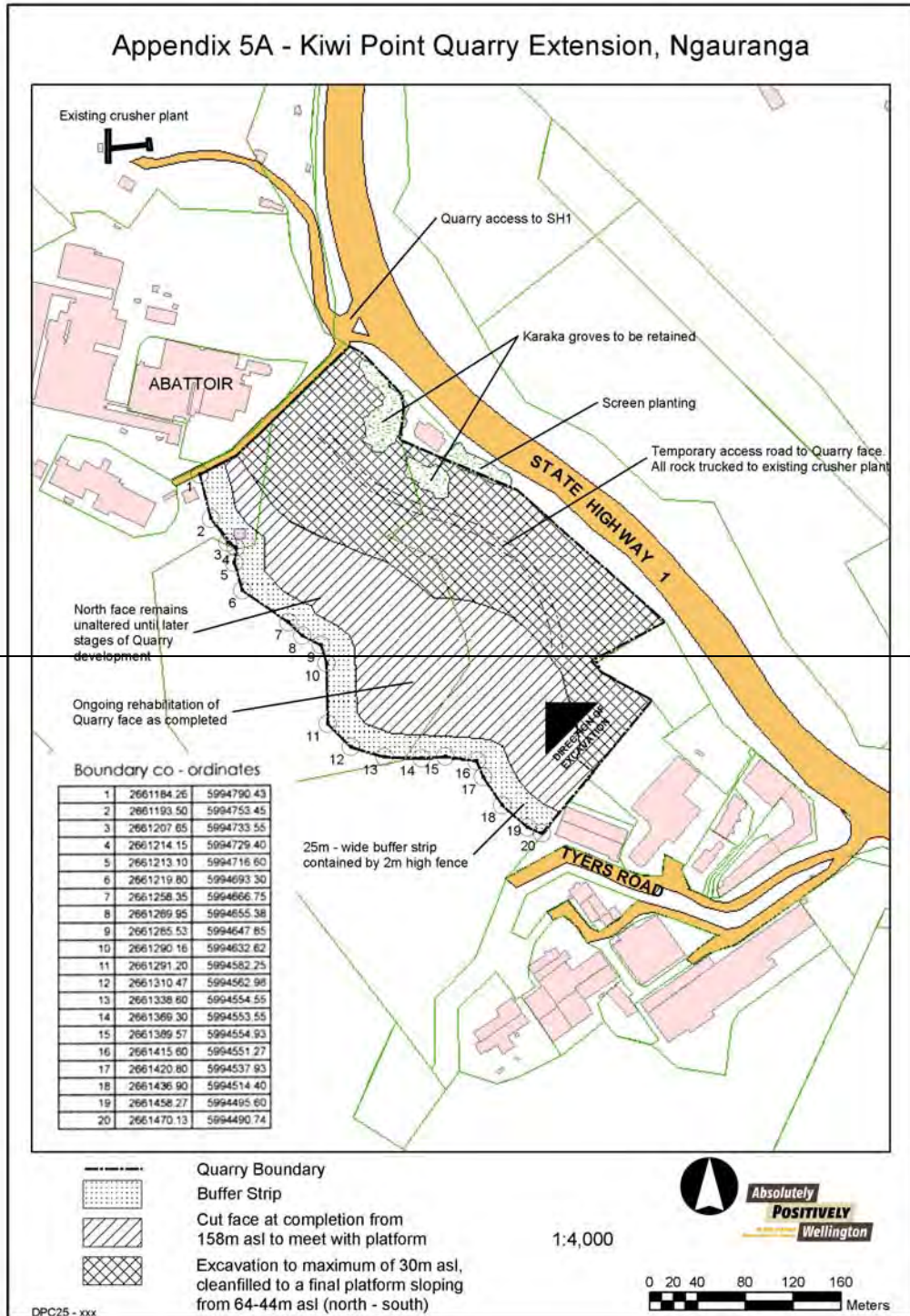
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Appendix 5. ~~Kiwi Point Quarry (Part of Lot 1, Lot 2 and part of Lot 3, DP 72995, Ngauranga Gorge)~~

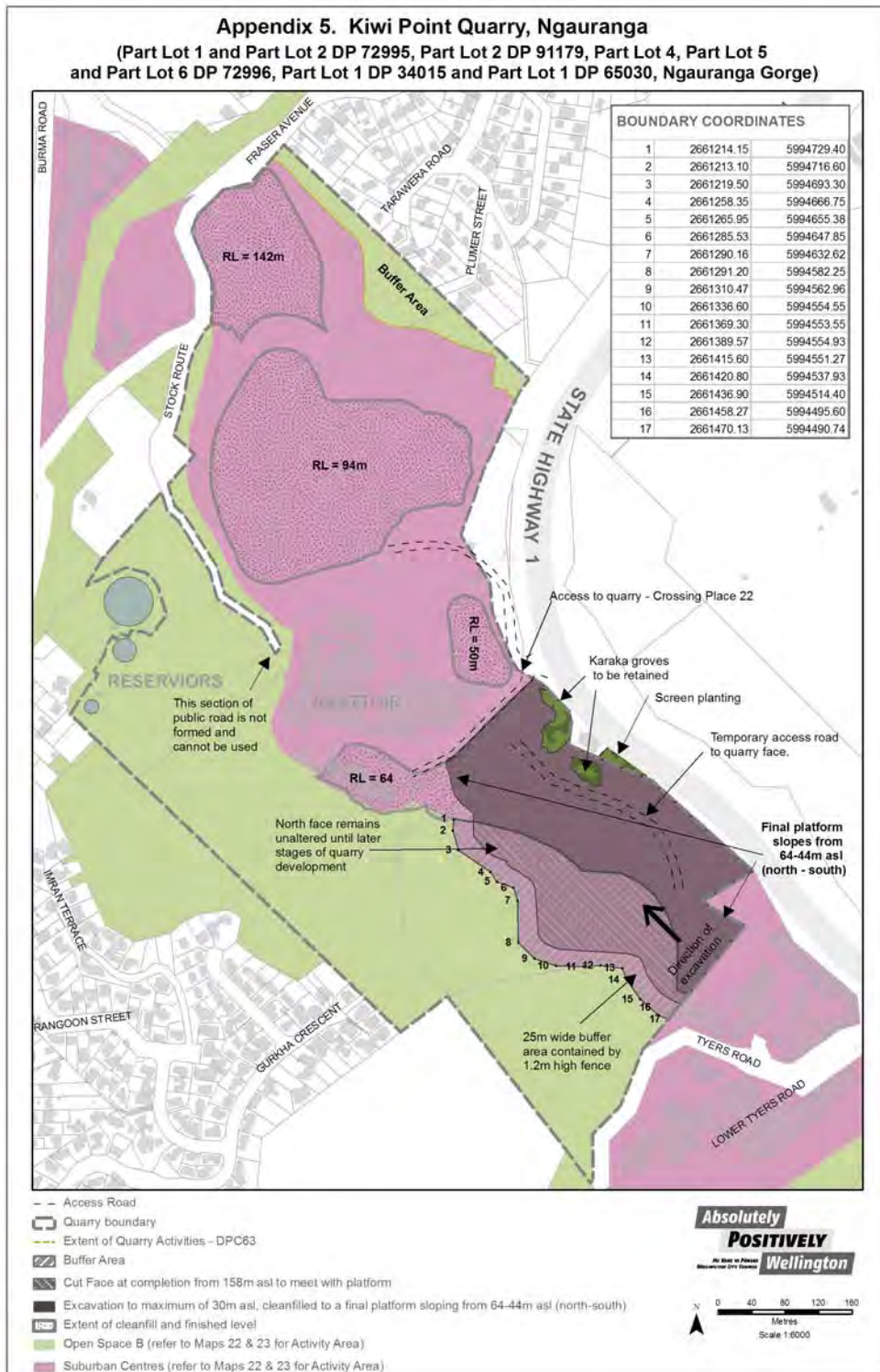


Map amended by District Plan Change No.25 – Kiwi Point Quarry Extension, Ngauranga Gorge (Operative 6 July 2006)

Appendix 5A. Kiwi Point Quarry Extension Area



Appendix 5. Kiwi Point Quarry



APPENDIX 2 QUARRY MANAGEMENT PLAN JUNE 2009

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APPENDIX 3 HEALTH AND SAFETY IN EMPLOYMENT (MINING ADMINISTRATION) REGULATIONS 1996 ERROR! BOOKMARK NOT DEFINED.

APPENDIX 4 RESOURCE CONSENTS ERROR! BOOKMARK NOT DEFINED.

APPENDIX 5 NORTH FACE STAGING PLANS ERROR! BOOKMARK NOT DEFINED.

APPENDIX 6 SOUTH FACING STAGING PLANS..... ERROR! BOOKMARK NOT DEFINED.

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EXECUTIVE SUMMARY

Wellington City Council's Kiwi Point Quarry (KPQ or Quarry) is a strategic Council asset and operates as a permitted activity under the Suburban Centre provisions of the Wellington District Plan with its core business being supplying a key infrastructural resource to the City and Region. The Quarry is located in the Ngauranga Gorge, adjacent to State Highway 1. The site is within an industrial area, which is located at the bottom of a basin surrounded by high ridges.

In December 2004, the Council approved a District Plan Change (Plan Change 25) for the expansion of the Quarry into a previously quarried area to the south of the original Quarry operation. A further plan change in December 2008 (Plan Change 64) has consolidated the provisions for the Quarry area as a whole and brings the whole of the Quarry operation under a single regime in the District Plan.

The Plan Changes ensure the Council and the City has continued access to a quality Quarry rock resource. Included in the Plan Changes are strict conditions to ensure adverse effects will be avoided, remedied or mitigated and sets out the requirements for a Quarry Management Plan (QMP) (this document) and how the site is to be progressively re-habilitated as quarrying operations proceed.

The Quarry currently produces around 350,000 tonnes, with production expected to increase to 500,000 tonnes per year over the term of this plan, of crushed greywacke comprising a full range of products from low grade to high quality sealing and asphalt aggregates for the Wellington roading and infrastructure market.

From 1997 to 2006, the Quarry operated under Council management through the Quarry Business Unit (QBU). Under Council management the Quarry achieved a high level of performance on matters such as health and safety, community relations, resident satisfaction, and environmental performance.

Since 2006 the Quarry has been operated by an independent contractor under a long term Quarry Development Services Contract.

The Quarry resource available at current extraction rates is estimated to provide for a further 50 years plus.

This document has been prepared in accordance with the requirements of the Wellington City District Plan.

This version of the plan is to be effective as from 01 July 2009 and supersedes all earlier versions.

1. INTRODUCTION

1.1 KIWI POINT QUARRY

The Kiwi Point Quarry (KPQ) operates as a permitted activity under the Suburban Centre provisions in the Wellington District Plan and is one of the City and region's key resources for development. Rock material from quarries is essential to providing and maintaining housing, building and infrastructure.

In December 2004 the Council approved a District Plan Change (Plan Change 25) to extend the Quarry into a formerly-worked area in Ngauranga Gorge to the south of the present Quarry. The development of this area is expected to provide a supply of rock material and aggregates for a further 50 years.

As part of the Plan Change 25 process, considerable investigations into all aspects of the future development of KPQ were undertaken so that the Council and community could be assured that the Quarry activity could be extended into the new area proposed without significant adverse effects. The Quarry extension area is to be used for the extraction of the rock resource, the temporary storage of material prior to transport to the crushing, screening and sale areas, and in the longer term for a temporary clean filling activity to restore the more deeply excavated areas back to a development level. A Quarry Management Plan (QMP) was identified as necessary as part of this process.

In December 2008, the Council undertook another plan change, Plan Change 64, to consolidate the provisions of the District Plan so that the whole of the quarry operated under one set of rules. Further modification of the quarry boundaries and rezoning of land allowed for the facilitation of the ongoing quarry operation. This QMP update reflects the amended provisions of the District Plan and has been prepared as part of the Plan Change 64 process.

This version of the QMP is to be effective as from 01 July 2009, and supersedes all earlier QMP versions from that date.

1.2 SITE LOCATION

KPQ is located in the Ngauranga Gorge to the west of State Highway One, prior to the Newlands off-ramp at or about map reference NZMS 260: R27; 611.952. Figure 1 shows the general location of KPQ.

1.3 LEGAL DESCRIPTION

The legal descriptions of the land are Lot 1, and Lot 2 DP 72995, Lot 2 DP 91179, Lot 4, Lot 5 and Lot 6 DP72996, Lot 1 DP34015 and Sec1 SO36728 Ngauranga Gorge. Wellington City Council owns the Quarry land as well as surrounding land occupied by Taylor Preston Limited, Allied Concrete and Downer EDI Works. Please refer to Figure 1.

1.4 QUARRY AREA ACTIVITIES

Not all areas of the site will be subject to quarry activities. The areas subject to quarrying and therefore this Management Plan are discussed in section 5 and depicted in Appendices 4 and 5.

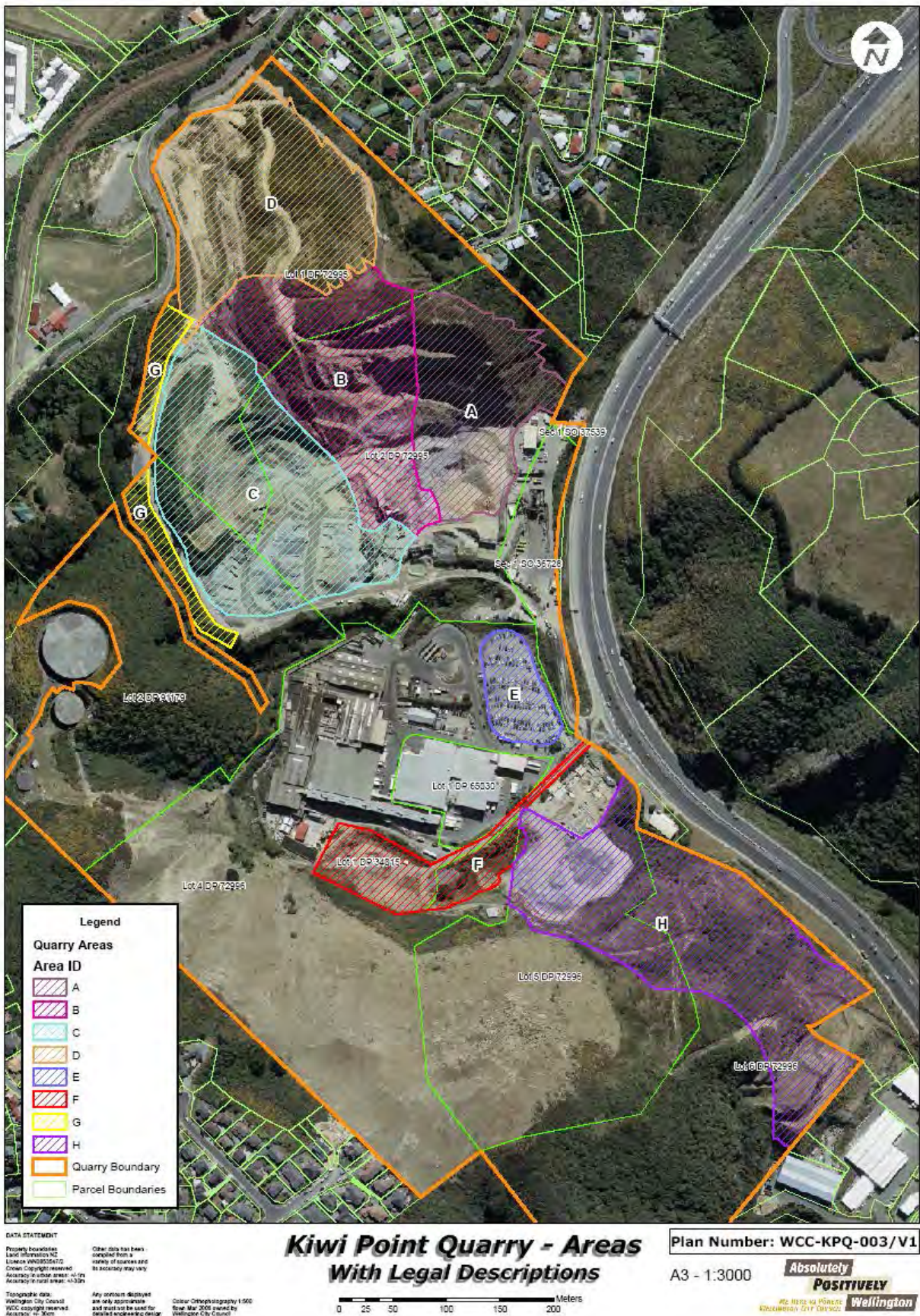


Figure 1

1.5 LAND USE ZONING

KPQ is predominantly zoned as Suburban Centre with some areas zoned Open Space B. The surrounding land is zoned Open Space B. Rule 7.1.3 of the Wellington District Plan allows for quarrying and cleanfilling as permitted activity within specified parts of the KPQ area, subject to conditions. The full wording of the relevant rules is included in Appendix 1.

Policy 6.2.3.3A of the District Plan provides for the development and site rehabilitation of the Quarry. A method to achieve this policy is a requirement for a Quarry Management Plan to be developed and for the operation of the Quarry to be in accordance with that Plan. The Method states:

A QMP shall be prepared and regularly updated, which sets out:

- *intended staging of the excavation and cleanfilling activities*
- *the means of management of surface and groundwater*
- *management of on-site traffic*
- *provision for any onsite processing and temporary storage of quarry material*
- *any specific provisions relating to onsite management of noise, dust, vibration, visual impact, water quality*
- *a procedure for addressing any complaints*
- *objectives and principles for the rehabilitation of the site, including:*
 - *a timetable for the rehabilitation of prominent quarry faces*
 - *measures to create soil conditions which will support plant growth*
 - *measures to create a variety of site conditions to support a range of species*
 - *means of controlling runoff to avoid erosion*
 - *means of control of plant and animal pests*
 - *measures to avoid fire risks*
 - *means to assist native vegetation to regenerate on grazing land*
 - *rehabilitation which is compatible with Open Space strategy for adjacent areas of land*
- *management of buffer areas*
- *practices and methods that will be adopted to ensure that all permitted activity conditions applying to the activities will be met.*

The QMP will complement the other rules applying to the quarry activity and will provide additional management details. It will be reviewed at least every five years and any necessary adjustments will be made.

As progressive rehabilitation of the area is an important aspect of quarry management, the QMP includes rehabilitation provisions. As quarrying and cleanfilling activities are completed on the site, an implementation plan shall be prepared annually in accordance with the QMP.

The requirement that regular monitoring is undertaken and regular progress reports are completed and submitted to the Council is a key element. This requirement is included because successful rehabilitation of any disturbed area requires constant monitoring as site conditions vary considerably and evolve over time. Regular observation and recording of results is an essential part of managing the process.

A vegetated buffer area is included within the Suburban Centres Area as part of the development of the southern part of the Quarry. At the northern end, the necessary buffer area is within the Open Space B Area.

It is important also that rehabilitation of the Quarry area should recognise and in the longer term be able to be integrated as appropriate with the Open Space strategy developed by the Council for adjacent areas of land. Current Council policy is for the creation of further Green

Belt areas on the steep hill sides of the Ngauranga Gorge and, for instance, it may be possible to allow continuation or linking of proposed walkways.

Overall, the environmental result will be the availability of quarry materials for the City and wider region in the short and medium term, and long-term achievement of well-vegetated quarry faces with the appearance of a natural landform which will be integrated with Council development of Open Space areas in this vicinity.

This QMP has been prepared in accordance with these requirements of the Wellington City District Plan.

1.6 PURPOSE OF THE QUARRY MANAGEMENT PLAN

The purpose of this QMP is to provide an overall framework that outlines how the Council will operate, manage and develop all the land area at Kiwi Point which is owned by the Wellington City Council for the purpose of quarrying in order to:

- Ensure compliance with the specific planning provisions contained within the Wellington City District Plan; and
- Guide management of the KPQ and rehabilitate quarried areas in accordance with the District Plan requirements.

1.7 SCOPE OF THE PLAN

The scope of this plan includes:

All the land within Ngauranga Gorge related to Quarrying and associated rehabilitation as indicated on the Plan in Figure 1:

- The carrying out of the Quarry operations in a prescribed manner
- The items and detail necessary to achieve the District Plan objectives. Cross-links to other management documents are provided when these deal with an issue in more detail.

The management plan is intended to be a practical working document to:

- ✓ *Ensure that the KPQ site is operated in a safe manner, and that environmental effects are properly controlled.*

1.8 CONSULTATION TO DATE

The Council undertook consultation on the KPQ during 2003 and 2004 as part of Plan Change 25.

The consultation involved the general public, neighbours and stakeholders such as community groups through media releases, public notices, and the Council's web site. Substantial information was made available through these mechanisms, and also through a brochure and an information pack sent out to stakeholders, potentially affected residents and any others who requested it.

Consultation was also undertaken with the general public, neighbours and stakeholders as part of Plan Change 64. Consultation related to the proposed amendment of the provisions of Chapters 6 and 7 of the Suburban Centres chapter of the District Plan, the modification of the quarry boundaries, and the rezoning of land.

Ongoing consultation will be conducted as and when it becomes necessary. A community liaison group is currently not considered necessary due to the absence of issues associated with the Quarry activities in relation to the surrounding residents.

1.9 CHANGES TO QUARRY MANAGEMENT PLAN – MARCH 2006

The QMP is intended to be a practical working document to:

- ✓ *Ensure that the KPQ site is operated in a safe manner, and that environmental effects are properly controlled. KPQ is currently operated in accordance with the QMP adopted in March 2006.*

The June 2009 QMP (this document) will become effective from 01 July 2009. This covers all the land area at Kiwi Point which is owned by the Wellington City Council for the purpose of Quarrying and will replace the March 2006 Quarry Management Plan.

The key change provided for in this revised plan is the adopting of a single management plan for the whole of the KPQ area as a single entity.

1.10 RELATIONSHIP WITH OTHER COUNCIL DOCUMENTS

Document	Purpose
Wellington City District Plan	<ul style="list-style-type: none"> ▪ Imposes conditions under which the Quarry must operate
Stormwater Management Plan - July 2005	<ul style="list-style-type: none"> ▪ Demonstrates how Quarry stormwater is managed on site
Wellington City Council Kiwi Point Quarry Design – February 2006	<ul style="list-style-type: none"> ▪ Design of Northern face
Kiwi Point Quarry Development Service contract between the Council and the Quarry Operator	<ul style="list-style-type: none"> ▪ Contract terms and conditions (Confidential and commercially sensitive)
Quarry Quality & Procedures Manual (This manual is owned by the Quarry operator and it is a requirement of the Council)	<ul style="list-style-type: none"> ▪ Overall operational management consistent with the Quarry's Quality Management System (ISO 9001:2008 accredited) ▪ Provides the detailed operational procedures for the Quarry including extraction and environmental management

1.11 FACILITIES NOT INCLUDED IN PLAN

The following facilities are hosted at the KPQ site on Council leased land and are not subject to this QMP:

- Downers EDi Works – Asphalt Plant
- Taylor Preston's – Meat Processing Plant
- Allied Concrete – Concrete Plant

1.12 PLAN REVIEW

This QMP will be reviewed every five years as required by the District Plan and Quarry license provisions. The review will include (without limitation):

- (1) Updates to satisfy the District Plan requirements;
- (2) Resource extraction rates in relation to Site Development projections;
- (3) Site Development issues that may have arisen;
- (4) Changes in Best Industry Practice or relevant Standards and Codes of Practice;
- (5) Quarry Health & Safety;
- (6) Quarry Operations Complaints;

- (7) Any other relevant matters in relation to the KPQ site and the carrying out of quarrying and cleanfilling operations;
- (8) Updates to matters covered in the QMP which are no longer required or changed.

The results of each review will be reported back to the Council.

2. LEGISLATIVE INFLUENCES

2.1 LEGISLATIVE INFLUENCES

The following external documents, studies and legislative changes have been identified as having an influence on the development of the QMP.

- Health & Safety in Employment (Mining Administration) Regulations 1996;
- Section 4: Meaning of “Quarry”
- Section 7: Manager and Acting Manager – (1)
- Section 8: Manager Required to hold Certificate – (1)
- Section 13: Certificate of Competence of Manager of Quarry
- Section 32: Offences
- Hazardous Substances & New Organisms Act (HAZNO) 1996 and related regulations (and subsequent reviews)
- Resource Management Act 1991

2.2 NON STATUTORY DOCUMENTS

- A Guide to the Management of Cleanfills
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews)
- Guidelines for management of hazards associated with crushing and screening plants – March 2008 (and subsequent reviews)
- Guidelines for the control of hazards in stockpiles and dumps – March 2008 (and subsequent reviews)
- Guidelines for the control of dust and associated hazards in surface Mines and Quarries – March 2008 (and subsequent reviews)
- Guidelines for the safe use, storage, and disposal of explosives in surface Mines and Quarries – March 2008 (and subsequent reviews)
- Guidelines for the safe operations of mobile plant – March 2008 (and subsequent reviews)
- Guidelines for emergency preparedness in Mines and Quarries – March 2008 (and subsequent reviews)
- Guidelines for noise control in Mines, Quarries and Tunnels – March 2008 (and subsequent reviews)
- Guidelines for isolation and lockout within Mines, Quarries and Tunnels – March 2008 (and subsequent reviews)

3. QUARRY ASSET

3.1 QUARRY ASSET DESCRIPTION

The KPQ was established in the 1930s and has always been owned by the Wellington City Council. Originally, the Council simply utilised the Quarry for its own roading needs. However, since 1995 Quarry products have been available to the public.

The site is within an industrial area, which is located at the bottom of a basin surrounded by high ridges. Residential areas are situated at the top of these ridges.

The current available rock resource available for extraction on the current northern workings is estimated at 8mT with the volume of rock available on the southern resource estimated to be 10mT. Both volumes are based on pit Quarry operations.

Quarrying of all areas within the KPQ site will release both valuable commercial site opportunities and space for cleanfill activities.

The KPQ site contains the following infrastructure assets owned by the Council:

- 0.5 km of roads (sealed)
- 3 km of roads (unsealed)
- 1 office administration building
- 1 staff facility
- 1 workshop building

In addition to these infrastructure assets, the quarry operator owns and operates a significant plant on site.

3.2 DEVELOPMENT

To maximise efficiency of Quarry operations, site work to be completed will include filling in the current culvert flume and stream area at least to a point where a suitably graded road for truck access to the nominated Quarry stockpile areas can be achieved and will also include:

- the culverting of the Ngauranga Stream within the Quarry and abattoir boundaries.
- infilling the upper gully area from Fraser Avenue, down and through the Quarry operation area. This infilling will effectively provide further industrial land. The stream has been piped from Fraser Avenue to the existing Quarry road and significantly infilled. This upper filled area (area D) is expected to release approximately 19,500 sq. metres.

4. QUARRY OPERATIONS

4.1 GENERAL

Current annual production from the Quarry is about 350,000 tonnes of material per annum. Of this around 150,000 is high grade stone used in infrastructural projects such as roading and building.

4.1.1 HOURS OF OPERATION

KPQ operating hours are:

- Monday to Saturday 0600 to 2200; and
- Sunday 0800 to 2200;

except for administration activities, the maintenance of plant and machinery, and the loading, unloading and movement of vehicles all of which may occur at any time.

4.2 QUARRY OPERATIONS – EXTRACTION AND PROCESSING

4.2.1 OVERBURDEN STRIPPING

The Quarry operator or his/her delegated representative shall ensure that soil stripping within the Quarry is a controlled activity and that best practice guidelines are referenced.

4.2.2 ROCK EXCAVATIONS AND TIP AREAS

The Quarry operator or his/her delegated representative shall ensure that excavations and tip areas are designed, constructed, operated and maintained so as to ensure that -

- (1) instability; or
- (2) movement,

which is likely to give rise to a risk to the Health and Safety of any person is avoided.

4.2.3 EXTRACTION

Extraction of rock from the Quarry is carried out by firstly drilling and blasting (where required) and then removal by excavators. Extracted rock is then delivered to the crushing plant(s) by loaders or dumpers depending on requirements of the crushing plant(s).

It is the duty of the Quarry operator or his/her delegated representative to develop and ensure compliance with suitable and sufficient rules covering excavation to ensure the safe construction and operation of excavations. Such rules shall in particular specify the following matters -

- (1) the manner in which such activities are to be carried out;
- (2) the nature and extent of supervision of such activities; and
- (3) the precautions to be taken during such activities to properly avoid, mitigate or minimise risks to the health and safety of any person and the safety and stability of the excavation.

Reference

- KPQ ISO 9001:2008 Quality & Procedures Manual, QP 3 Extraction and Processing Procedure and 7.5 Responsibility, Authority and Communication
- KPQ Health and Safety Plan, Section 9.1 Hazard Identification
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews)

4.2.4 APPRAISAL OF EXCAVATION

The Quarry operator or his/her delegated representative shall ensure that a suitable and sufficient appraisal of all proposed or existing excavations at the Quarry is undertaken by a competent person in order to determine whether any such excavation is a significant hazard.

- (1) The Quarry operator or his/her delegated representative shall ensure that -
 - (a) any significant findings made during an appraisal, any conclusions reached and the reasons for those conclusions are recorded by the competent person undertaking the appraisal;
 - (b) the competent person signs and dates any such record; and
 - (c) the record made in accordance with sub-paragraph (a) is made available to each employer of persons at work at the Quarry and to all persons at work at the Quarry.
- (2) Where the conclusion reached by the competent person following an appraisal is that the excavation presents no significant hazard then further such appraisals shall be carried out by a competent person -
 - (a) at appropriate intervals;
 - (b) whenever there is any reason to suspect that there has been or will be a significant change to -
 - (i) the matters to which the appraisal relates, or
 - (ii) any neighbouring land which may be affected by movement by or instability of the excavation to which the appraisal relates; and
 - (c) whenever there is any reason to doubt the validity of the conclusion of the current appraisal.
- (3) Where the conclusion reached by the competent person following an appraisal is that the excavation represents a significant hazard, the Quarry operator or his/her delegated representative shall close the excavations down as soon as is reasonably practicable pending an assessment of the site and or a geotechnical assessment

The Quarry operator or his/her delegated representative shall ensure that -

- (a) any significant findings made during an assessment or geotechnical assessment are recorded; and
- (b) any remedial works identified during the assessment are undertaken by the date specified.

Reference

- Quarry operator's Log Book
- KPQ ISO 9001:2008 Quality & Procedure Manual, QF34, Site check sheet
- KPQ Health and Safety Plan, and section 9.1 Hazard Identification

4.2.5 DUTIES IN RELATION TO A SIGNIFICANT HAZARD – EXCAVATIONS

Where the conclusion recorded following an assessment of a proposed or existing excavation is that the excavation represents a significant hazard by way of instability or movement, the Quarry operator or his/her delegated representative shall ensure, that a geotechnical assessment of the excavation is carried out as soon as is reasonably practicable.

Reference:

- KPQ ISO 9001:2008 Quality & Procedures Manual, QP 3.3 Extraction and 7.5 Responsibility, Authority and Communication
- KPQ Health & Safety Plan, section 9.1 Hazard Identification
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008(and subsequent reviews)
- Health & Safety in Employment Regulations 1992
- Health and Safety in Employment (Mining Administration) Regulations 1996

4.3 ROCK PROCESSING (CRUSHING, SCREENING AND WASHING)

4.3.1 GENERAL

This section describes the current mode and scope of the quarrying operations carried out at the Quarry. Quarry operations will vary over time in accordance with operational requirements and changes in quarrying technology and methods.

4.3.2 PROCESS

The process begins with the loosening of rock by blasting and excavation on the Quarry face. This material is then transferred to the crushing plant by front-end loader or dump truck.

4.3.3 PRIMARY CRUSHING

Aggregate transferred to the primary feed bin passes over a primary scalping screen where oversize material is processed through a 36 x 24 Jaw Crusher. Undersized aggregate from the scalping screen bypasses the primary crusher and is transferred to produce by-products. The use of this screen reduces the overall load on the primary crusher. Aggregate is then passed to the main feed belt where it is transferred into the secondary feed bin.

4.3.4 SECONDARY CRUSHING

Aggregate from the secondary feed bin passes over a scalping screen, with the undersized bypassing the crusher, again reducing the load on the secondary crusher. The remaining aggregate passes through a four-ft El Jay cone crusher. The aggregate is then conveyed to a 3600x1200 triple deck screen for initial separation. Aggregate greater than 40 mm is returned to the secondary crusher for further reduction. Aggregate less than 40 mm and greater than 20 mm is split out and sent to a 3ft tertiary crusher. Aggregate less than 5 mm is passed onto a conveyor belt for removal to the appropriate sand stockpile or washing.

Product between the 5 mm and 20 mm range is transferred to a Barmac 9600 duopactor for shaping.

4.3.5 TERTIARY CRUSHING

Aggregate passed into the tertiary section is processed through a 3 ft Symonds cone crusher to reduce before being sent over a 3600x1200 double deck screen. Here the top size is sent back to the Symonds for further reduction with all products passing -20mm sent to the Barmac and product less than 5 mm passed onto a conveyor belt for removal to the appropriate sand stockpile or washing.

Following shaping aggregate is screened over a 3600x1500 triple deck screen to separate aggregate less than 20 mm but greater than 5 mm to the washing plant for final screening and product less than 5 mm is passed onto a conveyor belt for removal to the appropriate sand stockpile or washing.

4.3.6 AGGREGATE WASHING

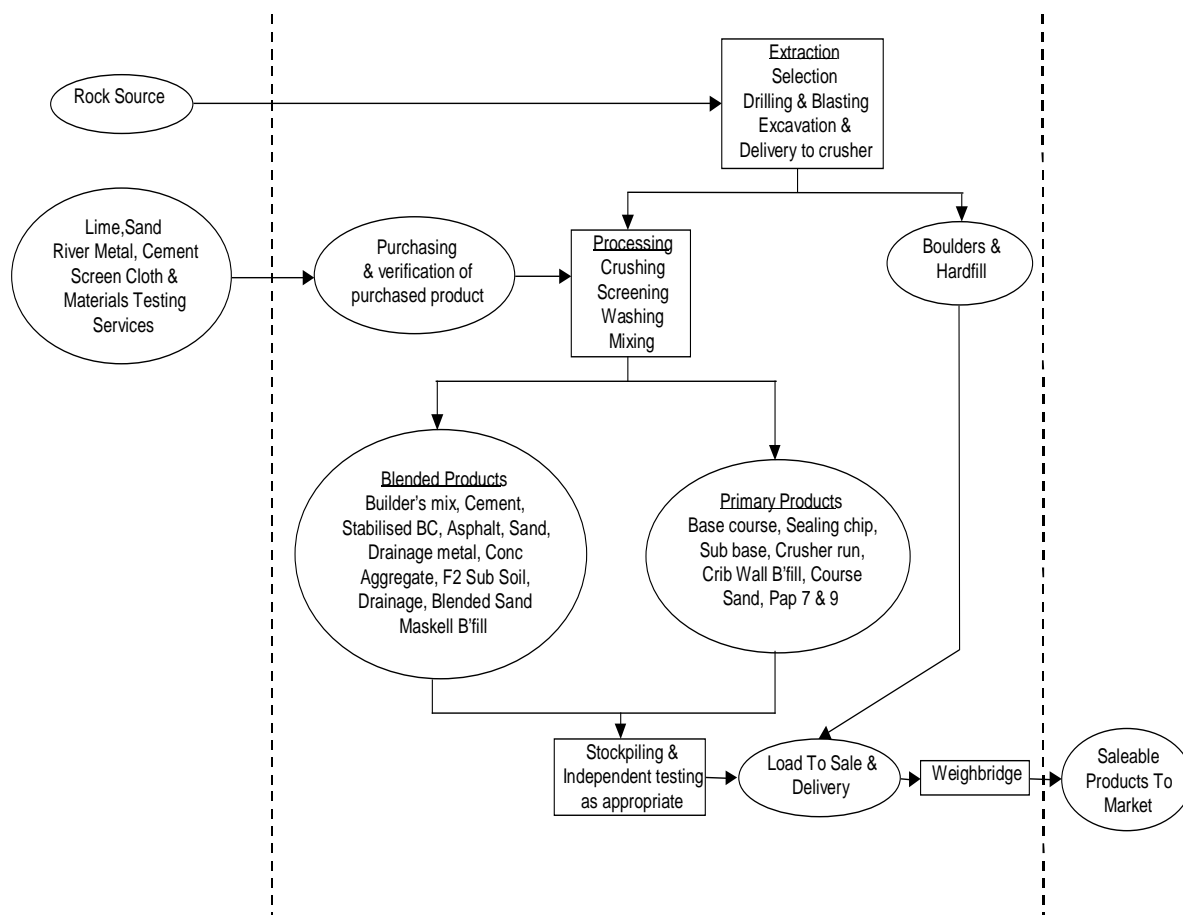
Aggregate feed to the wash plant is primary washed over a 3600x1500 triple deck screen where aggregate less than 6 mm but greater than 4.75 mm is sent to the Grade six hopper and product

less than 4.75 mm (sand) is sent to the sand screw and cyclone for final processing and dewatering.

Remaining aggregate is then sent by conveyor to a 3600x1200 double deck chip screen where product less than 20 mm and greater than 13 mm is separated and final screened to remove product to the Grade 4 & 5 hoppers. Remaining product is then sent by conveyor to a 3600x1200 double deck screen for final screening and slipping into Grade 3 & 2 feed hoppers.

All products having been processed are then transported to specified storage areas for stockpiling.

4.3.7 PROCESS FLOW



Reference:

- KPQ ISO 9001:2008 Quality & Procedures Manual, 3.4 Crushing Plant Operation and 7.5 Responsibility, Authority & Communication
- KPQ Health & Safety Plan and Section 9.1 Hazard Identification
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews)
- Guidelines for management of hazards associated with crushing and screening plant – March 2008 (and subsequent reviews)
- Guidelines for the control of dust and associated hazards in surface Mines and Quarries – March 2008 (and subsequent reviews)

- Guidelines for noise control in Mines, Quarries and tunnels – March 2008 (and subsequent reviews)

4.4 CLEANFILLING

4.4.1 CLEANFILLING SITES

The Quarry operator or his/her delegated representative shall ensure that a suitable and sufficient appraisal of all proposed or existing cleanfilling sites at the Quarry is undertaken by a competent person in order to determine whether any such cleanfilling site is a significant hazard.

- (1) The Quarry operator or his/her delegated representative shall ensure that -
 - (a) any significant findings made during an appraisal, any conclusions and the reasons for those conclusions are recorded by the competent person undertaking the appraisal;
 - (b) the competent person signs and dates any such record; and
 - (c) the record made in accordance with sub-paragraph (a) is made available to each employer of persons at work at the Quarry and to all persons at work at the Quarry.
- (2) Where the conclusion reached by the competent person following an appraisal is that the cleanfill site presents no significant hazard, then further such appraisals shall be carried out by a competent person
 - (a) at appropriate intervals

4.4.2 POTENTIAL EFFECTS OF CLEANFILLING ACTIVITIES

The main effect of any cleanfill which is not immediately used or restored is to:

- occupy space within or outside the working area,
- be visible,
- be a source of dust,
- be a source of sediment and other contamination in run-off,
- affect the surface water regime, e.g. by changing surface water flow in a flood plain.

The implications of carrying out cleanfilling activities can be minimised by Good Practice.

Greater Wellington Regional Council approved a resource consent application to discharge dust in association with cleanfill activities on 6 July 2005. A copy of the discharge permit is included in Appendix 4.

Reference:

- A guide to the Management of Cleanfills
- Quarry operator's log book
- KPQ ISO 9001:2008 Quality and Procedure Manual, QF34, Site check sheet and 7.5 Responsibility, Authority and communication

4.5 QUARRY OPERATIONS – SAFETY

4.5.1 INSPECTIONS

The Quarry operator or his/her delegated representative shall prepare and keep an up to date written log of complaints, inspection, maintenance and, where appropriate, testing of -

- (1) all complaints (environmental, operational and other),
- (2) all buildings (whether temporary or permanent) at the Quarry,
- (3) any plant at the Quarry; and
- (4) the carrying out of quarry operations.

Reference:

- Quarry operator's log book
- KPQ ISO 9001:2008 Quality and Procedure Manual, QF34, Site check sheet and 7.5 Responsibility, Authority and Communication
- QMP Section 9, Management of Complaints
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews)

4.5.2 BENCHES AND HAUL ROADS

The Quarry operator or his/her delegated representative shall ensure that -

- (1) Benches and haul roads are investigated, designed, constructed and monitored by a competent person so as to allow vehicles and plant to be used and moved upon them safely -
 - (a) a written report by a competent person that includes the statement that the intended height is safe and water discharge and collection is managed
 - (b) each working bench should have separate loading arrangements and of sufficient length and breadth to provide safe working conditions for the vehicles and equipment used on it as determined by a competent person.
 - (c) working benches shall be designed in such a way that no water is discharged over a lower face bench
- (2) The overburden or top of the Quarry shall be cleared far enough back from the edge of the Quarry to provide safe working environment
- (3) All vehicle access roads within the Quarry shall be so constructed and maintained that the width and surface of the carriageways are safe for the purpose for which they are to be used. Where access roads to benches are used to transport the quarried product by vehicle down a gradient, then the maximum gradient shall be 1 in 10 and in no case shall it exceed a gradient of 1 in 5.
- (4) Where necessary, effective precautions shall be taken, by the installation of barriers or otherwise, to prevent vehicles or plant accidentally leaving any bench or haul road.

Reference:

- KPQ ISO 9001:2008 Quality and Procedure Manual 3.3
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews)
- Guidelines for control of Hazards in stockpile and dumps – March 2008 (and subsequent reviews)
- Guidelines for the safe operations of mobile plant – March 2008 (and subsequent reviews)

4.5.3 QUARRY OPERATIONAL AND FINISHED FACES

The Quarry operator or his/her delegated representative shall ensure, so far as is reasonably practicable, that -

- (1) a face should not be worked in a manner that will create an over hang of the face
- (2) where unconsolidated ground is quarried, the face and sides should be battered to prevent collapse
- (3) a face should not be undercut by excavation of a slot at the toe of the face
- (4) where a person is required to work at the toe of a Quarry face or on the face itself, the face must be safely scaled of loose rock that could fall on the person
- (5) faces should be left in a safe condition at the end of each days work
- (6) finished slope of quarry faces shall not exceed 55 degrees from the horizontal
- (7) maximum height of finished batters shall not exceed 15 meters

Reference:

- KPQ ISO 9001:2008 Quality and procedure Manual QF34, Site check sheet 3.3.
- Industry Code of Practice Surface Mining and Quarry Industries – March 2008 (and subsequent reviews)
- Guideline for the control of hazards in stockpiles and dumps – March 2008 (and subsequent reviews)
- Guidelines for safe operations of mobile plant – March 2008 (and subsequent reviews)
- District Plan Rules 7.1.3.3.4 and 7.1.3.3.5

4.5.4 BARRIERS AND/OR FENCES

The Quarry operator or his/her delegated representative shall ensure that, where appropriate, a barrier suitable for the purpose of discouraging trespass is placed around the boundary of the Quarry and is properly maintained. Please also refer to sections 4.5.10 and 5.2.2 of this QMP.

Reference:

- KPQ ISO 9001:2008 Quality and Procedure Manual, QF 34 Site check sheet

- District Plan Rules 7.1.3.3.7 and 7.1.3.3.8

4.5.5 SIGNS

The Quarry Operator or his/her delegated representative shall ensure that signs are positioned throughout the Quarry site providing safety and general site information.

Reference:

- KPQ ISO 9001: 2008 Quality and Procedure Manual, QF34, Site check list

4.5.6 ESCAPE AND RESCUE FACILITIES AT THE QUARRY

The Quarry operator or his/her delegated representative shall ensure that -

- (1) adequate means of escape and rescue are provided and maintained so as to permit persons in the Quarry to leave the Quarry promptly and safely in the event of danger;
- (2) adequate means of communication and warning are provided to enable assistance, escape and rescue operations to be launched at once when required;
- (3) written instructions concerning the use of emergency equipment and the action to be taken in the event of an emergency at or near the Quarry are prepared;
- (4) persons at work at the Quarry are trained in appropriate action to be taken in the event of an emergency; and
- (5) rescue equipment is provided at readily accessible, appropriately sited and clearly sign-posted places and kept ready for use.

Reference

- KPQ Health and Safety Manual, Section 11, Emergency Procedure
- Industry Code of Practice Surface mining and Quarrying Industries – March 2008 (and subsequent reviews)
- Guidelines for emergency preparedness in Mines and Quarries – March 2008 (and subsequent reviews)

4.5.7 SAFETY DRILLS

The Quarry operator or his/her delegated representative shall ensure that safety drills are held at regular intervals for persons at work at the Quarry, and that the results of the safety drills are recorded.

Such safety drills shall be for the following purposes -

- (1) to train the persons who work at the Quarry in the appropriate actions to be taken in an emergency including, where appropriate, the correct use, handling or operation of emergency equipment; and
- (2) to train and check the skills of such persons to whom specific duties involving the use, handling or operation of such equipment have been assigned in the event of an emergency.

Reference:

- KPQ Health and Safety Manual Section 11 Emergency Procedures and QF 3.6 Emergency Drill Form
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews)
- Guidelines for emergency preparedness in Mines and Quarries - March 2008 (and subsequent reviews)

4.5.8 FIRE AND EXPLOSION HAZARDS

The Quarry operator or his/her delegated representative shall ensure that -

- (1) No person at work at the Quarry uses a naked flame or carries out any work which could give rise to a risk of an unintended explosion or fire unless sufficient measures to prevent such an explosion or fire are taken.
- (2) No person shall smoke in any part of the Quarry where there is a risk of fire or explosion.

4.5.9 CONTROL OF HARMFUL AND EXPLOSIVE ATMOSPHERES

- (1) It is the duty of the Quarry operator or his/her delegated representative shall ensure that -
 - (a) steps are taken in order to determine whether potentially explosive substances are present in the atmosphere and, where such substances are present,
 - (b) at any place in the Quarry where there is a risk of the occurrence or accumulation of an explosive atmosphere, all necessary measures are taken with a view to -
 - (i) preventing such occurrence and accumulation, or, where this is not practicable,
 - (ii) preventing the ignition of such an atmosphere; and
 - (c) at any place in the Quarry where there is a risk of the occurrence or accumulation of a substance harmful to health in the atmosphere, appropriate measures are taken in order to -
 - (i) prevent such occurrence and accumulation, or, where this is not practicable,
 - (ii) extract or disperse that harmful substance,in such a way that persons are not placed at risk.
- (2) Whenever persons at work are present at any place in the Quarry where they may be exposed to a substance harmful to health in the atmosphere -
 - (a) appropriate and sufficient breathing and resuscitation equipment shall be made available; and
 - (b) a sufficient number of persons trained in the use of such equipment shall be present.
- (3) The Quarry operator or his/her delegated representative shall ensure that equipment referred to at paragraph (2) (a) is suitably stored and maintained.

4.5.10 DANGER AREAS

The Quarry operator or his/her delegated representative shall ensure that -

- (1) any danger areas in the Quarry are clearly marked;
- (2) equipment or barriers designed to prevent inadvertent entry by any unauthorised person are installed at any danger area in the Quarry in which, because of the nature of the work being carried out there or for any other reason there is -
 - (a) risk of a person falling a distance likely to cause personal injury,
 - (b) risk of a person being struck by a falling object likely to cause personal injury, or
 - (c) a significant risk to the health and safety of persons; and
 - (d) where any person at work is authorised to enter a danger area, appropriate measures are taken to protect his/her Health and Safety.

Reference:

- KPQ Health & Safety Plan and Section 9.1 Hazard Identification
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews)

4.6 QUARRY OPERATIONS – EXPLOSIVES, DRILLING AND BLASTING

This section shall apply to the storage, transport and use of explosives at the Quarry.

Reference:

- KPQ Health & Safety Manual Section 16 Blasting
- Hazardous Substance & New Organisms ACT (HAZNO) 1996 and related regulations (and subsequent reviews)
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews)
- Guidelines for safe use, storage and disposal of explosives in Surface Mines and Quarries – March 2008 (and subsequent reviews)
- KPQ ISO 9001:2008 Quality and Procedure Manual, 7.5 Responsibility, Authority and communication QF44 Explosive Authorisation Procedure, QF45 Explosive (Approved Handler) form and QF3.1 Blast log form.

4.6.1 QUARRY OPERATOR OR HIS/HER DELEGATED REPRESENTATIVE - DUTIES

- (1) The Quarry operator or his/her delegated representative shall ensure that -
 - (a) so far as is reasonably practicable, that all explosives are stored, transported and used safely and securely; Refer 4.6.4

- (b) the appointment of one or more qualified (Approved Handlers) to organise and supervise all work at the Quarry involving the use of explosives ("the Explosives Supervisor"); and
 - (c) that at no time is there more than one person acting as the Explosives Supervisor at the Quarry.
- (2) It shall be the duty of the Quarry operator or his/her delegated representative to ensure that -
- (a) suitable and sufficient rules are made which lay down in writing procedures for –
 - (i) shotfiring operations at the Quarry, Refer 4.6.2
 - (ii) appointing shotfirer, and trainee shotfirer,
 - (iii) authorising other persons who will be involved with the storage, transport or use of explosives,
 - (iv) dealing with misfires, Refer 4.6.3 and
 - (v) ensuring, so far as is reasonably practicable, that such rules are complied with;
 - (b) an adequate written design (whether produced by him/her or not) is prepared for each shotfiring operation at the Quarry to ensure, so far as is reasonably practicable, that when such firing occurs it will not give rise to danger (Ref: Blast log form QF 3.1; and
 - (c) a copy of the specification referred to in sub-paragraph (b) is given to any person upon whom it imposes duties.
- (3) The Quarry operator or his/her delegated representative shall ensure that operations involving the storage, transport or use of explosives are carried out by -
- (a) a duly authorised and qualified (Approved Handlers); or
 - (b) a trainee under the close supervision of a qualified (Approved Handlers).
- (4) The Quarry operator or his/her delegated representative shall ensure that -
- (a) such facilities and equipment as are necessary to enable shotfiring operations to be carried out safely are provided;
 - (b) any vehicle which is provided for use in relation to shotfiring operations is so marked as to be readily identifiable from a distance;
 - (c) detonators are stored in separate containers from other explosives; and
 - (d) explosives are kept at all times either in a locked explosives store or under the constant supervision of a suitable person.
- (5) The Quarry Operator or his/her delegated representative shall ensure -
- so far as is reasonably practicable, that each shotfiring operation is carried out safely and in accordance with the rules required to be made in pursuance of paragraph (2)(a) and any specification required to be prepared in pursuance of paragraph (2)(b).

Reference:

- KPQ Health and Safety Manual Section 16 Blasting
- Hazardous Substances & New Organisms Act (HAZNO) 1996 and related regulations
- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews)
- Guidelines for the safe use, storage, and disposal of explosives in surface Mines and Quarries – March 2008 (and subsequent reviews)
- Explosive log held by Quarry operator
- KPQ ISO 9001:2008 Quality and Procedure Manual, 7.5 Responsibility, Authority and Communication, QF44, Explosive Authorisation Procedure, QF45, Explosive (Approved Handler) form, and QF3.1, Blast log form.

4.6.2 SHOT FIRES – DUTIES

Before a shot is fired, the shotfirer shall -

- (1) check the shottfiring system or circuit to ensure that it has been connected correctly
- (2) where appropriate, ensure that the electrical integrity of the shottfiring system or circuit is such as to make a misfire unlikely; and
- (3) ensure that the shot is fired from a safe place.

Reference:

- KPQ Health and Safety Manual Section 16 Blasting
- Explosive log held by Quarry operator

4.6.3 MISFIRES

In the event of a misfire the Quarry operator's "the Explosives Supervisor" shall consult the individual appointed and ensure, so far as is reasonably practicable, that -

- (1) apart from him/herself, no person other than the Explosives Supervisor, shotfirer, trainee shotfirer or any other person authorised by him/her enters the danger area -
 - (a) where the shot was fired by means of safety fuse, wait until a period of 30 minutes has elapsed since the misfire, or
 - (b) where the shot was fired by other means, wait until a period of 5 minutes has elapsed since the misfire and any shottfiring apparatus has been disconnected from the shot;
- (2) appropriate steps are taken to determine the cause of and to deal with the misfire; and
- (3) a suitable record is kept of the misfire.

Reference:

- KPQ Health and Safety Manual Section 16 Blasting
- Explosive log held by Quarry operator

4.6.4 TRANSPORT OF EXPLOSIVES

- (1) No person (other than a person engaged in the transport of explosives to or from the Quarry, a shotfirer, trainee shotfirer, a person authorised to handle explosives at a Quarry, or a person appointed to be in charge of the explosives store) shall handle explosives at the Quarry.
- (2) No person shall bring any substance or article (other than explosives) likely to cause an unintended explosion or fire within 10 metres of any explosives or (except for the purpose of lighting igniter cord or safety fuse) take any naked flame within 10 metres of any explosives.
- (3) No person shall forcibly remove any detonator lead, safety fuse or other system for initiating shots from a shothole after the shothole has been charged and primed.
- (4) No person shall charge or fire a shot -
 - (a) unless there is sufficient visibility to ensure that work preparatory to shotfiring, the shotfiring operation and any site inspection after the shot is fired can be carried out safely;
 - (b) in a shothole which has previously been fired, unless he is dealing with a misfire in accordance with action taken in pursuance of regulation 28(b); or
 - (c) in any tunnel or other excavation (not being merely a shothole) in the face or side of the Quarry for the purpose of extracting minerals or products of minerals.
- (5) No person shall fire a shot -
 - (a) unless he/she is a shotfirer or trainee shotfirer; and
 - (b) other than by means of a suitable exploder or suitable safety fuse.
- (6) No person shall cap a safety fuse with a detonator unless he is using equipment designed for the purpose and he is in a suitably sheltered place designated by the operator for the purpose.

Reference:

- KPQ Health and Safety Manual Section 16 Blasting
- Hazardous Substances & New Organisms Act (HAZNO) 1996 and related regulations (and subsequent reviews)
- Guidelines for the safe use, storage, and disposal of explosives in surface Mines and Quarries – March 2008 (and subsequent reviews)

4.6.5 BLAST TIMING

Blasting of Quarry workings/faces for extraction of rock for production shall be carried out in accordance with the District Plan rules between 10.00am and 2.00pm, Monday to Friday only using approved industry practices.

- (1) In all cases applicable property owners shall be notified as required by the District Plan by mail one week in advance or through an agreed system between the Quarry operator and the property owners.

(2) The owners of the following properties shall be notified:

- 9 and 14 Plumer Street, Johnsonville
- 73 and 75 Tarawera Road, Johnsonville
- 84 and 86 Tarawera Road, Johnsonville
- 113, 130, 170 and 175 Fraser Avenue, Johnsonville
- 146 Burma Road, Johnsonville

Where required they will also be advised by phone 5 minutes before firing of the blast. And

- (3) Immediately preceding all blasts and following the all clear being given by the “Explosive Supervisor” the shot fire shall activate an all clear siren. The siren sound shall distinguish it from normal Police, Ambulance or Fire service sirens.
- (4) Adjoining business operations of Downer EDI Works, Allied Concrete and Taylor Preston shall also be notified by mail one week in advance or through an agreed system between the Quarry operator and the businesses.

Immediately preceding all blasts and following the all clear being given by "the Explosives Supervisor" the shot firer shall activate an all clear siren.

Reference:

- District Plan Rules 7.1.3.3.2 and 7.1.3.3.3
- KPQ Health and Safety Manual Section 16 Blasting
- Hazardous Substances & New Organisms Act (HAZNO) 1996 and related regulations (and subsequent reviews)
- Guidelines for the safe use, storage, and disposal of explosives in surface Mines and Quarries – March 2008 (and subsequent reviews)

4.6.6 BLAST DESIGN

In general, the blast design is determined by the geology of the material at the Quarry to be broken and the fragmentation required. The degree of fragmentation required is related to the type and size of both the loading equipment and primary crusher(s).

A written design shall be prepared for each blasting operation to ensure, so far as is reasonably practicable, that when blasting occurs it will not give rise to danger to persons or property.

Reference

- KPQ ISO 9001:2008 Quality and Procedure Manual, QP3 Drilling and Blasting 3.3.4.2 and QF3.1 Blasting log form
- KPQ Health and Safety Manual Section 16 Blasting
- Hazardous Substances & New Organisms Act (HAZNO) 1996 and related regulations (and subsequent reviews)
- Guidelines for the safe use, storage, and disposal of explosives in surface Mines and Quarries – March 2008 (and subsequent reviews)

4.6.7 BLAST IMPACT ON ENVIRONMENT

To reduce the effects of blasting (noise, flyrock, vibration) on the environment blast impacts shall be controlled by good design and operations.

To reduce the effects of blasting operations the following planning conditions relating to blasting in most cases will reduce the effects. These conditions include:

- no blasting outside the permitted blasting hours (see 4.6.5 above)

Reference:

- KPQ Health and Safety Manual Section 16 Blasting

5. QUARRY DEVELOPMENT PLANS

5.1 SITE & QUARRY DEVELOPMENT PLANS

5.1.1 STAGING PLANS

Detailed staging plans have been produced to:

- Ensure staging is progressed in a manner that will be consistent with the requirements of the District Plan, including the final finished contour levels;
- Provide detailed engineering guidance for the Quarry activities; and
- Be used in determining the visual impact assessment of the Quarry.

The Quarry operations are designed to minimise the working face visible to the public at any time, and reduce the extent of visible modification to the prominent ridge. It aims to minimise the area that will be disturbed and create a final landform of comparatively natural appearance, finished to facilitate rehabilitation, while also maximising quarried rock volumes.

5.1.2 NORTHERN QUARRY AREA

The Northern Quarry area staging plans have been updated to reflect the finished design of this face of the Quarry which is expected to close first. To that end cleanfilling is proposed to fill the extracted area such that suitable contours can be obtained for rehabilitation of the area. The North Face staging plans are included in Appendix 5.

Reference

- Wellington City Council Kiwi Point Quarry Design – February 2006
- Kiwi Point Quarry Annual Work Plan

5.1.3 SOUTHERN QUARRY AREA

The concept staging plan through to finished design for the southern face indicates removal of the lower part of the spur that separates the abattoir from the industrial area on Tyers Road. This would eventually see the lower end of the spur entirely removed from 158m asl down to the bottom of the gorge where a platform resulting from the quarrying would be formed approximately 10 – 15 metres above the level of SH1. Then the quarrying would continue down to a platform level of 30m asl, before backfilling with cleanfill. The final finished ground level would form a platform sloping north south from 64 – 44m asl, which would vary between 0 and 10 metres above the level of SH1.

Quarrying would start on the south side of the spur and work progressively north. The following six representative stages are illustrated in Figures 2(a) 2(b) and 2(c) (Appendix 6) to show how the landform will progressively change during the Quarry's life span. The figures show the large-scale landform modification and staging and show regular benching required for overall slope stability and working access during the Quarry's operation. However, as the Quarry face is completed the final finishing will be designed in detail and progressively implemented, as part of site rehabilitation, to stagger the benching, vary gradients and vary ground conditions to achieve a more natural appearance and to aid plant establishment.

- Stage 1:* Set-up stage: construction of an access road to a working platform at 94m asl with screening bunds around the outer edge, screen planting adjacent to the WRC Pumping station.
- Stage 2:* Quarrying of the south face from 154m asl to an enlarged working platform at 94m asl (i.e. level of the preliminary working platform).
- Stage 3:* Quarrying of the south face from 94m asl down to the Quarry pit platform by progressively excavating and lowering the level of the working platform.
- Stage 4:* Quarrying to remove the remainder of the spur landform within the site from 158m asl to the Quarry pit platform, working from south to north and final contouring of the finished face.
- Stage 5:* Quarrying of the Quarry pit to 30m asl into the Quarry pit platform.
- Stage 6:* Backfilling of the Quarry pit to the level of the finished platform sloping north south from 64 - 44m asl.

The staging plans are included in Appendix 6. Figure 2a covers Stages 1 – 2. Figure 2b covers Stages 3 – 4. Figure 2c covers Stages 5 – 6.

5.2 BUFFER AREAS_& ASSOCIATED FEATURES - NORTHERN AND SOUTHERN QUARRY AREAS

5.2.1 BUFFER AREAS

A buffer area is to be maintained along the north-eastern boundary of the site near Plumer Street and Tarawera Road.

A 25 metre wide buffer area will be maintained on the uphill boundary of the site around the steep sides and top of the southern area to be excavated. This buffer area will be allowed to revegetate naturally except where additional planting is required.

5.2.2 FENCING

The top boundary of the northern buffer area shall be fenced and will continue to be while the Quarry is in operation, and pending any future use consideration.

A steel pole wire mesh fence must be maintained adjacent to any properties in the Residential Area along the quarry boundary to a height of 1.2 metres.

A security fence will be installed and maintained along the outer edge of the buffer area prior to commencement of operations in any area to exclude members of the public.

5.2.3 SCREENING

Screening of the southern face shall be provided by maintaining a bund on the site adjacent to State Highway 1 while carrying out operations..

Bunds on the outer edge of the access road and the main working platform (South to Tyers Road) will provide a visual screen, noise and dust buffer, and safety barrier during quarrying of the southern spur. The bunds will be a minimum of 2m height and will be created by excavating the road and working platform to a level 2m or more below the outer edge, which will be left in situ to

form a 'rim'. As the working platform is lowered, the bund will be adjusted to maintain the minimum height above the working area.

The earth bunds formed on the outer edge of the access road and main working platform will reduce the visible extent of the working area and screen truck movement from viewpoints below – namely SH1 and industry in the gorge. The bunds will be formed by leaving the outer edge of the road and working platform in place as a 'rim' and will be gradually lowered as the level of quarrying descends. Forming them in this way not only reduces the risk of rock fall from road and platform construction but also minimises the amount of ground disturbance on the slope below the working area.

5.3.5 SCREEN PLANTING

Screen planting will be in place south of the pumping station during Stage 1 of development of the southern face. By the time the quarrying operations reached end of stage 4, the plants would have grown tall enough to block views of the quarrying operations from southbound SH1 traffic. At this time the working platform is also expected to be at the level of SH1. The planting will consist of fast-growing eco-sourced trees, common to the area. This planting will complement the two existing karaka stands beside the pumping station that are to be retained.

5.2.4 BUILDINGS AND PLANT

The existing operational area at the Quarry, including the processing plant, office, and temporary stockpiling and customer service area will be maintained. Consequently, no permanent buildings or fixed machinery will be located at the southern part of the Quarry.

5.3.3 ACCESS ROAD

An access road will be constructed around the lower part of the southern spur to enable machinery to reach the south face (which will be quarried first) and transport the rock material back to the existing Quarry facilities for washing and stockpiling. This road will eventually be removed as the quarrying excavates below its level.

5.3.6 TEMPORARY HYDROSEEDING

As the access road is likely to be in place for at least 10 years, and the batters will be noticeable to southbound SH1 travellers, the batters will be hydroseeded to reduce the degree of contrast with the adjacent hillside. Machine access tracks to the working face of the southern part of the Quarry will be progressively constructed, removed and reconstructed as the landform is excavated.

5.3.7 STOCKPILES

Temporary stock piling of Quarry material is provided for in the southern part of the Quarry for short periods prior to trucking to the processing area in the northern part of the Quarry.

5.4 LOCATION OF CRUSHING PLANT AND STOCKPILES - CURRENT AREA

The crushing plant is intended to be maintained at its existing location. A future decision on its continued operation at this location may arise if:

- The existing plant becomes uneconomic to operate;
- Through consideration of possible end land uses for the northern part of the Quarry site.

Future options for crushing activity may require less extensive plant machinery and mobile crushing plant technology. Any processing plant used in the southern part of the quarry shall be relocatable

The existing stockpiles in the northern part of the Quarry will continue to be used for Quarry sales. Temporary stockpiles (pre-processing) may be used within the southern part of the quarry in accordance with the provisions of the District Plan.

6. QUARRY MANAGEMENT MEASURES

6.1 DISTRICT PLAN PROVISIONS

The following table cross-references how requirements of the District Plan outlined in Section 1.5 of this plan are in practice achieved through operational practice.

REQUIREMENT	DP REF's	MANAGEMENT PLAN & OTHER DOCUMENT LINKS
<i>Provide for the development and site rehabilitation of the Kiwi Point Quarry to the extent specified in the Plan in a way that avoids, mitigates, or remedies adverse effects</i>	6.2.3.3A	Staging Plans as included in this document. The District Plan (including rehabilitation provisions) as a Method, as provided for in this document Other effects as dealt with in this document
Practices and methods that will be adopted to ensure that all permitted activity conditions applying to the activities will be met	6.2.3.3A Method	Quarry Quality & Procedures Manual Quarry Operating procedures – QP1 – QP11 Resource Consents (Regional Council) Compliance
Staging of the excavation and cleanfilling activities	6.2.3.3A Method	Staging Plans as included in this document QP3 Extraction & Processing procedure
Management of surface and groundwater	6.2.3.3A Method	This document Resource Consents (Regional Council) Compliance Stormwater Management Plan QP7 Control & Monitoring of Nuisance Procedure
Management of on-site traffic	6.2.3.3A Method	QP8 General Site & Plant Maintenance Procedures
Management of any on-site processing and temporary storage of Quarry materials	6.2.3.3A Method	This document QP3 Extraction & Processing procedure Resource Consent Compliance
Specific provisions relating to on-site management of noise, dust, vibration, visual impact and water quality	6.2.3.3A Method	QP7 Control & Monitoring of Nuisance Procedure Resource Consent Compliance
Rehabilitation objectives and principles for the rehabilitation of the site	6.2.3.3A Method 7.1.3.7	This document Annual Implementation Plan
Complaints procedure	6.2.3.3A Method	Included as part of QP7 Control & Monitoring of Nuisance Procedure
Blasting times and notification	7.1.3.3.2	This document
Review the Quarry Management Plan every 5 years	6.2.3.3A Method	As per this document

6.2 GREATER WELLINGTON REGIONAL COUNCIL CONSENTS

The following activities are subject to greater Wellington Regional Council consents that will be maintained during the life of Quarry operations:

- Permit to take Water (WGN 030170 [22607]): For aggregate washing and dust suppression. Expires 26 March 2013.
- Permit to Discharge to Stream (WGN 950173): To intermittently discharge a mix of treated and settled storm water run-off and wash water into Ngauranga Stream. Expires 25 March 2011.
- Permit to Discharge to Air (WGN 050352 [24540]): To discharge contaminants to air from the operation of cleanfill. Expires 6 July 2020.
- Land Use Consent (WGN 050352 [24518]) and Water Permit (WGN050352 [24519]): To pipe and divert watercourses within Kiwi Point Quarry. Lapse 22 August 2010 unless implemented. Expires 22 Aug 2040. Land Use Consent (WGN 060255 [2519]): To undertake soil disturbance and vegetation clearance on erosion-prone land. Expires 26 November 2016.
- Land Use Consent (WGN 060255 [25260]): To pipe a 20-metre section of a tributary of the Ngauranga Stream and carry out associated disturbance of the stream bed. Expires 26 November 2041.
- Land Use Consent (WGN 060255 [25159]): To undertake soil disturbance and vegetation clearance on erosion-prone land. Expires 26 November 2016.

All resource consents are attached in Appendix 4.

6.3 STORMWATER MANAGEMENT

A stormwater management plan has been established for the KPQ and submitted to Greater Wellington Regional Council in June 2005. This plan provides for appropriate stormwater controls such as sediment ponds and maintenance schedules. These measures ensure that any sediment laden run off is adequately treated prior to leaving the site. In addition to these measures, two watercourses flowing through the site will be piped, further reducing the likelihood of downstream sedimentation.

Reference

- Appendix 9 – Stormwater Management Plan
- KPQ ISO 9001:2008 Quality and Producers Manual, QF Site check sheet

6.4 FUEL & SPILL CONTAINMENT MANAGEMENT

The operation of the quarry shall be undertaken in a way that ensures that -

- refuelling of equipment shall only be done within the established fuelling station structure;
- a spill contingency plan to deal with any spills of fuel, oil, lubricants or hydraulic fluids shall be maintained;
- an emergency spill containment kit shall be maintained on site;

- any spill of fuel, oil, lubricants or hydraulic fluids or other deleterious substances shall be immediately contained, reported and remediated.

6.5 DUST MANAGEMENT

Dust from the operation of the Quarry and Cleanfilling operations shall be managed in line with the requirements of Resource Consent WGN 050352 [24540] attached in Appendix 4.

Reference:

- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews)
- Guidelines for the control of dust and associated hazards in surface Mines and Quarries – March 2008 (and subsequent reviews)
- Greater Wellington Regional Council Permit to Discharge to Air (WGN 050352 [24540]): To discharge contaminants to air from the operation of the cleanfill.

6.6 NOISE MANAGEMENT

6.6.1 NOISE

In order to ensure that noise emissions from the Quarry site remains acceptable, it is of fundamental importance that the equipment on site is well maintained.

6.6.2 EQUIPMENT NOISE

All equipment used on site will be regularly maintained and of high standard to assist reduce noise.

6.6.3 VEHICLE REVERSING ALARMS

One specific item of equipment that can cause complaints is the use of vehicle reversing alarms. These are provided for safety reasons for the workforce, and need to generate a certain level of noise to achieve this. However, all items of plant operating at the Quarry will be fitted with reversing alarms such as directional and adjustable systems, which can help to minimise the noise impact.

6.6.4 BLASTING NOISE

As previously stated in this Quarry Management Plan, times where blasting is permitted to be undertaken is restricted to certain times of the day to help minimise the impact of noise.

Reference:

- Industry Code of Practice Surface Mining and Quarrying Industries – March 2008 (and subsequent reviews)
- Guidelines for noise control in Mines, Quarries and Tunnels – March 2008 (and subsequent reviews)

6.7 MANAGEMENT OF OTHER EFFECTS

6.7.1 MANAGEMENT OF TRAFFIC

There are two-entry points to the Quarry. However, the entry/exit on Fraser Avenue has been closed (temporarily) to reduce heavy truck traffic within the community.

The main entry to the Quarry is from State Highway 1 and shall during the period of this QMP be maintained to a standard required for industrial use. As per the District Plan this is the only access point for Quarry vehicles. This access is also the main access route for Taylor Preston's meat works, Allied Concrete and the Downers EDI Works Asphalt complex.

During the period covered by this plan it is intended to upgrade the Fraser Avenue entrance. This will allow more use to be made of the site for development once quarrying is completed.

Access routes for the cartage of Quarry materials from both the northern and southern Quarry operations will be maintained to a standard that complies with the requirements for the operation of heavy earth moving equipment.

Other than the access point, there are no restrictions on traffic movement to or from the Quarry.

Reference:

- District Plan Rules 7.1.3.6

7. KIWI POINT QUARRY REHABILITATION

7.1 INTRODUCTION AND REHABILITATION APPROACH

The rehabilitation of the quarry will extend to all areas within the boundaries of the site, which are located within both the Suburban Centres and Open Space Activity Areas under the District Plan, including the grazing areas, Ngauranga Gorge (Waitohi) stream, and buffer areas above the north and south quarry faces. (Refer to Appendix 9).

This section of the QMP establishes an objective, a set of principles and a process for the rehabilitation of KPQ. Each of the principles will be integrated within planning, design and management as each stage of the Quarry operation is completed. Detailed plans and budgets will be prepared annually to ensure the integrated and ongoing coordination of rehabilitation and quarry operations.

The quarry requires substantial site modification over time. Therefore specific rehabilitation activities are to be planned and carried out on an annual basis as part of an implementation plan. Each implementation plan will be tailored to the progress of quarry face closures, incorporating knowledge gained from ongoing monitoring. Each implementation plan will guide contract documentation for the physical works involved in the rehabilitation of the site. This will ensure maximum flexibility to respond to new situations as the excavations continue.

The implementation plans will be adequately funded on an ongoing basis as part of the Quarry operation, as there is little or no value in commencing rehabilitation unless there are resources available to implement and complete successive stages and monitor results. The rehabilitation of KPQ is to be monitored, and re-evaluated annually for the remaining life of the quarry, anticipated to be approximately 50 years, and followed by several years of maintenance.

The long period of Quarry operations allows for a substantial element of trialling and testing in finding solutions to best meet the rehabilitation specifics of the site. Because the precise nature of the final landform can only be determined for each section of the Quarry once the variations in rock type become evident, the preparation of a detailed Quarry rehabilitation implementation plan is not practicable in advance. However, the Quarry Staging Plans in Appendices 5 and 6 will provide a starting point for rehabilitation.

The overall objective of the proposed rehabilitation is to establish native vegetation cover that contributes to the Council's vision of Ngauranga Gorge as part of the City's inner green belt network. Rehabilitation will focus on bringing all areas where quarry operations have ceased to a state where native vegetation will re-establish. It is intended that all land encompassed within the KPQ Boundary in Figure 1 will be progressively rehabilitated, other than areas which are to be used in future for permitted or consented activities.

These latter areas comprise areas of cleanfill north of the access road that will be hydroseeded and left to settle. No additional planting or rehabilitation of the cleanfill will be required. Elsewhere active revegetation through planting will be required for approximately 10% of the existing quarry site. It is intended that the 10% will be distributed across the site to act as "islands" of planted small hardwood shrubs to establish seed sources.

7.2 SITE DESCRIPTION

The site is located in the central part of Ngauranga Gorge, adjacent to SH1, a major transport corridor, and surrounded by industrial landuse and open space areas. The site is overlooked by elevated residential suburbs. The landscape is highly modified, resulting from clearance of the original native forest cover followed by a long and ongoing history of major landform modification. The District Plan provides for the KPQ to operate within this unique environment until the completion of the southern area, which will mark the end of the Quarry operations. The main areas of the KPQ requiring rehabilitation work are listed below:

Main Rehabilitation Areas

- North Face
- South Face
- Grazing Area
- Buffers
- Stream

7.3 REHABILITATION OBJECTIVE AND PRINCIPLES

The overall objective of the KPQ rehabilitation *“is to establish native vegetation cover that contributes to the Council’s vision for Ngauranga Gorge to become part of the identified inner green belts”*.

While rehabilitation of the KPQ does not imply restoration of the site to its original pre-quarry state, it is important that the specific landscape qualities of Ngauranga Gorge are reflected in the rehabilitation of the site. Quarrying dramatically alters landforms and disrupts ecological processes and habitats. The primary aim of rehabilitation is to provide the conditions that enable natural processes to resume functioning albeit in a modified form.

Prior planning, landscape and ecological assessments, and consultation, have identified the following five general rehabilitation principles:

- (1) To promote Wellington’s indigenous biodiversity and rehabilitate natural processes within the site.
- (2) To conduct rehabilitation concurrently with quarry operations, coordinating progressive completion with rehabilitation.
- (3) To finish the quarry faces to resemble the steep bluff landforms that would have occurred naturally in the Ngauranga Gorge.
- (4) To conduct rehabilitation in a manner that encourages rapid vegetation of the slopes, reducing the duration of adverse visual impacts.
- (5) To revegetate the quarry in a way that supports the vision of the City’s Inner Green Belts.

Most effective rehabilitation occurs when the work is integrated as part of the overall operation and is implemented progressively, as each section of the Quarry is completed. At the same time the creation of scree slopes, bench ripping, return of over-burden to soften excavated terraces and faces and importation of soils provides opportunities for re-vegetation. Coordination of these activities ensure a high success rate for re-vegetation and encourage rapid vegetation.

Rehabilitation attempts to maximise favourable environmental conditions for plant growth and hasten natural revegetation processes by controlling those factors that are able to be controlled, monitoring results, and where necessary, progressively adapting activities to improve results.

Initial planting must be considered using known effective methods and techniques, and locally proven, rapid growing and robust plant species with a high likelihood of survival in a range of site conditions. In time, when site conditions have been moderated by the initial nursery cover, other species can be introduced.

Key factors that are likely to influence the success of this rehabilitation project are:

- Width, height and stability of terraces, size of screens
- The proximity and condition of remaining areas of adjacent native vegetation
- Quality of topsoil, cleanfill or redistributed stockpile
- Control of plant and animal pests
- Contamination of water sources
- Prevention of fire
- Monitoring of progress

Rehabilitation measures for each area will vary according to the specific micro climate, exposure aspect and substrate of the different sites. Specific detail for the varying conditions and appropriate measures will be included in the annual implementation plans.

7.4 NGAURANGA GORGE VALUES

To determine how best to rehabilitate the site, the contextual values of the site must be described and understood so that the rehabilitation techniques can re-integrate the quarry into the Ngauranga gorge landscape, and so that natural systems can be re-established to allow revegetation that approximates to the original patterns.

The Ngauranga Gorge has been identified as an area of strategic significance to the city and is recognised as a ‘working’ city gateway containing industrial and commercial uses and a major transport corridor that is made memorable by the views of Wellington Harbour. The Council’s open space strategy, *Capital Spaces*, refers to the Ngauranga Gorge as one of four proposed inner green belts. The return of closed canopy forest to the Ngauranga Gorge hillsides will enhance and realise the Council’s vision for a green belt in the Ngauranga Gorge. It will also be a positive factor in creating plant and animal habitat, soil protection and enhancing indigenous biodiversity. The rehabilitation of the Quarry seeks to support this vision.

The values of Ngauranga Gorge, identified in *Capital Spaces*, and their contribution to the Gorge landscape are summarised as:

Ecological values: Coastal forest is under-represented in Wellington. There is potential for native forest to be gradually restored on the steep hillsides of the gorge increasing this uncommon forest type and providing an almost continuous green corridor between the Wellington fault escarpment (Hutt Road Scarp), Ngauranga Gorge bush, Tyers Bush and the lowland reserves in Khandallah and Johnsonville, and the regenerating native forest of Mt Kaukau and the outer green belt.

Landscape Values: The gorge is an important threshold in and out of Wellington Harbour, experienced by thousands of people every day, and the regenerating native vegetation is noted in the strategy as providing the basis for a *“striking gateway to the harbour in the future”*.

Recreational values: Recreational values in the Ngauranga Gorge are currently limited by the steep open space terrain; SH1, which is a major cross-gorge barrier for pedestrian and cycle movement; and the dominance of industry on the valley floor. However, the Council has long term plans to develop more recreation routes along the western hills of the harbour, and opportunities to develop more recreational access through the gorge are likely to be explored further.

Heritage values: The entire gorge landscape is of historic interest, dating back to Maori settlement at the mouth of the gorge and then the history of the transport corridor and associated land uses, which have involved major modifications to the gorge landscape and the supply of quarry materials to the city and region for over 100 years.

7.5 IMPLEMENTATION TECHNIQUES

The KPQ has a number of factors which will make its rehabilitation challenging. The techniques in this section are to be applied generically across the site to the greatest practicable extent. The annual implementation plan should progressively develop specific rehabilitation proposals for each of the areas to cater for the unique combination of soil, slope, exposure and aspect within the site to which revegetation activities must respond. The implementation plan shall be prepared annually. The responsibilities of each technique are outlined below:

7.5.1 PLANNING

Ideally rehabilitation planning should commence at an early enough stage to ensure that remaining values of the site that are not directly affected by quarrying are protected and that maximum opportunities are provided for future rehabilitation in the quarried areas. The annual implementation plan should demonstrate an appropriate level of planning in order to achieve the rehabilitation principles.

An annual implementation plan will be developed. Each part of the site will have unique limitations and opportunities, so planning should not be too rigid. Regular monitoring enables rehabilitation actions and management to be reviewed and revised in response to results. Implementation will evolve over time, and will be reviewed and refined each year. Achieving a final landform that reflects the earlier features and topography of the area will require further detail and developed design to be carried out through annual implementation plans closer to the time of each individual quarry face closure.

7.5.2 VEGETATION PROTECTION

Prior to commencement of operations the extent of earthworks adjacent to vegetated buffers and stream margins should be clearly marked on site along with areas of vegetation and topsoil that are to be stripped and areas of vegetation that are to be retained.

The vegetation that is to remain must be clearly marked to prevent accidental removal. These remnants of vegetation have a vital role in future rehabilitation, acting as a seed source, providing shelter and providing habitat for birds that will encourage natural seed dispersal.

The removal of pine trees and other pest species must be immediately initiated throughout the site. The buffer areas above the northern face have been identified for pine removal. This should be initiated and continued through the development of future implementation plans.

7.5.3 STOCKPILING

There is currently no material "soil or overburden" stockpiled on the KPQ site. Future short term stockpiling of cleared vegetation and on-site soil material for re-spreading shall be determined and implemented within the annual implementation plans as appropriate.

In addition to topsoil and overburden stripped from quarried areas and the composted vegetation, other quarry by-products, such as grit and sludge, can potentially be used in the preparation of substrate. The addition of a 'blended' combination of these different materials to the uppermost layer of fill can improve both physical properties and fertility and thereby make these areas more suitable for plant establishment and growth.

7.5.4 ROCK FACE SHAPING

Rehabilitation will involve physical re-shaping of the quarry site to achieve the landform principle (Principle 3) and to support revegetation, before any planting is carried out. In accordance with the landform principle, the final shaping of the quarry faces is a critical phase of the rehabilitation of Kiwi Point Quarry, in order to address the high visual prominence of the quarry and its location in an important gateway to the city and existing residential suburbs.

A series of benches and haul roads will remain at completion of quarry extraction activities. These platforms are one of the most distinctive features that indicate an area has been quarried. These benches run against the 'grain' of the landscape and removing some of them or breaking them up is the key to reducing their visibility.

Some benches can be fully or partly demolished as part of the planned face finishing, but some benching is likely to need to remain to ensure slope stability. With care, key components of the surrounding landscape can be mirrored in the modified quarry face including large rock bluffs, screes and gullies.

The rehabilitation works also need to ensure continued safe access across the site for staff undertaking ongoing rehabilitation works such as planting and pest management. Retaining some benching on a temporary or permanent basis can ensure this.

The implementation plans shall provide that the absolute maximum slope of a quarry face (batter) shall not exceed 55 degrees from the horizontal (ie between benched areas) and the maximum height of a batter shall be no more than 15 metres in height. However, variety and visual interest shall be provided for by varying the batter angle and heights and creating features as described above.

Reference:

District Plan Rules 7.1.3.3.4 and 7.1.3.3.5

7.5.5 DRAINAGE

Care is needed in managing water and associated erosion. Benches direct and concentrate water flow and so drainage needs to be considered to prevent scouring and erosion. Cut-off drains are particularly important on the benches to prevent erosion and scouring of the replaced soils.

Routes for stormwater drains need to be determined in consultation with the rehabilitation adviser to ensure that routes are aligned to avoid tall trees and advanced native vegetation, and that appropriate remedial work is undertaken to prevent future erosion. This should be developed within the annual implementation plan.

7.5.6 SOIL PREPARATION

A fundamental process of rehabilitating the site will be the preparation of the substrate and the quality of topsoil for all planting areas, including areas left to regenerate naturally. Topsoil shall conform to the following specification:

Topsoil shall exhibit the presence of biological activity as evidenced by adequate aggregation and organic matter content. The material shall be acceptable for growing all of the appropriate species, given adequate management, and shall not contain any substances injurious to plant growth.

The mix of rubble, blended fill and topsoil needs to be determined for areas of both the north and south faces to reflect their unique climatic properties and planting requirements. Once laid, the exposed soils should be hydroseeded (or any other approved method) immediately to prevent erosion and dust problems, and also to limit germination of some pest plants.

The treatment of rock benches is important before re-spreading of onsite topsoil is possible. The surface of the bench usually needs to be ripped to create a zone of fractured rock which will allow the topsoil to be 'keyed in' and prevent the formation of extensive slip planes between the two materials. The fractured zone also serves to retain moisture and provides secure rooting.

7.5.7 REVEGETATION

The objective is to achieve a vegetation cover that relates to the existing vegetation remnants in the area. This provides continuity of habitat and linkages for wildlife movement.

There are three common methods appropriate for establishing vegetation cover on the earth-worked areas. Using a combination of methods at KPQ will mean that the most appropriate method can be used for the prevailing site conditions. There may be a need for fertilizing to enhance vegetation. The methods are:

- Hydroseeding (where appropriate)
- Natural regeneration by providing suitable conditions for vegetation establishment
- Planting with locally eco-sourced native species.

Planting will be co coordinated within the annual implementation plan to ensure appropriate plants species and numbers are available for the following planting season.

7.5.8 HYDROSEEDING

Hydroseeding or hydromulching of exposed soils will reduce runoff and erosion, bind soils preventing dust problems, and will inhibit some invasive pest plants. Hydroseeding will assist in stabilising loose soils primarily on benches and where appropriate some lower batter slopes; however its application to rock face and steep batter slopes is not yet proven as a reliable rehabilitation technique. Trials and development of new hydroseeding techniques should be initiated and monitored to find one or more solutions that meet the specifics of the site.

Hydroseeding and mulching shall be coordinated with quarrying, following the completion of earthworks. In areas allocated for natural regeneration, particular exotic grass mixes may inhibit native seed strike so further investigation of surface treatment will be needed to ensure the best balance of erosion and weed control while promoting native seed propagation. Some trialling has been completed locally and nationally with native shrub and grass species, and with some moss and lichen species. However, this technology is not yet reliable enough for large scale application. Some experimentation should be undertaken.

7.5.9 NATURAL REGENERATION

Sites left to regenerate naturally with local native vegetation can often be the most successful means of getting vegetation established. For this to be achieved optimum site conditions must prevail. That is, sites altered by earthworks must be left in a condition that allows natural regeneration to occur (i.e. runoff controlled, suitable substrate, good seed source nearby, pest

management strategy, etc). This process will take longer than on those sites that are assisted by planting or laying brush.

7.5.10 PLANTING

The aim of revegetation is to create “islands” of planted vegetation which spread outwards and assists the natural regeneration of adjacent areas through shelter and seed dispersal. The most favourable sites (micro sites) are selected for this planting, and they need not cover more than 10% of the site.

On all areas that are revegetated, the following practices should be adopted:

- Plant sourcing will require proactive planning so that the right species are planted at the right time – usually a year’s lead time is required to enable sufficient quantities of appropriate locally-sourced plant species to be propagated.
- The extent of planting programmed for each year needs to be determined in relation to resources available for maintenance in successive years.
- Species should be sourced from local plant populations to ensure that they are ecologically compatible and suitable for the environs (i.e. eco-sourced).
- All plants should be suitably acclimatised to local conditions prior to planting. If plants are propagated outside the Wellington district this may involve bringing them to a suitable local holding area or nursery several months before they are planted.
- Small grade plants should be used because they will acclimatise and establish more readily than large grades.
- Plants should be densely planted with the object of attaining ‘canopy closure’ as quickly as possible (ie. the sooner plants coalesce the better, because this assists in their survival and also reduces competition from pest plants and other unwanted plants).

7.5.11 STAGING

KPQ site rehabilitation has a timeframe measured in several decades. Revegetation of the first sections should be well advanced by the time south face quarry closes. Staging revegetation over several years is critical to its success, allowing flexibility to adapt to any unexpected seasonal events such as a particularly wet winter or particularly dry summer. It also enables adjustments to be made in terms of ongoing maintenance practice, species composition, pest management, timing, and methods of planting taking into account monitoring of previous planting. Staging revegetation work over several years also allows maintenance to be more easily accommodated.

7.5.12 TRIAL PLANTING

Each area will have unique features and combinations of soil, slope, moisture, sun and wind. Each annual implementation plan should contain some plant trials to test the efficacy of certain species and planting treatments.

The use of biodegradable geo-textile mats should be considered. These can be very effective in some situations but can be expensive relative to other methods. A number of suitable products are now available made from biodegradable materials such as coconut fibre. Mats should be considered and trialled but will generally be used as a supplementary rather than primary rehabilitation method.

7.5.13 MAINTENANCE

All areas of planting within the KPQ (10% of the site) will require some maintenance and pest management. Maintenance should be programmed and costed for the first five years following each planting stage. At the completion of this time frame, planting should be well established and self-sustaining. On exposed sites, maintenance work will involve replacing failed plants ('blanking') and cutting back / removing unwanted and competing species.

7.5.14 MONITORING

Commitment to ongoing monitoring of the rehabilitation progress and commitment to remedial maintenance is critical to the success of rehabilitation. Ongoing monitoring will be essential so that:

- trends can be recognised early and optimised (e.g. recognising most favourable micro-sites or the most successful species);
- pest problems (plant and animal) can be dealt to when signs are first observed (e.g. pull seedlings while still young);
- the effects of changeable climatic conditions can be managed (e.g. Delaying planting in drought years);
- trial plots can be set up and observed for improved overall results (hydroseeding, mulching, plant and material trials).

Monitoring and agreement to appropriate management responses will form part of the rehabilitation contract documentation. Whilst some management measures need to be in place at the outset, for others ongoing monitoring will be required to decide what action needs to be taken and when. This may simply be a matter of refining the rehabilitation method used but it may require significantly altering the method or the timing. Site management then becomes responsive and tailored to progress from year to year.

An annual monitoring inspection will be included within the implementation plan and associated reporting will cover:

- identification of successes of past and previous year
- identification of deficiencies or inadequacies
- identification of opportunities
- the programme for the coming year.

Comprehensive record keeping will be important to ensure the accumulation of knowledge, which will result in increased efficiency and reduced costs over the life of the rehabilitation project. Progress photographs, taken at key vantage points, will be used as a valuable monitoring tool.

7.6 ASSOCIATED REHABILITATION AREAS

Beyond the three main sites of the quarry (north and south faces and grazing area) a number of additional rehabilitation projects should be undertaken

7.6.1 BUFFER AREAS

- (1) Pines: pines should be removed from nearby areas regenerating to native vegetation, particularly in the native vegetation between the north face and Fraser Avenue. Branches and foliage can be mulched and utilised in soil rehabilitation on the finished quarry benches. Large logs can be placed and secured on benches to provide micro-sites for rehabilitation.
- (2) Management of invasive pest plants: such plants should be removed on an ongoing basis. In particular, continued efforts should be directed at vines such as old man's beard, convolvulus, blackberry and ivy which are currently invading the stream margins and the regenerating forests between the northern quarry workings and Fraser Avenue.

Reference:

- District Plan Rules 7.1.3.3.6

7.6.2 NGAURANGA GORGE (WAITOHI) STREAM

Like the forests of Ngauranga Gorge, the stream which once dominated the narrow bottom of the gorge has also been substantially modified to the extent that much of it is piped underground and those vestiges still above ground are largely hidden behind industrial development. Watercourses extend from Fraser Ave, running to the west of the north face and a large stormwater outlet from Johnsonville emerges at the existing quarry site. These feed the stream that flows behind the abattoir and is then piped underground and taken across SH1, north of the site.

It has been noted in previous investigations that this stream is seriously degraded. It would benefit from extensive rehabilitation. Stream rehabilitation is specialised and requires consultation with affected parties including the Taylor Preston management, Greater Wellington Regional Council and iwi, before specific rehabilitation is initiated under the annual implementation plan. Stream rehabilitation should address the removal of any introduced industrial waste from the streambed and slopes, diversion and treatment of contaminated runoff, pest plant removal and enhancement of riparian revegetation.

7.7 REHABILITATION SUMMARY

The principles for rehabilitation of the KPQ include all of the following steps.

- (1) Preparation of an annual implementation plan, including coordinated staging of works closure to achieve best ecological outcomes.
- (2) Programme for clearance of vegetation, mulching and composting and stockpiling.
- (3) Methods for limiting disruption to streams and freshwater habitat.
- (4) Vegetative screening of work areas.
- (5) At the completion of the quarry operation – the quarry landform shall be re-contoured to reflect the former landforms/ topography of the area. Achieving a combination of revegetated benches and more natural unvegetated landforms including large rock outcrops, bluffs, screes and gullies to reflect the surrounding topography is the desired outcome.

- (6) Creation of new soil substrate in all planting areas (benches, screes etc), to encourage rapid vegetation of the slopes, reducing the duration of visual impacts.
- (7) Trialling of a range of onsite revegetation methods for ensuring rapid vegetation cover, and maintenance of revegetated areas.
- (8) Preparation of pest plant, pest animal and fire control programme.
- (9) A monitoring and maintenance programme.

It is intended that experience and monitoring in early stages of rehabilitation will feed back into the continuing rehabilitation process.

8. LONG TERM USE

8.1 NORTHERN QUARRY AREA

The concept design for the existing northern quarry site has been based on the following staging plan:

- *Stage 1*, quarry area A and the area behind Downer EDI Works
- *Stage 2*, quarry area C and fill areas A and F
- *Stage 3*, quarry area B and fill areas C and F
- *Stage 4*, quarry and fill area D
- *Stage 5*, quarry and fill area E (Taylor Preston Carpark)
- *Stage 6*, develop area G
- *Final Stage*, final quarrying/filling, creating level platforms, access road etc.

Appendix 5 details the staging plans for the Northern Quarry site. In the long term, a range of permitted or consented activities will be able to establish on the site.

8.2 SOUTHERN QUARRY-AREA

District Plan Change 25 changed the zoning to Suburban Centres but restricted development other than quarrying and cleanfilling.

Given the expected duration of up to 50 years for development of the Southern part of the Quarry, there is opportunity to consider the future use of the land through District Plan reviews and other Council strategies.

9. MANAGEMENT OF COMPLAINTS

9.1 MANAGEMENT OF COMPLAINTS

It is the responsibility of the quarry operator to record all complaints. The quarry operator is responsible for acting on and, rectifying the cause of complaints.

All complaints received in respect of the Quarry operation shall be recorded on a Complaints Register Form QF 7.3, Appendix 8, for the collation into the complaints register. The forms record the following details of each complaint received either verbally or in written form:

- Date, event, name, address and contact details of the complainant (where provided)
- Action to resolve the issue/complaint and action to prevent similar complaints
- Date of oral response and date of written response

The quarry operator shall respond to complaints within the following timeframes following receipt:

- 8 hours – oral response
- 3 days – written response, which confirms details of the complaint and indicates what action has been taken or is proposed to be taken.
- It shall be made clear that if the complainant is not satisfied; he or she can contact the Council's Infrastructure Director
- A summary of all complaints received shall be presented in the monthly report to the Council.

Reference:

- KPQ ISO 9001:2008 Quality and Procedure Manual, QF 7.3 Complaints form
- KPQ Complaints Register

10. FURTHER INFORMATION

If you would like any further information on the Kiwi Point Quarry please, contact

THE COUNCIL

The Director Infrastructure

Wellington City Council

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Wellington 6140

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THE QUARRY OPERATOR

Atom Hire Ltd

Kiwi Point Quarry

PO Box 9538

Wellington 6141

Tel: (04) 472 6958

Fax: (04) 472 8268

11. REFERENCES

- Health & Safety in Employment (Mining Administration) Regulations 1996
- Health & Safety in Employment Regulations 1992
- Atom Hire (Quarry operator) Health & Safety Plan – January 2009
- Kiwi Point Quarry Management Plan – March 2006; Opus Consultants
- Kiwi Point Quarry - Quarry Storm-water Management Plan June 2005; Opus Consultants
- Guidelines for the control of dust and associated hazards in Surface Mines and Quarries – March 2008
- Guidelines for the safe use, storage, and disposal of explosives in surface Mines and Quarries – March 2008
- Guidelines for noise control in Mines, Quarries and Tunnels – March 2008 (and subsequent reviews)
- Guidelines for emergency preparedness in Mines and Quarries – March 2008 (and subsequent reviews)
- Guidelines for management of hazards associated with crushing and screening plants in Mines and Quarries – March 2008 (and subsequent reviews)
- Guidelines for the safe operation of mobile plant in Mines and Quarries – March 2008 (and subsequent reviews)
- Guidelines for the control of hazards in stockpiles and dumps in Mines and Quarries – March 2008 (and subsequent reviews)
- Industry Code of Practice Surface Mining and Quarry Industries – March 2008 (and subsequent reviews)
- Wellington City Council Kiwi Point Quarry Design Detail February 2006 Beca Infrastructure
- A Guide to the Management of Cleanfills
- Wellington City council District Plan
- Hazardous Substances & New Organisms Act (HAZNO) 1996 and related regulations (and subsequent reviews)
- Resource Management Act 1991



**APPENDIX 3 HEALTH AND SAFETY IN EMPLOYMENT (MINING
OPERATIONS AND QUARRYING OPERATIONS) REGULATIONS 2003**

HEALTH AND SAFETY IN EMPLOYMENT AMENDMENT ACT 2013



Health and Safety in Employment Amendment Act 2013

Public Act 2013 No 95
Date of assent 18 November 2013
Commencement see section 2

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Part 2B

**Worker participation in health and safety in
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The Parliament of New Zealand enacts as follows:

- 1 Title**
This Act is the Health and Safety in Employment Amendment Act 2013.
- 2 Commencement**
This Act comes into force on 16 December 2013.
- 3 Principal Act**
This Act amends the Health and Safety in Employment Act 1992 (the **principal Act**).
- 4 Section 2 amended (Interpretation)**
 - (1) In section 2(1), insert in their appropriate alphabetical order:
 - “**Board** means the New Zealand Mining Board of Examiners established under section 20D
 - “**coal** has the meaning given to it in section 19L
 - “**industry health and safety representative** has the meaning given to it in section 19L
 - “**mine operator** has the meaning given to it in section 19L
 - “**mine worker** has the meaning given to it in section 19L
 - “**mineral** has the meaning given to it in section 19L
 - “**mining operation** has the meaning given to it in section 19L
 - “**permit operator** has the meaning given to it in section 19L
 - “**quarrying operation** has the meaning given to it in section 19N
 - “**site health and safety committee** has the meaning given to it in section 19L

“**site health and safety representative** has the meaning given to it in section 19L

“**site senior executive** has the meaning given to it in section 19L

“**tourist mining operation** has the meaning given to it in section 19L

“**tunnelling operation** has the meaning given to it in section 19O

“**WorkSafe** means WorkSafe New Zealand established by section 5 of the WorkSafe New Zealand Act 2013”.

- (2) In section 2(1), replace the definition of **approved code of practice** with:

“**approved code of practice** means a code of practice for the time being approved under section 20A; but where any amendment of the code of practice has been approved under that section, means the code of practice as amended”.

- (3) In section 2(1), replace the definition of **hazard notice** with:

“**hazard notice** has the meaning given to it in section 19ZF(1) or 46A(1), as applicable”.

- (4) In section 2(1), replace the definition of **improvement notice** with:

“**improvement notice** means a notice under section 39(1) or (2) or 39A”.

- (5) In section 2(1), replace the definition of **prohibition notice** with:

“**prohibition notice** means a notice under section 41(1) or 41A”.

5 **New section 3G inserted (Provisions affecting application of amendments to this Act)**

After section 3F, insert:

- “**3G Provisions affecting application of amendments to this Act** Schedule 1AA contains application, transitional, and savings provisions that affect other provisions of this Act as from time to time amended, repealed, or repealed and replaced (*see* section 63).”

6 Section 11 amended (Employees to be given results of monitoring)

After section 11(3), insert:

- “(4) An employer is not required under this section to give an employee the results of monitoring to the extent that those results have already been provided to the employee under section 12A.”

7 New sections 12A and 12B and cross-heading inserted

After section 12, insert:

“Duties of mine operators in relation to information

“12A Mine workers to be given results of monitoring

- “(1) This section applies to the results of any monitoring of any mine worker or any mining operation undertaken in compliance with this Act or regulations made under this Act if the monitoring was—
- “(a) undertaken by or on behalf of a mine operator; or
 - “(b) undertaken by or on behalf of a department (within the meaning of the State Sector Act 1988) or WorkSafe and the results have been given to a mine operator.
- “(2) Subject to subsection (3), every mine operator must ensure that—
- “(a) every mine worker is given all results to which this section applies of monitoring of the mine worker (whether as an individual or as one of a number of mine workers) in relation to health or safety; and
 - “(b) all mine workers are given all results to which this section applies of general monitoring of—
 - “(i) conditions in the mining operation; or
 - “(ii) the health or safety of mine workers there.
- “(3) Every mine operator must ensure that—
- “(a) there are omitted from all results to which this section applies given to any individual mine worker all information that identifies, or discloses anything about, any other individual mine worker; and
 - “(b) there are omitted from all results to which this section applies given to any group of mine workers all infor-

mation that identifies, or discloses anything about, any individual mine worker.

“12B Information for site health and safety representatives

A mine operator must ensure that all site health and safety representatives in the mining operation have ready access to sufficient information about health and safety systems and health and safety issues in the mining operation to enable the representatives to perform their functions and exercise their powers effectively.”

8 New section 13AA and cross-heading inserted

After section 13, insert:

“Duties of mine operators in relation to training and supervision

“13AA Training and supervision of mine workers

Every mine operator must take all practicable steps to ensure that every mine worker who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a mining operation—

- “(a) has, or is so supervised by a person who has, such knowledge and experience of similar places, and work, plant, or substances of that kind, as to ensure that the mine worker’s doing the work, using the plant, or dealing with the substance is not likely to cause harm to the mine worker or other people; and
- “(b) is adequately trained in the safe use of all plant, objects, substances, and protective clothing and equipment that the mine worker is or may be required to use or handle.”

9 Section 19G amended (Minister may approve occupational health and safety training)

After section 19G(4), insert:

- “(5) For the purposes of Part 2B, the reference to a health and safety representative in section 19G(2)(b) means a site health and safety representative.”

10 New section 19J inserted (Relationship of this Part with Part 2B)

After section 19I, insert:

“19J Relationship of this Part with Part 2B

Except as provided in this Part or Part 2B, nothing in this Part applies to a mining operation.”

11 New Part 2B inserted

After Part 2A, insert:

“Part 2B

“Worker participation in health and safety in mining sector

“19K Purpose of Part

The purpose of this Part is to require the participation of mine workers in processes relating to health and safety in a mining operation so that—

- “(a) all persons with relevant knowledge and expertise can help make the mining operation healthy and safe; and
- “(b) when making decisions that affect mine workers and their work, a mine operator has information from mine workers who face the health and safety issues in practice.

“19L Interpretation

In this Act,—

“alluvial mining operation means a mining operation carried out above ground and associated with—

- “(a) the extraction of gold from river deposits of sand or gravel:
- “(b) the extraction of ironsand from sand or gravel

“coal means anthracite, bituminous coal, sub-bituminous coal, and lignite, and—

- “(a) includes every other substance worked or normally worked with coal; but
- “(b) does not include coal in the form of peat

“industry health and safety representative means a person appointed in accordance with section 19ZU

“**licence or other permission** means a lease, licence, or other instrument under which a person with an interest in land (including, for example, the owner of the land) permits another person to carry out a mining operation on the land

“**mine operator** means,—

“(a) in respect of a mining operation carried out under a permit granted under the Crown Minerals Act 1991,—

“(i) the person appointed by the permit operator to manage and control the mining operation; or

“(ii) the permit operator, if no such person has been appointed:

“(b) in respect of a mining operation (not being a mining operation described in paragraph (a)) carried out under a licence or other permission,—

“(i) the person appointed to manage and control the mining operation by the person who holds the licence or other permission to carry out mining operations; or

“(ii) the person who holds the licence or other permission to carry out mining operations, if no such person has been appointed:

“(c) in any other case,—

“(i) the person appointed to manage and control the mining operation by the owner of the land where the mining operation is being carried out; or

“(ii) the owner of the land where the mining operation is being carried out, if no such person has been appointed

“**mine worker** means a person who works in a mining operation, either as an employee or as a self-employed person

“**mineral** means a naturally occurring inorganic substance beneath or at the surface of the earth, and—

“(a) includes metallic minerals, non-metallic minerals, and precious stones; but

“(b) does not include clay, coal, gravel, limestone, sand, or stone

“**mining operation** has the meaning given to it in section 19M

“**peat** means combustible, soft, porous, or compressed sedimentary deposit of plant origin with a high water content

“**permit operator** has the same meaning as in section 2 of the Crown Minerals Act 1991

“**quarrying operation** has the meaning given to it in section 19N

“**site health and safety committee** means a committee established to support the ongoing improvement of health and safety in a mining operation

“**site health and safety representative** means a mine worker elected as a site health and safety representative, as an individual or as a member of a site health and safety committee, or both

“**site senior executive** means the person appointed as the site senior executive by the mine operator

“**tourist mining operation** means an operation that has the purpose of—

“(a) mine education; or

“(b) mine research; or

“(c) mine tourism

“**tunnelling operation** has the meaning given to it in section 19O.

“19M Meaning of mining operation

In this Act, **mining operation**—

“(a) means the extraction of coal and minerals and the place at which the extraction is carried out; and

“(b) includes any of the following activities and the place at which they are carried out:

“(i) exploring for coal:

“(ii) mining for coal or minerals:

“(iii) processing coal or minerals associated with a mine:

“(iv) producing or maintaining tailings, spoil heaps, and waste dumps:

“(v) the excavation, removal, handling, transport, and storage of coal, minerals, substances, contaminants, and wastes at the place where the activities described in subparagraphs (i) to (iv) are carried out:

- “(vi) the construction, operation, maintenance, and removal of plant and buildings at the place where the activities described in subparagraphs (i) to (iv) are carried out:
- “(vii) preparatory, maintenance, and repair activities associated with the activities described in subparagraphs (i) to (iv); and
- “(c) includes—
 - “(i) a tourist mining operation:
 - “(ii) a tunnelling operation; but
- “(d) does not include—
 - “(i) exploring for minerals:
 - “(ii) an alluvial mining operation:
 - “(iii) a mining operation wholly on or under the seabed on the seaward side of the mean high-water mark:
 - “(iv) a quarrying operation.

“19N Meaning of quarrying operation

- “(1) In this Act, **quarrying operation**—
- “(a) means an activity carried out above ground for the purpose of—
 - “(i) extracting any material, other than any coal or any mineral, from the earth; or
 - “(ii) processing any material, other than any coal or any mineral, at the place where the material is extracted; and
 - “(b) includes the place where an activity described in paragraph (a) is carried out; and
 - “(c) includes any place in which any material extracted or processed in a quarry is crushed or screened.
- “(2) Subsection (1) applies whether or not the material is to be extracted or processed for commercial gain and whether or not the material is extracted or processed by the use of explosives.

“19O Meaning of tunnelling operation

- In this Act, **tunnelling operation**—
- “(a) means an operation involving extraction of fill with the purpose of creating a tunnel or shaft or enlarging or extending any tunnel or shaft; and

- “(b) includes the place where an operation described in paragraph (a) is carried out; but
- “(c) excludes any tunnelling operation of a kind declared under section 19P not to be a tunnelling operation.

“19P Governor-General may, by Order in Council, exclude operations from section 19O

The Governor-General may, by Order in Council made on the recommendation of the Minister, declare that certain operations or classes of operation are not tunnelling operations for the purposes of section 19O.

“19Q General duty to involve mine workers in health and safety matters

- “(1) Every mine operator must ensure that there is, for a mining operation, a documented worker participation system that provides reasonable opportunities for the mine workers to participate effectively in ongoing processes for the improvement of health and safety in the mining operation.
- “(2) Without limiting subsection (1), **ongoing processes for the improvement of health and safety** include the matters referred to in sections 6 to 13AA.
- “(3) In complying with this Part, a mine operator must take into account any relevant approved code of practice.
- “(4) If a site health and safety committee or a site health and safety representative makes a recommendation regarding health and safety in a mining operation, the mine operator must either adopt the proposal or provide a written statement to the site health and safety committee or site health and safety representative setting out the reasons for not adopting the proposal.
- “(5) In subsection (1), **reasonable opportunities** means opportunities that are reasonable in the circumstances, having regard to relevant matters such as—
 - “(a) the number of mine workers in the mining operation; and
 - “(b) the likely potential sources or causes of harm in the mining operation; and

- “(c) the nature of the work that is performed and the way that it is arranged or managed by the mine operator; and
- “(d) the nature of the employment arrangements or contracting arrangements, including the extent and regularity of employment or engagement of temporary mine workers; and
- “(e) the willingness of mine workers and unions to develop worker participation systems; and
- “(f) in relation to employers and employees, the overriding duty to act in good faith.

“Worker participation system

“19R Development of worker participation system

- “(1) The following persons must co-operate in good faith to seek to develop, agree, implement, and maintain a worker participation system that sets out the ways in which the mine operator must seek to comply with section 19Q(1):
 - “(a) the mine operator;
 - “(b) the mine workers who wish to be involved;
 - “(c) a union or unions representing any of the mine workers.
- “(2) A worker participation system may include any matters that the mine operator, mine workers, and any union representing them, agree comply with this Part.
- “(3) If the system includes provision for site health and safety representatives, those representatives must be elected by the mine workers in the mining operation.
- “(4) If 1 or more mine workers request that the system include provision for site health and safety representatives, there must be provision for the election of at least 1 site health and safety representative.
- “(5) A system may allow for more than 1 site health and safety representative or 1 site health and safety committee and, in that case, each representative or committee may represent a particular type of work of the mine operator, or another grouping agreed in, or determined in accordance with, the system.

“19S Training of site health and safety representatives

- “(1) Sections 19E to 19G apply to any site health and safety representative under this Part who is an employee.
- “(2) A worker participation system may include a provision increasing or decreasing the maximum—
- “(a) number of days’ paid leave that the employers of mine workers are required to allow site health and safety representatives who are employees to take for health and safety training under section 19E(1) (as applied by subsection (1));
 - “(b) total number of days’ paid leave that employers of mine workers are required to allow site health and safety representatives and health and safety representatives to take for health and safety training under sections 19E(2) and 19F (as applied by subsection (1)).
- “(3) Despite subsection (2) and section 19E(1) and (2) (as applied by subsection (1)), a worker participation system must ensure that every site health and safety representative who is an employee has sufficient paid leave to attend training reasonably required to attain the competency requirements for site health and safety representatives prescribed by or under regulations made under this Act.

“19T Review and replacement of worker participation systems

- “(1) A worker participation system must specify a process by which it must be reviewed.
- “(2) At any time after the expiry of 12 months from the date the system is agreed, 1 or more mine workers or a union on their behalf may initiate the development of a new system in accordance with this Act.
- “(3) If a system is no longer in place, or functioning, a new system must be developed, agreed, implemented, and maintained in accordance with section 19R.

“19U Prescribed provisions apply if no scheme in place

- “(1) The provisions prescribed in regulations made under this Act apply if a worker participation system is not developed—

- “(a) within 3 months of the date on which a mining operation begins; or
 - “(b) if section 19T(3) applies, within 3 months of the date on which any person initiates the development of a new system.
- “(2) If the prescribed provisions apply, and have applied continuously for a period of 6 months or more, 1 or more mine workers or a union on their behalf may initiate the development of a new system in accordance with section 19R.

“Site health and safety representatives

“19V Election of site health and safety representatives

If a worker participation system provides for the election of 1 or more site health and safety representatives, but does not provide for the conduct of those elections, the requirements for the conduct of elections prescribed in regulations made under this Act apply.

“19W Functions of site health and safety representatives

The functions of a site health and safety representative are, in relation to the mining operation in respect of which the representative is appointed,—

- “(a) to represent mine workers in matters relating to health and safety:
- “(b) to investigate complaints from mine workers regarding health and safety:
- “(c) if requested by a mine worker, to represent the worker in relation to a matter relating to health and safety (including a complaint):
- “(d) to identify hazards in the mining operation and bring them to the attention of the mine operator or site senior executive:
- “(e) to monitor measures taken by the mine operator that are relevant to health and safety:
- “(f) to provide feedback to the mine operator or site senior executive about whether the requirements of this Act or regulations made under this Act are being complied with:

“(g) to promote the interests of mine workers who have been harmed at work, including in relation to arrangements for harmed workers’ rehabilitation and return to work.

“19X No duty on site health and safety representatives

Nothing in this Act imposes a duty on a site health and safety representative in that capacity.

“Powers of site health and safety representatives

“19Y Competency requirements for exercise of certain powers

A site health and safety representative must not exercise any power under section 19ZA, 19ZG, or 19ZH unless he or she meets the competency requirements for site health and safety representatives prescribed by or under regulations made under this Act.

“19Z Power of site health and safety representative to attend interview

With the consent of the mine worker, a site health and safety representative may attend any interview relating to health and safety that the worker has with the mine operator, the site senior executive or any other representative of the mine operator, or an inspector.

“19ZA Power of site health and safety representative to enter and inspect mining operation

- “(1) A site health and safety representative may enter and inspect any area of a mining operation at any reasonable time to perform the functions of the site health and safety representative.
- “(2) Before exercising the power under this section, the site health and safety representative must give reasonable notice to the site senior executive.
- “(3) In exercising the power under this section, the site health and safety representative must comply with any reasonable procedures and requirements applying in the mining operation that relate to health and safety.

“19ZB Power of site health and safety representative to examine and copy documents

A site health and safety representative may examine and copy any documents relevant to health and safety that are held by the mine operator, if the site health and safety representative has reason to believe that the documents contain information required to assess whether procedures at the mining operation are sufficient to achieve compliance with this Act and any regulations made under this Act.

“19ZC Power to require assistance

A site health and safety representative may require the site senior executive or person in charge of the relevant part or aspect of a mining operation to give the site health and safety representative reasonable assistance in the exercise of a power under section 19ZA or 19ZB.

“19ZD Power of site health and safety representative to accompany inspector

- “(1) A site health and safety representative may accompany an inspector who has, under section 31, entered a mining operation.
- “(2) An inspector may refuse to allow a site health and safety representative accompanying the inspector under this section to be present—
- “(a) during any discussion in which personal information may be disclosed (unless the person who is the subject of the information has expressly consented to the site health and safety representative being present):
 - “(b) if the inspector believes that the presence of the site health and safety representative would prejudice the maintenance of the law, including the investigation and prosecution of offences.
- “(3) In this section, **personal information** has the meaning given to it in section 2(1) of the Privacy Act 1993.

“19ZE Site health and safety representative may consult inspector

A site health and safety representative may consult with an inspector on any health and safety issue.

“19ZF Trained site health and safety representatives may issue hazard notices

“(1) In this section,—

“**hazard notice** means a notice that—

“(a) describes a hazard identified in a mining operation; and

“(b) is in the prescribed form; and

“(c) may set out suggested steps to deal with the hazard

“**trained site health and safety representative** means a site health and safety representative who has achieved a level of competency in health and safety practice specified by the Minister by notice in the *Gazette* or who has completed an appropriate course approved under section 19G.

“(2) Subsection (3) applies if a trained site health and safety representative—

“(a) believes on reasonable grounds that there is a hazard in the mining operation; and

“(b) has brought the hazard to the attention of the site senior executive; and

“(c) has discussed or attempted to discuss with the site senior executive steps for dealing with the hazard.

“(3) The trained site health and safety representative may give the site senior executive on behalf of the mine operator a hazard notice if—

“(a) the site senior executive refuses to discuss, or take steps to deal with, the hazard; or

“(b) the site senior executive and representative do not agree on the steps that must be taken, or the time within which the steps must be taken, to deal with the hazard; or

“(c) the representative believes on reasonable grounds that the mine operator or site senior executive has failed to meet the requirements of this Act or regulations made under this Act in relation to the hazard within a time agreed during the discussion.

“(4) If a hazard notice has been given by a trained site health and safety representative, the site senior executive must notify WorkSafe of that fact.

“19ZG Power of site health and safety representative to give notice requiring suspension of mining operation

- “(1) This section applies if a site health and safety representative—
- “(a) believes on reasonable grounds that the whole, or a part or an aspect, of a mining operation is likely to cause serious harm to any person; and
 - “(b) has discussed or attempted to discuss the matter likely to cause serious harm with the site senior executive.
- “(2) The site health and safety representative may give a written notice to the site senior executive ordering the suspension of the whole, or a part or an aspect, of the mining operation.
- “(3) The notice must set out the reasons for the site health and safety representative’s belief.
- “(4) If the site senior executive receives a notice under subsection (2), the site senior executive must stop the mining operation, or the part or aspect of the mining operation, mentioned in the notice.
- “(5) If a notice ordering the suspension of the whole, or a part or an aspect, of the mining operation has been given by a site health and safety representative, the site senior executive must notify WorkSafe of that fact.

“19ZH Power of site health and safety representative to require mining operation to stop in case of imminent serious harm

- “(1) This section applies if a site health and safety representative believes on reasonable grounds that serious harm to any person is likely to be caused imminently by the whole, or a part or an aspect, of a mining operation.
- “(2) The site health and safety representative may—
- “(a) stop the whole, or a part or an aspect, of the mining operation and immediately advise the person in charge of the operation or part or aspect of the operation; or
 - “(b) require the person in charge of the operation or part or aspect of the operation to stop the operation.
- “(3) If a site health and safety representative requires a person to stop the whole, or a part or an aspect, of a mining operation, that person must do so.

- “(4) The site health and safety representative must, as soon as practicable after exercising the power under subsection (2), advise the site senior executive of the action taken under that subsection and the reasons for the action taken.
- “(5) If a site health and safety representative has advised the site senior executive of action taken under subsection (2), the site senior executive must notify WorkSafe of that fact.

“19ZI Inspector may cancel order to suspend mining operation

An inspector may cancel the whole or part of a notice given under section 19ZG (whether or not mining operations have stopped pursuant to the notice) or an action taken by a site health and safety representative under section 19ZH(2) if the inspector does not consider that the operation or the part or aspect of the mining operation concerned is likely to cause serious harm to any person.

“19ZJ Workers must do other work

If the whole or a part or an aspect of a mining operation is stopped under section 19ZG or 19ZH, a mine worker who is an employee and who was working in the operation or part or aspect of the operation must do any other work within the scope of the worker’s employment agreement that the employer’s employer reasonably requests.

“19ZK Work not to restart until no likelihood of serious harm

The site senior executive must ensure that the operation or part or aspect of the mining operation stopped because a notice is given under section 19ZG, or stopped or required to be stopped under section 19ZH, is not restarted until the site senior executive is satisfied that it is not likely to cause serious harm to any person.

“19ZL Protection of site health and safety representatives performing functions or exercising powers

A mine operator or site senior executive must not—

- “(a) prevent or attempt to prevent a site health and safety representative from performing his or her functions or exercising his or her powers; or
- “(b) penalise a site health and safety representative for performing his or her functions or exercising his or her powers.

“19ZM Functions and powers for health and safety purposes only

A site health and safety representative must not perform a function or exercise a power under this Part for a purpose other than a health and safety purpose.

“19ZN Information to be used for health and safety purposes only

- “(1) This section applies to any information obtained by a site health and safety representative in the performance of the site health and safety representative’s functions or the exercise of the site health and safety representative’s powers under this Act.
- “(2) A site health and safety representative may—
 - “(a) disclose or use the information,—
 - “(i) if the information is about a person, only with the person’s consent:
 - “(ii) only to the extent necessary for the performance of the site health and safety representative’s functions or the exercise of the site health and safety representative’s powers under this Act:
 - “(b) disclose the information—
 - “(i) to WorkSafe or a person authorised by WorkSafe only if WorkSafe reasonably believes the disclosure is necessary for administering, monitoring, or enforcing compliance with this Act or any relevant health and safety legislation (as defined in section 3 of the WorkSafe New Zealand Act 2013):
 - “(ii) only if the disclosure is authorised or required by law.

“(3) In subsection (2), **disclose** includes to give any person access to information.

“**19ZO Health and safety representative not to unnecessarily impede production**

A site health and safety representative must not unnecessarily impede production at a mining operation when performing functions or exercising powers under this Part.

“**19ZP Protection from civil and criminal liability**

A site health and safety representative is protected from civil and criminal liability for any act that he or she does or omits to do—

- “(a) in the performance or intended performance of his or her functions or the exercise or intended exercise of his or her powers under this Act; and
- “(b) in good faith.

“**19ZQ Obligations of mine operators**

A mine operator must—

- “(a) allow a site health and safety representative to spend such time as is reasonably necessary to perform his or her functions and exercise his or her powers; and
- “(b) provide a site health and safety representative with such access to facilities that is reasonably necessary or prescribed in regulations made under this Act to enable the representative to perform his or her functions and exercise his or her powers.

“Removal of site health and safety representative

“**19ZR WorkSafe may remove site health and safety representative**

- “(1) WorkSafe may, by notice in writing, remove a site health and safety representative from office if WorkSafe considers that the site health and safety representative has failed to perform his or her functions or exercise his or her powers satisfactorily (for example, if the representative has exercised his or her

powers for an improper purpose in breach of section 19ZM or disclosed information in breach of section 19ZN).

“(2) The notice under subsection (1) must set out the reasons for WorkSafe’s opinion.

“19ZS Election of another site health and safety representative

“(1) If a site health and safety representative is removed from office by WorkSafe, another site health and safety representative may be elected.

“(2) Except as provided for in subsection (3), no election for a site health and safety representative to replace the representative who has been removed may be held until the expiry of the period for appeal under section 19ZT or, if an appeal is lodged, until a decision is made on the appeal.

“(3) One or more mine workers may initiate the election of a temporary site health and safety representative to replace the representative who has been removed.

“(4) The term of office of any temporary site health and safety representative ends on the expiry of the period for appeal under section 19ZT or, if an appeal is lodged, when a decision is made on the appeal.

“(5) A temporary health and safety representative has the functions and powers set out in sections 19W and 19Z to 19ZH, and those sections and sections 19X, 19Y, and 19ZI to 19ZQ apply with any necessary modifications.

“19ZT Site health and safety representative may appeal against removal

“(1) A site health and safety representative may appeal to a District Court against a decision of WorkSafe to remove him or her.

“(2) The appeal must be brought within 28 days of the date of the notice under section 19ZR.

“Industry health and safety representatives

“19ZU Appointment of industry health and safety representatives

“(1) This section and sections 19ZV to 19ZZD apply only to—

- “(a) a mining operation associated with the extraction of coal and where any person works below ground (**underground coal mining operation**):
 - “(b) mine workers who work in an underground coal mining operation:
 - “(c) any union that represents mine workers who work in an underground coal mining operation.
- “(2) A union or group of mine workers may, in any manner determined by the union or group, appoint a person to be an industry health and safety representative.
- “(3) The person appointed must meet the competency requirements for industry health and safety representatives prescribed in regulations made under this Act.
- “(4) The union or group of mine workers that appoints an industry health and safety representative must meet the costs of the representative.

“19ZV Notice to WorkSafe of appointment or cessation of appointment of representative

A union or group of mine workers that appoints an industry health and safety representative must—

- “(a) give notice to WorkSafe of that appointment; and
- “(b) provide the prescribed information in relation to that appointment, and a photograph of the representative authenticated in accordance with any prescribed requirements; and
- “(c) give notice to WorkSafe within 14 days after the date on which the person ceases to be a representative.

“19ZW Functions and powers of industry health and safety representatives

- “(1) An industry health and safety representative has, in respect of any mining operation and any mine worker, the functions and powers set out in sections 19W and 19Z to 19ZH, and those sections and sections 19X and 19ZI to 19ZP apply with any necessary modifications.

- “(2) In addition to the functions and powers referred to in subsection (1), an industry health and safety representative has the following functions:
- “(a) to participate in investigations into accidents in mining operations that resulted, or could have resulted, in serious harm;
 - “(b) to assist with industry-wide initiatives to improve health and safety in mining operations.

“19ZX Further provision concerning scope of functions and powers of industry health and safety representatives

An industry health and safety representative may perform his or her functions and exercise his or her powers in relation to any mining operation or mine worker whether or not,—

- “(a) in the case of a representative appointed by a union, any worker in the mine, or the relevant mine worker, as the case may be, is a member of that union; or
- “(b) in the case of a representative appointed by a group of mine workers, any worker in the mine, or relevant mine worker, as the case may be, is a member of that group.

“19ZY Identity cards

- “(1) WorkSafe must give each industry health and safety representative an identity card.
- “(2) The identity card must be in the prescribed form.
- “(3) A person who ceases to be an industry health and safety representative must return his or her identity card to WorkSafe as soon as possible, but within 14 days, after the date on which the person ceases to be a representative.

“19ZZ Production or display of identity card

- “(1) Before an industry health and safety representative exercises a power under this Part in relation to any person, the representative must—
 - “(a) produce his or her identity card to the person; or
 - “(b) display the identity card so it is clearly visible to that person.

- “(2) An industry health and safety representative who exercises a power under section 19ZA must—
- “(a) produce his or her identity card to the person apparently in charge of the part of the mining operation being entered; or
 - “(b) display the identity card so it is clearly visible to that person.
- “(3) If the representative is unable, despite reasonable efforts, to comply with subsection (2), the representative must, before leaving the mining operation, leave a written notice stating—
- “(a) the representative’s identity; and
 - “(b) the address of a place where the representative may be contacted; and
 - “(c) the date and time of entry onto the mining operation; and
 - “(d) the representative’s reasons for entering onto the mining operation.

“19ZZA Removal of industry health and safety representative

Sections 19ZR and 19ZT apply to an industry health and safety representative with any necessary modifications.

“19ZZB Register of industry health and safety representatives

- “(1) WorkSafe must keep and maintain a register of industry health and safety representatives.
- “(2) The purpose of the register is to enable members of the public to know the names and contact details of industry health and safety representatives.
- “(3) The register may be kept in any manner that WorkSafe thinks fit.
- “(4) The register must contain the prescribed information.

“19ZZC Alterations to register

WorkSafe may at any time make any amendments to the register that are necessary to reflect any changes in the information referred to in section 19ZZB(4).

“19ZZD Search of register

- “(1) A person may search the register for a purpose set out in section 19ZZB(2).
- “(2) WorkSafe must—
- “(a) make the register available for public inspection, without fee, at reasonable hours at the head office of WorkSafe; and
 - “(b) supply to any person, on request and on payment of a reasonable charge, a copy of the register or any extract from it.”

12 Section 20 replaced (Codes of practice)

Replace section 20 with:

“20 Codes of practice

- “(1) WorkSafe may from time to time issue any instrument (a **code of practice**) that is—
- “(a) a statement of preferred work practices or arrangements; or
 - “(b) a statement of preferred aims, arrangements, practices, or principles (or any 2 or more of those matters) for the design of plant, protective clothing, or protective equipment, of any kind or description; or
 - “(c) a statement of preferred arrangements, characteristics, components, configurations, elements, or states (or any 2 or more of those matters) for manufactured plant, manufactured protective clothing, or manufactured protective equipment, of any kind or description; or
 - “(d) a statement of preferred characteristics for any manufactured or processed substance used or capable of being used—
 - “(i) in or in connection with any protective clothing or protective equipment; or
 - “(ii) otherwise for or in connection with protecting people from hazards; or
 - “(e) a statement of preferred practices or arrangements relating to employee participation in health and safety in the place of work; or
 - “(f) a statement of preferred practices or arrangements relating to worker participation in a mining operation.

- “(2) WorkSafe may issue any amendment or revocation of a code of practice.
- “(3) Subject to subsection (4), a code of practice may incorporate, adopt, or apply, with or without modification, all or any part of any other document prepared or issued by any body or authority, including the Environmental Protection Authority established by section 7 of the Environmental Protection Authority Act 2011.
- “(4) WorkSafe must not issue or amend a code of practice in a way that adopts with modification any document previously approved by another Minister of the Crown or any compliance document (within the meaning of the Building Act 2004) without the consent of the other Minister or the chief executive of the department of State responsible for the administration of the Building Act 2004 (as relevant).

“20A Code to be approved by Minister

- “(1) A code of practice, an amendment to a code of practice, or a revocation of a code of practice has no force or effect until it has been approved by the Minister.
- “(2) The Minister must not approve any code, amendment, or revocation, unless—
 - “(a) at least 28 days have passed since the publication in the *Gazette* of a notice of the intention of WorkSafe to apply for approval; and
 - “(b) the Minister has consulted any persons that will be affected by the code, amendment, or revocation (or representatives of those persons), and they have had the opportunity to consider its possible effects and to comment on the effects to the Minister; and
 - “(c) the Minister has considered any comments made to the Minister concerning the effects.
- “(3) However, the Minister may approve a code, amendment, or revocation without complying with the requirements of subsection (2)(a) or (b) if the Minister is satisfied that sufficient consultation has already taken place in respect of the matters in the code, amendment, or revocation.

- “(4) When the Minister approves a code, amendment, or revocation, the Minister must—
- “(a) publish a notice of the approval in the *Gazette*; and
 - “(b) show the date of the approval on the code, amendment, or revocation and publish it in any manner the Minister thinks fit.
- “(5) The fact that the Minister has published a notice of approval in the *Gazette* under subsection (4)(a) is conclusive proof that the requirements of this section have been complied with in respect of the approval.

“20B Court may have regard to code

- “(1) A court may, in determining whether or not a person charged with failing to comply with any provision of this Act has complied with the provision, have regard to any approved code of practice that—
- “(a) was in force at the time of the alleged failure; and
 - “(b) in the form in which it was then in force, related to matters of a kind to which the provision relates.
- “(2) In any proceedings, a document purporting to be an approved code of practice, or an amendment of an approved code of practice, issued by WorkSafe is, in the absence of proof to the contrary, deemed to be an approved code of practice or an amendment of an approved code of practice.
- “(3) Subsection (2) does not affect any other method of proof of an approved code of practice or an amendment of an approved code of practice.

“20C Codes to be made available

- “(1) WorkSafe must ensure that every approved code of practice is, at all reasonable times, made available to the public for inspection free of charge—
- “(a) in hard copy at every office of WorkSafe; and
 - “(b) on an Internet site maintained by, or on behalf of, WorkSafe.
- “(2) WorkSafe may charge any person a reasonable fee for—
- “(a) providing the person with a hard copy of an approved code of practice; or

- “(b) allowing the person to use equipment under WorkSafe’s control to copy all or any part of an approved code of practice.
- “(3) Nothing in this section requires WorkSafe to allow any person to use equipment under WorkSafe’s control to copy all or any part of an approved code of practice.

“Competencies in mining industry

“20D New Zealand Mining Board of Examiners

WorkSafe must establish a board to be known as the New Zealand Mining Board of Examiners.

“20E Functions of Board

The Board has the following functions:

- “(a) to advise WorkSafe on competency requirements for mine workers:
- “(b) to examine applicants, or have applicants examined, for certificates of competence:
- “(c) to issue, renew, cancel, and suspend certificates of competence:
- “(d) any other function relating to training and competency requirements for participants in the extractives industry conferred on the Board by regulations made under this Act.

“20F Membership of Board

- “(1) WorkSafe may at any time appoint a member of the Board.
- “(2) The appointment of a member of the board must be for a specified period.
- “(3) WorkSafe must appoint one of the members of the Board as the chairperson of the board.
- “(4) When appointing a member of the Board, WorkSafe must have regard to the need to ensure that the Board has among its members knowledge and experience of—
 - “(a) mining operations:
 - “(b) health and safety inspection in the mining industry:
 - “(c) mining education:
 - “(d) mining industry training.

- “(5) Without limiting subsection (4), the Board may include 1 or more employees of WorkSafe.
- “(6) A member of the board may resign by notice in writing to WorkSafe.
- “(7) Clause 15 of Schedule 5 of the Crown Entities Act 2004 (**Schedule 5**) applies to the members of the Board as if they were members of a committee appointed under clause 14 of Schedule 5 by the board of a Crown entity.

“**20G Proceedings of Board**

The Board may determine its own procedure.

“**20H Board levy**

- “(1) The Governor-General may, by Order in Council, in accordance with a recommendation of the Minister, make regulations imposing a levy on mine operators to fund the direct and indirect costs incurred by the Board in performing the Board’s functions to the extent they relate to mining operations.
- “(2) The regulations must—
 - “(a) specify how the levy rate or rates are calculated:
 - “(b) specify the mine operators or classes of mine operators responsible for paying the levy:
 - “(c) specify, if the levy is to be paid at different rates, the mine operators, mining operations, thing being extracted, or other things or the classes of mine operators, mining operations, thing being extracted, or other things to which the different rates apply:
 - “(d) specify when and how the levy is to be paid:
 - “(e) specify the persons or classes of persons, if any, exempt from paying the levy.
- “(3) Without limiting subsections (1) and (2), the regulations may—
 - “(a) specify the returns to be made to WorkSafe or some other person or body for the purpose of enabling or assisting the determination of amounts of levy payable:
 - “(b) specify the circumstances in which, and conditions subject to which, persons may be allowed extensions of time for paying the levy:

- “(c) for the purpose of ascertaining whether the regulations are being complied with,—
 - “(i) require the keeping of accounts, statements, and records of a specified class or description by either or both of WorkSafe and the persons responsible for paying the levy; and
 - “(ii) require the retention of the accounts, statements, and records for a specified period:
 - “(d) provide for the establishment of a dispute resolution process for disputes relating to levies, including—
 - “(i) the appointment of persons to resolve the disputes; and
 - “(ii) the procedures to be followed by the persons; and
 - “(iii) the remuneration of the persons.
- “(4) Before making a recommendation under this section, the Minister must—
- “(a) receive advice from WorkSafe on the proposed levy; and
 - “(b) consult the people responsible for paying the proposed levy.”

13 Section 21 amended (Regulations)

Replace section 21(1)(b) with:

- “(b) without limiting paragraph (a), imposing duties relating to the health or safety of mine workers on—
 - “(i) mine operators:
 - “(ii) mine workers:
 - “(iii) site senior executives:
- “(c) the default worker participation system for the purpose of section 19U:
- “(d) the requirements for conducting elections of site health and safety representatives for the purpose of section 19V(1):
- “(e) the form of the identity card to be held by an industry health and safety representative:
- “(f) prescribing the information to be provided to WorkSafe for the purpose of section 19ZV(b) and any requirements concerning the authentication of any photograph provided under that section:

- “(g) prescribing the information to be contained in the register kept under section 19ZZB:
- “(h) prescribing functions of the New Zealand Mining Board of Examiners for the purpose of section 20E(d):
- “(i) providing for any other matters contemplated by this Act and necessary for its administration or necessary for giving it full effect.”

14 Section 22 amended (Application of regulations)

In section 22, insert as subsection (2):

- “(2) Regulations under section 21(1)(b) may impose duties—
 - “(a) on all mine operators:
 - “(b) on mine operators of a particular kind or description:
 - “(c) on all site senior executives:
 - “(d) on site senior executives of a particular kind or description:
 - “(e) on all mine workers:
 - “(f) on mine workers of a particular kind or description:
 - “(g) in relation to all mining operations:
 - “(h) in relation to mining operations of a particular class or description.”

15 Section 23 amended (Other provisions relating to regulations)

- (1) In section 23, replace “section 21(1)(a)” with “section 21(1)(a) or (b)” in each place.
- (2) After section 23(1)(e), insert:
 - “(ea) the competency requirements to be met by site health and safety representatives and industry health and safety representatives:”.
- (3) After section 23(1)(f), insert:
 - “(fa) the prescribing by WorkSafe, by notice in the *Gazette*, of—
 - “(i) requirements to be met for the granting of certificates of competence:
 - “(ii) other competency requirements for mine workers, site senior executives, site health and safety

representatives, and industry health and safety representatives.”.

16 Section 31 amended (Powers of entry and inspection)

After section 31(6), insert:

“(7) In this section, a reference to an employee includes any mine worker and a reference to an employer includes any mine operator.”

17 Section 33 amended (Powers to take samples and other objects and things)

After section 33(3), insert:

“(4) In this section, a reference to an employer includes any mine operator.”

18 New section 39A inserted (Inspectors may issue improvement notices in relation to mining operation)

After section 39, insert:

“39A Inspectors may issue improvement notices in relation to mining operation

“(1) An inspector may, in relation to a mining operation, give a person written notice to comply with a provision of this Act or of regulations made under this Act, if the inspector believes on reasonable grounds that the person is failing to comply with that provision or is likely to fail to comply with that provision.

“(2) An improvement notice must state that the inspector concerned believes that the person to whom or which it relates is failing, or is likely to fail, to comply with the provision, and must specify—

“(a) the provision; and

“(b) the inspector’s reasons for believing that the person is failing, or is likely to fail, to comply with the provision; and

“(c) the nature of the failure or likely failure; and

“(d) a day before which compliance is to be completed.

“(3) An improvement notice may specify steps that could be taken to ensure compliance with the provision concerned.

- “(4) Every person to whom or to which an improvement notice is given or posted must comply with it.
- “(5) Nothing in this section limits the power of an inspector under section 39.”

19 New section 41A inserted (Inspectors may issue prohibition notices in relation to mining operation)

After section 41, insert:

“41A Inspectors may issue prohibition notices in relation to mining operation

- “(1) This section applies if, in relation to a mining operation,—
- “(a) an inspector believes that there is a likelihood of serious harm to any person because of a failure to comply with any provision of this Act or of regulations made under this Act; or
 - “(b) an inspector believes on reasonable grounds that it is likely that a person will fail to comply with any provision of this Act or of regulations made under this Act and that failure would be likely to cause serious harm to any person.
- “(2) The inspector may give written notice to stop, or not start, the carrying on, continuing, operating, storing, transporting, or use of the activity, building, place of work, plant, process, situation, structure, or substance, that the inspector believes to constitute the hazard that is likely to cause serious harm until an inspector is satisfied that measures sufficient to eliminate the hazard, or minimise the likelihood that the hazard will be a source of harm, have been taken.
- “(3) A prohibition notice must specify—
- “(a) the hazard to which it relates; and
 - “(b) the inspector’s reasons for believing that the hazard is likely to cause serious harm.
- “(4) A prohibition notice may require the withdrawal of all mine workers of a specified kind or description except such mine workers as may be necessary to deal with the hazard.
- “(5) A prohibition notice may specify steps that could be taken to eliminate the hazard or minimise the likelihood that the hazard will be a source of harm.

“(6) Nothing in this section limits the power of an inspector under section 41.”

20 Section 42 amended (Service of prohibition notices)

(1) In section 42(1), after “prohibition notice”, insert “under section 41”.

(2) In section 42(2), after “notice”, insert “under section 41”.

(3) After section 42(2) insert:

“(3) An inspector who gives a prohibition notice under section 41A may—

“(a) fix the notice to or near the part of the place of work or plant to which it relates and give a copy of it to the site senior executive, or another representative of the mine operator, on behalf of the mine operator; or

“(b) give the notice to the site senior executive, or another representative of the mine operator, on behalf of the mine operator.

“(4) No person may remove a notice under section 41A served in accordance with subsection (3)(a) unless authorised by an inspector.”

21 Section 43 amended (Compliance with prohibition notices)

(1) In section 43, after “notice”, insert “under section 41”.

(2) In section 43, insert as subsection (2):

“(2) A mine operator to whom a prohibition notice under section 41A is given must ensure that no action is taken in contravention of it.”

22 Section 50 amended (Other offences)

In section 50(1)(b), after “19B,”, insert “section 19Q(1), section 19ZN(2), section 19ZG(4), section 19ZH(3), section 19ZL,”.

23 Section 56D amended (Inspector may require information)

(1) After section 56D(1)(b)(iii), insert:

“(iiia) a mine operator:

- “(iiib) a mine worker:
- “(iiic) a site senior executive:”.

- (2) After section 56D(2)(b)(i), insert:
- “(ia) a mine operator:”.

24 Section 59 amended (Funding)

- (1) In section 59(1), insert in its appropriate alphabetical order:
- “**certain Crown costs** means the expected cost to the Crown of—
- “(a) WorkSafe carrying out its functions under any enactment:
 - “(b) any agency designated under section 28B of this Act carrying out functions under this Act and enforcing the Hazardous Substances and New Organisms Act 1996 in places of work:
 - “(c) the Crown administering the relevant health and safety legislation (within the meaning of section 3 of the Work-Safe New Zealand Act 2013):
 - “(d) collecting the funding levy”.
- (2) In section 59(2), replace “the expected cost to the Crown of the administration of this Act” with “certain Crown costs”.
- (3) In section 59(5), replace “the Secretary” with “WorkSafe”.

25 New section 63 and Schedule 1AA inserted

- (1) After section 62, insert:
- “**63 Application, savings, and transitional provisions**
The application, savings, and transitional provisions set out in Schedule 1AA have effect for the purposes of this Act.”
- (2) Before Schedule 1, insert the Schedule 1AA set out in Schedule 1 of this Act.

26 Further amendments

The enactments specified in Schedule 2 are amended in the manner set out in that schedule.

Schedule 1

s 25

**New Schedule 1AA inserted in principal
Act****Schedule 1AA**

s 63

Part 1**Transitional provisions relating to Health
and Safety in Employment Amendment Act
2013****1 Existing mining operations**

- (1) This clause applies to any mining operation that was in operation immediately before the date on which the Health and Safety in Employment Amendment Act 2013 came into force.
- (2) Nothing in sections 12A, 13AA, 39A, or 41A of the principal Act, as inserted by the Health and Safety in Employment Amendment Act 2013, applies in respect of the mining operation until 1 January 2015.
- (3) The mine operator may, but is not required to, comply with section 19Q(1) of the principal Act, as inserted by the Health and Safety in Employment Amendment Act 2013, before 1 January 2015.
- (4) Section 19J of the principal Act, as inserted by the Health and Safety in Employment Amendment Act 2013, applies in respect of the mining operation from the earlier of—
 - (a) the date on which the mine operator complies with section 19Q(1) of the principal Act, as inserted by the Health and Safety in Employment Amendment Act 2013; and
 - (b) 1 January 2015.
- (5) If, on 1 January 2015, the mining operation does not have a documented worker participation system referred to in section 19Q(1) of the principal Act, as inserted by the Health and Safety in Employment Amendment Act 2013, the prescribed provisions referred to in section 19U(1) of the principal Act, as inserted by the Health and Safety in Employment Amendment Act 2013, apply.
- (6) Nothing in subclause (3) limits the application of sections 19ZU to 19ZZ of the principal Act, as inserted by the Health

Part 1—*continued*

and Safety in Employment Amendment Act 2013, in respect of the mining operation.

2 Notices, etc, before site senior executive appointed for existing mining operation

- (1) This clause applies to any mining operation to which clause 1 applies before the mine operator has appointed a site senior executive for the first time in accordance with regulations made under section 21 of the principal Act.
- (2) Any notice required or enabled by the Act to be given to the site senior executive of the mining operation may be given to the mine operator or a representative of the mine operator.
- (3) Sections 19ZF, 19ZG, 19ZH, and 19ZK of the principal Act, as inserted by the Health and Safety in Employment Amendment Act 2013, apply, with any necessary modifications, as if references to the site senior executive were references to the mine operator or a representative of the mine operator.

3 Exemptions of mining operations from regulations for limited period

- (1) Regulations made under section 21(1)(b) of the principal Act may provide for the granting by WorkSafe of an exemption (unconditionally or subject to conditions) in respect of any particular mining operation (whether or not it is one to which clause 1 applies) from one or more obligations or requirements under the regulations for any specified period, or periods, of up to a total of 36 months and ending not later than 31 December 2017.
- (2) The regulations must—
 - (a) specify the reasons for which exemptions may be granted; and
 - (b) require WorkSafe to specify in an exemption the reasons for which the exemption is granted.
- (3) An exemption granted under the regulations is not a disallowable instrument for the purposes of the Legislation Act 2012 and does not have to be presented to the House of Representatives under section 41 of that Act.

Part 1—*continued*

- (4) Nothing in this clause limits section 23(1)(k) of the principal Act.
-

Schedule 2
Consequential amendments

s 26

Employment Relations Act 2000 (2000 No 24)

Replace section 107(2) with:

“(2) An employee who is representing employees under the Health and Safety in Employment Act 1992, whether as a health and safety representative or a site health and safety representative (as those terms are defined in that Act) or otherwise, is to be treated as if he or she were a delegate of other employees for the purposes of subsection (1)(g).”

Privacy Act 1993 (1993 No 28)

In Schedule 2, Part 1, insert in its appropriate alphabetical order:

Health and Safety in Employment Act 1992 section 19ZZB

Legislative history

12 November 2013	Divided from Health and Safety (Pike River Implementation) Bill (Bill 130–2) by committee of the whole House as Bill 130–3B
14 November 2013	Third reading
18 November 2013	Royal assent

This Act is administered by the Ministry of Business, Innovation, and Employment.

**Reprint
as at 31 December 2013**



**Health and Safety in Employment
(Mining Operations and Quarrying
Operations) Regulations 2013**
(SR 2013/483)

Jerry Mateparae, Governor-General

Order in Council

At Wellington this 9th day of December 2013

Present:

The Right Hon John Key presiding in Council

Pursuant to section 21 of the Health and Safety in Employment Act 1992, His Excellency the Governor-General, acting on the advice and with the consent of the Executive Council and in accordance with a recommendation of the Minister of Labour, makes the following regulations.

Note

Changes authorised by subpart 2 of Part 2 of the Legislation Act 2012 have been made in this reprint.

Note 4 at the end of this reprint provides a list of the amendments incorporated.

These regulations are administered by the Ministry of Business, Innovation, and Employment.

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Regulations

- 1 Title**
These regulations are the Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013.

- 2 Commencement**
These regulations come into force on 16 December 2013.

3 Interpretation

(1) In these regulations, unless the context otherwise requires,—

Act means the Health and Safety in Employment Act 1992

acting manager means the person designated for the purpose referred to in regulation 23

alluvial mine operator means a person who controls an alluvial mining operation and, in relation to a particular alluvial mining operation, means the person who controls that operation

alluvial mine worker means a person who works in an alluvial mining operation, either as an employee or as a self-employed person

alluvial mining operation has the meaning given to it in section 19L of the Act

Board has the meaning given to it in section 2(1) of the Act

borehole—

(a) means a hole of any diameter that has been bored or drilled for any purpose (including exploration, quality control, geological investigation, or geotechnical investigation in the mining operation) either from the surface or from an underground location; but

(b) does not include a drill hole that has been drilled for the purpose of blasting operations

brushing means removing a layer of material from the floor, roof, or side of a heading or cut-through

certificate of competence means a certificate issued by the Board under regulation 41

changeover station means a facility located within the underground parts of an underground mining operation or tunnelling operation that allows a mine worker to safely—

(a) change or recharge his or her breathing apparatus; or

(b) replace a self-contained self-rescuer

coal has the meaning given to it in section 19L of the Act

coal mining operation means any mining operation associated with the exploration or extraction of coal

competent person means a person who—

- (a) has the relevant knowledge, experience, and skill to carry out a task required or permitted by these regulations to be carried out by a competent person; and
- (b) has—
 - (i) a relevant qualification evidencing the person's possession of that knowledge, experience, and skill; or
 - (ii) if the person is an employee, a certificate issued by the person's employer evidencing the person's possession of that knowledge, experience, and skill

current, in relation to a certificate of competence, means a certificate of competence that has been issued under regulation 41 and has not expired or been cancelled or suspended by the Board

electrical plant—

- (a) means plant that utilises or is powered by electricity; and
- (b) includes appliances and fittings

electrical system—

- (a) means an electrical system in which all the electrical plant is, or is capable of being, electrically connected to a common source of electrical energy; and
- (b) includes the source and the plant

emplacement area means an area where the overburden or tailings of a mining operation are deposited within or beyond the excavated areas of the mining operation

ERZ0 means—

- (a) an underground coal mining operation, or any part of it, where the general body concentration of methane is known to be, or is identified by a risk assessment as likely to be, greater than 1.25%;
- (b) any part of an underground coal mining operation that is an ERZ1 or a NERZ if the general body concentration of methane in that part of the mining operation becomes greater than 1.25%:

- (c) an area of an underground coal mining operation that is classified by the mine operator as an ERZ0 under regulation 190

ERZ1—

- (a) means—
 - (i) an underground coal mining operation, or any part of it, where the general body concentration of methane is known to be, or is identified by a risk assessment as likely to be, greater than 0.25% but not more than 1.25%; or
 - (ii) an area of an underground coal mining operation that is classified by the mine operator as an ERZ1 under regulation 190; and
- (b) includes—
 - (i) a workplace where coal or other material is being mined (except where the work is undertaken in a shaft or roadway driven from the surface in material other than coal or between seams predominantly driven in material other than coal) other than by brushing in an outbye location:
 - (ii) a place where adequate standards of ventilation in relation to methane cannot be assured taking into account abnormal circumstances in the mining operation:
 - (iii) a place where connections, or repairs, to a methane drainage pipeline are being carried out:
 - (iv) a place where holes are being drilled underground in the coal seam or adjacent strata for exploration or seam gas drainage:
 - (v) a place, in a panel, other than a longwall panel that is being extracted, inbye the panel's last completed cut-through:
 - (vi) a goaf area:
 - (vii) each place on the return air side of any of the places in subparagraphs (i) to (vi), unless the place is an ERZ0:
 - (viii) any development heading

explosion protected means, in respect of any plant or installation, that the plant or installation is, or includes features that

are, designed, manufactured, and maintained to prevent the plant or installation acting as an ignition source when exposed to an explosive atmosphere

explosion risk zone means an ERZ0, an ERZ1, or a NERZ

explosive means a substance that is capable of sudden expansion owing to a release of internal energy; and includes the capability to generate—

- (a) deflagration; or
- (b) pyrotechnic effects,—

and **explosion** has a corresponding meaning

explosive atmosphere means a mixture with air of flammable substances in the form of dusts, fibres, gases, mists, or vapours that, if ignited, may lead to an explosion

fresh air has the meaning given to it in regulation 4

health and safety management system means the system developed under Part 2 and includes any principal hazard management plan or principal control plan

highwall mining means mining conducted by remote-controlled equipment that drives an excavation from the surface of an opencast mining operation into a coal seam underground

hot work means welding, soldering, heating, cutting, grinding, or vulcanising in which the surface temperature of the work or a tool for the work is likely to exceed 150°C

industry health and safety representative has the meaning given to it in section 19L of the Act

industry training organisation means a body corporate for the time being recognised under section 5 or 8(1) of the Industry Training Act 1992 in respect of the extractives industry

licensed cadastral surveyor has the meaning given to it in section 4 of the Cadastral Survey Act 2002

live electrical work—

- (a) means any work carried out on electrical plant in an ERZ0 or ERZ1, including testing or maintenance, that compromises the explosion protection techniques of that equipment; and
- (b) includes the use of testing equipment that is not certified for use in the explosion risk zone where it is, or is intended to be, used

main fan means the fan that is the principal source of—

- (a) providing fresh air to the underground parts of a mining operation; and
- (b) controlling the accumulation of methane, noxious gases, dust, and other contaminants in the underground parts of a mining operation

medical practitioner means a health practitioner who is, or is deemed to be, registered with the Medical Council of New Zealand continued by section 114(1)(a) of the Health Practitioners Competence Assurance Act 2003, as a practitioner of the profession of medicine

metalliferous mining operation means any mining operation associated with the extraction of minerals

methane means methane and associated hydrocarbons

mine operator—

- (a) has the meaning given to it in section 19L of the Act; and
- (b) in relation to a particular mining operation, means the mine operator for that mining operation

mine worker has the meaning given to it in section 19L of the Act

mineral has the meaning given to it in section 19L of the Act

Mines Rescue Trust means the board recognised under section 7 of the Mines Rescue Act 2013

mining operation has the meaning given to it in section 19L of the Act

mobile plant means plant that is capable of moving—

- (a) under its own power while energised by an internal power source, including a battery, compressed air, or an internal combustion engine; and
- (b) while energised by a reeling cable or trailing cable

NERZ (or **negligible explosion risk zone**) means—

- (a) an underground coal mining operation, or any part of it, where the general body concentration of methane is demonstrated by means of continuous and recorded monitoring to be less than 0.25%; or
- (b) any part of an underground coal mining operation that is submerged by water

notifiable accident mean an accident specified in Schedule 8
old workings, in relation to a mining operation (**mining operation A**),—

- (a) means the workings or any part of the workings of an abandoned or suspended mining operation that are above, below, or within 200 metres of the boundary of mining operation A; and
- (b) includes roadways, voids, and goafs that were created as part of the abandoned or suspended mining operation

opencast coal mining operation means any mining operation associated with the exploration or extraction of coal and where no person works underground

opencast metalliferous mining operation means any mining operation associated with the extraction of minerals and where no person works underground

permit holder has the same meaning as it has in the Crown Minerals Act 1991

ppm means parts per million

principal control plan means a plan required under regulation 92

principal hazard has the meaning given to it in regulation 65

principal hazard management plan means a plan required under regulation 66

quarry operator means a person who controls a quarrying operation and, in relation to a particular quarrying operation, means the person who controls that operation

quarry worker means a person who works in a quarrying operation, either as an employee or as a self-employed person

quarrying operation has the meaning given to it in section 19N of the Act

reeling cable means a cable that is used or placed in position for the conveyance of electricity from an electrical system to mobile plant and capable of being wound onto a reeling drum

refuge means a facility located within the underground parts of an underground mining operation or tunnelling operation that—

- (a) can be sealed during an emergency at the operation to prevent the entry of contaminated air; and
- (b) has a supply of fresh air independent of the normal ventilation system

safety-critical equipment means electrical plant critical to maintaining safe conditions at the mining operation and that is permitted to remain energised at times when the supply of electricity to plant or to a part or the whole of the mining operation is otherwise required to be isolated

secondary workings—

- (a) means the extraction of material from a place following the initial development phase; and
- (b) includes pillar extraction, splitting pillars, caving, stoping, longwalling, and bottom coaling

shaft means an opening in an underground mining operation or tunnelling operation having an inclination above the horizontal of 15° or more—

- (a) through which the mine workers or materials are transported; or
- (b) that is used as a main intake or outlet for ventilation

site health and safety representative has the meaning given to it in section 19L of the Act

site office means a place at an operation for the time being designated by the site senior executive as the site office for that operation

site senior executive—

- (a) has the meaning given to it in section 19L of the Act; and
- (b) in relation to a particular mining operation, means the site senior executive for that mining operation

suspended means,—

- (a) in relation to a mining operation other than a tunnelling operation, that the activities listed in 19M(a) and (b) of the Act are for the time being not being carried out, but the mining operation has not been abandoned; and

- (b) in relation to a tunnelling operation, that tunnelling activities are for the time being not being carried out, but the tunnelling operation has not been abandoned

trailing cable means a cable, other than a reeling cable, that is used or placed in position for the conveyance of electricity from an electrical system to mobile plant

tunnelling operation has the meaning given to it in section 19O of the Act

underground coal mining operation means any underground mining operation associated with the exploration or extraction of coal

underground metalliferous mining operation means any underground mining operation associated with the extraction of minerals

underground mining operation means any mining operation, other than a tunnelling operation, where any person works underground

winder means any machinery used to raise or lower, by means of a rope or ropes, a conveyance up or down a shaft or slope, but does not include any lifting machine, endless rope haulage, or scraper winch installation

winding system means the equipment used to raise or lower a conveyance up or down a shaft or slope

WorkSafe means WorkSafe New Zealand established by section 5 of the WorkSafe New Zealand Act 2013.

- (2) For the purpose of these regulations, **abandoned**, in relation to the whole or, as the case may be, a part of a mining operation, means,—
- (a) in relation to a mining operation other than a tunnelling operation,—
- (i) that the whole or, as the case may be, the part of the mining operation has been closed or sealed; and
- (ii) that the activities described in section 19M(a) to (c) of the Act are no longer being carried out in the whole or, as the case may be, the part of the mining operation and any hazards associated

- with the carrying out of those activities in that place have been eliminated or isolated; and
- (b) in relation to a tunnelling operation,—
 - (i) that the tunnel or shaft has been completed or that the whole or, as the case may be, the part of the tunnelling operation has been closed or sealed; and
 - (ii) that tunnelling activities are no longer being carried out in the whole or, as the case may be, the part of the tunnelling operation and any hazards associated with the carrying out of those activities in that place have been eliminated or isolated.

4 Meaning of fresh air

A reference in these regulations to **fresh air** means that the air—

- (a) contains not less than 19% by volume of oxygen; and
- (b) contains not more than 0.25% methane; and
- (c) contains not more than 25 ppm of carbon monoxide; and
- (d) contains not more than 5 000 ppm of carbon dioxide; and
- (e) contains no other substance at a level that is likely to cause harm to a mine worker over the period that the mine worker is exposed to the substance at the mining operation.

5 Relationship between Act and regulations

A person on whom a duty is imposed by these regulations in relation to a particular set of circumstances must, on the occurrence of those circumstances, comply with that duty, despite the fact that the Act may impose the same, a similar, or an additional duty on that person in relation to that set of circumstances.

6 Provisions affecting application of these regulations

Schedule 1 contains application, transitional, and savings provisions that affect other provisions of these regulations as from

time to time amended, revoked, or repealed and replaced (*see* regulation 232).

Part 1

Safety-critical roles and competency requirements

Subpart 1—Site senior executive

7 Appointment of site senior executive

- (1) The mine operator of a mining operation must appoint a site senior executive for that mining operation.
- (2) Subject to regulation 10, a mine operator that has more than 1 mining operation may appoint a person to be the site senior executive for more than 1 mining operation.

8 Competency requirements for appointment as site senior executive

- (1) The mine operator and the site senior executive must ensure that the site senior executive holds a current certificate of competence as a site senior executive and any other certificate or competency required by subclause (2).
- (2) In addition to the requirements of subclause (1),—
 - (a) if appointed for an underground coal mining operation, the site senior executive must hold a current certificate of competence as—
 - (i) a first-class coal mine manager; or
 - (ii) if not more than 5 mine workers ordinarily work underground at the underground coal mining operation at any one time, a coal mine underviewer:
 - (b) if appointed for an underground metalliferous mining operation, the site senior executive must hold a current certificate of competence as—
 - (i) a first class mine manager; or
 - (ii) if at least 3 but not more than 10 mine workers ordinarily work underground at the underground metalliferous mining operation at any one time, an A-grade tunnel manager; or
 - (iii) if fewer than 3 mine workers ordinarily work underground at the underground metalliferous

mining operation at any one time, an A-grade tunnel manager or B-grade tunnel manager:

- (c) if appointed for a tunnelling operation, the site senior executive must have successfully completed any additional competencies prescribed by WorkSafe under regulation 34(d) for a site senior executive of a tunnelling operation.
- (3) Subclause (2)(a) does not apply during any period of time where the only activities at the mining operation are those described in regulation 16(2).
- (4) If there is disagreement between the mine manager and the site senior executive in relation to any operational matter at the mining operation, the manager's view prevails if the site senior executive does not hold a relevant certificate of competence as a manager or holds a lower certificate of competence than the manager (of the relevant certificates of competence in regulation 35(b) to (j) applicable to the particular type of mining operation).
- (5) Nothing in subclause (4) limits or affects the application of the Act to any matter arising at the mining operation.

9 Notice of appointment of site senior executive

- (1) The mine operator who appoints a site senior executive must give notice of that appointment to the person appointed, and to WorkSafe.
- (2) The notice must specify the identity of the site senior executive and the mining operation or mining operations for which he or she has been appointed as site senior executive.

10 WorkSafe may advise appointment not suitable

- (1) Within 30 days of the date on which notice is given to WorkSafe under regulation 9 of the appointment of a site senior executive, WorkSafe may give notice to the mine operator that it considers the appointment to be unsuitable—
 - (a) because the person does not hold the required certificates of competence; or
 - (b) because the person has been appointed as site senior executive for more than 1 mining operation and will not

- be able to effectively perform his or her role as a site senior executive at each of those mining operations; or
- (c) for any other reason relating to the suitability of the person to perform the role of site senior executive at the mining operation or mining operations to which the person has been appointed.
- (2) WorkSafe may require the mine operator to supply information relating to the appointment in order to assist it to form an opinion for the purpose of subclause (1).
- (3) The mine operator must terminate or modify the appointment in accordance with any notice given under subclause (1).

11 Mine operator must ensure site senior executive has sufficient resources

The mine operator must ensure that the site senior executive has sufficient resources and authority to perform his or her functions, duties, and powers under the Act and these regulations.

12 Appointment of acting site senior executive during temporary absence

- (1) If the site senior executive of a mining operation is temporarily unable to perform his or her duties as site senior executive for the mining operation, the mine operator must appoint, in writing, a person to act as the site senior executive during the absence.
- (2) The mine operator must ensure that the acting site senior executive is a fit and proper person to act in the place of the site senior executive.
- (3) Subject to subclause (2), it is not necessary that the acting site senior executive hold any certificate of competence.
- (4) The mine operator must ensure that written notice of an appointment as acting site senior executive is given to the person appointed, and to WorkSafe.
- (5) The person acting as the site senior executive is subject to all of the obligations of a site senior executive.
- (6) No act done by an acting site senior executive purporting in good faith to act as the site senior executive may in any pro-

ceedings be questioned on the ground that the occasion for that site senior executive to act had not arisen or had ceased.

Subpart 2—Manager

13 Manager of mining operation

The mine operator of a mining operation must appoint a person to—

- (a) manage the mining operation; and
- (b) supervise the health and safety aspects of the mining operation on every day on which any mine worker is at work.

14 Manager of quarrying operation

The quarry operator of a quarrying operation must appoint a person to—

- (a) manage the quarrying operation; and
- (b) supervise the health and safety aspects of the quarrying operation on every day on which any quarry worker is at work.

15 Manager of alluvial mining operation

The alluvial mine operator of an alluvial mining operation must appoint a person to—

- (a) manage the alluvial mining operation; and
- (b) supervise the health and safety aspects of the alluvial mining operation on every day on which any alluvial mine worker is at work.

16 Manager must hold certificate

- (1) The mine operator or, as the case may be, the quarry operator or alluvial mine operator, and the manager must ensure that the manager holds a current certificate of competence specified in regulations 17 to 22 for the kind of mining operation or quarrying operation or alluvial mining operation to which the manager is appointed.
- (2) Subclause (1) does not apply to—
 - (a) any operation in which any activity is carried out pursuant to a prospecting licence or an exploration licence

granted under the Mining Act 1971 or a coal prospecting licence granted under the Coal Mines Act 1979 or a prospecting permit or an exploration permit granted under the Crown Minerals Act 1991, being in each case a licence or permit in force; or

- (b) any operation in which any exploratory activity is carried out by machinery for the purpose of ascertaining whether a mine or quarry may be worked.

17 Certificate of competence of manager of metalliferous mining operation

- (1) Subject to subclauses (2) to (5), a manager appointed to a metalliferous mining operation must hold a certificate of competence as a first-class mine manager.
- (2) A manager appointed to an underground metalliferous mining operation in which more than 3 but not more than 10 mine workers ordinarily work underground at any one time may hold a certificate of competence as an A-grade tunnel manager.
- (3) A manager appointed to an underground metalliferous mining operation in which not more than 3 mine workers ordinarily work underground at any one time may hold—
 - (a) a certificate of competence as an A-grade tunnel manager; or
 - (b) a certificate of competence as a B-grade tunnel manager.
- (4) A manager appointed to an opencast metalliferous mining operation in which more than 4 mine workers ordinarily work at any one time may hold a certificate of competence as an A-grade quarry manager.
- (5) A manager appointed to an opencast metalliferous mining operation in which not more than 4 mine workers ordinarily work at any one time may hold—
 - (a) a certificate of competence as an A-grade quarry manager; or
 - (b) a certificate of competence as a B-grade quarry manager.

18 Certificate of competence of manager of underground coal mining operation

- (1) Subject to subclause (2), a manager appointed to an underground coal mining operation must hold a certificate of competence as a first-class coal mine manager.
- (2) A manager appointed to an underground coal mining operation in which not more than 5 mine workers ordinarily work underground at any one time may hold a certificate of competence as a coal mine underviewer.

19 Certificate of competence of manager of opencast coal mining operation

A manager appointed to an opencast coal mining operation must hold a certificate of competence as an A-grade opencast coal mine manager.

20 Certificate of competence of manager of tunnelling operation

- (1) Subject to subclause (2), a manager appointed to a tunnelling operation must hold a certificate of competence as an A-grade tunnel manager.
- (2) A manager appointed to a tunnelling operation in which not more than 2 mine workers ordinarily work underground at any one time may hold a certificate of competence as a B-grade tunnel manager.

21 Certificate of competence of manager of quarrying operation

- (1) Subject to subclauses (2) and (3), a manager appointed to a quarrying operation must hold a certificate of competence as an A-grade quarry manager.
- (2) A manager appointed to a quarrying operation in which no explosives are used and not more than 4 quarry workers ordinarily work at any one time may hold a certificate of competence as a B-grade quarry manager.
- (3) A manager appointed to a quarrying operation in which no explosives are used may hold—

- (a) a certificate of competence as a B-grade quarry manager; or
- (b) a certificate of competence as a manager to manage that quarry, being the quarry specified in the certificate.

22 Certificate of competence of manager of alluvial mining operation

- (1) Subject to subclauses (2) and (3), a manager appointed to an alluvial mining operation must hold a certificate of competence as a first-class mine manager.
- (2) A manager appointed to an alluvial mining operation in which more than 4 alluvial mine workers ordinarily work at any one time may hold a certificate of competence as an A-grade quarry manager.
- (3) A manager appointed to an alluvial mining operation in which not more than 4 alluvial mine workers ordinarily work at any one time may hold—
 - (a) a certificate of competence as an A-grade quarry manager; or
 - (b) a certificate of competence as a B-grade quarry manager.

23 Acting manager

- (1) If for any reason the manager is unable to act as manager for any period, the mine operator or, as the case may be, the quarry operator or alluvial mine operator must designate a person to act as manager for that period or for 10 weeks, whichever is shorter.
- (2) The mine operator, quarry operator, or alluvial mine operator must ensure that the acting manager is a fit and proper person to act in the place of the manager.
- (3) Subject to subclause (2), it is not necessary that the acting manager hold any certificate of competence.
- (4) No act done by an acting manager purporting in good faith to act as the manager may in any proceedings be questioned on the ground that the occasion for that manager to act had not arisen or had ceased.

24 Notification of appointment of manager or acting manager

The mine operator or, as the case may be, the quarry operator or the alluvial mine operator must ensure that—

- (a) written notice of an appointment as manager or a designation as acting manager is given to the person appointed or designated, as the case may require, and to WorkSafe; and
- (b) all mine workers or, as the case may be, quarry workers or alluvial mine workers are informed of the name of the manager or acting manager.

25 Mine operator must ensure workers comply with instructions of manager or acting manager

The mine operator or, as the case may be, the quarry operator or alluvial mine operator must ensure that, in order to ensure compliance with the Act and these regulations, all mine workers comply with all reasonable instructions given by—

- (a) the manager; and
- (b) any acting manager.

Subpart 3—Other safety-critical roles

26 Electrical superintendent

- (1) The site senior executive of a mining operation must appoint an electrical superintendent for the mining operation if an electrical engineering principal control plan is in place, or required to be put in place, at the mining operation.
- (2) The site senior executive and the person appointed as an electrical superintendent must ensure that the person holds a current certificate of competence as an electrical superintendent.

27 Mechanical superintendent

- (1) The site senior executive of a mining operation must appoint a mechanical superintendent for the mining operation if a mechanical engineering control plan is in place, or required to be put in place, at the mining operation.

- (2) The site senior executive and the person appointed as a mechanical superintendent must ensure that the person holds a current certificate of competence as a mechanical superintendent.

28 Mine surveyor

- (1) The site senior executive of an underground mining operation or tunnelling operation must appoint a mine surveyor for the operation.
- (2) The site senior executive and the person appointed as a mine surveyor at an underground mining operation must ensure that the person holds a current certificate of competence as a mine surveyor.
- (3) The site senior executive and the person appointed as a mine surveyor at a tunnelling operation must ensure that the person holds a current certificate of competence as a mine surveyor or is a licensed cadastral surveyor.
- (4) In considering any appointment of a mine surveyor, the site senior executive must consider—
 - (a) the education, knowledge, and experience of the person, having regard to the type and size of the mining operation and the nature and complexity of the technology used at the mining operation; and
 - (b) the fitness and capacity of the person to exercise the skills required as a mine surveyor.
- (5) Unless expressly authorised by WorkSafe, no underground mining operation or tunnelling operation may operate for longer than 28 days without a person holding the position of mine surveyor.

29 Ventilation officer

- (1) The site senior executive of a mining operation must appoint a ventilation officer for the mining operation if a ventilation control plan is in place, or required to be put in place, at the mining operation.
- (2) The site senior executive and the person appointed as a ventilation officer must ensure that the person holds a current certificate of competence as a ventilation officer.

30 Underviewer

- (1) The site senior executive of an underground coal mining operation must appoint an underviewer for each production shift at the mining operation.
- (2) Subject to subclause (3), the site senior executive and the person appointed as an underviewer must ensure that the person holds a current certificate of competence as a first-class coal mine manager or an underviewer.
- (3) WorkSafe may at any time give notice to the site senior executive that the person appointed as underviewer must hold a current certificate of competence as a first-class coal mine manager.
- (4) The site senior executive must ensure that an underviewer is present at each production shift at the mining operation.

31 Supervisor

- (1) The site senior executive of a mining operation other than an underground coal mining operation must appoint a supervisor for each production shift.
- (2) The site senior executive and the person appointed as a supervisor of an underground metalliferous mining operation must ensure that the person holds a certificate of competence as a B-grade tunnel manager, an A-grade tunnel manager, or a first-class mine manager.
- (3) The site senior executive and the person appointed as a supervisor of a tunnelling operation must ensure that the person holds a current certificate of competence as a B-grade tunnel manager or an A-grade tunnel manager.
- (4) The site senior executive and a person appointed as a supervisor of an opencast coal mining operation must ensure that the person holds a current certificate of competence as a B-grade opencast coal mine manager or an A-grade opencast coal mine manager.
- (5) The site senior executive and a person appointed as a supervisor of an opencast metalliferous mining operation must ensure that the person holds a current certificate of competence as a B-grade quarry manager, an A-grade quarry manager, or a first-class mine manager.

- (6) Despite subclauses (2) to (5), WorkSafe may at any time give notice to the site senior executive that the person appointed as supervisor must hold a certificate of competence of one of the kinds described in regulation 35(b) or (d) to (j).
- (7) The site senior executive must ensure that a supervisor is present at each production shift at the mining operation.

32 Other workers required to hold certificates

The site senior executive of a mining operation must take all practicable steps to ensure that a worker required to carry out the duties normally associated with a coal mine deputy or a winding engine driver holds a current certificate of competence issued in accordance with these regulations.

33 Appointment of person to more than 1 role

- (1) The site senior executive may appoint—
 - (a) a person to more than 1 of the roles in regulations 13 to 32:
 - (b) the site senior executive himself or herself to 1 or more of the roles in regulations 13 to 32, in addition to his or her role as site senior executive.
- (2) The site senior executive must be satisfied that—
 - (a) the person or, as the case may be, the site senior executive himself or herself, holds the required certificates of competence for each role to be performed; and
 - (b) the person or, as the case may be, the site senior executive himself or herself, will be able to carry out each role effectively.
- (3) At any time WorkSafe may give written notice to the site senior executive that it considers that a person (including the site senior executive) appointed to more than 1 role is not able to carry out each role effectively because the person does not meet either or both of the criteria in subclause (2)(a) and(b).
- (4) WorkSafe may require information from the site senior executive relating to the appointment in order to assist it to form an opinion for the purpose of subclause (3).

- (5) The site senior executive must terminate or modify any appointment in accordance with any notice given under sub-clause (3).

Subpart 4—Certificates of competence and other competence requirements

34 WorkSafe may prescribe requirements

WorkSafe may, after consultation with the Board, by notice in the *Gazette* prescribe—

- (a) the requirements to be met for the granting of certificates of competence for mine workers, quarry managers, alluvial mine managers, and site senior executives, including—
 - (i) the qualifications and experience required for the granting of a certificate of competence; and
 - (ii) the continuing education required to be completed for the granting of a renewal of a certificate of competence; and
- (b) competency requirements to be met, including unit standards to be achieved, by mine workers who do not require a certificate of competence; and
- (c) competency requirements to be met, including unit standards to be achieved, by a site senior executive in addition to holding a certificate of competence; and
- (d) competency requirements to be met by site health and safety representatives.

35 Certificates of competence

The following kinds of certificate of competence may be issued under regulation 41:

- (a) site senior executive:
- (b) first-class mine manager:
- (c) first-class coal mine manager:
- (d) A-grade opencast coal mine manager:
- (e) B-grade opencast coal mine manager:
- (f) A-grade quarry manager:
- (g) B-grade quarry manager:

- (h) a certificate of competence as a manager to manage the quarrying operation specified in the certificate:
- (i) A-grade tunnel manager:
- (j) B-grade tunnel manager:
- (k) coal mine underviewer:
- (l) supervisor:
- (m) coal mine deputy:
- (n) electrical superintendent:
- (o) mechanical superintendent:
- (p) mine surveyor:
- (q) ventilation officer:
- (r) winding engine driver.

36 Application for certificate of competence

An application for a certificate of competence must be made to the Board and be accompanied by the fee prescribed in Schedule 2.

37 Application to contain evidence

An application for a certificate of competence must contain evidence of the matters referred to in regulation 38.

38 Requirements for applicants

An applicant for a certificate of competence must—

- (a) have the qualifications and experience prescribed under regulation 34 for a holder of that certificate of competence; and
- (b) be a fit and proper person to hold that certificate of competence.

39 Investigations by Board

(1) For the purpose of investigating whether an applicant for a certificate of competence is a person to whom regulation 38 applies, the Board may—

- (a) request the applicant to supply information on relevant matters; and
- (b) request any person who the Board believes is able to provide relevant information to provide information on relevant matters.

- (2) A request under subclause (1)—
 - (a) must specify those matters on which the Board seeks information; and
 - (b) may be made from time to time.
- (3) A person has the same privileges in relation to the giving of information to the Board as witnesses have in any court.

40 Use of information

- (1) For the purpose of determining whether an applicant is a person to whom regulation 38 applies, the Board may take into account any information received in response to the exercise of the powers in regulation 39.
- (2) The Board may refuse an application if it is unable to obtain sufficient information to satisfy it that the applicant is a person to whom regulation 38 applies.

41 Board to issue certificate of competence

- (1) The Board must issue the certificate of competence sought in the application if it is satisfied—
 - (a) that the application was made in accordance with regulations 36 and 37; and
 - (b) that the applicant is a person to whom regulation 38 applies.
- (2) If the Board refuses to issue a certificate of competence, it must supply to the applicant a statement of the reasons for the refusal.

42 Duration of certificate of competence

- (1) Unless cancelled earlier, a certificate of competence expires 5 years after the date on which it was issued.
- (2) The certificate of competence must show on its face the date on which it expires.

43 Continuing professional development condition of certificate

The holder of a certificate of competence must comply with the continuing education requirements prescribed under regulation 34 for a holder of that certificate of competence.

44 Renewal of certificate of competence

- (1) An application for the renewal of a certificate of competence must—
 - (a) be made to the Board not less than 2 months before the day on which the certificate expires; and
 - (b) be accompanied by—
 - (i) evidence of the applicant's compliance with the requirements of regulation 43; and
 - (ii) the fee, if any, prescribed in Schedule 2.
- (2) If an application is made in accordance with this regulation, the Board must renew the certificate of competence to which the application relates if it is satisfied that the applicant has complied with the requirements of regulation 43.
- (3) Subclause (2) is subject to regulation 45.
- (4) A certificate of competence may be renewed before or after the day on which the certificate expires, but in each case the renewed certificate comes into force on the day after the date on which it expires.
- (5) Regulation 38 applies to a certificate of competence renewed under this regulation.

45 Cancellation or suspension of certificate of competence

- (1) The Board must cancel a certificate of competence if it is satisfied on reasonable grounds that the holder has died.
- (2) The Board must cancel a certificate of competence if, after giving the holder at least 14 days' notice and an opportunity to be heard (including in person), it is satisfied on reasonable grounds—
 - (a) that the certificate was issued in error; or
 - (b) that the holder's application for the certificate contained any false information or evidence; or
 - (c) that the holder either never has been or is no longer a person to whom regulation 38 applies.
- (3) The Board must cancel or suspend a certificate of competence for such period as it thinks fit if, after giving the holder at least 14 days' notice and an opportunity to be heard (including in person), it is satisfied on reasonable grounds—

- (a) that the holder has been so negligent in carrying out any task that the holder of the certificate could reasonably be expected to perform to a reasonable standard that the life of any person has been or could have been endangered; or
 - (b) that the holder has shown himself or herself unfit to be the holder of the certificate by the improper manner in which he or she has carried out any task that the holder of the certificate could reasonably be expected to perform in a proper manner.
- (4) The Board may suspend or cancel a certificate of competence if it is satisfied that the holder of the certificate has not complied with the requirements of regulation 43.
- (5) A person whose certificate of competence is suspended or cancelled must return the certificate to the Board within 14 days after the date of the suspension or cancellation.

46 Replacement of certificate of competence

- (1) An application for a duplicate of a certificate of competence must be made to the Board and be accompanied by the fee, if any, prescribed in Schedule 2.
- (2) If the Board is satisfied that a certificate of competence has been lost or destroyed, it must issue a duplicate of that certificate.

47 Register

- (1) The Board must keep a register of the individuals to whom it has issued a certificate of competence.
- (2) The register must show—
 - (a) the full name of the holder:
 - (b) the kind of certificate the holder holds:
 - (c) the date on which the certificate expires:
 - (d) in relation to a certificate that has been suspended, the date on which the suspension took effect and the date on which the suspension ends:
 - (e) in relation to a certificate that has been cancelled, the date of cancellation.

48 Access to register

- (1) Any person may apply to the Board for a copy of the register or an extract from it for the purpose of ascertaining whether an identified person—
 - (a) holds a current certificate of competence; or
 - (b) holds a certificate of competence that is suspended; or
 - (c) held a certificate of competence that has subsequently expired or been cancelled.
- (2) If the Board is satisfied that the person has a proper interest in the information and the information is required for a purpose specified in any of subclauses (1)(a) to (c), the Board may, on payment of the prescribed fee, if any, provide the person with a copy of or an extract from the register.

49 Appeal to District Court

- (1) An appeal may be made to a District Court by—
 - (a) an applicant who is dissatisfied with a refusal to issue a certificate of competence under regulation 41;
 - (b) a holder of a certificate of competence who is dissatisfied with a refusal to renew the certificate of competence under regulation 44;
 - (c) a holder of a certificate of competence who is dissatisfied with the cancellation or suspension of the certificate of competence under regulation 45;
 - (d) a holder of a certificate of competence who is dissatisfied with a refusal to issue a duplicate of that certificate under regulation 46.
- (2) Part 14 of the District Courts Rules 2009 applies to an appeal brought under subclause (1).
- (3) The decision of the District Court on any appeal brought under subclause (1) is final.

*Competency requirements for mine workers***50 Supervision of untrained mine workers**

- (1) This regulation applies to any mine worker who does not require a certificate of competence of a kind in regulation 35.
- (2) A mine worker (A) who has not achieved the unit standards prescribed by WorkSafe under regulation 34 or received

equivalent training provided at the mining operation by the mine operator must be accompanied at all times by a mine worker (**B**) who—

- (a) has achieved the unit standards or received equivalent training at the mining operation or holds a certificate of competence of a kind in regulation 35 relevant to the work being done; and
 - (b) has at least 12 months' experience working at the same kind of mining operation at which B is to accompany A.
- (3) For the purposes of this regulation, **equivalent training** means training that has been assessed by an assessor registered with an industry training organisation as being such that satisfactory completion of the training would otherwise have entitled the mine worker to achieve the prescribed unit standards.

*Competencies of persons appointed as health
and safety inspectors who inspect mining
operations*

51 Competencies of persons appointed as health and safety inspectors who inspect mining operations

- (1) This regulation prescribes examinations for the purpose of section 29(1) of the Act and applies in respect of any person appointed as a health and safety inspector who is to inspect mining operations.
- (2) Unless the person already has experience relevant to health and safety in mining operations, the person must have passed an examination or examinations in areas of knowledge Work-Safe is satisfied are specifically relevant to health and safety in mining operations.
- (3) The examinations prescribed by this regulation are in addition to those prescribed in regulation 6 of the Health and Safety in Employment (Prescribed Matters) Regulations 2003.

Part 2

Health and safety management system

Subpart 1—Responsibility for health and safety management system

52 Mine operator must ensure health and safety management system developed, implemented, and maintained

The mine operator must ensure that the site senior executive develops, implements, and maintains a health and safety management system for the mining operation that complies with these regulations.

53 Site senior executive must develop, implement, and maintain health and safety management system

- (1) The site senior executive must develop, implement, and maintain a health and safety management system that complies with these regulations.
- (2) The health and safety management system must be in place,—
 - (a) in the case of a coal mining operation, from when exploration activities commence until the operation is abandoned; and
 - (b) in the case of a metalliferous mining operation, from the commencement of the physical development of the mining operation and construction of mining infrastructure, including earthworks, until the operation is abandoned; and
 - (c) in the case of a tunnelling operation, from the commencement of the physical development of the tunnel until all tunnelling activities cease.

Subpart 2—Risk assessment

54 Risk appraisal

The site senior executive must ensure that—

- (a) a process is in place to systematically identify the hazards to mine workers at the mining operation; and
- (b) the process is used when developing, implementing, and maintaining the health and safety management system, including, without limitation, each time the health

and safety management system or any aspect of it is reviewed.

55 Risk assessment

- (1) The site senior executive must ensure that—
 - (a) a process is in place to assess the inherent risk of harm to mine workers from identified hazards at the mining operation and to identify the controls required to manage that risk; and
 - (b) the process is used when developing, implementing, and maintaining the health and safety management system, including, without limitation, each time the health and safety management system or any aspect of it is reviewed.
- (2) Nothing in this regulation limits any specific provision in Parts 3 and 4 relating to the assessment of risks.

**Subpart 3—Content of health and safety
management system**

56 Content of health and safety management system

- (1) The health and safety management system must contain at least the following:
 - (a) the mine operator's health and safety policy, including broad aims in relation to the healthy and safe operation of the mine;
 - (b) a description of the processes used to identify the hazards present at the mining operation, to assess the inherent risk of harm to workers from those hazards, and to identify the controls required to manage that risk as required by regulations 54 and 55;
 - (c) the means of reporting and recording relevant health and safety information, including the setting of key performance indicators and investigation of accidents;
 - (d) a description of the systems, procedures, and other risk control measures in place to manage hazards and to respond to increased levels of risk in relation to any hazard:

- (e) a description of the measures that will be used to identify material changes at the mining operation that may create hazards:
 - (f) a description of the management structure for the management of the health and safety at the mining operation, including competency requirements and arrangements for filling temporary and permanent vacancies, and competency requirements for acting positions in the structure:
 - (g) monitoring and audit matters as required by regulation 57:
 - (h) a description of the arrangements in place to monitor the health and safety of mine workers at the mining operation:
 - (i) the principal hazard management plans and principal control plans required for the mining operation by these regulations:
 - (j) a description of arrangements in place to monitor, assess, and inspect working places within the mining operation:
 - (k) any other matter required by these regulations to be included in the health and safety management system.
- (2) The health and safety management system must be set out at a level of detail commensurate with the nature, size, and complexity of the mining operation and the hazards and any other relevant matters associated with the mining operation.
- (3) The health and safety management system must be prepared in a form and expressed in a way that it is easily understood by any mine worker.

Subpart 4—Review, consultation, and records

57 Audit and monitoring of health and safety management system

The health and safety management system must—

- (a) set out performance standards for measuring the effectiveness of all aspects of the health and safety management system that—

- (i) are in sufficient detail that the mine operator's ability to ensure the effectiveness of the system is apparent from the documentation; and
- (ii) include steps to be taken to continually improve all aspects of the system; and
- (b) include a description of the way in which the performance standards are to be met; and
- (c) set out the process for auditing the effectiveness of the health and safety management system against those performance standards, including the methods, frequency, and results of the audit process.

58 Periodic review of health and safety management system

The site senior executive must ensure that the health and safety management system is reviewed and, if necessary, revised—

- (a) not later than 12 months after the date on which the mining operation begins; and
- (b) at least every 3 years after the date of the first review.

59 Additional reviews of health and safety management system

The site senior executive must ensure that, in addition to any review required under regulation 58, the health and safety management system, or, as the case may be, any relevant part of it, is reviewed and, if necessary, revised—

- (a) before a significant or material change is made to the mining operation:
- (b) if a notifiable accident occurs in the mining operation:
- (c) if an audit of the health and safety management system, or any part of it, indicates a deficiency in the management of hazards in the mining operation:
- (d) if there is evidence that a hazard in the mining operation is not adequately controlled by the measures outlined in the system:
- (e) if a site health and safety representative or industry health and safety representative requests the review:
- (f) if and when the mining operation is suspended:
- (g) if the mining operation has been suspended, before the mining operation recommences.

60 Consultation

The site senior executive must consult with mine workers and site health and safety representatives about the content of the health and safety management system when—

- (a) preparing the health and safety management system; and
- (b) reviewing the health and safety management system, or any part of it.

61 Maintenance of records of health and safety management system

- (1) The mine operator must ensure that the following records are kept:
 - (a) the current version of the health and safety management system;
 - (b) any previous versions of the health and safety management system that applied in the preceding 7 year period;
 - (c) records of all reviews and audits of the health and safety management system, or any part of it, that have been conducted in the preceding 7 year period;
 - (d) records of any risk appraisal carried out to identify principal hazards at the mining operation as required by regulation 66(1)(a).
- (2) The mine operator must ensure that the records referred to in subclause (1) are maintained in such a way that—
 - (a) the current version of the health and safety management system can be clearly identified; and
 - (b) every previous version of the health and safety management system required to be kept is kept as it was while it was current and shows the period during which it was current.
- (3) The mine operator must ensure that the records referred to in subclause (1) are made available, on request, to WorkSafe, a site health and safety representative, or an industry health and safety representative.

Subpart 5—Providing health and safety
management system documentation to mine
workers

**62 Providing health and safety management system
documentation to mine workers**

- (1) The mine operator for a mining operation must ensure that, before a mine worker commences work at the mining operation,—
 - (a) the mine worker is given a written summary of the health and safety management system for the mining operation; and
 - (b) the mine worker is informed of the right to access the current version of the health and safety management system.
- (2) The mine operator must ensure that the current version of the health and safety management system is readily accessible by a mine worker at the mining operation.
- (3) The mine operator must ensure that a mine worker is given access to—
 - (a) the current versions of the principal hazard management plans that are relevant to the work the mine worker is to carry out; and
 - (b) the current versions of the principal control plans that are relevant to the work the mine worker is to carry out; and
 - (c) the current versions of any other plans or documented processes for the management of hazards that are relevant to the work the mine worker is to carry out.
- (4) If the health and safety management system is revised under subpart 4, the mine operator must ensure that each mine worker at the mining operation is made aware of any revision that is relevant to work being carried out by that mine worker.

**63 Providing health and safety management system
documentation to contractor**

- (1) This regulation applies to a person who is engaged by the mine operator to provide services where the person's employees or

other workers engaged by the person to provide those services will be mine workers in relation to the mine operator.

- (2) The mine operator must ensure that the current version of the health and safety management system, and records of all audits and reviews of the health and safety management system, or any part of it, and other audits of the site itself that have been conducted, are made available on request to any person to whom this regulation applies.

64 Duty to provide instruction

The mine operator for a mining operation must ensure that mine workers at the mining operation are provided with suitable instruction in relation to the health and safety management system before commencing work and that a record of this instruction is kept.

Part 3

Principal hazard management plans

65 Meaning of principal hazard

In these regulations, **principal hazard** means—

- (a) any hazard arising at any mining operation that could create a risk of multiple fatalities in a single accident or a series of recurring accidents at the mining operation in relation to any of the following:
- (i) ground or strata instability:
 - (ii) inundation and inrush of any substance:
 - (iii) mine shafts and winding systems:
 - (iv) roads and other vehicle operating areas:
 - (v) tips, ponds, and voids:
 - (vi) air quality:
 - (vii) fire or explosion:
 - (viii) explosives:
 - (ix) gas outbursts:
 - (x) spontaneous combustion in underground coal mining operations; and
- (b) any other hazard at the mining operation that has been identified by the site senior executive under regulation 66 as a hazard that could create a risk of multiple fatal-

ities in a single accident, or a series of recurring accidents at the mining operation.

- 66 Site senior executive responsible for identifying principal hazards and having principal hazard management plan**
- (1) The site senior executive must—
- (a) carry out an appraisal of the mining operation to identify principal hazards at the mining operation; and
 - (b) ensure there is a principal hazard management plan for each principal hazard identified.
- (2) Without limiting subclause (1),—
- (a) the following mining operations must have a principal hazard management plan for fire or explosion:
 - (i) an underground coal mining operation;
 - (ii) an underground metalliferous mining operation or tunnelling operation if methane is detected at the mining operation;
 - (b) any mining operation where explosives are used must have a principal hazard management plan for explosives;
 - (c) a mining operation must have a principal hazard management plan for tips, ponds, and voids if a tip at the mining operation is—
 - (i) located on a slope; and
 - (ii) is greater than 15 metres in height; and
 - (iii) is greater than 100 000 cubic metres in volume.
- 67 General purposes of principal hazard management plans**
- The general purposes of the principal hazard management plans are to—
- (a) identify the nature of all principal hazards at any mining operation;
 - (b) set out the measures that will be used to ensure that all principal hazards are effectively managed.
- 68 Content of principal hazard management plans**
- Each principal hazard management plan must include the following:

- (a) a statement as to the nature of a principal hazard addressed by the principal hazard management plan:
- (b) a description of how all risk assessments will be conducted in relation to the principal hazard:
- (c) the results of any risk assessment completed in respect of the principal hazard:
- (d) a description of the control measures to be implemented to manage the principal hazard and the risk of harm it presents to the health and safety of mine workers:
- (e) a description of how any specific requirements or duties in the regulations that apply to the principal hazard will be complied with:
- (f) a description of the emergency preparedness for the principal hazard:
- (g) a description of the roles and their corresponding responsibilities under the principal hazard management plan, including the competencies required to carry out the roles and the details of the responsibilities:
- (h) a statement of the periodic review of the principal hazard management plan's continued suitability and effectiveness in managing the principal hazard and the risks related to the hazard at the mining operation, in accordance with regulation 69:
- (i) a description of the audit programme in accordance with regulation 70:
- (j) any other matter required by these regulations in relation to particular principal hazards.

69 Review and revision of principal hazard management plans

- (1) In addition to the requirements of regulation 58, the site senior executive must ensure that each principal hazard management plan is reviewed at least once every 2 years after the date the principal hazard management plan is approved by the site senior executive.
- (2) In addition to the requirements of regulation 59, the site senior executive must ensure that a principal hazard management plan is reviewed after—

- (a) the occurrence of an accident at the mining operation involving a principal hazard that it was intended to manage:
 - (b) a material change in the management structure at the mining operation that may affect the principal hazard management plan:
 - (c) a material change in plant used or installed at the mining operation that may affect the principal hazard management plan:
 - (d) the occurrence of any other event as provided in a principal hazard management plan as requiring a review of the plan.
- (3) Any review of a principal hazard management plan under subclause (1) must include—
- (a) a review of the risk assessment in relation to the relevant principal hazard; and
 - (b) a review of all other aspects of the principal hazard management plan.
- (4) In addition to the requirements of regulation 61, the mine operator must ensure that records of all reviews and revisions of principal hazard management plans are kept for at least 12 months from the date on which the mining operation is abandoned.
- (5) The mine operator must, on request, provide records relating to a review of a principal hazard management plan to an inspector or a site health and safety representative.

70 Audits of principal hazard management plans

- (1) The mine operator must engage, and pay for, a competent person to carry out an independent external audit of all principal hazard management plans, ensuring that—
- (a) external audits are carried out once every 3 years after the date the principal hazard management plan is approved by the site senior executive.; and
 - (b) the external auditors are independent of the mining operation.
- (2) In addition to the requirements of regulation 61, the mine operator must ensure that records of all audits of principal hazard

management plans are kept for at least 12 months from the date on which the mining operation is abandoned.

Ground or strata instability

- 71 Principal hazard management plans for ground or strata instability**
- (1) Following the identification of ground or strata instability as a principal hazard at a mining operation, the site senior executive must ensure that a geotechnical assessment is completed by a competent person to determine the level of ground or strata support required to safely conduct the mining operation.
 - (2) A principal hazard management plan in relation to ground or strata instability must, at a minimum, address the following:
 - (a) circumstances under which ground or strata failure may occur at the mining operation; and
 - (b) ways in which potential ground or strata failure could be avoided through the design of suitable ground or strata support methods that must have regard to—
 - (i) the characteristics of the area to be supported, including natural and geotechnical features:
 - (ii) the surrounding workings, including abandoned or previously excavated workings:
 - (iii) the activities to be carried out, including proposed activities:
 - (iv) in relation to underground mining operations and tunnelling operations, the size and geometry of the openings in the underground workings; and
 - (c) suitable ground or strata support methods that are able to be implemented by means of clear directions and diagrams; and
 - (d) continuous modelling, testing, and updating, where required, of the ground or strata support methods; and
 - (e) appropriate equipment and procedures to monitor, record, interpret, and analyse data about seismic activity and its impact on the mining operation; and
 - (f) collection, analysis, and interpretation of relevant geotechnical data, including monitoring of openings and excavations, where appropriate; and

- (g) maintaining the integrity of ground or strata support, including, for example, by replacing defective supports; and
- (h) allowing for higher standards of support to be installed (for example, more support installed at more frequent intervals) than that required by the principal hazard management plan.

Inundation and inrush

72 Meaning of inundation and inrush

- (1) In these regulations, **inundation and inrush** refers to the sudden and unplanned entry into workings of a mining operation of liquid, gas, or other materials or substances.
- (2) Subclause (1) applies unless a provision of these regulations provides otherwise.

73 Consideration of whether inundation and inrush is a principal hazard

- (1) In the course of an appraisal as required under regulation 66(1)(a) to identify inundation and inrush as a principal hazard at a mining operation, the site senior executive must ensure that a suitably qualified and experienced person reviews relevant plans in accordance with subclauses (2) to (4).
- (2) The suitably qualified and experienced person must include consideration of the following in the review:
 - (a) any mine plans of the mining operation, made and kept as required under these regulations;
 - (b) any relevant historical mine or survey plans.
- (3) The review by the suitably qualified and experienced person must include—
 - (a) identifying and locating old workings that may be in the vicinity of the proposed activities to be undertaken at the mining operation; and
 - (b) ascertaining whether the old workings contain accumulation of any matter than may flow, including those in a solid, liquid, or gaseous state.
- (4) The suitably qualified and experienced person must, following the completion of the review,—

- (a) report the findings in writing; and
 - (b) have the written report peer reviewed by a competent person who is independent of the mining operation; and
 - (c) give a copy of the peer-reviewed report to the site senior executive.
- (5) The site senior executive must, on request, make the peer-reviewed report available to WorkSafe within a reasonable period of time.

74 Principal hazard management plans for inundation and inrush

- (1) The following matters must be considered in the development of a principal hazard management plan in relation to inundation and inrush:
- (a) the proposed activities to be undertaken:
 - (b) the potential sources of inundation and inrush:
 - (c) the nature and magnitude of the rate of flow of the potential sources of inundation and inrush:
 - (d) the location of adjacent workings and the strength of the ground between workings:
 - (e) the location, design, and construction of dams, ponds, tailings dams, emplacement areas, and any other bodies of water or material (including material entering a mining operation due to adverse weather conditions or other natural events):
 - (f) the reasonably foreseeable harm that could result from each potential source of inundation and inrush, having regard to matters such as—
 - (i) the accuracy of plans of the mining operation:
 - (ii) the location of the potential sources of inundation and inrush:
 - (iii) variation in rock properties:
 - (iv) geological weaknesses:
 - (v) future activities at the mining operation:
 - (vi) geological changes and similar unknown matters:
 - (g) the potential for an accumulation of liquid, gas, or other materials or substances that could flow into other workings or locations:

- (h) the monitoring system that will be needed to provide warnings of conditions that may—
 - (i) lead to an occurrence of inundation and inrush; and
 - (ii) warrant a reassessment of the nature of the inundation and inrush hazard.
- (2) A principal hazard management plan in relation to inundation and inrush must, at a minimum, include the following:
 - (a) a written summary of the nature and magnitude of the identified risks of inundation and inrush;
 - (b) the assumptions made in developing the principal hazard management plan;
 - (c) a description of special systems that have been developed for working at the mining operation and in inrush control zones (including the assumptions underpinning the development of those systems);
 - (d) identification of the inrush control zones that have been or will be established and maintained;
 - (e) confirmation of the location of all old workings in the vicinity of an area in which work is to be carried out, before work is commenced in a new area of the mining operation;
 - (f) means of sealing or otherwise controlling boreholes to prevent inundation and inrush.

75 Additional ground of review of principal hazard management plans relating to inundation and inrush

In addition to the requirements of regulation 59, the site senior executive must ensure that a principal hazard management plan relating to inundation and inrush is reviewed and, if necessary, revised in the following circumstances:

- (a) before the workings of the mining operation are extended into any new area;
- (b) before any work is carried out in an inrush control zone.

76 Obligations relating to work in inrush control zone

- (1) Prior to commencement of any work in an inrush control zone, the site senior executive must carry out a risk assessment.

- (2) The purpose of the risk assessment is to determine the risk of inundation and inrush from working in an inrush control zone.
- (3) As part of the notification under regulation 229, the site senior executive must provide WorkSafe with—
 - (a) the results of the risk assessment; and
 - (b) the details of the intended control measures.
- (4) The principal hazard management plan must be updated with the following information after the risk assessment has been completed:
 - (a) methods used to manage the risk of inundation and inrush:
 - (b) any procedures developed to manage the risk of inundation and inrush when working in an inrush control zone, such as the use of exploratory boreholes:
 - (c) relevant details of the plan of the mining operation.

Mine shafts and winding systems

77 Principal hazard management plans for mine shafts and winding systems

- (1) A principal hazard management plan for mine shafts and winding systems must be based on an assessment of the following matters:
 - (a) the stability and integrity of the shaft:
 - (b) the potential for fires developing in the underground parts of the mining operation, the shaft, or the vicinity of the winding engine:
 - (c) the potential for any unintended or uncontrolled movement of the conveyances within the shaft:
 - (d) the potential for a detached conveyance to fall down the shaft:
 - (e) the potential for any person, plant, material, or support structure to fall into, or within, the shaft:
 - (f) the potential for failure of, or damage to, safety-related plant and controls, including—
 - (i) ropes bearing the weight of the shaft conveyance; and
 - (ii) controls and limiting devices to prevent the shaft conveyance from exceeding safe limits (includ-

- ing winding speed, and the top and bottom ends of the shaft) and any other relevant limits:
- (iii) measures to—
 - (A) detect and prevent slack rope, drum slip, or tail rope malfunctions; and
 - (B) stop the winding engine in the event that a malfunction occurs; and
 - (iv) braking system (including emergency brakes) and measures preventing unrestrained or uncontrolled descent of a shaft conveyance; and
 - (v) warning systems for any emergency in the shaft conveyance; and
 - (vi) communication systems:
- (g) the potential for injury to any person in a shaft conveyance from any material—
- (i) being carried in the shaft conveyance; or
 - (ii) falling from a shaft conveyance:
- (h) systems ensuring that all persons can escape from a stalled shaft conveyance:
- (i) any other relevant matter.
- (2) A principal hazard management plan for mine shafts and winding systems must, at a minimum, provide for the following:
- (a) the measures to be used to eliminate, isolate, or minimise—
 - (i) the occurrence of fires in a shaft; and
 - (ii) the unintended movement or falling of people, plant, substance, or any other material or object:
 - (b) a description of the winding systems to be used, including the ropes or other means that will enable the conveyance to carry the weight that it will be expected to carry:
 - (c) the control measures that will ensure that every winding system at the mining operation remains in a safe condition:
 - (d) the measures to—
 - (i) prevent and detect malfunction in the winding engine and associated plant; and
 - (ii) stop the winding engine in the event of any slack rope, drum slip, or tail rope:

- (e) the means for any person to escape from a stalled shaft conveyance:
- (f) the means of communication between the winding engine room, shaft conveyances that carry people, and the entrance to every shaft in use:
- (g) the means to prevent uncontrolled contact between shaft conveyances, other equipment installed in the shaft, and the sides of the shaft:
- (h) requirements for regular testing and inspection of the winding system and its components:
- (i) the means of preventing hazards materialising from the design, construction, manufacture, installation, commissioning, maintenance, testing, repair, use, decommissioning, and disposal of mine shafts and winding systems:
- (j) the means by which the mining operation would manage any hazards that could arise in relation to mine shafts and winding systems.

78 Additional requirements for principal hazard management plans in relation to automatic winding systems

In addition to the requirements in regulation 77, for a mining operation with an automatic winding system, a principal hazard management plan for mine shafts and winding systems must include the following:

- (a) the measures to monitor the winding engine from outside the winding engine room:
- (b) the warning systems to alert all persons at the mining operation of any emergency in a mine shaft:
- (c) the measures to prevent spillage into the shaft during loading of any plant or material onto or into a shaft conveyance.

79 Additional requirements for principal hazard management plans in relation to dual-purpose shafts

In addition to the requirements in regulation 77, for a mining operation with a dual-purpose shaft for conveying materials

and persons, the principal hazard management plan must include the following:

- (a) the measures to ensure the adequate protection of any person being carried in a shaft conveyance from any material in the shaft or conveyance that may cause injury to that person:
- (b) the measures used to prevent any person from being carried in a shaft conveyance while any material is being carried in the shaft conveyance:
- (c) the measures to be used to prevent any material being carried in a shaft conveyance from protruding horizontally outside the conveyance:
- (d) the measures to ensure that any material being carried in a shaft conveyance is properly secured and will not become unsecured during transportation.

Roads and other vehicle operating areas

80 Principal hazard management plans for roads and other vehicle operating areas

- (1) The principal hazard management plan for roads and other vehicle operating areas within the mining operation must, at a minimum, provide for the following:
 - (a) the measures to be taken to ensure that the design, layout, operation, construction, and maintenance of each road and other vehicle operating area at the mining operation is safe for all authorised users:
 - (b) the measures to be taken to manage the risks associated with land adjacent to the road or other vehicle operating area at the mining operation:
 - (c) having regard to the volume and speed of traffic and other relevant matters, the measures to be taken to manage the risks associated with interactions between the following:
 - (i) vehicles (of the same or different types):
 - (ii) vehicles and persons (including in parking areas and around earth-moving machinery in operation):
 - (d) the measures to be taken to manage the risks associated with interactions between mobile plant and other traffic:

- (e) the measures to be taken to manage the risks associated with interactions between mobile plant and fixed structures (including overhead and underground power lines, tunnel walls, and roofs):
- (f) the measures to be taken to manage the risks associated with the use of remote control vehicles at the mining operation:
- (g) the procedures to be followed for the operation and movement of load-shifting equipment:
- (h) the listing of prohibited zones, including consideration of whether to add new, or make changes to existing, prohibited zones:
- (i) the procedure for discharging loads from fixed or mobile plant:
- (j) in relation to dump trucks,—
 - (i) the design, construction, and maintenance of safety berms, windrows, and bunds on roads used by trucks; and
 - (ii) the risks of the trucks overturning, and measures to manage those risks; and
 - (iii) the safe dumping areas and routes; and
 - (iv) the recommended methods of safe working:
- (k) the availability of safe means of transport for mine workers' access to and exit from their place of work within the mining operation:
- (l) the conditions for the safe operation of equipment or vehicles transporting people or equipment:
- (m) the minimum dimensions and conditions of the roads and other areas on which equipment or vehicles transporting people or equipment are to operate:
- (n) the maximum load that may be carried or towed by vehicles and equipment, whether by reference to weight, dimensions, or other criteria:
- (o) the rules relating to the safe carriage of persons, including the segregation of people from the load, the provision of seating, and the use of seat belts, other harnesses, or restraint devices:

- (p) the measures to be taken for safety of persons working or travelling on or near roads or other areas used by vehicles:
 - (q) the measures to be taken for safe parking, refuelling (including safe storage of fuel for vehicles), and recharging of vehicles or equipment:
 - (r) the requirements for periodic inspection and testing of the braking systems of vehicles:
 - (s) the procedure to be followed before equipment or vehicles transporting people or equipment are operated:
 - (t) the procedure to be used on the discovery of a defect in equipment or vehicles used, or to be used, for transporting people or equipment.
- (2) The site senior executive must ensure that the measures and matters in subclause (1) are determined after the following factors have been taken into account:
- (a) the characteristics of the vehicles and other mobile plant to be used in the mining operation:
 - (b) the conditions of the road or other vehicle operating area in the particular area of the mining operation (including environmental conditions such as the time of day, visibility, temperature, and the effects of weather).
- (3) In this regulation, **prohibited zone** means any place in the mining operation where any vehicle (including any remote-operated vehicle), any other mobile plant, or any person must not enter at certain times, or at all times, as provided in a principal hazard management plan and notified at relevant places near the place concerned.

Tips, ponds, and voids

81 Principal hazard management plans for tips, ponds, and voids

The principal hazard management plan in relation to tips, ponds, and voids must, at a minimum, provide for the following:

- (a) the procedures and processes to ensure the safe design, construction, and maintenance of any tips, ponds, or voids at the mining operation:

- (b) a geotechnical assessment to be carried out commensurate with the type and scale of tipping operations and having regard to—
 - (i) the underlying geotechnical structure at the location of a tip; and
 - (ii) the properties of the material being tipped; and
 - (iii) the creation of any ponds or voids:
- (c) roading design and traffic movement connected with tipping operations:
- (d) the tipping rules relating to the use of tips:
- (e) records to be kept of the materials that have been tipped:
- (f) an inspection and monitoring regime.

82 Risk reassessment in relation to tips, ponds, and voids

In addition to the requirements of regulation 55, the site senior executive must ensure that a reassessment of the stability of the tip, pond, or void is carried out by a competent person—

- (a) at least once every 2 years after the date the principal hazard management plan is approved by the site senior executive; and
- (b) if a tip, pond, or void as constructed deviates from the geotechnical design; and
- (c) if a new tip, pond, or void is created.

83 Inspection of tips

If the principal hazard management plan for tips, ponds, and voids requires regular inspections to be carried out, the principal hazard management plan must specify—

- (a) the nature and interval of inspections; and
- (b) the appointment of a competent person to supervise the conduct of tipping operations, including a requirement that this person supervise every inspections of a tip at the mining operation.

*Air quality: managing dust and other airborne
contaminants*

84 Principal hazard management plans for air quality

- (1) The following matters must be considered in the development of the principal hazard management plan for air quality:
 - (a) the levels of oxygen in the natural or supplied air at the mining operation:
 - (b) the temperature and humidity of the air at the mining operation:
 - (c) the types of dust and other contaminants that are likely to be in the air from both natural and introduced sources and that may be hazardous for the health and safety of any mine workers exposed to the dust or contaminants:
 - (d) the levels of dust and other contaminants in the natural or supplied air at the mining operation:
 - (e) the length of exposure of mine workers at the mining operation to airborne dust or other contaminants, taking into account such matters as extended shifts and reduced recovery periods between shifts and any other relevant matters.
- (2) The principal hazard management plan must, at a minimum, identify the measures that will be taken to—
 - (a) monitor and assess airborne dust and contaminants at the mine:
 - (b) regularly monitor the atmosphere at the mining operation to manage hazards associated with unsafe concentrations of oxygen, methane, and other gases in the air:
 - (c) effectively reduce, dilute, or extract airborne dust and other contaminants, including through the use of appropriate suppression, ventilation, or exhaust extraction systems:
 - (d) ensure air provided by the ventilation system at the mining operation is of sufficient volume, velocity, and quality to remove airborne dust and contaminants from the mining operation and to maintain a safe and healthy atmosphere at the mining operation:
 - (e) ensure that the supply of fresh air to the ventilation system used in the underground parts of the mining operation is from the purest source available:

- (f) suppress dust that may arise as a result of activities at the mining operation, including through the use of dust collection and dust suppression plant where appropriate.

Fire or explosion

85 Principal hazard management plan for fire or explosion

- (1) The following matters must be considered in the development of the principal hazard management plan for fire or explosion:
 - (a) potential sources of fire and explosion at the mining operation:
 - (b) potential sources of flammable, combustible, and explosive materials, both natural and introduced, including gas, dust, fuels, solvents, and timber:
 - (c) potential sources of ignition including equipment, static electricity, electricity, spontaneous combustion, lightning, hot work, and other work practices:
 - (d) potential for propagation of fire or explosion to other parts of the mining operation:
 - (e) the use, presence, and storage of flammable and explosive substances including combustible ore, sulphide dust, coal dust, or methane.
- (2) The principal hazard management plan for fire or explosion must include—
 - (a) a description of the potential sources described in subclause (1)(a) to (c) and of the potential for propagation of fire or explosion:
 - (b) procedures for the use, presence, and storage of flammable and explosive substances:
 - (c) provision for hot-work procedures, including any restrictions on doing hot work if applicable under regulation 161:
 - (d) provision for live electrical work procedures, including any restrictions on doing live electrical work if applicable under regulation 195:
 - (e) details of the type and location of the systems for prevention, early detection, and suppression of fire (including remote monitoring systems) and of the equipment for firefighting at the mining operation:

- (f) where a gas monitoring system is in place, provision for the use of portable gas detectors fitted with suitable extension probes to monitor the presence of methane in the event that the gas monitoring system, or part of it, fails or becomes non-operational:
 - (g) reference to the principal control plan for emergency management and the location of changeover stations, or refuge chambers, where they exist:
 - (h) in respect of coal mining operations, the methods that will be used to limit the generation of coal dust, which must include the use of dust suppression systems at coal crushers, coal conveyors, and conveyor transfer points.
- (3) In the case of an underground coal mining operation, the principal hazard management plan must also set out the methods that will be used to—
- (a) minimise the amount of coal dust resulting from the use of mechanical mining systems:
 - (b) minimise the accumulation of coal dust on roadways and on other surfaces in the roadways, and remove accumulations of coal dust from the roadways and other surfaces:
 - (c) suppress airborne coal dust and remove it from the workings of the mining operation:
 - (d) determine the rate of application of stone dust that is necessary to minimise the risk of a coal dust explosion:
 - (e) suppress coal dust explosions and limit propagation of coal dust explosions to other parts of the mining operation:
 - (f) monitor and take samples of roadway dust, including any stone dust that has been applied, to ensure that the methods outlined in the principal hazard management plan are adequate and sufficiently implemented to prevent and suppress coal dust explosions.

Explosives

86 Principal hazard management plan for explosives

The principal hazard management plan for explosives must, at a minimum, address the following matters:

- (a) transportation of explosives at the mining operation:

- (b) explosive precursors:
- (c) inspection of and reporting on the safety of equipment used at the mining operation for manufacturing, storing, transporting, and delivering explosives:
- (d) the appropriate action to be taken to make safe the equipment mentioned in paragraph (c):
- (e) how explosives brought into the mining operation and used at the mining operation will be accounted for:
- (f) how explosives will be checked for any deterioration in the explosives and isolated if they have deteriorated:
- (g) the establishment of secure storage for explosives at the mining operation, including a system for signing explosives in and out of storage:
- (h) in the case of underground mining operations and tunnelling operations, a process to remove explosives from under ground at the operation unless there is an approved facility to store the explosives under ground:
- (i) the identification and control of hazards that may arise—
 - (i) during the charging and firing of explosives; and
 - (ii) in particular places, including, for example, in a storage bin feeder in which an explosive is to be used to clear a blockage:
- (j) the establishment of declared danger zones that no person may enter while blasting operations are taking place:
- (k) the procedure to find, recover, and detonate misfired explosives:
- (l) a record to be kept of misfired explosives:
- (m) a register of people at or providing a service to the mining operation who are approved handlers under the Hazardous Substances and New Organisms Act 1996 to handle explosives:
- (n) the co-operation required between the mining operation and any person authorised under the Hazardous Substances and New Organisms Act 1996 regarding the safety of the storage, handling, transportation, and use of explosives at the mining operation, including compliance with any conditions attached to the authorisation

under the Hazardous Substances and New Organisms Act 1996 of the person handling the explosive.

Gas outbursts

87 Principal hazard management plan for gas outbursts

- (1) The following matters must be considered in the development of the principal hazard management plan for gas outbursts:
 - (a) the potential for gas to be released into the working areas of a mining operation from natural or introduced sources at concentration levels that could lead to fire, explosion, or asphyxiation:
 - (b) the nature of the gas that could be released:
 - (c) the levels of gas in the material being mined:
 - (d) gas seam pressures.
- (2) The following must be undertaken during the development of the principal hazard management plan for gas outbursts:
 - (a) analysis of samples taken of *in situ* gas content:
 - (b) geotechnical investigation and analysis:
 - (c) statistical analysis of the data obtained as part of a technical review undertaken to determine what gas thresholds for safe mining should be applied at the mining operation.
- (3) The principal hazard management plan for gas outbursts must, at a minimum, include the following matters:
 - (a) the determined risk of gas outbursts, measuring such factors as the *in situ* methane and carbon dioxide gas levels per tonne of material:
 - (b) the specific geological risk features that are able to be identified in the area to be mined:
 - (c) the control processes to be used to manage the risk of gas outbursts, which must include, but not be limited to, monitoring the following matters (where relevant) and comparing the measurements to the predetermined gas thresholds and mining rates adopted in the plan:
 - (i) carbon dioxide and methane gas content and desorption rates:
 - (ii) ventilation:
 - (iii) gas drainage:

- (iv) bore hole surveying;
 - (v) the rate of development of the workings of the mining operation:
- (d) a procedure for work to be authorised by the mine manager before that work first commences in a particular part of the underground parts of the mining operation and at specified intervals following the commencement of work.
- (4) The procedure developed as required by subclause (3)(d) must include a requirement for the mine manager, before authorising work, to verify that the information necessary to assess the risk of harm to mine workers from gas outbursts has been obtained and that all necessary control measures have been implemented, including—
- (a) requirements (subject to any stricter requirements in Part 7 or 8) for readings and records to be taken at least once every 2 hours of the concentration of gas in the general body of air at the face; and
 - (b) requirements to continuously identify geological structures; and
 - (c) provision for the rate of roadway advance to be modified; and
 - (d) the use of surveys and sample drill holes; and
 - (e) the training of workers to identify the signs of gas outbursts; and
 - (f) the training of workers in rescue and escape procedures following outbursts; and
 - (g) the provision of personal protective equipment to mine workers operating mobile plant.

Spontaneous combustion

- 88 Appraisal of likelihood of spontaneous combustion to occur required at all underground coal mining operations**
- (1) The appraisal of an underground coal mining operation as required by regulation 66(1)(a) must, in respect of assessing the likelihood of spontaneous combustion to occur, include, but is not limited to, the following:

- (a) an independent test of the coal to be mined at the operation as to its propensity for spontaneous combustion; and
 - (b) consideration of all sections of the operation and the nature of the operation; and
 - (c) evaluation of the spontaneous combustion-related history of the operation and any adjacent or prior operations in the same seam and coal measures; and
 - (d) a review of the experiences of spontaneous combustion at other underground coal mining operations.
- (2) The site senior executive must ensure that a determination that there is not the potential for spontaneous combustion to occur at an underground coal mining operation is reviewed at least once every 3 years following the initial determination and in the following situations:
- (a) where there is evidence that spontaneous combustion has occurred or may be occurring in a coal seam or in coal that has been extracted from a coal seam at the underground mining operation, regardless of where the extracted coal is located when the evidence of spontaneous combustion is discovered; or
 - (b) where the workings of the mining operation move into or near another coal seam that has not previously formed part of the assessment of the likelihood of spontaneous combustion to occur at the mining operation; or
 - (c) whenever an audit of the health and safety management system, or any part of it, indicates that the likelihood of spontaneous combustion occurring at the underground coal mining operation should be reassessed; or
 - (d) a site health and safety representative or industry health and safety representative requests the review.

89 Ongoing review of information about spontaneous combustion

In addition to the requirements of regulation 69(3), the following must be assessed when a principal hazard management plan for spontaneous combustion is reviewed under regulations 69(1):

- (a) available information about spontaneous combustion at underground coal mining operations; and
- (b) emerging technology regarding the control of spontaneous combustion in underground coal mines.

90 Principal hazard management plan for spontaneous combustion

The principal hazard management plan for spontaneous combustion must, at a minimum, include the following matters:

- (a) a description of the characteristics of the operation as they relate to the control of spontaneous combustion at the operation:
- (b) an inspection programme for spontaneous combustion that includes taking recordings and making a written report on findings:
- (c) the means to ensure all mine workers are trained in the standards and work practices that may contribute to, and in the early detection of, spontaneous combustion:
- (d) a description of the controls in place at the mining operation to eliminate, isolate, or minimise spontaneous combustion:
- (e) the details of the monitoring programme to determine when the controls referred to in paragraphs (f) and (g) must be used, including—
 - (i) early detection of spontaneous combustion using gas analysis and sensory indicators:
 - (ii) the locations for continuous monitoring of gas to take place:
 - (iii) the location and calibration of gas monitoring instruments:
 - (iv) monitoring of air flow rates and pressure differentials in the underground parts of the mining operation:
- (f) the details of the actions to be taken in response to a spontaneous combustion event, which must include—
 - (i) the procedure for withdrawing mine workers from the underground parts of the mining operation; and

- (ii) the particular responsibilities and competencies required of mine workers responding to the event:
- (g) the procedure or processes for emergency sealing of a part or parts of the underground parts of the mining operation in response to a spontaneous combustion event, including, but not limited to, the details of the sealing procedures and seal design required to comply with Part 8:
- (h) the minimum amount and type of materials required for the construction of emergency seals to be kept at the mining operation, or guaranteed to be readily available to the mining operation, at all times:
- (i) the details of any corrective action to be taken when non-conformance with the principal hazard management plan is identified.

91 Recording of spontaneous combustion events

- (1) The mine operator must ensure that a record is kept of—
 - (a) any spontaneous combustion events that occur at or in the vicinity of the mining operation; and
 - (b) issues, decisions, and actions, and the consequences of those actions, that arise from or are taken as a result of every spontaneous combustion event; and
 - (c) the spontaneous combustion characteristics specific to the mining operation; and
 - (d) all variations from the principal hazard management plan, the causes of non-conformance, and action taken to correct variations.
- (2) The mine operator must ensure that the record required by sub-clause (1) is—
 - (a) made available on request to an inspector, a site health and safety representative, or an industry health and safety representative; and
 - (b) kept for at least 12 months from the date on which the mining operation is abandoned.

Part 4

Principal control plans

92 Site senior executive responsible for having principal control plans

If a subpart of this Part applies to a mining operation, the site senior executive must ensure that there is a principal control plan for the mining operation that complies with that subpart.

93 General purpose of principal control plans

The purpose of a principal control plan is to document—

- (a) the systems and processes in place at the mining operation to manage hazards at the operation; and
- (b) the measures that are necessary to manage principal hazards at the mining operation.

94 Review and revision of principal control plans

- (1) In addition to the requirements of regulation 58, the site senior executive must ensure that each principal control plan is reviewed at least once every 2 years after the date on which the principal control plan is approved by the site senior executive.
- (2) In addition to the requirements of regulation 59, the site senior executive must ensure that a principal control plan is reviewed after—
 - (a) the occurrence of an accident at the mining operation involving any hazard that the principal control plan was intended to manage;
 - (b) a material change in the management structure at the mining operation that may affect the principal control plan;
 - (c) a material change in plant used or installed at the mining operation that may affect the principal control plan;
 - (d) the occurrence of any other event identified in a principal control plan as requiring a review of the plan.
- (3) In addition to the requirements of regulation 61, the mine operator must ensure that records of all reviews and revisions of principal control plans are kept for at least 12 months from the date on which the mining operation is abandoned.

- (4) The mine operator must, on request, provide records relating to a review of a principal control plan to an inspector or a site health and safety representative.

95 Audits of principal control plans

- (1) The mine operator must engage, and pay for, a competent person to carry out an independent external audit of all principal control plans, ensuring that—
- (a) external audits are carried out once every 3 years after the date the principal control plan is approved by the site senior executive.; and
 - (b) the external auditors are independent of the mining operation.
- (2) In addition to the requirements of regulation 61, the mine operator must ensure that results of all audits of principal control plans are kept for at least 12 months from the date on which the mining operation is abandoned.

Subpart 1—Mechanical engineering

96 Application

This subpart applies to any mining operation where 1 or more principal hazards have been identified that may involve hazards or controls of a mechanical type.

97 Risk assessment in relation to mechanical engineering control plan

The following matters must be considered when developing the mechanical engineering control plan:

- (a) the hazards presented by mechanical equipment, plant and installations over their lifetime;
- (b) the potential for mine workers to be harmed by sources of stored energy, which is energy associated with mechanical equipment, plant, and installations other than electrical energy;
- (c) the measures required to prevent the uncontrolled release of stored energy and to prevent the unintended operation of mechanical plant and installations, including

- mechanical plant and installations restarting on restoration of the supply of electricity:
- (d) the potential for, and need to prevent, catastrophic failure of mechanical equipment, plant, or installations:
 - (e) the potential for, and need to prevent, fires being initiated or fuelled by mechanical equipment, plant, or installations:
 - (f) the potential for, and need to prevent, cutting equipment acting as an ignition source for gas or coal dust explosions:
 - (g) the potential for, and need to minimise, exposure of mine workers to toxic or harmful materials associated with mechanical plant and installations:
 - (h) the need for safeguards for mechanical plant and installations to have a probability of failure appropriate to the degree of risk posed by the mechanical plant or installation to which they relate:
 - (i) in the case of an underground coal mining operation, the potential for, and need to prevent, stored energy providing a source of ignition for gas or coal dust explosions:
 - (j) any other matter that deals with the safe management of mechanical plant and installations.

98 Mechanical engineering control plan

The mechanical engineering control plan must, at a minimum, address the following matters:

- (a) the standards of engineering practice to be followed at the mining operation regarding mechanical plant and installations throughout their life cycle, including, but not limited to, the following:
 - (i) arrangements for the acquisition and operation of fit-for-purpose mechanical plant and installations:
 - (ii) inspection and testing systems to ensure mechanical plant and installations are and remain safe to operate:
 - (iii) arrangements for the maintenance, repair, and alteration of mechanical plant and installations:

- (iv) arrangements for the commissioning of mechanical plant and installations and for such commissioning to be documented:
- (v) the competencies required of mine workers who may deal with mechanical plant and installations during the life cycle of the equipment, plant, and installations at the mining operation:
- (vi) arrangements for the mine workers installing, commissioning, maintaining, and repairing mechanical plant and installations to be supervised by competent persons:
- (vii) safe work procedures for mine workers who may deal with mechanical plant and installations during the life cycle of the equipment, plant, and installations at the operation:
- (viii) the identification, assessment, rectification, and management of defects in mechanical plant and installations:
- (b) the safe operation of conveyors, winding system, mobile plant, and dredges:
- (c) the safety of mechanical plant and installations:
- (d) the fitting of appropriate automatic fire suppression and engine or fuel pump shutdown systems to safety-critical equipment and all underground diesel engines:
- (e) the fitting of heat detection and automatic trip sensors on safety-critical mechanical components to ensure they stop operating if they may become a danger to health and safety:
- (f) the fitting of devices to protect the operator of mobile plant from the hazards involving mobile plant overturning, objects falling on or coming into contact with the operator, and the operator being ejected from the seat, in the form of the following:
 - (i) rollover protection and falling object protection on mobile plant that is suitable for the mining operation:
 - (ii) seat belts or other devices used to restrain the operator on mobile plant:

- (iii) protective canopies on mobile plant working under an unsupported roof when they are controlled by an on-board operator:
- (g) the safe use and storage of pressurised fluids (including managing the hazards associated with compressed air and pressurised hydraulic fluids):
- (h) means for the prevention, detection, and suppression of fires on mobile plant and conveyors:
- (i) the control of diesel engine plant and installations, including the following:
 - (i) limiting the number of diesel engines permitted underground in any underground mining operation or tunnelling operation consistent with the safe operation of the mining operation and capacity of the ventilation system to reduce exhaust emissions to an acceptable level:
 - (ii) limiting the use of diesel engine plant and installations in the underground parts of an underground coal mining operation to diesel engine plant and installations that are approved for use in an underground coal mining operation:
 - (iii) where diesel engines are used on plant underground, the fitting of such plant with steel fuel tanks, automatic fire suppression of adequate delivery means and capacity, and a ready method of battery isolation:
 - (iv) the maintenance of explosion-protected plant in an explosion-protected state:
- (j) the use of fire-resistant hydraulic fluids in high-risk applications underground in an underground mining operation or tunnelling operation:
- (k) the engine management systems used to control diesel pollutants emitted underground in an underground mining operation or tunnelling operation:
- (l) the arrangements for hot work to be done safely, including an approval system for hot work to be done if the mining operation is an underground coal mining operation or an underground metalliferous mining oper-

ation or tunnelling operation where methane has been detected.

Subpart 2—Electrical engineering

99 Application

This subpart applies to—

- (a) any mining operation where 1 or more principal hazards have been identified that may involve hazards or controls of an electrical type; and
- (b) any underground mining operation or tunnelling operation.

100 Electrical engineering control plan

- (1) The electrical engineering control plan must, at a minimum, address the following matters:
 - (a) the prevention of harm to people from sources of electrical energy:
 - (b) the prevention of fires being ignited by electrical energy:
 - (c) the prevention of electrical plant being unintentionally operated:
 - (d) the provision of electrical safeguards for electrical and non-electrical hazards with a probability of failure appropriate to the likelihood of the hazard occurring and the severity of harm that could result:
 - (e) the competencies required of mine workers carrying out electrical work at the mining operation:
 - (f) the reliability of electrical plant and installations used in the monitoring and control of hazards and of electronic communication equipment:
 - (g) the use of a maintenance management system that includes the keeping of commissioning, inspection, and test reports and certification documentation of electrical plant and installations throughout the life cycle of the plant and installations:
 - (h) safe working practices for working on high voltage installations:
 - (i) any other requirements of these regulations relating to the management of the safety of electrical plant and in-

stallations and electrical engineering practices, and any requirements of regulations made under the Electricity Act 1992 relevant to the use of electricity at the mining operation.

- (2) In the case of an underground mining operation or tunnelling operation, the electrical engineering control plan must, in addition to the matters in subclause (1), include provision for—
- (a) the design, installation, operation, and maintenance of electrical plant and installations at the mining operation, to minimise the potential impacts from voltage rise due to lightning, static electricity, voltage surges and other transient voltages to within acceptable limits, including—
 - (i) the prevention of the ignition of gas by a static charge:
 - (ii) the prevention of the effects of lightning being transferred to the underground parts of the mining operation:
 - (b) the safe operation of every electrical control system at the mining operation under all operating conditions, including instability or failure of the electricity supply:
 - (c) the isolation of the supply of electricity to all electrical plant or installations in the event of—
 - (i) unsafe electrical plant or installations being detected; or
 - (ii) unsafe electrical practices being detected:
 - (d) the isolation of the supply of electricity to any particular item of electrical plant or to any installation in the event that a failure to maintain that electrical plant or installation in accordance with the electrical engineering control plan is detected:
 - (e) reasonable access to works by people undertaking installation, maintenance, or emergency work for those works:
 - (f) the safety of any person undertaking installation, maintenance, or emergency work on works:
 - (g) specific procedures for the following:
 - (i) use of electric welding plant:

- (ii) use of electrical test equipment, including instruments:
 - (iii) work near overhead power lines and cables:
 - (iv) treatment of electric shocks and electric burns:
 - (h) the security and maintenance of the mining operation's electrical control system software and control circuits, including—
 - (i) controlling the modification of the software and circuits:
 - (ii) keeping records of any modifications:
 - (i) the safe use of lasers, including fibre-optic equipment at the mining operation.
- (3) In the case of an underground coal mining operation, the electrical engineering control plan must, in addition to the matters in subclauses (1) and (2), provide for—
 - (a) the prevention of electrical energy acting as an ignition source for gas or coal dust explosions:
 - (b) for each explosion risk zone, ensuring the use only of electrical plant and installations, including cables and electrical plant on diesel vehicles, that are appropriate to the explosion risk zone in which they are located or being used:
 - (c) the approval system under which live electrical work may be carried out:
 - (d) the isolation of the supply of electricity to the underground parts of the mining operation, but not the supply to safety-critical equipment, in the event of the following circumstances:
 - (i) the presence of methane levels at or above,—
 - (A) in an NERZ, 0.5%:
 - (B) in an ERZ1, 1.25%:
 - (ii) if ventilation falls below the specified quantity set by the electrical engineering control plan:
 - (e) the safe restoration of the supply of electricity to the underground parts of the mining operation by a competent person:
 - (f) the plant and procedures used to ensure that, in the event of a failure of the main ventilation system, the supply of electricity entering the underground parts of the mining

operation (other than power to plant or installations that have been designed so that they are incapable of producing heat or sparks sufficient to ignite an explosive atmosphere)—

- (i) is automatically and systematically isolated:
 - (ii) is incapable of being restored before the main ventilation system is repaired and restarted:
 - (iii) is not restored until a competent person determines it is safe to do so.
- (4) For the purpose of this regulation, **works** has the meaning given to it in section 2 of the Electricity Act 1992.

Subpart 3—Ventilation

101 Application

This subpart applies to any underground mining operation or tunnelling operation.

102 Ventilation control plan

- (1) The ventilation control plan must, at a minimum, address the following matters:
- (a) the installation of ventilation control devices to control the supply of ventilation to the underground parts of the mining operation and the means used to ensure that ventilation control devices are not interfered with:
 - (b) the development of procedures for the construction, installation, use, and maintenance of ventilation control devices at the mining operation:
 - (c) the placement of the main fans, and provision of other devices for a main fan, such as measuring or monitoring devices:
 - (d) the maintenance of return airways in a suitable condition so that they are accessible to those who must inspect them or maintain them or travel through them in an emergency:
 - (e) the competencies of mine workers who operate, maintain, or adjust any part or the whole of the ventilation system at the mining operation:

- (f) the processes that will ensure that only mine workers with the required competencies operate, maintain, or adjust any part or the whole of the ventilation system at the mining operation:
 - (g) the means by which heat stress conditions will be monitored and controlled:
 - (h) reporting procedures relating to ventilation:
 - (i) the maintenance of ventilation records and plans:
 - (j) if it is possible that an area or areas of the underground parts of the mining operation may need to be sealed, the manner of sealing such areas, and the precautions to be taken:
 - (k) ensuring that no person enters any area of the mining operation that is sealed, disused, or otherwise not ventilated:
 - (l) the procedures to be followed in the event of a failure of a part or the whole of the main ventilation system at the mining operation and, where considered necessary, the safe withdrawal of people from underground in the mining operation.
- (2) In the case of an underground mining operation or tunnelling operation, the ventilation control plan must, in addition to the matters in subclause (1), address the following matters:
- (a) how the exposure of mine workers to engine pollutants in the atmosphere at the mining operation will be controlled, including—
 - (i) the provision of sufficient ventilation to dilute harmful exhaust pollutants at the mining operation; and
 - (ii) regular testing, on at least a monthly basis, of the exhaust material from each diesel engine at the mining operation to verify that the ventilation provided is sufficient to dilute any harmful exhaust pollutants emitted by the engines:
 - (b) a procedure for the starting of a main fan:
 - (c) procedures for using the following types of fans, where they form part of the mining operation's ventilation system, including starting and stopping procedures:
 - (i) auxiliary fans; and

- (ii) booster fans; and
 - (iii) scrubber fans:
 - (d) the levels of methane at which a methane detector will activate its alarm, and the procedures to be followed when that occurs:
 - (e) measures to be taken if the effective temperature in the underground parts of the mining operation exceeds 28°C:
 - (f) providing for the recording of instances referred to in paragraph (e) as part of the health and safety management system:
 - (g) the procedure regarding the action to be taken when monitoring identifies the presence of noxious gases:
 - (h) the criteria for determining that ventilation is inadequate in a part or the whole of the underground parts of the mining operation, having regard to the quality, quantity, and velocity of air provided by the ventilation system such that workers must be evacuated from the affected part or the whole of the operation as required by regulation 149:
 - (i) the procedure in the event that the main ventilation system at the mining operation fails (which, if the operation is ventilated by more than 1 main ventilation fan, means a failure of 1 or more of the fans), including—
 - (i) the action to be taken to ensure the safety of mine workers if the ventilation system fails in part or totally for at least 30 consecutive minutes; and
 - (ii) the safe withdrawal of mine workers from the underground parts of the mining operation to a place of safety when it is necessary to withdraw them from the underground parts; and
 - (iii) how the system that monitors the operation of the main ventilation fan or fans at the mining operation will ensure an alarm is given at the surface part of the mining operation in the event that 1 or more of the main ventilation fans stops.
- (3) In the case of an underground coal mining operation, the ventilation control plan must, in addition to the matters in sub-clauses (1) and (2), address the following matters:

- (a) an assessment of potentially explosive gas contained within the coal seam that is being mined:
- (b) based on the assessment required by paragraph (a), the establishment of a system for the delivery of adequate ventilation that is designed to maintain the concentration of methane below 0.5% of the general body of air in any production area:
- (c) the design, monitoring, and control of the underground ventilation arrangements to ensure that the atmosphere underground in the mining operation is kept within the prescribed limits (including design, monitoring, and control of arrangements required to support air quality, dust, and airborne contaminant management, gas outburst management, spontaneous combustion management, or other hazard management arrangements at the mining operation that are dependent on ventilation):
- (d) the development and implementation of a procedure to ventilate the underground parts of the mining operation where work is performed, including specification of the maximum distances from the face where ventilation ducting and brattice lines may be located:
- (e) the placement of every main ventilation fan in a location and under such conditions that will prevent the fan being damaged during an explosion occurring underground at the mining operation.

Subpart 4—Emergency management

103 Application

This subpart applies to any mining operation where 1 or more principal hazards have been identified.

104 Consultation with emergency services

When developing an emergency management control plan, the site senior executive must consult—

- (a) fire, police, and ambulance emergency services that have responsibility for the area in which the mining operation is located; and
- (b) in the case of a coal mining operation, an underground metalliferous mining operation, or a tunnelling oper-

ation where a tunnel is intended to be 150 metres or more in length, the Mines Rescue Trust.

105 Emergency management control plan

- (1) The emergency management control plan must, at a minimum, address the following matters:
 - (a) the co-ordination and control of emergencies at the mining operation:
 - (b) the people (or positions) at the mining operation who, or that, will have responsibilities in relation to emergencies at the mining operation, and the detail of those responsibilities:
 - (c) the events that trigger the activation of the plan:
 - (d) the use of communication systems in emergencies at the mining operation:
 - (e) the giving of timely notice, information, and warnings about emergencies to anyone potentially affected by an emergency at the mining operation, including to the persons nominated as next of kin by mine workers:
 - (f) measures to be taken to isolate an area of the mining operation affected by an emergency:
 - (g) the availability of the Mines Rescue Trust and other emergency services to respond to an emergency at the mining operation:
 - (h) the means to locate and account for people at the mining operation in the event of an emergency at the mining operation:
 - (i) the maintenance of an accurate record of all people underground at a mining operation at all times and their likely location, and the availability of that record for the purposes of responding to emergencies at the mining operation:
 - (j) the evacuation of the mining operation in an emergency, including the conditions that will prompt withdrawal of mine workers from the mining operation where there is an imminent risk of harm to mine workers:
 - (k) appropriate transportation from the mining operation:

- (l) first-aid arrangements at the mining operation, including first-aid equipment, facilities, and services and the mine workers who are qualified to provide first aid;
 - (m) provision for all aspects of firefighting, including adequate and compatible firefighting equipment, procedures for firefighting, and training mine workers in firefighting;
 - (n) a procedure to ensure prompt notification of all relevant emergency services and the Mines Rescue Trust.
- (2) In the case of an underground mining operation or tunnelling operation, the emergency management control plan must, in addition to the matters in subclause (1), include provision for ensuring—
- (a) there is an effective means of communicating between the surface of the mining operation and any part of the mining operation where people may be located underground; and
 - (b) the availability of a suitable number of people trained in mines rescue who will be able to respond to an emergency at a mining operation; and
 - (c) there is adequately maintained equipment at the mining operation that will—
 - (i) allow for rapid and continuous rescue operations to take place at the mining operation in conditions of reduced visibility and irrespirable and irritant atmospheres; and
 - (ii) assist the escape or safe recovery of any mine worker or other person from a mining operation where necessary; and
 - (d) the safe escape of people from underground in the mining operation through conditions of reduced visibility and irrespirable and irritant atmospheres (including adequately maintained self-rescuers and other facilities to aid escape where appropriate); and
 - (e) there is an appropriate means of escape to the surface part of the mining operation; and
 - (f) the maintenance of an up-to-date plan of—
 - (i) the exits from the underground parts of the mining operation; and

- (ii) the changeover stations and refuges in the underground parts of the mining operation.
- (3) In the case of an underground coal mining operation, the emergency management control plan must, in addition to the matters in subclauses (1) and (2), include the processes for—
 - (a) safely sealing the whole of the underground parts of the mining operation in an emergency; and
 - (b) the safe use of inertisation equipment.

106 Testing, etc, of emergency management control plan

- (1) In addition to the requirements of regulation 69, the site senior executive must ensure that—
 - (a) the emergency management control plan is regularly tested—
 - (i) using practice drills; and
 - (ii) involving the services referred to in regulation 104; and
 - (b) mine workers are provided with training in the emergency management control plan and that the provision of this training is recorded.
- (2) The mine operator must ensure that the mining operation is provided with adequate resources to—
 - (a) effectively implement the emergency management control plan; and
 - (b) keep facilities and equipment regularly inspected and maintained in a fully operational condition.
- (3) In addition to the requirements of regulation 62, the site senior executive must ensure that a copy of the current emergency management control plan is given to the Mines Rescue Trust, where relevant, and other emergency services referred to in regulation 104.

Subpart 5—Worker health**107 Application**

This subpart applies to any mining operation where 1 or more principal hazards have been identified that may have long-term effects on the health of mine workers.

108 Worker health control plan

- (1) The worker health control plan must, at a minimum, address how the following hazards are to be monitored and controlled where they are present at the operation:
 - (a) noise:
 - (b) vibration:
 - (c) dust, including asbestos dust, coal dust, silica dust, or mixed dust (being dust that contains mixtures of more than 1 different kind of dust):
 - (d) diesel particulates:
 - (e) fumes, including exhaust fumes, welding fumes and other fumes arising from metallic sources:
 - (f) temperature, including extreme hot and cold temperatures, and humidity:
 - (g) changes in atmospheric pressure:
 - (h) manual handling and lifting:
 - (i) hours of work and fatigue:
 - (j) psychosocial hazards:
 - (k) ultraviolet radiation:
 - (l) ionising radiation:
 - (m) biological hazards:
 - (n) any other hazard that may adversely affect the health of mine workers who work at the mining operation.
- (2) The worker health control plan must also—
 - (a) provide for the development of strategies (proportionate to the hazards present at the mining operation and to how a mine worker's behaviour may affect the worker's safety or the safety of others at the mining operation) to deal with fatigue or consumption of drugs and alcohol; and
 - (b) set out a detailed process for obtaining urgent medical treatment for mine workers who suffer serious harm at the mining operation, taking into account the nature of the terrain where the mining operation is located and the remoteness of the mining operation from the nearest hospital or other place where medical assistance may be provided.

Part 5

Worker participation systems

109 Default worker participation system

The provisions in Schedule 3 are the prescribed provisions for the purposes of section 19U of the Act.

110 Process for election of site health and safety representatives

- (1) The provisions in subclauses (2) and (3) are the prescribed provisions for the purposes of section 19V(1) of the Act.
- (2) An election for a site health and safety representative must—
 - (a) involve only candidates who—
 - (i) work sufficiently regularly and for a sufficient duration to enable them to carry out their functions effectively; and
 - (ii) have worked for a minimum of 2 years in a mining operation of the kind at which the person will be a site health and safety representative; and
 - (iii) are willing to take on the position; and
 - (b) be conducted through a secret ballot; and
 - (c) give all mine workers, or all mine workers in a relevant grouping for the purposes of section 19R(5) of the Act, a reasonable opportunity to vote; and
 - (d) be determined by the wishes of the majority of those who vote.
- (3) An election is not required if—
 - (a) there is only 1 candidate for a position, in which case the candidate automatically fills the position; or
 - (b) there are no candidates for a position, in which case the position is not filled.

111 Competency requirements for appointment as industry health and safety representative

- (1) An industry health and safety representative must hold at least 1 of the following certificates of competence:
 - (a) first-class coal mine manager;
 - (b) coal mine underviewer;
 - (c) coal mine deputy.

- (2) In addition to the requirements of subclause (1), an industry health and safety representative must have successfully completed any other competency requirements for an industry health and safety representative that are prescribed by WorkSafe under regulation 34.

112 Form of identity cards

- (1) This regulation applies to an identity card that WorkSafe is required to give to an industry health and safety representative under section 19ZY of the Act.
- (2) The front of the identity card must—
- (a) clearly identify the representative as an industry health and safety representative; and
 - (b) display the following information:
 - (i) a recent photograph of the representative; and
 - (ii) the representative's full name; and
 - (iii) the name of the union or group of mine workers that appointed the representative.

*Information required in relation to appointment
of industry health and safety representative*

113 Notice to WorkSafe in relation to appointment of industry health and safety representative

The information required to be given for the purpose of section 19ZV(b) of the Act is—

- (a) the name of the industry health and safety representative; and
- (b) the contact details of the representative, including telephone numbers, a physical address (which need not be the person's residential address), and email addresses (if any); and
- (c) the date of appointment of the representative; and
- (d) if the representative was appointed by a union, the name and contact details of the union, including telephone numbers, physical addresses, and email addresses (if any); and
- (e) if the representative was appointed by a group of mine workers, the name and contact details of a person or persons who may be contacted on behalf of the group

- about the appointment of the representative, including telephone numbers, physical addresses, and email addresses (if any); and
- (f) evidence that the industry health and safety representative meets the requirements of regulation 111.

*Register of industry health and safety
representatives*

114 Register of industry health and safety representatives

The information required to be contained in the register required under section 19ZZB of the Act is as follows:

- (a) the name of the industry health and safety representative; and
- (b) the contact details of the representative, including telephone numbers, a physical address (which need not be the person's residential address) and email addresses (if any); and
- (c) the date of appointment of the representative; and
- (d) if the representative was appointed by a union, the name and contact details of the union, including telephone numbers, physical addresses, and email addresses (if any); and
- (e) if the representative was appointed by a group of mine workers, the name and contact details of a person or persons who may be contacted on behalf of the group about the appointment of the representative, including telephone numbers, physical addresses and email addresses (if any).

*Action following reporting of hazard by mine
worker*

115 Mine operator must investigate reported hazard

- (1) If a mine worker reports the existence of a hazard in the mining operation, including (without limitation) any action done or not done in contravention of any system, procedure, or other risk-control measure in place at the mining operation to control a hazard, the mine operator must ensure that the report is investigated.

- (2) The investigation must be completed as soon as practicable, having regard to the seriousness of the hazard.

116 Mine operator must advise mine worker of result of investigation

When the investigation required by regulation 115 is completed, the mine operator must ensure that the mine worker who reported the hazard is promptly advised of the result of the investigation.

**Part 6
Specific duties in all mining operations**

117 Application

This Part applies to all mining operations, unless specifically provided otherwise.

Ground or strata instability

118 Installation of ground or strata support

The mine operator must ensure that—

- (a) no person enters an area of the mining operation that has unsupported ground or strata unless that person is installing or supervising the installation of ground or strata support; and
- (b) where any mine worker who is installing or supervising the installation of ground or strata support will be exposed to a hazard associated with unsupported ground or strata, temporary support is provided to protect that mine worker from the hazard.

119 Obligations relating to ground or strata support

The manager must ensure—

- (a) that suitable ground or strata support methods are designed and implemented for all working areas, in accordance with regulation 118; and
- (b) that plans showing the ground or strata support arrangements put in place are displayed in locations readily accessible to all mine workers.

*Roads and other vehicle operating areas***120 Roads and other vehicle operating areas**

The mine operator must ensure that the following are given adequate consideration in the design, layout, operation, construction, and maintenance of each road within the mining operation:

- (a) the grade and width of the road:
- (b) the drainage system for the road:
- (c) the characteristics of the mobile plant to be used at the mine, including stopping distances, manoeuvrability, operating speeds, driver position, and remote control:
- (d) the movement of mobile plant when forming dumps or stockpiles:
- (e) the interaction between light and heavy vehicles at the mining operation.

121 Operation of mobile plant by authorised mine workers only

The mine operator must ensure that no mobile plant is operated at the mining operation except by a competent person who is authorised in writing by the mine operator to do so.

*Defects discovered during inspection of tips***122 Defects discovered during inspection of tips**

- (1) The mine operator must ensure that any person who carries out an inspection of a tip at the mining operation—
 - (a) makes a written record of all defects discovered during the inspection; and
 - (b) informs the mine manager of the defects that require immediate rectification.
- (2) The mine operator must ensure that a written record is made of the action taken to remedy any defect in a tip discovered during an inspection of the tip.
- (3) The mine operator must ensure that the records required by subclauses (1)(a) and (2) are kept as part of the health and safety management system.

Explosives

123 Explosives

- (1) The mine operator must ensure that—
 - (a) no person uses, handles, or issues explosives at the mining operation unless the person meets the requirements of an approved handler for the purposes of the Hazardous Substances and New Organisms Act 1996:
 - (b) explosives used at the mining operation are—
 - (i) authorised for use by the mine operator:
 - (ii) stable:
 - (iii) fit for their intended use:
 - (iv) insensitive to shock, sparks, friction, and the environment in which they will be stored, transported, and used:
 - (v) simple to store, use, transport, and control:
 - (c) every person who designs or initiates a shot does so in a manner that ensures that the shot and any material expelled outside the declared danger zone do not cause harm to any person in, or in the vicinity of, the mining operation.
- (2) In subclause (1)(c), **declared danger zone** means the area that no person may enter while blasting operations are to take place, established in accordance with the principal hazard management plan for explosives.

Conveyor belts

124 Conveyor belts

- (1) The mine operator must ensure that, where a conveyor belt or belts are used at the mining operation, the conveyor belt or belts are—
 - (a) designed, installed, and used in such a way that will address any hazard that may arise when the conveyor belt is started. This must include the use of pre-start warnings:
 - (b) fitted with an emergency stop system that can be activated at any point along the length of the conveyor belt accessible by any person:

- (c) designed, installed, and used in such a way that will protect any person near or travelling under a conveyor belt from being struck by a falling object or objects:
 - (d) designed, installed, and used in such a way that will address the hazards arising from the interaction between people and the conveyor belt. This must include provision for the safe crossing of conveyor belts, where they may be crossed:
 - (e) in the case of an underground metalliferous mining operation or tunnelling operation where no methane has been detected, fitted with certified fire resistant conveyor belting and drum lagging:
 - (f) in the case of an underground metalliferous mining operation or tunnelling operation where methane has been detected, or an underground coal mining operation, fitted with certified fire resistant and anti-static conveyor belting and drum lagging.
- (2) The mine operator must ensure that a written maintenance programme is in place and is complied with for the maintenance of the conveyor belt to ensure that it complies with subclause (1).

Emergency

125 Crush injuries

The mine operator must ensure that there are adequate and appropriate means available at the mining operation to deal with any crush injuries that may occur and to rescue a trapped or injured person.

126 Treatment and transport of sick and injured mine workers

- (1) The mine operator must ensure that suitable and sufficient facilities, including first-aid equipment, and mine workers trained in first aid are available at the mining operation to provide first aid to sick or injured mine workers, including in the underground parts of an underground mining operation or tunnelling operation.

- (2) The mine operator must ensure that arrangements are in place, or an appropriate vehicle is available at the mining operation, to transport sick or injured workers from the mining operation to a place where they can receive further medical attention if required.
- (3) In the case of an underground mining operation or tunnelling operation, the arrangements or vehicle required under sub-clause (2) must enable the transportation of sick or injured mine workers from the underground parts of the operation to the surface.

127 Resuscitation equipment

The mine operator must ensure that—

- (a) suitable resuscitation equipment is available for all parts of the mining operation; and
- (b) people trained to use the equipment are available at the mining operation; and
- (c) there is a procedure for any mine worker to raise the alarm when resuscitation equipment is required.

Worker health monitoring

128 Worker health monitoring

- (1) The mine operator must offer medical examinations to each mine worker at the following times:
 - (a) immediately before the mine worker starts work at the mining operation; and
 - (b) immediately before the mine worker ceases working at the mining operation, if the mine worker has not been examined within the 12 months before that date; and
 - (c) periodically throughout the time that the mine worker is working at the mining operation, but no less than once every 5 years.
- (2) If a mine worker wishes to be examined, the mine operator must ensure the mine worker is examined, at the expense of the mine operator, by a medical practitioner or nurse chosen after consultation with the mine worker.
- (3) The purpose of the examinations is to establish the level of health of the mine worker at each of the points in time specified

in subclause (1) as it relates to the work that the worker is performing at the mining operation at that time.

- (4) The mine operator must ensure that—
- (a) the records of the monitoring done in accordance with this regulation are made available to WorkSafe on request (ensuring that no record identifies, or discloses anything about, any individual mine worker except with the mine worker's consent); and
 - (b) the records of the monitoring done in accordance with this regulation in relation to each mine worker are kept,—
 - (i) in the case of any hazard the worker may have been exposed to that is known to have a cumulative or delayed effect, for at least 30 years following the making of the record; and
 - (ii) in the case of all other hazards, for at least 7 years after the record is made or until the mine worker to whom the record relates stops working at the mining operation, whichever is the later.

129 Records of first aid provided to mine workers

The mine operator must ensure that records of first aid provided to mine workers who are seriously harmed at the mining operation are kept for at least 7 years after the accident concerned.

Part 7

**Specific duties in underground mining
operations and tunnelling operations**

130 Application

This Part applies only to underground mining operations and tunnelling operations, unless specifically provided otherwise.

Ground or strata failure

131 Steps to be taken following ground or strata failure

- (1) The mine operator must ensure that,—

- (a) in the case of an underground coal mining operation, the interviewer is made aware of any actual or suspected unplanned fall of rock or coal; or
 - (b) in the case of an underground metalliferous mining operation, the supervisor is made aware of any actual or suspected unplanned fall of rock or coal.
- (2) Without limiting the requirements of section 7(2) of the Act or regulation 228, the mine operator must ensure—
 - (a) that every report by a mine worker about an unplanned fall of rock or coal is assessed to determine whether the fall of rock or coal could have resulted in serious harm to a mine worker had the circumstances been different; and
 - (b) if the fall of rock or coal could have resulted in serious harm to a mine worker had the circumstances been different, that an investigation is carried out.
- (3) If the investigation reveals that the cause of the ground or strata control is attributable, in part or in full, to a ground or strata support design fault, the mine operator must ensure that the design is reviewed by a competent person who—
 - (a) is independent of the mining operation; and
 - (b) was not involved in the development of the original ground or strata design.
- (4) In addition to the requirements of regulation 61, the mine operator must ensure that the records of any ground or strata failure that caused or had the potential to cause serious harm to any person (including records of the investigation into the causes of the failure) are kept at least until the date that is 12 months from the date on which the mining operation is abandoned.

Inundation and inrush

132 Holes to be kept in advance of working places

- (1) If accurate survey information is not available, the mine operator must ensure that drill holes of sufficient length to indicate a dangerous proximity are kept in advance of a working in a mining operation that is within 50 metres of—
 - (a) old workings; or

- (b) a place containing or likely to contain an accumulation of flammable or noxious gases or an accumulation of water or mud.
- (2) Subclause (3) applies when a risk assessment determines that it is likely that workings in an underground mining operation or tunnelling operation will break through into a place containing or likely to contain an accumulation of water or material that flows when wet and that the water or material may create a hazard if it flows into the workings.
- (3) The mine operator must ensure that the following precautions are observed until conditions in the place are ascertained:
 - (a) the width of the working is reduced as far as possible; and
 - (b) a borehole at least 10 metres long is kept constantly extended near the centre of the working face; and
 - (c) flank boreholes are maintained on each side at intervals of not less than 4.5 metres.

133 Information to workers

The mine operator must ensure that every mine worker is informed of the faces being advanced at the underground mining operation or tunnelling operation and their proximity to adjacent workings, including old workings.

134 Connection to be investigated

The mine operator must ensure that, before an attempt is made to connect workings in an underground mining operation or tunnelling operation to other workings, including old workings, the other workings are investigated to ascertain whether any hazard is present in those workings.

135 Holing into old workings

- (1) Every mine worker who inadvertently holes into old workings in an underground mining operation or tunnelling operation must ensure that—
 - (a) first, if possible, the hole is stopped up immediately; and
 - (b) secondly, the underviewer, in the case of an underground coal mining operation, or the supervisor, in the case of an underground metalliferous mining operation

or tunnelling operation, and then the manager are notified.

- (2) The site senior executive must promptly notify WorkSafe of an incident described in subclause (1).

136 Protection against inundation

The mine operator must ensure that, if the workings in an underground mining operation or tunnelling operation are liable to an inundation or an inrush of water or material that flows when wet, such additional chambers, drives, shafts, or other workings are provided as are necessary to ensure that mine workers in an underground mining operation or tunnelling operation can escape safely.

137 Stopping of work

If the mine operator considers that it is not possible to manage an inundation or inrush hazard in a part or the whole of the mining operation, the mine operator must stop all work in the affected part, or the whole, of the mining operation.

Mine shafts and winding systems

138 Equipment for raising and lowering mine workers, coal, minerals, or material

- (1) The mine operator must ensure, in relation to every egress required by regulations 170 to 172 that is a shaft, that equipment for raising or lowering mine workers, coal, minerals, or material to or from the surface is—
 - (a) suitable for the purpose; and
 - (b) ready for immediate use.
- (2) The mine operator must ensure that the requirements in Schedule 4 are complied with in respect of vertical shafts of a depth greater than 60 metres and slopes.

139 Operation of manually operated winders, slope haulage, and hoist equipment

- (1) The mine operator must ensure that—
 - (a) no person operates a manually operated winder or slope haulage or hoist equipment at the mining operation un-

- less the person holds a certificate of competence as a winding engine driver; and
- (b) there are a sufficient number of mine workers at the mining operation who are qualified as required by paragraph (a) to operate that equipment on each shift.
- (2) The mine operator of a mining operation that uses signals to communicate with the operator of a winding system or slope haulage or hoist equipment must ensure that the health and safety management system for the operation includes a signal code and that the signal code is—
- (a) easily accessible to each mine worker at the mining operation;
 - (b) displayed in clear and direct view of the operator of the winder or slope haulage or hoist equipment;
 - (c) displayed at every place where a person may contact the operator using the signals code;
 - (d) notified to WorkSafe.
- (3) The mine operator must ensure that every mine worker who may need to use the signals code is provided with training in how to use the code.

Ventilation

140 Separation of airways

- (1) If the mining operation has more than 1 main airway, the mine operator must ensure that the airways are separated sufficiently to ensure—
- (a) stability; and
 - (b) ventilation to the standards required by regulation 141(a) and (b).
- (2) The mine operator must ensure that no more than 2 temporary stoppings are installed in a line of stoppings that separate an intake airway from a return airway immediately adjacent to the last line of cut-throughs in the panel.

141 Air quality and temperature

The mine operator must ensure, in relation to the underground mining operation or tunnelling operation, that—

- (a) there is fresh air at the commencement of every section of the workings that has a working face; and
- (b) the humidity of the air is maintained at such a level as to minimise the likelihood of heat stress; and
- (c) measurements to ensure compliance with this regulation are made at suitable intervals, and at suitable locations, using methods and measuring devices capable of giving accurate results; and
- (d) there is no recirculation of air within a working face other than through a scrubber fan.

142 Measurement of air from fans

- (1) The mine operator of an underground coal mining operation must ensure that, at least once in every week, a competent person—
 - (a) measures the quantity of air being delivered to every working place in the underground parts of the mining operation; and
 - (b) determines whether air is being recirculated in the underground parts of the mining operation and takes suitable action to stop any such recirculation.
- (2) The mine operator of an underground metalliferous mining operation or tunnelling operation must ensure that, at least once in every month, a competent person—
 - (a) measures the quantity of air being delivered to every working place in the underground parts of the mining operation; and
 - (b) determines whether air is being recirculated in the underground parts of the mining operation and takes suitable action to stop any such recirculation.

143 Quantity and velocity of air

- (1) The mine operator must ensure that—
 - (a) the volume of air passing through an active working face, other than a longwall working face, is not less than 0.3 cubic metres per second for each square metre of normal development cross-sectional area; and

- (b) the volume of air passing through an active longwall working face is not less than 4 cubic metres per second for each metre of extracted height in the face.
- (2) The mine operator must ensure, in respect of any underground parts of a mining operation where a mine worker is doing work or may travel, that the air in that part is provided at an adequate quantity and velocity to ensure the mine worker will not be exposed to a concentration of dust that is likely to cause harm to the mine worker.

144 Ventilation fans other than auxiliary fans

The mine operator must ensure that,—

- (a) where the main ventilation fan or fans, other than a portable fan that is the main ventilation fan for a tunnelling operation with a single entry tunnel, are on the surface of the mining operation, an effective airlock is provided and maintained on the surface at each shaft or outlet connected to the main ventilation fan or fans that is used for winding or the transport of people, plant, or material; and
- (b) each main ventilation fan has the following devices connected to it:
 - (i) a pressure gauge that continuously indicates the air pressure; and
 - (ii) a device that continuously indicates and records the volume of air passing through the fan; and
 - (iii) a device that continuously indicates and records the number of revolutions per minute of the fan; and
- (c) each main ventilation fan is fitted with a device that continuously monitors and records the condition of the fan, including the temperature, vibration levels, and static pressure, and that will, when the device detects a significant departure from the fan's normal operating parameters,—
 - (i) first, trigger a visible alarm; and
 - (ii) following such period of time as will provide a mine worker with a reasonable opportunity to respond to the alarm, isolate the supply of electri-

- city to the fan if no other action has been taken by a mine worker in response to the departure from normal operating parameters; and
- (iii) record the date and time that an alarm is triggered and the supply of electricity is isolated; and
- (d) each booster fan installed underground is fitted with a device that continuously monitors and records the condition of the fan, including the temperature, vibration levels, and static pressure, and that will, when the device detects a significant departure from the fan's normal operating parameters,—
- (i) first, trigger a visible alarm; and
 - (ii) following such period of time as will provide a mine worker with a reasonable opportunity to respond to the alarm, isolate the supply of electricity to the fan if no other action has been taken by a mine worker in response to the departure from normal operating parameters; and
 - (iii) record the date and time that an alarm is triggered and the supply of electricity to the fan is isolated; and
- (e) each of the monitoring devices referred to in paragraphs (c) and (d) is designed and installed so that the part of the device that displays the results of the monitoring is located where it can be easily accessed by a mine worker required to check the condition of the fan; and
- (f) the devices referred to in paragraphs (b) to (d) are maintained; and
- (g) any scrubber fan used at the mining operation is located and operated in a way that prevents the uncontrolled recirculation of air through the fan.

145 Auxiliary fans

The mine operator must ensure that—

- (a) no auxiliary fan is installed or used unless the quantity of air reaching it is, at all times, sufficient to ensure that air is not recirculated by the fan; and

- (b) every forcing auxiliary fan is installed at least 5 metres from the intake side of the place to be ventilated by the fan; and
- (c) every exhaust auxiliary fan is installed at least 5 metres from the return side of the place to be ventilated by the fan; and
- (d) when forcing and exhaust auxiliary fans are used in an overlap system to simultaneously ventilate the same face,—
 - (i) the secondary fan is installed more than 15 metres from the face; and
 - (ii) the installed capacity of the secondary fan is less than the installed capacity of the primary fan; and
- (e) there is installed and maintained with every auxiliary fan an air duct for conducting a sufficient supply of air to and from the face or place to be ventilated; and
- (f) every auxiliary fan, whether powered by electricity or otherwise, is constructed in such a way as to prevent the possibility of an accumulation of an electrostatic charge; and
- (g) if an auxiliary fan is installed in a place, no mine worker enters or remains in that place while the fan is not operating, unless a competent person has inspected the place and found it to be safe.

146 Additional requirements for auxiliary fans installed in underground coal mining operations

The mine operator of an underground coal mining operation must ensure that—

- (a) any auxiliary fan, other than an auxiliary fan powered by compressed air, that is used at the mining operation will switch off automatically if the main ventilation system fails; and
- (b) any auxiliary fan powered by compressed air that is used at the mining operation will be de-energised promptly if the main ventilation system fails; and
- (c) where 1 auxiliary fan is operating in a panel at the mining operation, the quantity of air flowing to the panel

is not less than 30% of the open circuit capacity of the auxiliary fan; and

- (d) where 2 or more auxiliary fans are operating in a panel at the mining operation, the quantity of air flowing to the panel is not less than the sum of—
 - (i) the open circuit capacity of each auxiliary fan operating in the panel; and
 - (ii) 30% of the open circuit capacity of the largest auxiliary fan operating in the panel.

147 Starting, stopping, etc, of fans

The mine operator must ensure that—

- (a) no mine worker starts, stops, removes, or alters a fan that is ventilating a place underground unless the mine worker is authorised by the mine operator to do so; and
- (b) before a mine worker starts, stops, removes, or alters a fan that is ventilating a place underground, the mine worker ensures that every other mine worker likely to be affected by the action is notified about it.

148 Ventilation of work areas to be adequate before entry

The mine operator must ensure that—

- (a) all areas underground at the mining operation that mine workers are permitted to enter are adequately ventilated before any mine worker may go underground; and
- (b) if at any time the requirements of the ventilation control plan are not being met in relation to a part or the whole of the mining operation that is underground, no mine worker enters the affected part or, as the case may be, the whole of the mining operation; and
- (c) despite paragraphs (a) and (b), if any area underground that mine workers are permitted to enter is not adequately ventilated, a mine worker may, if authorised by the mine operator, go underground—
 - (i) to restore ventilation to adequate levels; or
 - (ii) in the case of an emergency.

149 Withdrawal of mine workers if ventilation inadequate

The mine operator must ensure that, if ventilation is found to be inadequate or a ventilation control device fails in a part or the whole of the mining operation that is underground,—

- (a) every mine worker withdraws from the affected part or the whole of the mining operation; and
- (b) the mine worker with responsibility for the affected part or parts—
 - (i) immediately takes such measures as are available to the mine worker to restore adequate ventilation; and
 - (ii) notifies the ventilation officer.

150 Quantity of air to be measured

The mine operator must ensure that a competent person measures, at least once in every month, the quantity of air—

- (a) in the main current; and
- (b) in every split; and
- (c) at the commencement of the main return airway; and
- (d) in each ventilating district; and
- (e) at any additional place identified by the mine operator as a hazard.

151 Plan of ventilation system to be updated every month

- (1) The mine operator must ensure that a plan of the ventilation system is prepared and updated at least once a month.
- (2) The plan must show—
 - (a) the direction, course, and volume of airflow; and
 - (b) the location and description of every device used to regulate or distribute air; and
 - (c) the measurements taken as required by regulation 150.

152 Application of regulation 153

Regulation 153 applies to—

- (a) any underground coal mining operation; and
- (b) any underground metalliferous mining operation or tunnelling operation where methane has been detected.

153 Ventilation

The mine operator of a mining operation to which this regulation applies must ensure that—

- (a) the percentage of methane in the general body of air in the underground parts of the mining operation where a mine worker is or may be present is not more than 2% by volume; and
- (b) a quantity of fresh air adequate to ensure that paragraph (a) is complied with is circulated throughout the underground parts of the mining operation—
 - (i) before a mine worker enters the underground parts of the mining operation; and
 - (ii) whenever a mine worker is in the mine; and
- (c) there is fresh air at the following places:
 - (i) the commencement of an ERZ1:
 - (ii) every location that is 100 metres outbye of the most inbye completed line of cross-cuts in a panel or of a longwall or shortwall face; and
- (d) no air current passes through any stopping, or any unsealed, abandoned, or worked out area, before ventilating or passing through an active working place; and
- (e) the total number of mine workers ordinarily present in a ventilation district or ventilation circuit in the mine is kept to a minimum; and
- (f) a competent person measures, at least once in every week, the percentage of methane in the main return and split returns.

154 Exposure to diesel emissions

The mine operator must ensure that—

- (a) the design and maintenance of the ventilation system and transport system are such that no mine worker is exposed to diesel emissions that could cause harm to the mine worker; and
- (b) if 1 or more diesel engines are being operated in a ventilating current, the volume of air is not less than the greater of—

- (i) 0.05 cubic metres per second for each kilowatt of the maximum combined output capability of the engines; and
- (ii) 3.5 cubic metres per second.

155 Assessment of hazards associated with fuel additives

The mine operator must ensure that any hazard to mine workers associated with fuel additives used in diesel engines underground at the mining operation is assessed, including by—

- (a) comparison testing of underground diesel engines at appropriate load points; and
- (b) regular testing of undiluted exhaust emissions, including from the surrounding atmosphere.

*Fire and explosion***156 Use of petrol engines prohibited**

The mine operator must ensure that no plant with a petrol-driven engine is used underground in the operation.

157 Fire protection and early warning systems

- (1) The mine operator must ensure that suitable and sufficient devices are installed in the underground parts of the mining operation to monitor for early signs of fire.
- (2) If a device installed as required by subclause (1) detects signs of fire in the underground parts of the mining operation, the device must—
 - (a) activate an audible alarm that will warn mine workers in the affected part or parts of the mining operation to escape to a place of safety; and
 - (b) activate an alarm at the surface of the mining operation.
- (3) The mine operator must ensure that suitable and sufficient fire extinguishers are provided beside all high-voltage electrical plant and, if a significant risk of fire exists, beside all other electrical plant.

158 Testing for methane

- (1) The mine operator must ensure that testing for the presence of methane in the underground parts of the mining operation is carried out—
 - (a) as often as practicable; and
 - (b) with a suitable device.
- (2) The mine operator must ensure that, in respect of the devices used to test for the presence of methane, suitable procedures are in place dealing with—
 - (a) their safe use for that purpose; and
 - (b) their examination and maintenance; and
 - (c) their regular calibration.
- (3) The mine operator must ensure that no locked flame safety lamps are taken into or used in the underground parts of the mining operation.

159 Application of regulations 160 to 162

Regulations 160 to 162 apply to—

- (a) any underground coal mining operation; and
- (b) any underground metalliferous mining operation or tunnelling operation where methane has been detected.

160 Sparks or naked flames

A mine operator of a mining operation to which this regulation applies must ensure that no device or material, including smoking materials, likely to cause a spark or naked flame is taken into or used in the underground parts of the mining operation.

161 Restrictions on hot work

- (1) The mine operator of an underground coal mining operation must ensure that no hot work is done in an ERZ0 at any time.
- (2) The mine operator of an underground coal mining operation must ensure that no hot work is done in an ERZ1 except under an approval system established as part of a mechanical engineering control plan.
- (3) The mine operator of any other mining operation to which this regulation applies must ensure that no hot work is done in the

mining operation except under an approval system established as part of a mechanical engineering control plan.

162 Monitoring for methane

The mine operator of a mining operation to which this regulation applies must ensure that monitoring is carried out continuously at every working face where methane has been detected and a mine worker is present.

163 Mine worker must inform person in charge of hazard from methane or noxious gas

- (1) If a mine worker knows or suspects that a location in the underground parts of the mining operation constitutes a hazard by reason of the presence of methane or noxious gas, the mine worker must immediately inform,—
 - (a) in the case of an underground coal mining operation, the interviewer; or
 - (b) in the case of an underground metalliferous mining operation or tunnelling operation, the supervisor; or
 - (c) the mine worker responsible for the part of the mining operation that includes the location that constitutes or is suspected to constitute a hazard.
- (2) A mine worker of the kind described in subclauses (1)(a) to (c) who is informed that a location in the underground parts of the mining operation may or does constitute a hazard by reason of the presence of methane or noxious gases must inspect the location as soon as practicable and as far as is safely possible.

164 Withdrawal of mine workers when high level of methane present

- (1) This regulation applies when the level of methane in the general body of air in a part or the whole of the underground parts of an underground mining operation or tunnelling operation is detected to be 2% by volume or more.
- (2) The mine operator must ensure that—
 - (a) every mine worker in the affected part or parts of the mining operation withdraws from the affected part or parts including, as the case requires, the whole of the underground parts of the mining operation; and

- (b) the only person who enters the affected part or parts of the mining operation or, as the case requires, any part of the underground parts of the mining operation, is—
 - (i) a competent person, to test for the presence of methane; or
 - (ii) a mine worker, to inquire into the cause of the presence of the methane or to remove the methane; and
- (c) no other mine worker enters the affected part or parts of the mining operation, or, as the case requires, any part of the underground parts of the mining operation, until a competent person reports to the manager that it is safe to do so.

165 Combustible material

- (1) The mine operator must ensure that any hazards associated with the storage of combustible materials are managed.
- (2) Without limiting subclause (1), the mine operator must ensure that flammable materials with a flashpoint of 23°C or lower are not stored underground in the mining operation, unless they are kept in a fireproof room, compartment, or box.

Emergency

166 Competent person at surface when mine workers underground

The mine operator must ensure that at all times when mine workers are underground there is a person above ground at the mining operation who—

- (a) is trained to answer alarms; and
- (b) is capable of isolating the supply of electricity to the underground parts of the mining operation; and
- (c) has authority to take action in the event of an emergency.

167 Emergency contact details

The mine operator must prepare and regularly update a list of emergency contact details for each mine worker.

168 Self-rescuers

- (1) The mine operator must ensure that any mine worker who goes underground is issued with a self-contained self-rescuer and carries it with him or her at all times while the mine worker is underground at the mining operation.
- (2) The mine operator must ensure that—
 - (a) all self-rescuers used at the mining operation are provided and maintained in good order and condition; and
 - (b) any mine worker who goes underground is trained in the use of the self-rescuer provided.

169 Training in use of self-rescuers

The mine operator must ensure that—

- (a) any mine worker who goes underground is trained at least once every 3 months on how to don and change over the self-rescuer provided; and
- (b) the training in paragraph (a) is carried out in an environment that simulates emergency conditions in the underground parts of the mining operation; and
- (c) records are kept of the training provided to mine workers under this regulation.

170 Escapeways in underground coal mining operation

- (1) The mine operator of an underground coal mining operation must ensure that the mining operation has at least 2 egresses trafficable on foot (**escapeways**) to the surface that are separated in a way that prevents any reasonably foreseeable event happening in 1 of the escapeways that may stop a person from being able to escape through the other escapeway.
- (2) The mine operator must ensure each ERZ1 at the underground coal mining operation in which a mine worker works has 2 escapeways leading to the surface or a refuge.
- (3) Subclause (2) does not apply to an ERZ1—
 - (a) in which an inspection is being carried out under the mining operation's health and safety management system and no other mine worker is working in the ERZ1; or
 - (b) where the ERZ1 is located in a single-entry drive or shaft that is being sunk.

- (4) The mine operator must ensure that at least 1 of the escapeways at the underground coal mining operation is designated as the primary escapeway and is—
- (a) an intake airway or a combination of adjacent intake airways; and
 - (b) separated, as far as is reasonably practicable, from all other roadways by a separation stopping that is anti-static, fire-resistant, and of substantial construction that will ensure there is minimal leakage through the stopping; and
 - (c) as far as practicable, free from hazards associated with fire; and
 - (d) trafficable by a vehicle; and
 - (e) fitted with fire fighting equipment located on, or near, any equipment installed in the escapeway.

171 Escapeways in underground metalliferous mining operations and tunnelling operations

- (1) The mine operator of an underground metalliferous mining operation or tunnelling operation must ensure that there are adequate means of escape from the underground parts of the mining operation.
- (2) When determining the means of escape from the underground parts of the mining operation, the mine operator must consider—
- (a) the need for mine workers to escape from the underground parts of the mining operation during an emergency; and
 - (b) the inclusion and placement of refuges.
- (3) The mine operator must ensure that a record is kept of the process undertaken to determine the means of escape from the underground parts of the mining operation, including the reasons for the final determination.

172 Additional requirements for escapeways in underground metalliferous mining operations

The mine operator of an underground metalliferous mining operation must ensure that, before stopping operations start at the

mining operation, the operation has at least 2 egresses trafficable on foot (**escapeways**) that—

- (a) are accessible from all stoping operations and lead to the surface; and
- (b) are located strategically in response to the hazards that may arise at the mining operation and that will require evacuation; and
- (c) allow for the passage of rescuers and rescue equipment, including stretchers; and
- (d) are separated in such a way that a reasonably foreseeable event happening in one of the escapeways would not prevent persons escaping through the other escapeway; and
- (e) are maintained in a safe, accessible, and useable condition.

173 Changeover stations and refuges

- (1) If a mine worker may not be able to escape from the underground parts of the mining operation during an emergency, or the use only of the self-contained self-rescuer provided to a mine worker as required by regulation 168 may not be sufficient to ensure the mine worker is able to escape from the underground parts of the mining operation during an emergency, the mine operator must ensure that the mining operation has 1 or more of the following:
 - (a) changeover stations:
 - (b) refuges:
 - (c) secure areas where mine workers can be protected from harm during the emergency.
- (2) Subject to subclause (3), when determining the type, number, and nature of the facilities required by subclause (1), the mine operator must have regard to the nature, complexity, and size of the mining operation and the activities carried out underground.
- (3) A changeover station that is intended to be used for mine workers to replace their self-contained self-rescuers must—
 - (a) have a secure supply of air that is independent of the rest of the underground parts of the mining operation; and

- (b) not allow the entry of contaminated air into the changeover station.

174 Navigational aids

- (1) The mine operator must ensure that navigational aids are provided marking all pathways to—
 - (a) the surface; and
 - (b) changeover stations, if any; and
 - (c) refuges, if any.
- (2) Any mine worker who may be required to use the pathways described in subclause (1) must be made familiar with them.

175 Communications systems

- (1) The mine operator must ensure that a communication system is provided that allows for oral communication between people on the surface and in the underground parts of the mining operation during an emergency.
- (2) In the case of an underground coal mining operation, the mine operator must ensure that—
 - (a) the communication system incorporates an adequate backup power supply; and
 - (b) the components for the system that are installed underground are recognised as being safe to operate in an explosive atmosphere, unless the components are installed in a drift or shaft being driven from the surface in material other than coal.

176 Continued monitoring of atmospheric conditions underground during emergency

- (1) The mine operator of an underground coal mining operation must ensure that a system is provided that monitors the atmospheric conditions in the underground parts of the mining operation during an emergency and provides information about those conditions to people on the surface.
- (2) The mine operator must ensure that—
 - (a) the system incorporates an adequate backup power supply; and

- (b) the components for the system that are installed underground are recognised as being safe to operate in an explosive atmosphere, unless the components are installed in a drift or shaft being driven from the surface in material other than coal.

Part 8

Specific duties in underground coal mining operations only

177 Application

This Part applies only to underground coal mining operations, unless specifically provided otherwise.

Ventilation

178 Failure of ventilation system

In the event of a failure of the ventilation system to a part or the whole of an underground coal mining operation, the mine operator must ensure that—

- (a) the supply of electricity to the underground parts of the mining operation, but not the supply to safety-critical equipment, is isolated as soon as is reasonably practicable; and
- (b) every battery-operated mobile plant located in the affected parts of the mining operation is brought out without any delay to—
 - (i) a main intake airway or main intake airways; or
 - (ii) a charging or repair station of suitable fireproof construction that is normally ventilated with intake air; and
- (c) the supply of electricity is not restored until after the ventilation system has been safely restored and a competent person considers it is safe to restore the supply of electricity.

179 Air across and to working face

The mine operator must ensure that an adequate quantity and velocity of air is delivered across the working face of any production or development place, and within the roadways lead-

ing to any working face, to dilute and render harmless any accumulations or layering of methane.

180 Sealed goafs

If an underground coal mining operation has a sealed goaf, the mine operator must ensure that appropriate steps are taken to control any hazards that may be presented or caused by the emission of methane and noxious gases from the sealed goaf, including by—

- (a) preventing intake air from travelling across the face of a permanent seal at the mining operation; or
- (b) minimising the risks of inrush and leakage of atmospheric contaminants from sealed goaf areas and abandoned or sealed workings into intake airways, which must include—
 - (i) use of no less than a type C seal; and
 - (ii) minimising leakage through seals; and
 - (iii) preventing damage to seals; and
 - (iv) installing a monitoring device in each intake airway on the return side of the seals over which the intake air passes to detect the intake airway's general body concentration of—
 - (A) oxygen; and
 - (B) carbon dioxide, if it is present behind the seal in a general body concentration greater than 3%; and
 - (C) any other gas that is present behind the seal in a quantity and concentration that is likely to create a hazard if it enters the intake airway adjacent to the seal; and
- (v) for longwall workings, installing a monitoring device at the intersection of the longwall face and the intake airway to detect the intake airway's general body concentration of—
 - (A) oxygen; and
 - (B) carbon dioxide, if it is present behind the seal in a general body concentration greater than 3%; and

- (C) any other gas that is present behind the seal in a quantity and concentration that is likely to create a hazard if it enters the intake airway adjacent to the seal; and
- (vi) ensuring that every monitoring device installed as required by subparagraphs (iv) and (v) triggers an alarm to warn every mine worker who may be affected when a gas required to be detected by the device is present at the predetermined concentration.

181 Position and electricity supply of main ventilation fan

- (1) The mine operator must ensure that no main ventilation fan is located in the underground parts of the mining operation.
- (2) The mine operator must ensure that the supply of electricity to the main ventilation fan does not enter into or travel through the underground parts of the mining operation.

182 Ventilation control devices

The mine operator must ensure that all ventilation control devices, including seals, are designed, constructed, and maintained to meet the design criteria specified in Schedule 5.

183 Standards for sealing

The mine operator must ensure that a seal installed at the mining operation is of the following types or higher:

- (a) if the level of naturally occurring methane at the mine is insufficient to reach the lower explosive limit for the gas under any circumstances, type B:
- (b) if a mine worker or mine workers may remain underground when an explosive atmosphere exists and there is a possibility of spontaneous combustion, spark, or another ignition source, type D:
- (c) in any other situation relating to an underground part of the mining operation, type C:
- (d) for sealing the entrance to the underground parts of the mining operation, type E.

Sealing underground coal mining operation

184 Facilities required for sealing

The mine operator must ensure that—

- (a) every entrance from the surface to the underground parts of the mining operation is capable of being readily sealed, with an engineered structure capable of withstanding an air blast of 70 kPa from within the underground parts of the mining operation when it is open, at the following locations:
 - (i) at the surface, without requiring any person to travel in front of the entrance in order to seal it; or
 - (ii) where the entrance is a vertical shaft,—
 - (A) at the surface, without requiring any person to travel across the entrance in order to seal it; or
 - (B) in a roadway at the bottom of the shaft; and
- (b) at least 1 entrance from the surface to the underground parts of the mining operation has the facilities available to fit an airlock; and
- (c) the seals on the surface of the mining operation are constructed and have appropriate facilities available to support inertisation; and
- (d) when sealed, the mining operation has facilities allowing the following:
 - (i) the use of inertisation equipment from a safe position; and
 - (ii) monitoring of the atmosphere behind the seal from a safe position; and
 - (iii) re-entry by people to the underground parts of the mining operation.

185 Notice of intention to seal underground coal mining operation

- (1) The mine operator must give notice to WorkSafe of any intention to seal the whole of the underground parts of the mining operation.
- (2) Except in case of emergency sealing, the notice must be given, 1 month in advance of the activity taking place.

- (3) The notice must include—
 - (a) the proposed locations of the seals to be installed; and
 - (b) the proposed sealing procedure; and
 - (c) a summary of hazards identified and how they will be managed; and
 - (d) any evidence of the presence of an ignition source in a part or the whole of the underground parts of the mining operation; and
 - (e) predictions of the rates at which methane and other gases will accumulate in the underground parts of the mining operation; and
 - (f) the gas monitoring procedures to be carried out during and after the sealing.
- (4) If sealing becomes impracticable in the way in which the procedure was described in the notice provided to WorkSafe, the mine operator must—
 - (a) promptly notify WorkSafe of the changes from the initial proposed method of sealing the underground coal mining operation; and
 - (b) if the notification under paragraph (a) is not in writing, confirm the notification in writing to WorkSafe as soon as reasonably practicable.

186 Sealing not to be done unless notified

- (1) Except as provided in regulation 187, the mine operator must ensure that the whole of the underground parts of a mining operation is not sealed unless WorkSafe has been notified of the intention to seal the mining operation as required by regulation 185.
- (2) The mine operator must ensure that the whole of the underground parts of the mining operation is sealed in the way that has been notified to WorkSafe.

187 Emergency sealing

- (1) This regulation applies if there is evidence that there is an immediate likelihood of an explosive atmosphere developing in a part or the whole of the underground parts of the mining operation.
- (2) The mine operator must ensure that—

- (a) a risk appraisal and risk assessment is conducted in relation to the emergency sealing of a part or the whole of the underground parts of the mining operation; and
 - (b) the emergency sealing is carried out in a manner that manages any potential hazards.
- (3) The site senior executive must notify WorkSafe of the intention to seal the part or the whole of the underground parts of the mining operation and must confirm in writing as soon as practicable that the sealing has been carried out.

188 Testing of inertisation equipment

The mine operator must ensure that—

- (a) the following facilities at the mining operation are tested at appropriate intervals to ensure that the facilities are capable of being used in an emergency:
 - (i) every seal required to be used with the inertisation equipment;
 - (ii) every connection point for using the inertisation equipment; and
- (b) the necessary facilities, including water and cleared areas, are available for use with inertisation equipment; and
- (c) modelling is carried out at least once a year to ensure that the inertisation points are located in places that will support effective inertisation in an emergency.

Fire and explosion

189 Compressed air

The mine operator must provide for sufficient electrical bonding and earthing of compressed air equipment, hoses, and pipes that are likely while in operation to develop static electrical charges that are capable of causing an electric shock to a person or a spark.

190 Establishment of explosion risk zones

- (1) The mine operator must ensure that—

- (a) a risk appraisal and risk assessment are conducted to identify the location and type of each explosion risk zone required at the mining operation; and
 - (b) explosion risk zones are established for the mining operation.
- (2) The mine operator may temporarily classify any NERZ at the mining operation as an ERZ0 or an ERZ1.

191 Signposting of explosion risk zones

- (1) The mine operator must ensure that—
- (a) the boundaries of each explosion risk zone at the mining operation are clearly indicated by signage at each boundary; and
 - (b) a plan showing the explosion risk zone boundaries is displayed at the surface of the mining operation where mine workers will see it; and
 - (c) the plan is updated at the end of each shift to reflect any changes to the location of a boundary or boundaries.
- (2) In the event that a temporary change in conditions results in a temporary change in the location of the boundary of an explosion risk zone, the signage required by subclause (1) is not required to be changed if the mine operator ensures that appropriate precautions are taken to control mine workers and mobile plant entering an explosion risk zone affected by the temporary change.

192 Signposting of boundaries between explosion risk zones

If a mine worker or mobile plant can physically move through a boundary between an NERZ and an ERZ1 or between an ERZ1 and an ERZ0, the mine operator must ensure that the actual location of the boundary is signposted in each intake airway and vehicle access leading to,—

- (a) in respect of a boundary between an NERZ and an ERZ1, the ERZ1; or
- (b) in respect of a boundary between an ERZ1 and an ERZ0, the ERZ0.

193 Machinery restrictions in explosion risk zones

The mine operator must ensure that—

- (a) no plant, including mobile plant, or installations powered by electricity that are not explosion-protected are used or located in an ERZ0 or an ERZ1; and
- (b) all mobile plant powered by electricity or a diesel engine used in an NERZ that is not explosion-protected must be fitted with a device that ensures the mobile plant is automatically shut down if it passes beyond an NERZ; and
- (c) no diesel engine is used to power plant, including mobile plant, or installations used or located in an ERZ0; and
- (d) no diesel engine that is not explosion-protected is used to power plant, including mobile plant, or installations used or located in an ERZ1.

194 Use of diesel engines in underground coal mining operations

The mine operator must ensure that diesel engines are used to power plant, including mobile plant, or installations in an underground coal mining operation only in accordance with the following requirements:

- (a) in respect of plant, including mobile plant, and installations located or used in an NERZ, a diesel engine that is not explosion-protected may be used to power the plant or installation only where—
 - (i) a risk assessment has been carried out regarding the use of the engine and any risk controls identified by the risk assessment have been implemented; and
 - (ii) in respect of mobile plant, an automatic system is in place to ensure that the plant cannot enter an ERZ1 or an ERZ0 and that system is either fail-safe or includes multiple redundancy devices; and
 - (iii) the diesel engine is clearly marked as a non-explosion-protected engine:
- (b) in respect of plant, including mobile plant, and installations located or used in an ERZ1, an explosion-pro-

tected diesel engine may be used to power the plant or installation only if—

- (i) the diesel engine—
 - (A) has been tested by an accredited testing station in accordance with AS/NZS 3584.2:2008 Diesel engine systems for underground coal mines—Explosion protected; and
 - (B) is clearly marked with information identifying when the test report was done and by whom; and
- (ii) the diesel engine has been assessed by the engine's manufacturer as being safe to use in an ERZ1 and is clearly marked with information identifying that the engine has been assessed as safe to use in an ERZ1, when that assessment was done, and by whom.

195 Restrictions on live electrical work in ERZ0 or ERZ1

The mine operator must ensure that no live electrical work is done in an ERZ0 or ERZ1 except under an approval system established as part of the electrical engineering control plan.

Methane monitors

196 Monitoring for methane at working face

The mine operator must ensure that monitoring for the presence of methane—

- (a) is continuous at every working face of the mining operation at which a mine worker is present and is carried out—
 - (i) as near to the face as possible; and
 - (ii) at an elevation determined by the principal hazard management plan for fire or explosion; and
- (b) is also carried out when required by regulation 162.

197 Methane monitors in intake airways

The mine operator must ensure that—

- (a) there is at least 1 methane monitor in each intake airway at the boundary between an NERZ and an ERZ1; and
- (b) every methane monitor located at the boundary between an NERZ and an ERZ1 is visible at the boundary and will,—
 - (i) if the concentration of methane detected in the general body of air at the boundary reaches 0.25% or more, automatically activate a visible alarm; and
 - (ii) if the concentration of methane detected in the general body of air at the boundary reaches 0.5% or more, automatically isolate the supply of electricity to all plant, other than safety critical equipment, in—
 - (A) the ERZ1 and the NERZ; or
 - (B) if the NERZ has been subdivided, the ERZ1 and the subdivided part of the NERZ adjacent to the ERZ1.

198 Methane monitors in return airways

The mine operator must ensure that—

- (a) there is at least 1 methane monitor in each main return airway and in each return airway in a ventilation split; and
- (b) every methane monitor located in a return airway automatically activates a visible alarm at the surface of the mining operation when the concentration of methane detected in the general body of air in the return airway reaches or exceeds the percentage stated in the ventilation control plan as the percentage at which the methane detector activates its alarm; and
- (c) a record is kept of every occasion that the methane monitor activates a visible alarm as required by paragraph (b).

199 Methane monitors on mobile plant powered by battery or diesel engine

- (1) The mine operator must ensure that all mobile plant used in an ERZ1 that is powered by a battery or diesel engine is fitted with a methane monitor that will,—
 - (a) if the concentration of methane detected in the general body of air around the mobile plant reaches 1% or more, automatically activate a visible alarm to warn the operator of the mobile plant; and
 - (b) if the concentration of methane detected in the general body of air around the mobile plant reaches 1.25% or more,—
 - (i) automatically shut down the mobile plant; and
 - (ii) in the case of mobile plant powered by a diesel engine, automatically prevent the diesel engine from restarting.
- (2) The mine operator must ensure that, in the case of non-explosion-protected mobile plant that is powered by a battery or diesel engine and that is fitted with an automatic methane monitor, the mine worker operating the mobile plant immediately parks and shuts down the plant if the methane monitor fails while the mobile plant is in use.

200 Methane monitors on certain mobile plant powered by electricity through trailing or reeling cable

- (1) The mine operator must ensure that every coal cutter, continuous miner, tunnel-boring machine, road-heading machine, and longwall shearer used at the mining operation is fitted with a methane monitor that will,—
 - (a) if the concentration of methane detected in the general body of air around the mobile plant reaches 1% or more, automatically—
 - (i) activate a visible alarm to warn the operator of the mobile plant; and
 - (ii) isolate the electricity supply to the cutters:
 - (b) if the concentration of methane detected in the general body of air around the mobile plant reaches 1.25% or more, automatically isolate the supply of electricity to

the trailing cable or reeling cable supplying the mobile plant.

- (2) The mine operator must ensure that every mobile bolting machine, loader, load-haul-dump vehicle, and shuttle car used at the mining operation is fitted with a methane monitor that will,—
 - (a) if the concentration of methane detected in the general body of air around the mobile plant reaches 1% or more, automatically activate a visible alarm to warn the operator of the mobile plant; and
 - (b) if the concentration of methane detected in the general body of air around the mobile plant reaches 1.25% or more, automatically isolate the supply of electricity to the trailing cable or reeling cable supplying the mobile plant.

201 Monitoring of other mobile plant powered by electricity through trailing or reeling cable

- (1) This regulation applies to any mobile plant of a kind other than that specified in regulation 200.
- (2) The mine operator must ensure—
 - (a) that the mobile plant is fitted with a methane monitor that will perform the functions described in regulation 200(2); or
 - (b) that the mobile plant is recognised as being suitable for use in an ERZO by or under the Electricity (Safety) Regulations 2010; or
 - (c) in any other case, that any mine worker who detects a concentration of methane in the general body of air that reaches 1.25% or more immediately isolates the supply of electricity to the trailing cable or reeling cable supplying the mobile plant.

202 Auxiliary and booster fans

- (1) The mine operator must ensure that each auxiliary and booster fan is fitted with a methane monitor and that,—
 - (a) if the concentration of methane detected in the general body of air around an auxiliary fan reaches 1.25%

- or more, the supply of electricity to the auxiliary fan is automatically isolated; and
- (b) if the concentration of methane detected in the general body of air around a booster fan reaches 1.25% or more, the methane monitor automatically activates an audible and visible alarm.
- (2) The audibility and visibility of the alarm required by subclause (1)(b) must be sufficient to ensure that necessary action will be taken in response to the alarm.
 - (3) Nothing in this regulation applies to an auxiliary fan or a booster fan located in a drift or shaft being driven from the surface of a mining operation in material other than coal.

203 Recording and notification of isolation of electricity supply

- (1) If the supply of electricity is automatically isolated or mobile plant is shut down as required by any of regulations 197 and 199 to 202 (except to cutters as required by regulation 200(1)(a)(ii)), the mine operator must ensure that a record is kept of the date, time, and location of the event.
- (2) If the supply of electricity is automatically isolated as required by regulation 197(b)(ii), the mine operator must ensure that WorkSafe is notified as soon as practicable.

204 Failure of methane monitoring system

- (1) This regulation applies if the methane monitoring system fails or becomes non-operational, affecting a part or the whole of the underground parts of the mining operation, and the mining operation does not have—
 - (a) a procedure for the use of portable monitors to detect methane; or
 - (b) a sufficient number of portable monitors to continually monitor the affected part or the whole of the underground parts of the mining operation to the extent necessary to ensure that the levels of methane in the affected part or the whole of the underground parts of the mining operation remain below 2%.

- (2) The mine operator must ensure that every mine worker underground is withdrawn to a place of safety.
- (3) The mine operator must ensure that no mine worker enters or remains in an unsafe part of the underground parts of the mining operation, except to repair or replace the affected parts of the methane monitoring system.
- (4) For the purposes of subclause (3), a part or the whole of the underground parts of the mining operation is unsafe if the concentration of methane in the general body of air in that part or the whole of the underground parts of the mining operation cannot be monitored as required by these regulations.

Dust sampling

205 Sampling of roadway dust

- (1) The mine operator must ensure that—
 - (a) dust sampling and analysis is carried out in accordance with this regulation at no less than the following intervals:
 - (i) for a strip or spot sample of dust in an ERZ0, once a week; and
 - (ii) for a strip sample of dust in an ERZ1, once a month; and
 - (iii) for a strip sample of dust in an NERZ, once every 3 months; and
 - (b) the samples of dust are taken by a competent person from the complete perimeter of the roadway and the structures in it, over a length of roadway of at least 45 metres, and by using strip samples; and
 - (c) if the dust on the floor of a roadway appears to contain a different content of incombustible material from the dust on the roof and sides of the roadway, the dust on the floor is sampled and tested separately from the dust on the roof and sides of the roadway; and
 - (d) each sample of the layer of dust is taken from the layer to a depth not greater than 5 millimetres; and
 - (e) if a location is resampled, the individual strips from which dust is taken for a strip sample are not the same as those from which a previous sample has been taken.

- (2) The mine operator must ensure that the analysis of dust samples is carried out in an independent testing facility.
- (3) In subclause (1), **strip sample** means the collection of dust from a series of transverse strips of equal width and that are equally spaced not more than 5 metres apart over an area that is at least 1% of the total area sampled.

206 Recording of dust sampling and analysis

The mine operator must ensure that—

- (a) the mine worker in charge of the part of the mining operation where a sample of dust was taken is given notice of the results of the analysis of that sample; and
- (b) a record is kept of the following information for each roadway dust sample taken at the mining operation:
 - (i) the date the sample was taken; and
 - (ii) the location from which the sample was taken; and
 - (iii) the volume and type of incombustible material in the sample; and
 - (iv) the method used to analyse the sample; and
- (c) the results of the analysis of the dust sample, in particular the volume and type of incombustible material content, are marked on a plan of the mining operation.

207 Minimum content of incombustible material in roadway dust

The mine operator must ensure that the content of incombustible material in roadway dust at the mining operation is kept at or above 80% of the volume of the roadway dust.

208 Mine operator must have standard operating procedure for application of incombustible material to roadway

- (1) The mine operator must ensure that a standard operating procedure for the application of incombustible material to roadways is in place to keep the proportion of incombustible material at or above 80% of the volume of roadway dust in every part of the underground parts of the mining operation.

- (2) The standing operating procedure required by subclause (1) must be included in the health and safety management system for the mining operation.

209 Requirements for stone-dusting new roads

The mine operator must ensure that—

- (a) as soon as a 30-metre length of roadway is driven, that entire length is stone-dusted; and
- (b) each new part of the roadway is stone-dusted within 24 hours of the part being driven.

Explosion barriers

210 Explosion barriers

- (1) The mine operator must ensure that—
 - (a) an explosion barrier is installed and maintained in the part of any roadway in a panel, other than a single-entry roadway, containing a conveyor belt; and
 - (b) an explosion barrier is installed and maintained in the part of any return roadway in a panel, other than a single-entry roadway; and
 - (c) adequate explosion-suppression measures are installed and maintained in single-entry roadways.
- (2) For the purpose of subclause (1), an explosion barrier is taken to be installed in a part of a roadway if the most inbye part of the barrier is in the part of the roadway.
- (3) The mine operator must ensure that a risk appraisal and risk assessment are carried out to determine—
 - (a) the type of the explosion barriers to be installed as required by subclause (1) that will effectively limit the development of, and contain, an ignition of coal dust or methane; and
 - (b) whether any additional explosion barriers need to be installed, and the type and location of those explosion barriers.
- (4) The mine operator must ensure that any explosion barriers installed at the mining operation are designed, constructed, and maintained to prevent, as far as is reasonably practicable, a coal dust explosion in one part of the underground parts of the

mining operation from propagating to other parts of the mining operation.

Part 9

Notification and reporting

211 WorkSafe to be notified of commencement, recommencement, installation, or cessation

- (1) The mine operator must ensure that—
 - (a) WorkSafe is notified of the matters specified in sub-clauses (2) to (5) at the times specified in those sub-clauses; and
 - (b) every notification includes details as to—
 - (i) the name and contact details of the mine operator, including postal and business addresses; and
 - (ii) the location of the mining operation; and
 - (iii) the nature of the mining operation; and
 - (iv) the proposed date of commencement, recommencement, installation, or cessation (including suspension or abandonment); and
 - (v) the name and contact details of the site senior executive; and
 - (vi) the name and contact details of a person who can be contacted about the notification to be given under this regulation if the site senior executive is not available.
- (2) The first matter is the proposed date of commencement of the mining operation. In the case of a mining operation that operates intermittently, the notification must be given not less than 24 hours before the proposed date of commencement. In any other case, the notification must be given not less than 2 months before the proposed date of commencement.
- (3) The second matter is the proposed date of recommencement of a mining operation that has not operated within the 2 months immediately before that date. The notification must be given not less than 14 days before the proposed date of recommencement.
- (4) The third matter is the proposed date of installation of—
 - (a) a shaft; or

- (b) a winding system.
The notification must be given not less than 14 days before the proposed date of installation.
- (5) The fourth matter is the proposed date of suspension or abandonment of a mining operation. In the case of a mining operation that has been conducted for fewer than 12 months, the notification must be given not less than 24 hours before the proposed date of suspension or abandonment. In any other case, the notification must be given not less than 14 days before the proposed date of suspension or abandonment.
- (6) If a tunnelling operation or shaft becomes an underground mining operation, subclauses (1) to (5) apply in respect of the underground mining operation.

212 Giving draft principal hazard management plans and principal control plans to WorkSafe

- (1) A mine operator must give the following to WorkSafe not less than 2 months before the mining operation commences:
 - (a) all draft principal hazard management plans for the mining operation; and
 - (b) all draft principal control plans for the mining operation.
- (2) Nothing in subclause (1) applies where a mining operation recommences after being suspended.

213 Plans of mining operation

- (1) The mine operator must ensure that a plan is made of the mining operation as at the date of commencement of the mining operation.
- (2) The mine operator must ensure that the plan of the mining operation is reviewed and, if necessary, updated—
 - (a) at least once every 3 months in relation to the parts of the plan that identify points of access, egresses, and refuges;
 - (b) when there has been a significant modification to the mining operation;
 - (c) if the mining operation has been suspended, before the mining operation recommences;
 - (d) otherwise, at least once every 6 months.

- (3) The plan, including any updated plan, must—
 - (a) be prepared by a mine surveyor using the New Zealand Geodetic Datum 2000 and to a suitable scale; and
 - (b) be kept at the site office; and
 - (c) be available for inspection at all times at which a mine worker is present at the mining operation.
- (4) The mine surveyor who prepares the plan must hold a certificate of competence as a mine surveyor or, in the case of an opencast mining operation or tunnelling operation only, be a licensed cadastral surveyor.

214 Copy of plan of mining operation to be given to WorkSafe

The mine operator must ensure that a copy of the plan of the mining operation is given to WorkSafe—

- (a) as soon as practicable after the date of completion of the plan for the first time; and
- (b) at intervals of 12 months after that date; and
- (c) whenever any significant changes are made to the plan.

215 Copy of plan of mining operation to be available to industry health and safety representative

The mine operator must ensure that the plan of the mining operation, including any updated plan, is made available, on request, to an industry health and safety representative.

216 Plans of ceased mining operation

- (1) The mine operator must ensure that, immediately following the suspension or abandonment of the mining operation, a plan is made of the mining operation.
- (2) The plan must be—
 - (a) prepared by a mine surveyor using the New Zealand Geodetic Datum 2000 and to a suitable scale; and
 - (b) correct as at the date of suspension or abandonment; and
 - (c) copied to WorkSafe.

217 Details to be included in plans

The mine operator must ensure that the plans, including any updated plans, prepared under regulations 213 and 216 include such details as exist of—

- (a) every explosion risk zone:
- (b) every area of an underground metalliferous mining operation or tunnelling operation where methane has been detected:
- (c) tenure boundaries:
- (d) the angle of inclination, datum level at the collar, depth, and location of every borehole or shaft:
- (e) the direction, extent, and location of every known barrier, fault, intrusive dyke, old workings, washout, water accumulation, or aquifer:
- (f) the floor levels and location of every traverse station:
- (g) the angle of dip, direction, nature, and thickness of every known coal seam:
- (h) the cross and longitudinal sections of every level and lode:
- (i) the horizontal and vertical sections of the ventilation system, including details of—
 - (i) the direction, course, and volume of air flow; and
 - (ii) the location and description of every device used to regulate or distribute air; and
 - (iii) the location of firefighting, rescue, and emergency facilities, including emergency egresses, changeover stations, refuges, and first-aid stations:
- (j) the separation distances between shafts:
- (k) the location of inrush control zones:
- (l) the location of electrical installations, including the route and voltage of all conductors (excluding trailing cables) and the position of all major switchgear:
- (m) water dams, tailing dams, and tip heads:
- (n) areas where spontaneous combustion has occurred, including sealed areas:
- (o) places where hydrocarbons and explosives are stored:
- (p) roads and other key features of the traffic management system within the mining operation:

- (q) any other identified hazards present at or close to the mining operation:
- (r) natural features surrounding the mining operation:
- (s) the location of every device that provides for oral communication between the underground parts of the mining operation and the surface:
- (t) an indication of every location at which it is proposed to develop the mining operation with the next 12 months.

218 Plan showing firefighting, rescue, and emergency facilities to be posted

The mine operator must ensure that—

- (a) a version of the plan required by regulation 213 is prepared showing the matters described in regulation 217(i)(iii); and
- (b) copies of the version of the plan required by subclause (a) are displayed at a prominent and secure position on the surface part of the mining operation and at locations underground where they will—
 - (i) assist any person who may have to escape from the mining operation in an emergency; or
 - (ii) assist with the rescue of mine workers from the underground parts of the mining operation in an emergency.

219 Mining operation records

- (1) The mine operator must ensure that mining operations records—
 - (a) are kept at the site office; and
 - (b) are available for inspection by a mine worker or the site senior executive at any time at which a mine worker or the site senior executive is present at the mining operation.
- (2) The mining operations records must consist of—
 - (a) information about the mine operator, including the information provided in the notice given to WorkSafe under regulation 211:
 - (b) information about the appointment of the site senior executive, including the person's name:

- (c) all notifications and reports to WorkSafe under regulations 211 and 227 to 229:
 - (d) the current and all previous plans of the mining operation:
 - (e) plans of any abandoned mining operation above, below, or within 200 metres of the boundary of the mining operation, including where any part of an abandoned mining operation is above, below, or within 200 metres of the boundary of the mining operation:
 - (f) records of the certificates of competence held by mine workers at the mining operation and any other training or qualifications they have received:
 - (g) records of mine workers underground:
 - (h) the register of accidents and incidents required under section 25 of the Act and the records kept under regulation 226:
 - (i) the results of examinations performed under regulation 222:
 - (j) statutory notices received from WorkSafe and the responses to those notices, including any remedial action taken as a result of those notices:
 - (k) the details of any inspections completed by a site health and safety representative or industry health and safety representative and any actions taken by a site health and safety representative or industry health and safety representative, including any notices issued under sections 19ZF to 19ZH of the Act.
- (3) A matter must be kept in the mining operation record for 7 years after the matter is included in the record.

220 Record of mine workers underground

The mine operator must ensure that—

- (a) no mine worker is allowed to enter the underground parts of an underground mining operation or tunnelling operation without the permission of the manager; and
- (b) an accurate record is made of every mine worker's entry into, and exit from, the underground parts of an underground mining operation or tunnelling operation; and
- (c) the record, or a copy of it, is kept at the entry point.

221 Shift reports

- (1) The mine operator of an underground coal mining operation must ensure that—
 - (a) the underviewer of each shift at the underground coal mining operation completes a written report on—
 - (i) the current state of the workings of the mining operation and plant at the mining operation; and
 - (ii) any material matters that may affect the health and safety of mine workers arising from work done during the shift; and
 - (iii) any hazards or potential hazards identified during the shift; and
 - (iv) the controls (if any) put in place during the shift to manage those hazards; and
 - (b) the underviewer communicates the content of the written report to the underviewer of the incoming shift; and
 - (c) the content of the written report is communicated to the mine workers on the incoming shift.
- (2) The mine operator of a mining operation other than an underground coal mining operation must ensure that—
 - (a) the supervisor of each shift at the mining operation completes a written report on—
 - (i) the current state of the workings of the mining operation and plant at the mining operation; and
 - (ii) any material matters that may affect the health and safety of mine workers arising from work done during the shift; and
 - (iii) any hazards or potential hazards identified during the shift; and
 - (iv) the controls (if any) put in place during the shift to manage those hazards; and
 - (b) the supervisor communicates the content of the written report to the supervisor of the incoming shift; and
 - (c) the content of the written report is communicated to the mine workers on the incoming shift.
- (3) If the content of the written report is communicated to the underviewer or supervisor of the incoming shift orally under subclause (1)(b) or (2)(b), the mine operator must ensure that the

written report is made available to the underviewer or supervisor of the incoming shift during his or her shift.

- (4) A procedure for performing the tasks described in subclauses (1) and (2) must be included in the health and safety management system for the mining operation.

222 Examination of mining operations

- (1) The mine operator must ensure that a competent person—
- (a) examines,—
 - (i) before the start of each working shift and at suitable times during each working shift, every area of the mining operation where a mine worker is or will be present; and
 - (ii) at least weekly, every accessible area of the mining operation, including every area containing barriers, machinery, seals, underground or surface infrastructure, and ventilation stoppings; and
 - (iii) at least weekly, every vehicle in the mining operation; and
 - (iv) before it is started, any fixed or mobile plant in the mining operation that has been stopped for the preceding 24 hours or longer; and
 - (b) takes all practicable steps to eliminate, isolate, or minimise any significant hazard identified during the examination; and
 - (c) ensures that all plant examined either is safe or is made safe.
- (2) The mine operator must ensure that a written procedure for the conduct of examinations required by subclause (1) is included in the health and safety management system for the mining operation and sets out—
- (a) the matters to be covered by the examination; and
 - (b) a timetable (subject to the minimum requirements of subclause (1)) for the carrying out of the examinations; and
 - (c) the process for recording findings; and
 - (d) the process for taking action as a result of findings.

223 Barometer, hygrometer, and thermometer

- (1) The mine operator of an underground mining operation or tunnelling operation must ensure that—
 - (a) a barometer and thermometer are placed on the surface of the mining operation in a conspicuous position near the entrance to the underground parts of the mining operation; and
 - (b) a hygrometer is available for use in every underground mining operation or tunnelling operation.
- (2) The mine operator must ensure that a competent person reads the barometer and thermometer before the examinations required by regulation 222(1).

224 Visits to solitary mine workers

- The mine operator of an underground mining operation or tunnelling operation must ensure that—
- (a) a competent person visits or contacts a mine worker required to be alone in the underground parts of the mining operation at least twice during each shift and at intervals not exceeding 4 hours; and
 - (b) a record is kept of visits to or contact made with a mine worker as required by paragraph (a).

225 Hazard notices

The prescribed form for the purposes of section 19ZF of the Act (which relates to the issuing of hazard notices by trained site health and safety representatives) is the form set out in Schedule 6 of these regulations.

226 Register of accidents and serious harm

- (1) The mine operator must record the particulars of the following in relation to any mine worker:
 - (a) every accident that harmed (or, as the case may be, might have harmed) the mine worker at the mining operation; and
 - (b) every occurrence of serious harm to the mine worker at work, or as a result of any hazard to which the mine worker was exposed while at the mining operation.

- (2) For each accident or occurrence of serious harm, the particulars prescribed in Schedule 7 must be recorded in a register of accidents and serious harm maintained by the mine operator.
- (3) The mine operator must ensure that a copy of the register is provided to WorkSafe at intervals of not more than 6 months.
- (4) For the avoidance of doubt, a mine operator is not required, in relation to any mine worker, to maintain a separate register of accidents and serious harm under section 25(1) or (1B) of the Act.

227 Notification of accidents and serious harm

- (1) For the purpose of section 25(2)(b) of the Act, every accident specified in Schedule 8 is required to be notified to WorkSafe if the accident occurs at a mining operation.
- (2) For the purpose of section 25(3)(b) of the Act, the mine operator must notify the following to WorkSafe:
 - (a) every accident specified in Schedule 8 if the accident occurs at the mining operation; and
 - (b) every occurrence of serious harm at the mining operation.
- (3) The mine operator must notify the accident or serious harm to WorkSafe by providing the particulars prescribed in Schedule 7 to WorkSafe.
- (4) The mine operator must also provide the particulars of the accident or serious harm, except for personal information about any mine worker, to every site health and safety representative at the mining operation.
- (5) WorkSafe must make the particulars of the accident or serious harm, except for personal information about any mine worker, available to industry health and safety representatives.
- (6) For the avoidance of doubt, a mine operator is not required, in relation to any mine worker, to separately notify the accident or serious harm to WorkSafe on the basis that the mine worker is an employee of or a self-employed person contracted to the mine operator.

228 Accident investigations

- (1) The mine operator must ensure that—

- (a) any accident at the mining operation is investigated; and
 - (b) the investigation findings are made available to the mine workers at the mining operation.
- (2) If the accident is a notifiable accident, the mine operator must ensure that a report of the investigation findings is provided to WorkSafe within 30 days of the date on which the accident occurred.
 - (3) A procedure for making findings available to workers must be included in the health and safety management system.
 - (4) Nothing in this regulation affects section 7(2) of the Act.

229 Notification of high-risk activities

- (1) Before a high-risk activity specified in Schedule 9 is undertaken, the mine operator must ensure that notice of the activity is given to WorkSafe.
- (2) The period of notice to be given is the waiting period specified in Schedule 9 in relation to that activity, or any other longer or shorter period of notice that WorkSafe, by notice in writing, directs.
- (3) The notice must specify—
 - (a) the nature of the high-risk activity; and
 - (b) the intended commencement date of the activity.
- (4) The date that notice is given is the date that the notice is received by WorkSafe.
- (5) WorkSafe may request further information about the activity between the time of the notification of the activity by the mine operator and the expiry of the waiting period.
- (6) The mine operator must ensure that the high-risk activity is not commenced until the period of notice under subclause (2) has expired.

230 Quarterly report to WorkSafe

- (1) The mine operator must give WorkSafe the information set out in Schedule 10.
- (2) The information must be given every 3 months.

Part 10 Offences

231 Offences

- (1) The provisions to which this regulation applies are regulations 7 to 9, 10(3), 12 to 16, 23 to 32, 33(5), 45(5), 52 to 55, 58 to 64, 66, 69, 70, 71, 73(1), 75, 76(1), 82, 88(2), 91, 92, 94, 95, 104, 106, 115, 116, 118 to 129, 131 to 151, 153 to 158, 160 to 176, 178 to 224, and 226 to 230.
- (2) The provisions referred to in subclause (1) are provisions to which section 50 of the Act applies.

Part 11

Transitional provisions, revocations, and consequential amendments

232 Application, savings, and transitional provisions

The application, savings, and transitional provisions set out in Schedule 1 have effect for the purposes of these regulations.

233 Revocations

The following regulations are revoked:

- (a) the Health and Safety in Employment (Mining—Administration) Regulations 1996 (SR 1996/220);
- (b) the Health and Safety in Employment (Mining Underground) Regulations 1999 (SR 1999/331).

234 Consequential amendments to Health and Safety in Employment (Prescribed Matters) Regulations 2003

- (1) This regulation amends the Health and Safety in Employment (Prescribed Matters) Regulations 2003 (the **principal regulations**).
- (2) After regulation 4(3), insert:
“(4) Subclauses (1) and (2) do not apply to a mine operator who is required to maintain a register of accidents and serious harm that occur at a mining operation in accordance with regulation 226 of the Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013.”
- (3) After regulation 5(3), insert:

“(4) Subclause (1) does not apply to a mine operator who is required to notify an accident or occurrence of serious harm at a mining operation in accordance with regulation 227 of the Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013.”

235 Consequential amendments to Health and Safety in Employment Regulations 1995

- (1) This regulation amends the Health and Safety in Employment Regulations 1995 (the **principal regulations**).
- (2) In regulation 2, insert in its appropriate alphabetical order:
“**alluvial mining operation** has the meaning given to it in the Act”.
- (3) In regulation 2, replace the definition of **mine** with:
“**mining operation** has the meaning given to it in the Act”.
- (4) In regulation 2, replace the definition of **quarry** with:
“**quarrying operation** has the meaning given to it in the Act”.
- (5) In regulation 2, revoke the definition of **tunnel**.
- (6) Replace regulation 19(2)(n) with:
“(n) any machinery used in an alluvial mining operation, a mining operation, or a quarrying operation.”

236 Consequential amendments to Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001

- (1) This regulation amends the Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001 (the **principal regulations**).
- (2) Revoke regulation 59(2) and (8).
- (3) In regulation 78(2), replace “Health and Safety in Employment (Mining—Underground) Regulations 1999” with “Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013”.
- (4) In regulation 83(2), replace “Health and Safety of Employment (Mining Underground) Regulations 1999” with “Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013”.

**237 Consequential amendment to Electricity (Safety)
Regulations 2010**

[Revoked]

Regulation 237: revoked, on 31 December 2013, by regulation 237.

Schedule 1
Application, savings, and transitional
provisions

r 232

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- 18 Application of Health and Safety in Employment (Mining Administration) Regulations 1996 151
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1 Interpretation

In this schedule, a mining operation or, as the case may be, a quarrying operation or an alluvial mining operation—

- (a) is an existing mining operation or, as the case may be, an existing quarrying operation or existing alluvial mining operation if, immediately before the date on which these regulations came into force, it was in operation or suspended; and
- (b) ceases to be an existing mining operation or, as the case may be, an existing quarrying operation or existing alluvial mining operation if it is abandoned.

Provisions relating to existing mining operations

2 Application of Parts 2 to 4 and 6 to 10 to existing mining operation

Until 1 January 2015, nothing in Parts 2 to 4 or 6 to 10 of these regulations applies to an existing mining operation.

3 Application of Health and Safety in Employment (Mining—Underground) Regulations 1999

- (1) Subclause (2) applies to an existing mining operation to which the Health and Safety in Employment (Mining—Underground) Regulations 1999 apply.
- (2) Until 1 January 2015, the Health and Safety in Employment (Mining—Underground) Regulations 1999 continue to have effect in relation to the existing mining operations as if they had not been revoked by regulation 233.

4 Transitional provision for escapeways in underground coal mining operation

Until 16 December 2024, nothing in regulation 170(1) applies to an existing mining operation that is an underground coal mining operation.

5 Application of regulations 180(b)(i) and 183 to seals in existing mining operations

Nothing in regulation 180(b)(i) or 183 applies in respect of any seal that was constructed and in place in an existing mining operation immediately before 16 December 2013.

6 Application of regulation 182 to certain ventilation control devices in existing mining operations

Nothing in regulation 182 applies in respect of any of the following ventilation control devices that were constructed and in place at an existing mining operation immediately before 16 December 2013:

- (a) stoppings, doors, overcasts, and regulators installed as part of the main ventilation system:
- (b) stoppings, doors, overcasts, and regulators installed as part of the ventilation system for a panel:
- (c) mine entry airlock:
- (d) seals.

Exemptions**7 WorkSafe may grant exemptions from requirements**

- (1) WorkSafe may, by notice in writing to the mine operator, exempt an existing mining operation from any requirement or requirements of these regulations if WorkSafe is satisfied that the mining operation is unable to comply with the requirement or requirements.
- (2) WorkSafe may grant a renewal of an exemption granted under subclause (1).
- (3) The total period of any exemption granted under subclause (1) (combined with any period of renewal granted under subclause (2)) must not exceed 36 months and must end no later than 31 December 2017.

8 WorkSafe may request information

WorkSafe may request that a mine operator provide it with any information that will assist WorkSafe to decide whether to grant the mining operation an exemption under clause 7(1) or a renewal under clause 7(2).

9 Exemption may be subject to conditions

An exemption (or renewal of an exemption) granted under clause 7 may be subject to any condition or conditions that WorkSafe thinks fit.

Provisions relating to safety-critical roles and competencies

10 Existing holders of safety-critical roles

- (1) This clause applies to any person who, immediately before the date on which these regulations come into force, holds any of the following positions in an existing mining operation or existing quarrying operation and holds any necessary qualifications required in relation to that position under the Health and Safety in Employment (Mining Administration) Regulations 1996:
- (a) manager of a mining operation:
 - (b) manager of a quarrying operation:
 - (c) manager of an alluvial mining operation:
 - (d) coal mine underviewer:
 - (e) coal mine deputy:
 - (f) gas tester:
 - (g) mine surveyor:
 - (h) winding engine driver.
- (2) On the date on which these regulations come into force a person to whom this regulation applies continues to hold the position he or she held immediately before that date.

11 Appointment of manager of mining operation, quarrying operation, or alluvial mining operation

- (1) On or before 1 January 2015, the mine operator of an existing mining operation or, as the case may be, an existing quarrying operation or alluvial mining operation must ensure that a manager is appointed for the operation in accordance with regulation 13, 14, or 15 and, except as provided in this regulation, that person must hold a current certificate of competence as required by these regulations.
- (2) If the person appointed held the position of manager immediately before the date on which these regulations came into

force, until the relevant date specified in subclause (3), nothing in regulations 16 to 22 applies in respect of the person, provided that the person holds any necessary qualifications that would have been required in relation to that position under the Health and Safety in Employment (Mining Administration) Regulations 1996.

- (3) The relevant dates are,—
- (a) if the person's certificate of competence has an expiry date, whichever is the earlier of—
 - (i) the date that is 12 months after the expiry date; and
 - (ii) 1 January 2016; or
 - (b) if the person's certificate of competence does not have an expiry date, 1 January 2016.

12 Appointment of electrical superintendent, mechanical superintendent, and ventilation officer

- (1) On or before 1 March 2015, the site senior executive of an existing mining operation must ensure that a person is appointed to each of the safety critical roles described in regulations 26, 27, and 29 if required in relation to that mining operation in accordance with those regulations.
- (2) Until 1 January 2016, nothing in regulation 26(2), 27(2), or 29(2) requires a person appointed as an electrical superintendent, mechanical superintendent, or ventilation officer to hold any certificate of competence issued under these regulations.

13 Appointment of other safety-critical roles

- (1) On or before 1 March 2015, the site senior executive of an existing mining operation must ensure that a person is appointed to each of the safety-critical roles described in regulations 28, 30, and 31 if required in relation to that mining operation in accordance with those regulations and, except as provided in this regulation, each person must hold the appropriate current certificate of competence as required by these regulations.
- (2) If a person appointed to a role described in regulation 28, 30, 31, or 32 held that position immediately before the commencement of these regulations, until the relevant date specified in

subclause (3), nothing in regulation 28(2), 30(2) and (3), 31(2) to (5), or 32 applies in respect of the person, provided that the person holds any necessary qualifications that would have been required in relation to that position under the Health and Safety in Employment (Mining Administration) Regulations 1996.

- (3) The relevant dates are,—
- (a) if the person's certificate of competence has an expiry date, whichever is the earlier of—
 - (i) the date that is 12 months after the expiry date; and
 - (ii) 1 January 2016; or
 - (b) if the person's certificate of competence does not have an expiry date, 1 January 2016.

14 Appointment of site senior executive for mining operations

- (1) Nothing in regulation 7 applies in respect of an existing mining operation until 1 July 2014.
- (2) Until 1 January 2016, nothing in regulation 8(1) to (3) applies in respect of a site senior executive appointed in respect of any mining operation (whether or not an existing mining operation).

15 Appointment of safety-critical roles for new mining operations

In respect of any mining operation, quarrying operation, or alluvial mining operation that is not an existing mining operation, existing quarrying operation, or existing alluvial mining operation,—

- (a) until 1 January 2016, nothing in regulations 16 to 22 applies in respect of a person appointed as manager, provided that the person holds any necessary qualifications that would have been required in relation to that position under the Health and Safety in Employment (Mining Administration) Regulations 1996;
- (b) until 1 January 2016, nothing in regulations 26(2), 27(2), or 29(2) requires a person appointed as an electrical superintendent, mechanical superintendent, or

ventilation officer to hold any certificate of competence issued under these regulations:

- (c) until 1 January 2016, nothing in regulations 28(2), 30(2) and (3), 31(2) to (5), or 32 applies in respect of a person appointed as mine surveyor, underviewer, supervisor, coal mine deputy, or winding engine driver, provided that the person holds any necessary qualifications that would have been required in relation to that position under the Health and Safety in Employment (Mining Administration) Regulations 1996.

Applications and other matters in relation to
certificates of competence

16 Applications and other matters in relation to certificates of competence before 1 January 2015

- (1) Until 1 January 2015, any application for a certificate of competence of a kind specified in regulation 16 of the Health and Safety in Employment (Mining Administration) Regulations 1996 must be made and dealt with under those regulations.
- (2) Any application for the renewal or replacement of a certificate of competence issued under those regulations must be made and dealt with under those regulations.
- (3) Despite subclauses (1) and (2), the prescribed fees for the making of the applications are those set out in Schedule 2 of these regulations.
- (4) The cancellation or suspension of a certificate of competence issued under the Health and Safety in Employment (Mining Administration) Regulations 1996 must be dealt with under those regulations.
- (5) Any certificate granted or renewed in accordance with this clause expires on 31 December 2015 unless it has an earlier expiry date shown on its face.

17 Applications, etc, for certificates of competence as at 1 January 2015

- (1) This clause applies to any application for a certificate of competence or for a renewal of a certificate of competence under the Health and Safety in Employment (Mining Administra-

tion) Regulations 1996 that, immediately before 1 January 2015, had been made but not yet determined.

- (2) The application must be treated as if it was made to the Board of Examiners, and the Board must deal with it in accordance with the Health and Safety in Employment (Mining Administration) Regulations 1996.
- (3) Any certificate granted or renewed in accordance with this clause expires on 31 December 2015 unless it has an earlier expiry date shown on its face.

18 Application of Health and Safety in Employment (Mining Administration) Regulations 1996

For the purpose of clauses 10 to 17,—

- (a) the Health and Safety in Employment (Mining Administration) Regulations 1996 (except Schedule 1) continue to have effect with any necessary modifications as if they had not been revoked by regulation 233; and
- (b) the recognition of any organisation under regulation 17 of the Health and Safety in Employment (Mining Administration) Regulations 1996 that was in effect immediately before these regulations came into force continues to have effect.

Schedule 2

rr 36, 44, 46

**Fees for issue, renewal, and replacement
for certificate of competence**

Type of fee	\$
Issue of any certificate of competence	140.00
Renewal of any certificate of competence	80.00
Replacement of any certificate of competence	30.00

Schedule 3

r 109

Mine worker participation system

Mine health and safety representatives

1 Consultation with mine workers

If the Act or these regulations require the mine operator or site senior executive to consult with mine workers, that consultation,—

- (a) if a site health and safety representative or representatives have been elected for the mining operation,—
 - (i) must be done with the site health and safety representative or representatives; and
 - (ii) may, in addition, be done directly with the affected mine workers and any other representative of 1 or more mine workers; or
- (b) otherwise, may be done directly with the affected mine workers and any representative of 1 or more mine workers.

2 Mine workers and union may elect site health and safety representatives

The mine workers, together with any union representing them, may hold an election for at least 1 site health and safety representative (which may include 1 or more site health and safety representatives elected for each particular type of work of the mine operator, or another grouping) to carry out the functions in section 19W of the Act.

3 Mine workers or union may require mine operator to hold election for site health and safety representative

- (1) If an election may or must be held under clause 2, the mine workers, together with any unions representing them, may, instead of holding the election themselves, notify the site senior executive that they require the mine operator to hold the election.
- (2) The mine operator must hold the election within 2 months of receiving notification.

4 Method of electing site health and safety representative

- (1) An election for a site health and safety representative must—
 - (a) involve only candidates who—
 - (i) work sufficiently regularly and for a sufficient duration to enable them to carry out their functions effectively; and
 - (ii) have worked for a minimum of 2 years in a mining operation of the kind at which the person will be a site health and safety representative; and
 - (iii) are willing to take on the position; and
 - (b) be conducted through a secret ballot; and
 - (c) give all mine workers, or all mine workers in a relevant grouping for the purposes of section 19R(5) of the Act, a reasonable opportunity to vote; and
 - (d) be determined by the wishes of the majority of those who vote.
- (2) An election is not required if—
 - (a) there is only 1 candidate for a position, in which case the candidate automatically fills the position; or
 - (b) there are no candidates for a position, in which case the position is not filled.

5 Filling vacancy for health and safety representative

The mine workers, together with any unions representing them, may hold an election (or require the mine operator under clause 3 to hold an election) if a vacancy arises in a position of site health and safety representative.

Mine health and safety committees

6 Mine health and safety committees

- (1) The site senior executive may establish a mine health and safety committee.
- (2) Despite subclause (1), the site senior executive must establish a mine health and safety committee if requested to do so by—
 - (a) a site health and safety representative; or
 - (b) 5 or more mine workers at the mining operation.

7 Membership of committee

- (1) Subject to this clause, the membership of a health and safety committee may be agreed between the mine operator and the mine workers.
- (2) If there is a site health and safety representative, that representative, if he or she consents, is a member of the committee.
- (3) If there are 2 or more site health and safety representatives, those representatives may choose 1 or more of their number (who consent) to be members of the committee.
- (4) At least half of the members of the committee must be mine workers who are not nominated by the mine operator.
- (5) The committee must include at least 1 member nominated by the mine operator to represent the mine operator and who has the authority to allocate financial and other resources on behalf of the mine operator.

8 Functions of committee

The functions of a health and safety committee are—

- (a) to facilitate co-operation between the mine operator and the mine workers in developing, reviewing, and implementing measures designed to ensure the health and safety of the mine workers at work:
- (b) to assist in developing and reviewing standards, rules, and procedures relating to health and safety that are to be followed or complied with in the mining operation:
- (c) to perform any other function agreed between the committee and the mine operator.

9 Meetings of committee

A health and safety committee must meet at least once every 3 months.

Schedule 4

r 138(2)

**Standards for equipment for raising and
lowering mine workers, coal, minerals,
and materials**

Winder or slope haulage

- 1 A winder or slope haulage used at the mining operation must have at least 2 independent brakes.
- 2 The brakes must not include a single line component that, if it failed, would prevent the braking system from safely stopping the winder.
- 3 Each brake must be designed, adjusted, and maintained so as to safely stop and hold the conveyance or conveyances under all conditions of loading, directions of travel, and speeds under or at which it will travel.
- 4 Each brake on a drum winder must be capable of supporting 2 times the maximum static load normally hoisted by the drum winder from the lowest operating position in the shaft.
- 5 Each brake on a friction winder must be capable of producing a braking torque,—
 - (a) when transporting persons, at least 3 times the maximum out-of-balance static torque applied to the driving sheave by the loads normally carried by the winder; and
 - (b) when transporting rock or materials, at least 2 times the maximum out-of-balance static torque applied to the driving sheave by the loads normally carried by the winder.
- 6 The braking system of each winding system at the mining operation must be designed in such a way that the failure of any one component in the winding system will not prevent the conveyance from being brought safely to a rest.
- 7 Every winder used at the mining operation must have—

- (a) an automatic device to prevent the winder over-winding; and
 - (b) a device to prevent a descending conveyance from being landed at the lowest entrance to the shaft at a speed exceeding 2 metres per second; and
 - (c) a device to indicate the position of each conveyance in the shaft; and
 - (d) for a manually controlled winder that is capable of exceeding speeds of 4 metres per second, a rope speed indicator located on the winder where it can be read by the winder operator.
- 8 Every slope haulage used at the mining operation must have—
- (a) an automatic device installed to prevent overtravel; and
 - (b) a device that indicates the position of each rope-hauled line of vehicles in the roadway; and
 - (c) for manually controlled slope haulage that is capable of exceeding speeds of 2 metres per second, a rope speed indicator located on the slope haulage where it can be read by the slope haulage operator.
- 9 Where electric automatic devices are used to prevent over winding, over travel, or over speeding, the device must provide an equivalent level of safety as a non-electronic automatic device used for the same purpose.
- 10 Where an electronic automatic device is used to prevent over winding, over travel, or over speeding and the device includes a single line component that could cause the device to fail to an unsafe mode, the device must have a separate supervisory device with an independent drive that will safely bring the winding system to a rest in the event of over wind, over travel, or over speed.
- 11 If a supervisory device is brought into operation for any reason or a supervisory device fails, further operation of the winding system associated with the supervisory device must be stopped until,—

- (a) in the case of the supervisory device being brought into operation, the electric automatic device is examined and proved to be effective; or
 - (b) in the case of the failure of the supervisory device, the cause of the failure has been remedied.
- 12 If an electronic automatic device has separate modes for winding persons and for winding materials, the device must be set to the mode for winding persons before any person is allowed to enter the conveyance, and, except in relation to a shaft being sunk, the mode to which the device has been set must be displayed at every landing in such a way that it will be clearly visible to any person transmitting signals from a landing.

Controls and safety devices for conveyances

- 13 The headframe or tower of a shaft used for winding at the mining operation must have—
- (a) equipment that is designed and installed to ensure the conveyance or counterweight will stop safely if the conveyance is overwound; and
 - (b) safety devices that are designed and installed so that when a conveyance or counterweight has stopped or become detached from the winding rope, the conveyance will not fall down the shaft; and
 - (c) means by which people can safely leave an overwound or stalled conveyance, including a way out of the conveyance.
- 14 Where there may be uncontrolled contact between the conveyances in a shaft, a conveyance and equipment installed in the shaft, or a conveyance and the side of the shafts, the shaft must contain suitable guides for each conveyance and counterweight.
- 15 Winders used to transport persons at the mining operation must be fitted with brake locking devices that are interlocked with any other safety-related plant in the shaft and that will prevent the winder moving during normal transport of persons if—

- (a) any shaft side barrier or gate is not closed; or
 - (b) the conveyance gates are not fully closed and latched;
or
 - (c) any emergency stop button has not been reset after an
emergency stop signal has been activated.
- 16 Each winder at the mining operation must have suspension equipment capable of withstanding stall conditions or a hook that can detach an ascending conveyance from the rope in the event that the conveyance overwinds.
- 17 Every winder and slope haulage used at the mining operation that is not directly supervised must have suitable equipment, such as fire extinguishers, that will operate automatically to extinguish fire in the plant's engine room.
- 18 Every friction winder at the mining operation must have a device that cuts power to the winding system and stops the winding drum or sheave by applying brakes automatically before a conveyance, counterweight, or rope attachment reaches a permanent obstruction to its passage in the shaft.
- 19 Every winder used at the mining operation must automatically synchronise the position of the conveyance in a shaft with the conveyance's position indicator and safety devices.
- 20 Any adjustment to the synchronisation of the position of the conveyance with its position indicator and safety devices may be done only while the conveyance's brakes are applied and the winder is stationary.
- 21 The speed of a friction winder used at the mining operation must not exceed the following speeds:
- (a) in the case of friction winders used to raise or lower people, 16 metres per second:
 - (b) in the case of friction winders used to raise or lower material, 18 metres per second.

- 22 The brakes on a friction winder used at the mining operation must—
- (a) apply automatically when the power to the winder fails:
 - (b) when applied automatically in any situation, not be likely to cause the winding rope to slip on the driving sheave:
 - (c) in the case of a manually controlled friction winder, be able to be applied manually by the winder operator.
- 23 Every winder's brakes must apply automatically and prevent the winder being operated if the brake linings become worn to an extent that jeopardises the safe operation of the brakes.
- 24 Sufficient information about the operating requirements of any winder, slope haulage, or hoist intended to be used at the mining operation must be given to the supplier of the plant so that the supplier is able to provide plant that is appropriate to be installed at the operation, and so that the installer is able to install the plant appropriately for the operation, and a record of the information provided to the supplier is kept.
- 25 Any plant utilising winders, slope haulage, or hoists must be tested before being used at the mining operation to confirm that it meets the operating requirements, and a record of the test results must be kept.
- 26 Where it is intended to use a winder, slope haulage, or hoist outside its operating requirements, a design check by a competent person must be carried out and any necessary modification to the plant must be completed before it is used outside the specified operating requirements.
- 27 Every shaft that exceeds 60 metres in depth and that may be used as a means of egress by mine workers, including in an emergency, must have an automatic cage or skip installed that is suitable for raising or lowering mine workers.

Rope used for winding and slope haulage

- 28 A rope must not be used for winding or slope haulage at the mining operation unless the mine operator has obtained a certificate from the manufacturer of the rope stating—
- (a) the date the rope was manufactured; and
 - (b) the tensile strength, diameter, length, and mass of the rope; and
 - (c) the class of steel used in the rope's construction.
- 29 A rope must not be used for winding or slope haulage at the mining operation unless the rope's tensile strength has been tested by an independent testing facility and a certificate stating the tensile strength has been obtained from the testing facility.
- 30 For a rope other than a friction winder rope, a sample of at least 2 metres must cut from the end of the rope during recapping, sent to an independent testing facility for testing its tensile strength, and a certificate stating the tensile strength obtained from the testing facility.
- 31 Where a certificate obtained from an independent testing facility states that the tensile strength of the rope is less than 90% of the rope's tensile strength when new, the rope must not be used for winding or slope haulage at the mine.
- 32 Only rope recommended by the manufacturer of the winding system may be used at the mining operation.
- 33 Only rope dressing recommended by the manufacturer of the rope may be used.
- 34 The load applied to any rope used for drum winding at the mining operation must not result in a factor of safety less than the minimum factor of safety as set out in the following paragraphs (where L is the depth of the wind in metres):
- (a) for a friction winder—

Proposed use	Minimum factor of safety		
	Single rope	2 or 3 ropes	4 or more ropes
Transporting persons or where the safety of persons is involved	7.5	6.9	6.3
Transporting rock or materials, where the safety of persons is not involved	6.8	6.2	5.6
Transporting rock in a shaft used only for that purpose	6.3	5.7	5.1
Transporting plant at a speed of less than 2 metres per second	5.0	5.0	5.0
Balance ropes	6.0	6.0	6.0

(b) for a winder other than a friction winder—

Proposed use	Minimum factor of safety
Transporting persons or where safety of mine persons is involved	7.5 – 0.001L
Transporting rock or materials, where the safety of persons is not involved	5.5 – 0.0003L
Transporting rock in a shaft used only for that purpose	4.5
Transporting plant at a speed of less than 2 metres per second	5

(c) for stage ropes used in shaft sinking—6.

- 35 Each winder rope on a multi-rope winder must be attached at the conveyance or counterweight by a device that loads the ropes in as uniform a manner as is reasonably practicable.
- 36 If rope attachments are connected directly to the conveyance or counterweight, devices must be provided to adjust the rope length and indicate rope tension; and there must be regular monitoring and testing of winder or slope haulage ropes that does not damage or destroy the ropes.
- 37 Each winder rope used at the mining operation must be re-capped at least once every 6 months.

- 38 When recapping is done as required by clause 10, the capping location must be moved at least 150 millimetres along the rope towards the standing end of the rope.
- 39 There must be criteria in place for when rope must be discarded.
- 40 Unsuitable rope must be discarded.
-

Schedule 5
**Ventilation control devices and design
criteria**

r 182

Ventilation control device	Design criteria
Ventilation ducting	Anti-static and fire-resistant
Brattice line or temporary stopping	Anti-static and fire-resistant
Separation stopping for a primary escapeway	Anti-static, fire-resistant and of substantial construction that will ensure minimal leakage
Stoppings, doors, overcast, or regulator installed as part of the main ventilation system	Capable of withstanding an overpressure of 35 kPa
Stoppings, doors, overcast, or regulator installed as part of the ventilation system for a panel	Capable of withstanding an overpressure of 14 kPa
Mine entry airlock	Capable of withstanding an overpressure of 70 kPa whilst it is open
Type B seal	Capable of withstanding an overpressure of 35 kPa
Type C seal	Capable of withstanding an overpressure of 140 kPa
Type D seal	Capable of withstanding an overpressure of 345 kPa
Type E seal	Capable of withstanding an overpressure of 70 kPa

Schedule 6
Hazard notice
Form
Hazard notice

r 225

Section 19ZF, Health and Safety in Employment Act 1992

To: [*name of site senior executive*]

I believe that there is a hazard in our mining operation at [*state physical address or describe location of mining operation*].

This hazard is [*describe hazard*].

I suggest the steps that should be taken to deal with this hazard are: [*state details—it is optional whether to provide this information*].

I confirm that: [*all these statements must apply before a hazard notice may be issued*]

- I believe on reasonable grounds that there is a hazard in our mining operation; and
- I have brought the hazard to your attention; and
- I have discussed or attempted to discuss with you steps for dealing with the hazard.

and

[*One of the following statements must apply – delete statements that do not apply.*]

You refuse to discuss the hazard.

or

You refuse to take steps to deal with the hazard.

or

You and I do not agree on the steps that must be taken to deal with the hazard.

or

I believe on reasonable grounds that you and the mine operator have failed to meet the requirements of this Act or regulations made under this Act in relation to the hazard within a time agreed during the discussion.

Signature:

(Trained site health and safety representative)

Form—*continued*

Name:

Date:

Notes for site health and safety representative

- 1 You may issue a hazard notice only if you are a trained site health and safety representative within the meaning of section 19ZF of the Health and Safety in Employment Act 1992. To be a trained site health and safety representative, you must have—
 - achieved a level of competence in health and safety practice specified by the Minister by notice in the *Gazette*; or
 - completed an appropriate course of training that has been approved under section 19G of the Health and Safety in Employment Act 1992.
- 2 You may (but do not have to) notify a health and safety inspector that you have issued this notice. If you do, you should ensure you provide your name and contact details to the inspector.

Notes for mine operator

- 1 This hazard notice sets out a description of a hazard that a trained site health and safety representative believes exists in your mining operation.
 - 2 There is no penalty attached to this notice. However, it serves as a prior warning if an infringement notice is issued by an inspector under section 56B of the Health and Safety in Employment Act 1992.
-

Schedule 7

rr 226(2), 227(3)

**Particulars of accident or serious harm
to be recorded in register and notified to
WorkSafe****1 Particulars of mining operation**

- (1) Mining operation: [*include location*]
- (2) Particulars of mining operator: [*name, business address, telephone number, and email address*]
- (3) Particulars of site senior executive: [*name, business address, telephone number, and email address*]

2 Description of accident or serious harm

- (1) Where and how did the accident or serious harm occur? [*describe the events leading up to the accident or serious harm*]
- (2) Has an investigation been carried out? *Yes/No*
- (3) Describe any hazards involved:
- (4) Were any of the hazards a significant hazard? *Yes/No*
- (5) Identify the hazards that were significant hazards:

3 Particulars of accident or serious harm

- (1) Location within mining operation where accident or serious harm occurred:
- (2) Time and date of accident or serious harm:
- (3) Shift: [*select 1 of the following*:
 - *day*
 - *afternoon*
 - *night*]
- (4) Hours worked since arrival at work:
- (5) Description of any plant involved in accident: [*include make and model*]
- (6) Type of accident (if any): [*indicate the type of accident (if any) specified in Schedule 6 that best describes the accident*]
- (7) Name of injured person (if any):
- (8) Was the injured person seriously harmed? *Yes/No*

**4 Additional particulars required in cases of serious harm
(if any)**

Particulars of injured person (if any)

- (1) Residential address:
- (2) Date of birth:
- (3) Sex:
- (4) Occupation or job title:
- (5) Self-employed: *Yes/No*
- (6) Employer:
- (7) Period of employment (employees only): [*select 1 of the following:*
 - *first week*
 - *first month*
 - *1–6 months*
 - *6 months–1 year*
 - *1–5 years*
 - *over 5 years*]

Particulars of injury (if any)

- (8) Treatment: [*select 1 of the following:*
 - *none*
 - *first aid only*
 - *doctor but no hospitalisation*
 - *hospitalisation*]
- (9) Body part affected: [*select 1 or more of the following:*
 - *head*
 - *neck*
 - *trunk*
 - *upper limb*
 - *lower limb*
 - *multiple locations*
 - *systemic internal organs*]
- (10) Nature of injury or harm: [*select 1 or more of the following:*
 - *fatal*
 - *fracture of spine*
 - *fracture other than spine fracture*
 - *dislocation*

- *sprain or strain*
- *head injury*
- *internal injury of trunk*
- *amputation (including eye)*
- *open wound*
- *superficial injury*
- *bruising or crushing*
- *foreign body*
- *burns*
- *nerves or spinal cord*
- *multiple injuries*
- *puncture wound*
- *poisoning or toxic effects*
- *damage to artificial aid*
- *disease, nervous system*
- *disease, musculoskeletal system*
- *disease, skin*
- *disease, digestive system*
- *disease, infectious or parasitic*
- *disease, respiratory system*
- *disease, circulatory system*
- *tumour (malignant or benign)*
- *mental disorder]*

Further particulars of serious harm

- (11) Mechanism of serious harm: [*select 1 or more of the following:*
- *fall, trip, or slip*
 - *sound or pressure*
 - *body stressing*
 - *biological factors*
 - *mental stress*
 - *hitting objects with part of the body*
 - *being hit by moving objects*
 - *heat, radiation, or energy*
 - *chemicals or other substances]*

- (12) Agency of serious harm: [*select 1 or more of the following:*
- *machinery or (mainly) fixed plant*
 - *mobile plant or transport*
 - *powered equipment, tool, or appliance*
 - *non-powered handtool, appliance, or equipment*
 - *chemical or chemical product*
 - *material or substance*
 - *environmental exposure (eg, dust or gas)*
 - *animal, human, or biological agency (other than bacteria or virus)*
 - *bacteria or virus*]
-

Schedule 8

Notifiable accidents

r 227

A notifiable accident is any of the following that occurs at a mining operation:

Fire, ignition, explosion, or smoke

- (1) any outbreak of fire underground involving open flame
- (2) the ignition underground of any gas or dust
- (3) any accident where mine workers are required to evacuate a part or the whole of the underground parts of an underground mining operation or tunnelling operation because of smoke
- (4) the outbreak of any fire on the surface that endangers mine workers on the surface or in the underground parts of the mining operation
- (5) any fire on plant, including mobile plant, or a building associated with mining or tunnelling activities
- (6) in relation to a coal mining operation, the detection of any spontaneous combustion

Ventilation and gas

- (1) any accident where mine workers are required to evacuate a part or the whole of the underground parts of a mining operation or tunnelling operation because of methane or any other gas
- (2) any unplanned stoppage of the main fan in excess of 30 minutes
- (3) any unplanned accumulation of methane or other gas requiring formal degassing operations
- (4) the loss of consciousness of any mine worker including asphyxia

Outburst, inundation, or inrush

- (1) any violent outburst of coal, gas or solid matter
- (2) any windblast event capable of injuring or causing death to any mine worker or damaging seals or stoppings
- (3) any inundation or inrush of water or material that flows when wet

- (4) any structural failure of a tip, pond, or dam resulting in unintended movement or release of material or fluids

Ground, geotechnical, and other structural failures

- (1) any failure of ground control that prevents persons from passing through the area or otherwise exposes them to danger
- (2) any ground movement of a surface slope, face, bench, or haul road which has the potential to cause injury or death
- (3) any movement of a surface slope or face that adversely affects any building, footpath, waterway, public utility, or other area of public access
- (4) in relation to the surface of a mining operation, the structural failure of any gantry, storage bunker, tower, or other elevated structure

Emergency, escape, and rescue

- (1) any initiation of the mine emergency plan other than during a planned exercise
- (2) use of emergency escape equipment, including self-contained self-rescuers or other breathing apparatus, except during training
- (3) failure in use or training of any emergency escape equipment or mines rescue breathing apparatus
- (4) any emergency evacuation of a part or the whole of a mining operation
- (5) the unplanned unavailability of 1 or more of the emergency escapeways from an underground mining operation or tunnelling operation
- (6) any occasion where a mine worker or mine workers are trapped or unable to leave their place of work in a mining operation

Vehicles and plant

- (1) any collision of mobile plant with other plant, including mobile plant, with a potential to cause serious harm
- (2) any overturning of mobile plant, regardless of which part of the mobile plant is against the ground when it comes to a rest

- (3) any unintended movement or brake failure of mobile plant that could have caused serious harm
- (4) any occasion on which mobile plant breaches a safety berm or windrow
- (5) a failure of any part of a powered shaft winding system causing danger
- (6) the sinking of any waterborne craft

Shot-firing

- (1) any misfire of a round of shots on a face
- (2) any unplanned or premature ignition of a shot
- (3) any accident where a person suffers injury or dies as a result of shot-firing
- (4) any accident where material is projected beyond the declared danger zone or otherwise exposes any person to danger during blasting operations

Electricity

- (1) unintended contact of any mobile plant with conductors, whether overhead or underground
 - (2) any occurrence of electrical arcing or electric shock
-

**Schedule 9
High-risk activities**

r 229

Applies to	High-risk activity	Length of time between notification and when activity can be undertaken
All mining operations	Commencement of highwall mining	1 month
	Entering a highwall mining excavation	48 hours
All mining operations	Shot-firing underground, where shot-firing has not been undertaken within a year prior to the intended time of shot-firing	7 days
All mining operations	Commissioning or use of mine shaft and winding systems plant	3 months
Underground mining operations and tunnelling operations	Working within inrush control zones	1 month
Underground mining operations and tunnelling operations	Entry by any mine worker into any sealed area of the underground parts of the mining operation	7 days
Underground metalliferous mining operations and tunnelling operations where methane has been detected	Hot work in the underground parts of the mining operation	1 month before first hot work covered by hot work approval system 24 hours before each occasion of hot work thereafter
Underground mining operations	Single entry development (being the development of a roadway or a drift for more than 200 metres without forming an intersection)	1 month
Underground mining operations	Shaft or drift sinking, raise boring or development of a new entry to the underground parts of the mining operation	3 months
Underground mining operations	The use of voltages in excess of 1 200 V in ERZ1 for electrical plant other than electrical plant and cables associated with longwall mining	3 months

Applies to	High-risk activity	Length of time between notification and when activity can be undertaken
Underground metalliferous mining operations	Newly devised method of mining a rise involving drill and blast and entry to the rise	1 month
Coal mining operations	The establishment or discontinuance of emplacement areas	3 months
Coal mining operations	Secondary workings: <ul style="list-style-type: none"> • pillar or pillar dimension reduction • longwall • miniwall • shortwall 	3 months
Underground coal mining operations	Injection or application of polymeric material for ventilation or strata	24 hours
Underground coal mining operations	Driving an underground roadway with a width greater than 5.5 metres	7 days
Underground coal mining operations	Widening an existing underground roadway	7 days
Underground coal mining operations	Installation of a booster fan underground	3 months
Underground coal mining operations	Hot work in an ERZ1	1 month before first hot work covered by hot work approval system 24 hours before each occasion of hot work thereafter
Underground coal mining operations	Hot work in an NERZ	1 month before first hot work covered by hot work approval system 24 hours before each occasion of hot work thereafter
Underground coal mining operations	Live electrical work in an ERZ0 or ERZ1	7 days before first live electrical work covered by live electrical work approval system

Applies to	High-risk activity	Length of time between notification and when activity can be undertaken
		24 hours before each occasion of live electrical work thereafter
Underground coal mining operations	The introduction for the first time of a vehicle with a non-flameproof (fire-protected) diesel engine to an NERZ	3 months
Underground coal mining operations	The use of voltages in excess of 4 000 V in an ERZ1 for electrical plant and cables associated with longwall mining	3 months
Underground coal mining operations	Barrier mining (meaning the mining of a barrier or protective pillar against the external boundaries of the workings of the mining operation, against any outcrop of the seam and between any underground workings and any open cut workings. The requirement to notify is triggered when the width of the barrier is proposed to be less than 40 metres between adjoining workings of adjacent mining operations)	3 months
Underground coal mining operations	<ul style="list-style-type: none"> • Multi-seam mining • Formations of small pillars • Shallow depth of cover • Mining under massive roof conditions • Mining under significant bodies of water 	3 months

Schedule 10

r 230

**Information to be given to WorkSafe in
quarterly report****1 Description of mining operation**

The following descriptive details for the mining operation:

- (a) the name of the mine operator, the site senior executive, and the mine manager; and
- (b) the location of the mining operation; and
- (c) the business contact details of the mine operator, the site senior executive, and the mine manager; and
- (d) the nature of the mining operation, including whether it is an opencast or underground mining operation or tunnelling operation, and the kind of material that is extracted.

2 Commodity processed

A description of the primary commodity processed at the mining operation during the reporting period.

3 Number of workers

The average number of mine workers who worked at the mining operation during the reporting period.

4 Number of hours worked

The total number of full-time equivalent, additional shift, and overtime hours worked at the mining operation during the reporting period.

5 Number of accidents

The total number of notifiable accidents required to be notified under section 25 of the Act and regulation 227 that occurred during the reporting period.

6 Number of lost-time injuries

The total number of incidents referred to in clause 5 that involved injury or disease of a mine worker that resulted in the inability of the worker to work for 1 day or more (not includ-

ing the incident day) during the reporting period (whether the worker is rostered on that day or not).

7 Days lost from work

The total number of days (not including the incident day) lost from work by mine workers as a result of accidents referred to in clause 5 during the reporting period.

8 Number of alternative duties injuries

The total number of accidents referred to in clause 5 that involved injury or disease of a mine worker that resulted in the worker being on alternative duties during the reporting period.

9 Number of alternative duty days

The total number of days (not including the accident day) on which mine workers worked on alternative duties during the reporting period as a result of accidents referred to in clause 8.

10 Number of medical treatment injuries

- (1) The total number of work-related injuries of mine workers that required medical treatment during the reporting period but did not require a day lost from work or alternative duties (other than the accident day).
- (2) In subclause (1), **medical treatment** means the management or care of a patient, and—
 - (a) includes—
 - (i) the suturing of a wound; and
 - (ii) the treatment of fractures; and
 - (iii) the treatment of bruises by drainage of blood; and
 - (iv) the treatment of second- and third-degree burns; but
 - (b) does not include diagnostic procedures, observation, counselling, first aid, or therapeutic measures taken solely for preventative purposes.

11 Number of fatalities

The total number of fatalities that occurred during the reporting period as a result of an accident referred to in clause 5.

12 Reporting figures to specify employees of mine operator separately

Each amount required by clauses 3 to 11 to be reported must be supplied in a form showing the total amount separated in respect of the following 2 categories:

- (a) mine workers employed by the mine operator; and
- (b) mine workers other than employees of the mine operator.

Rebecca Kitteridge,
Clerk of the Executive Council.

Issued under the authority of the Legislation Act 2012.
Date of notification in *Gazette*: 12 December 2013.

Reprints notes

1 *General*

This is a reprint of the Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013 that incorporates all the amendments to those regulations as at the date of the last amendment to them.

2 *Legal status*

Reprints are presumed to correctly state, as at the date of the reprint, the law enacted by the principal enactment and by any amendments to that enactment. Section 18 of the Legislation Act 2012 provides that this reprint, published in electronic form, will have the status of an official version once issued by the Chief Parliamentary Counsel under section 17(1) of that Act.

3 *Editorial and format changes*

Editorial and format changes to reprints are made using the powers under sections 24 to 26 of the Legislation Act 2012. See also <http://www.pco.parliament.govt.nz/editorial-conventions/>.

4 *Amendments incorporated in this reprint*

Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2013 (SR 2013/483): regulation 237

APPENDIX 4 RESOURCE CONSENTS



RESOURCE MANAGEMENT ACT 1991

Consent No. WGN050352 [24540]
Category: Discharge permit

Pursuant to sections 104B and 108, and subject to all the relevant provisions of the Resource Management Act 1991 and any regulations made thereunder, a consent in respect of a natural resource is hereby granted to:

Name	Kiwi Point Quarry Business Unit, Wellington City Council	
Address	P O Box 2199, Wellington	
Term of consent	Effective: 6 July 2005	Expires: 6 July 2020
Purpose for which right is granted	To discharge contaminants to air from the operation of a cleanfill.	
Location	Kiwi Point Quarry, Centennial Highway, Ngauranga at or about map reference NZMS 260: R27:611.951	
Legal description of land	Lots 1, 2 and 3 DP 72995	
Volume/quantity/rate	NA	
Conditions	1-15 as attached	

For and on behalf of
 WELLINGTON REGIONAL COUNCIL

Manager, Consents Management

Date: 6 July 2005



Conditions to Resource Consent

WGN050352 [24540]

- (1) The location, design, implementation and operation of the works shall be in accordance with the consent application and its associated plans and documents lodged with the Wellington Regional Council on 2 June 2005, and amendments received by fax on 28 June 2005.
- (2) The permit holder shall pass a copy of this consent including any relevant site plans and attachments to the operator undertaking the works.
- (3) The Manager, Consent Management shall be given a minimum of 48 hours notice prior to works commencing.
- (4) Only material such as clay, soil, rock, concrete, or brick, that are free of combustible or putrescible components or hazardous substances or materials likely to create a hazardous leachate by means of biological breakdown, shall be deposited within the cleanfill site.

Materials considered to meet the above definition are outlined in Table 4.1 of the publication A Guide to the Management of Cleanfills by Ministry for the Environment (2002).

- (5) Cleanfill shall only be deposited in Areas A, B, C and D identified on the aerial photo attached to the application as Appendix One.
- (6) The permit holder shall ensure that there shall be no discharges to air resulting from the exercise of this consent that are noxious, dangerous, offensive or objectionable at or beyond the legal boundary of the property where the activity is to be carried out, being Lots 1, 2 & 3 DP 72995.
- (7) All work areas associated with the operation of the cleanfill are to be managed in such a way as to keep fugitive dust emissions to a minimum. This shall include, but not be limited to wetting unsealed areas with sufficient water as required.
- (8) The permit holder shall operate the cleanfill in accordance with Kiwi Point Quarry Quality Procedures, subject to any changes required to meet the conditions of this consent. A copy of this document shall be forwarded to the Manager, Consents Management within two months of commencement of the activity authorised by this permit.
- (9) Upon achieving the desired completion levels (as identified in the rehabilitation plan) cleanfilled areas shall be topsoiled and planted upon completion. The topsoil shall be of sufficient depth such that no concrete or other rubble is visible. Vegetation shall be established as soon as practical after topsoiling.
- (10) The permit holder shall supply a copy of the comprehensive rehabilitation plan to the Manager, Consents Management, within six months of commencement of the activity authorised by this permit. This plan should include details of the final levels of rehabilitated areas and details of the proposed plantings to occur and timeframes from completion.
- (11) Depositing of cleanfill shall be supervised by Kiwi Point Quarry Staff at all times.
- (12) The permit holder shall record details of each load of material that is deposited within the cleanfill, including:
 - (a) the date and time of receipt of the material at the cleanfill site;
 - (b) quantity;
 - (c) source;
 - (d) description of material deposited (e.g. soil, concrete, bricks);
 - (e) name of the contractor depositing the material;


6/7/05

This information shall be forwarded to the Manager, Consents Management, Wellington Regional Council at periods ending 31 March and 30 September each year, and shall be made available for inspection when requested.

- (13) The permit holder shall keep a permanent record of any complaints received alleging adverse effects from the permit holder's operations. The complaints record shall contain the following where practicable:
- (a) the name and address of the complainant, if supplied;
 - (b) identification of the nature of the complaint;
 - (c) date and time of the complaint and alleged event;
 - (d) weather conditions at the time of the alleged event;
 - (e) results of the permit holder's investigations; and,
 - (f) any mitigation measures adopted.

The complaints' record shall be made available to the Wellington Regional Council on request.

The permit holder shall notify the Manager, Consents Management, Wellington Regional Council, of any complaints received, which relate to the exercise of this permit, within 24 hours of being received, or the next working day.

- (14) The permit holder shall keep a record of any incident that has or could have resulted in a condition of this permit being contravened. The incident record shall be made available to the Wellington Regional Council upon request.

The permit holder shall notify the Manager, Consents Management, Wellington Regional Council of any such incident, within twenty four hours of the incident being brought to the attention of the permit holder, or the next working day.

- (15) The Wellington Regional Council may review any or all conditions of this permit by giving notice of its intention to do so pursuant to section 128 of the Resource Management Act 1991, at any time within three months of the first, third, fifth, seventh, ninth, eleventh and thirteenth anniversaries of the date of the granting of this permit for any of the following purposes:

- (a) To deal with any adverse effects on the environment which may arise from the exercise of this permit, and which are appropriate to deal with at a later stage.
- (b) To review the adequacy of any plans and/or monitoring requirements prepared for this consent so as to incorporate into the permit any modification which may become necessary to deal with any adverse effects on the environment arising from the exercise of this permit.
- (c) The Wellington Regional Council shall be entitled to recover from the permit holder the actual and reasonable costs of the conduct of any review, calculated in accordance with, and limited to, that council's scale of charges in-force and applicable at that time pursuant to Section 36 of the Resource Management Act 1991.



Resource Consent

RESOURCE MANAGEMENT ACT 1991

Consent No. WGN110099 [30687]

Category: Discharge permit

Pursuant to sections 104B, 105, 107 and 108, and subject to all the relevant provisions of the Resource Management Act 1991 and any regulations made thereunder, a consent in respect of a natural resource is hereby granted to:

Name	Wellington City Council	
Address	PO Box 2199, Wellington	
Duration of consent	Effective: 14 October 2010	Expires: 14 October 2020
Purpose for which right is granted	To discharge a mixture of treated and settled stormwater runoff and/or treated washwater, into Ngauranga Stream at a maximum rate of 200 litres per second with a maximum suspended solids concentration of 120g/m ³ .	
Location	Kiwi Point Quarry at or about map reference NZMS 260: R227; 2661136.5995042	
Legal description of land	Lot 2 DP 72995 on CT 42C/682	
Conditions	1-18 as attached	

For and on behalf of
WELLINGTON REGIONAL COUNCIL

Tracy Cost
Manager, Environmental Regulation

Date: 14/10/10

Summary of your rights and responsibilities

(Not part of the resource consent)

This resource consent gives you the right to use a public resource (e.g. water, air, the coastal marine area) in the manner specified in the consent.

You may exercise the resource consent as you see fit provided that you comply with all the conditions of your resource consent and all other laws of the land.

If you wish to change the way you operate under this resource consent or if you wish to change or cancel any consent conditions, please contact the Wellington Regional Council (hereafter referred to as Greater Wellington) prior to making the changes. You may need a formal change to your resource consent conditions.

You may transfer your coastal, discharge, or water permit to any other person. If you sell your operation please contact Greater Wellington and we will arrange the transfer. The service is free of charge.

If your resource consent application contained inaccurate or misleading information, Greater Wellington may cancel or alter the resource consent.

Your resource consent does not:

- provide any warranty of any structure or process;
- provide any guarantee that the resource will be available at all times;
- provide any right of access through or over public or private land;
- negate the need for any approvals necessary under other legislation.

You, as the holder(s) of this resource consent and your agents (including contractors and employees), are jointly and severally liable for compliance with the conditions of this consent. It is important that anyone operating on your behalf fully understands and complies with the conditions of the resource consent.

You are required to pay any relevant charges that are associated with the consent. Greater Wellington fixes these charges under section 36 of the Resource Management Act 1991. The Act allows you to comment on any proposed charges *prior to them being fixed*. Charges may be reviewed every year. If you would like a copy of our current Resource Management Charging Policy please ask us.

You are required to allow Greater Wellington Enforcement Officers access to your site and operation at any reasonable time so that we can inspect your operation and confirm that it is complying with the resource consent.

Your resource consent will lapse if you do not give effect to it within five years of the date it was granted (unless otherwise specified in the resource consent conditions). If you wish to apply for an extension of this lapse date please contact Greater Wellington before the lapse date.

If you stop using your resource consent for a continuous five-year period, Greater Wellington may cancel your resource consent. We will advise you in advance if we propose to cancel your consent. You have the right to object to your consent being cancelled.

This consent is issued without prejudice to any claim that is lodged with the Waitangi Tribunal in relation to the customary ownership of natural resources, whether it be a claim that is awaiting hearing or awaiting settlement by the Crown.

Conditions to Resource Consent WGN110099 [30687]

General condition

1. The location, design, implementation and operation of the activity/structure shall be in general accordance with the consent application and its associated plans and documents lodged with the Wellington Regional Council on 17 September 2010.

For the avoidance of doubt, where information contained in the application is contrary to conditions of this consent, the conditions shall prevail.

2. The consent holder shall ensure that a copy of this consent and all documents and plans referred to in this consent, are kept on site at all times and presented to any Wellington Regional Council officer on request.

Receiving water standards

3. The discharge of stormwater and /or washwater shall not result in any of the following effects in the Ngauranga Stream after reasonable mixing in up to a 2 year return period rain event downstream of the two discharge points:

- The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
- Any conspicuous change in colour or visual clarity;
- Any emission of objectionable odour;
- Any significant adverse effects on aquatic life.

Note: A two year rain event is deemed to have occurred when more than 60mm of rain has been recorded at the Greater Wellington Regional Council, Seton Nossiter Park raingauge monitoring site, over a 12 hour period.

Suspended solids and pH levels

4. During wet weather (in up to a two year return period event) the suspended solids content of the discharge shall not exceed 120g/m³.
5. During dry weather the suspended solids content of the discharge shall not exceed 15g/m³ unless prior approval is received from the Manager, Environmental Regulation, Wellington Regional Council.
6. The consent holder shall take all practicable steps to minimise the suspended solid content of any discharge to the Ngauranga Stream from the Kiwi Point Quarry site.
7. The consent holder shall ensure that the pH level of the treated stormwater and/or washwater discharge to the Ngauranga Stream does not drop below 5.5 unless prior approval is received from the Manager, Environmental Regulation, Wellington Regional Council.

Ongoing maintenance

8. The consent holder shall ensure that all aspects of the water treatment system are maintained and operated to minimise any discharge to the Ngauranga Stream from the Kiwi Point Quarry site. This should include but not necessarily be limited to reusing water on site.
9. The operation and maintenance of the water treatment system shall be to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

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Monitoring and reporting requirements

10. To monitor compliance with conditions 4, 5, and 7 of this consent the consent holder shall establish monitoring locations for the treated stormwater and/or washwater discharge and for the Ngauranga Stream up stream of the discharge. The monitoring locations shall be supplied to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council within 1 month of the grant of this consent.
11. The consent holder shall undertake sampling at the locations established in condition 10 of this consent whenever 20mm or more of rain has been received (measured from the Greater Wellington Regional Council Seton Nossiter Park raingauge monitoring site) during the preceding 24 hour period. These samples shall be analysed for suspended solid content and ph level.
12. In addition to the sampling undertaken in accordance with condition 11 of this consent, the consent holder shall undertake sampling at the location established in accordance with condition 10 of this consent on a monthly basis. These samples shall be analysed for suspended solid content and ph level.
13. If results from monitoring undertaken in accordance with condition 11 and 12 of this consent show suspended solid concentrations of the treated stormwater and/or wash water exceed 120g/m³ the consent holder shall notify the Manager Environmental Regulation, Wellington Regional Council as soon as possible but no later than 48 hours after the result is detected. The consent holder shall then liaise with the Manager Environmental Regulation, Wellington Regional Council on an appropriate course of action.
14. If results from monitoring undertaken in accordance with condition 11 and 12 of this consent indicate that the discharge of the treated stormwater and/or wash water has a ph level of at, or below 5.5, the dosing of water with liquid coagulant and/or flocculant shall cease immediately. In this event the Manager Environmental Regulation, Wellington Regional Council shall be notified as soon as possible, and within 48 hours of the result being detected. The consent holder shall then liaise with the Manager Environmental Regulation, Wellington Regional Council on an appropriate course of action.
15. The results of samples undertaken in accordance with conditions 11 and 12 of this consent shall be keep as a permanent record and shall be submitted to the Manager Environmental Regulation in the form of a annual report no later that 30 June each year, or on request.
16. The consent holder shall undertake ongoing investigation and implementation of measures to reduce suspended solid concentrations in discharges to the Ngauranga Stream. The investigation shall be undertaken to the satisfaction of the Manager, Environmental Regulation, Greater Wellington Regional Council.
17. The consent holder shall submit the results of the investigation including measures implemented undertaken in accordance with condition 16 of this consent to the Manager, Environmental Regulation, Greater Wellington Regional Council as part of the annual report required by condition 15 of this consent.

Review

18. The Wellington Regional Council may review any or all conditions of this consent by going notice to do so pursuant to section 128 of the Resource Management Act 1991, at any time within six months of the second and fifth anniversary of the date of grant of this consent for either of the following purposes:
 - To review the adequacy, and if necessary amend the monitoring requirements outlined in this consent, and/or
 - To address any adverse effects on the environment which may arise from the exercise of this consent.

The review of conditions shall allow for the deletion or amendment of conditions of this consent, and the addition of such new conditions as are shown to be necessary to avoid, remedy or mitigate any adverse significant adverse effects in the environment.

Note: Additional resource consents from your local council may be required to undertake this proposal. We advise you to contact the Wellington City Council prior to commencing works.

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RESOURCE MANAGEMENT ACT 1991
Consent No. WGN060255 [25159]
Category: Land use consent

Pursuant to sections 104C and 108, and subject to all the relevant provisions of the Resource Management Act 1991 and any regulations made thereunder, a consent in respect of a natural resource is hereby granted to:

Name	Kiwi Point Quarry Business Unit, Wellington City Council	
Address	PO Box 2199, Wellington 6140	
Term of consent	Effective: 28 November 2006	Expires: 28 November 2016
Purpose for which right is granted	To undertake soil disturbance and vegetation clearance on erosion-prone land.	
Location	Kiwi Point Quarry, Ngauranga Gorge at or about map reference NZMS 260. R27;610.954	
Legal description of land	Lots 1, 2 and 3 DP 72995, Lots 4, 5 and 6 DP 72996, Lot 1 DP 65030, Lot 1 DP 34015, Sec 1 SO 37539, Sec 1 SO 36728.	
Conditions	1-13 as attached	

For and on behalf of
 WELLINGTON REGIONAL COUNCIL

Manager, Environmental Regulation

Date: 28 November 2006



Summary of your rights and responsibilities

(Not part of the resource consent)

This resource consent gives you the right to use a public resource (e.g. water, air, the coastal marine area) in the manner specified in the consent.

You may exercise the resource consent how you see fit provided that you comply with all the conditions of your resource consent and all other laws of the land.

If you wish to change the way you operate under this resource consent or if you wish to alter or delete any consent conditions, please contact the Wellington Regional Council (hereafter referred to as Greater Wellington) prior to making the changes. You may need a formal variation to your resource consent conditions.

You may transfer your coastal, discharge, or water permit to any other person. So if you sell your operation please contact Greater Wellington and we will arrange the transfer. The service is free of charge.

If your resource consent application contained inaccurate or misleading information Greater Wellington may ask the Environment Court to cancel or alter the resource consent.

Your resource consent does not:

- provide any warranty of any structure or process;
- provide any guarantee that the resource will be available at all times;
- provide any right of access through or over public or private land;
- negate the need for any approvals necessary under other legislation.

You, as the holder(s) of this resource consent and your agents (including contractors and employees), are jointly and severally liable for compliance with the conditions of this consent. It's important that anyone operating on your behalf fully understands and complies with the conditions of the resource consent.

You are required to pay any relevant charges that are associated with the consent. Greater Wellington fixes these charges under section 36 of the Resource Management Act 1991. The Act allows you to comment on any proposed charges *prior to them being fixed*. Charges are usually fixed every three years. If you would like a copy of our current Resource Management Charging Policy please ask us.

You are required to allow Greater Wellington Enforcement Officers access to your site and operation at any reasonable time so that we can inspect your operation and confirm that it is complying with the resource consent.

Your resource consent will lapse if you do not exercise it within five years of the date it was granted (unless otherwise specified in the resource consent conditions). If this lapsing is going to be a problem for you please contact Greater Wellington before the lapse date.

If you stop using your resource consent for a continuous five-year period, Greater Wellington may cancel your resource consent. We will advise you in advance if we propose to cancel your consent. You also have the right to object to your consent being cancelled.

This consent is issued without prejudice to any claim that is lodged with the Waitangi Tribunal in relation to the customary ownership of natural resources, whether it be a claim that is pending hearing or whether it is a claim that is awaiting settlement by the Crown.

Conditions to Resource Consent WGN060255 [25159]

- (1) The location, design, implementation and operation of the works shall be in accordance with the consent application and its associated plans and documents lodged with the Wellington Regional Council on 10 March 2006 and further information lodged 3 April 2006, 29 May 2006 and 17 October 2006.

Note: For the purposes of clarity, where there is inconsistencies between the information provided at different times, the most recent information applies; and where there are inconsistencies between the information provided and the conditions of this consent, the conditions shall prevail.

- (2) The Manager, Environmental Regulation, Wellington Regional Council, shall be given a minimum of 48 hours notice prior to the works commencing in each development Area (identified as Areas D, G and F in Survey Drawing number 0068R055 supplied on 29 May 2006).
- (3) The consent holder shall provide a copy of this consent, including conditions, and site plans lodged with the application, and the erosion and sediment control plan to any contractor undertaking works authorised by this consent, prior to works commencing.
- (4) A copy of this consent, and the Erosion and Sediment Control Plan for each area (as referred to in condition 2) shall be held on site for the duration of works and be made available to any Wellington Regional Council officer on request.
- (5) An annual work programme shall be provided by 31 May each year. The work programme shall outline the general work in each area (as referred to in condition 2) to be undertaken over the next 12 months.
- (6) The consent holder shall prepare an Erosion and Sediment Control Plan (ESCP) for each Area and submit that ESCP to the Manager, Environmental Regulation, Wellington Regional Council for approval, at least 5 working days prior to works commencing in that Area. The ESCP shall include the following:
- Details of what erosion and sediment control measures are to be implemented, and design information regarding these;
 - Location of individual erosion and sediment control measures;
 - Catchment boundaries for the sediment controls, and stormwater flow directions;
 - A maintenance schedule for all sediment control measures, and a template checklist to be used for weekly/monthly compliance audits by consent holder;
 - A staging programme for managing the exposed areas, including progressive stabilisation; and
 - The identification of experienced staff to ensure the consent conditions and ESCP are adhered to, and emergency contact phone number(s) for those persons.

The consent holder shall obtain the written approval of the Manager, Environmental Regulation, Wellington Regional Council for the ESCP prior to soil disturbance commencing. Any amendments to the ESCP shall also be approved in writing.

- (7) The consent holder shall ensure that all sediment-laden runoff from the site is treated in accordance with any ESCP approved under condition 6.
- (8) All works and measures details in each ESCP shall be operational prior to commencement of works within each area, and be maintained to perform at full operational capacity until each area has been adequately stabilised in accordance with condition 11.

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- (9) All erosion and sediment control measures shall be installed, operated and maintained in accordance with the Erosion and Sediment Control Guidelines for the Wellington Region (September 2002) unless written approval has been obtained for the Manager, Environmental Regulation, Wellington Regional Council.
- (10) All 'clearwater' runoff from stabilised and unexposed surfaces including catchment areas above each site shall, as far as practicable, be diverted away from exposed areas.
- (11) No erosion or sediment control measures implemented under the ESCP are to be removed unless that removal is first approved by the Manager, Environmental Regulation, Wellington Regional Council, or the relevant site or area is stabilised.

For the purposes of this condition "stabilised" in relation to a site or areas means an area inherently resistant to erosion or rendered resistant, such as by using indurated rock or by the application of basecourse, colluvium, grassing, mulch, or another method to the reasonable satisfaction of the Manager, Environmental Regulation, Wellington Regional Council. Areas of disturbed land that are greater than 280 from horizontal shall be stabilised by the planting of woody species. Where seeding or grassing is used on a surface that is not otherwise resistant to erosion, the surface is considered stabilised once, on reasonable visual inspection by a Wellington Regional Council officer, an 80% vegetative ground cover has been established.

- (12) The consent holder shall take all practicable steps to minimise sedimentation and increased turbidity in surface water as a result of any soil disturbance, including:
- (a) installing and maintaining appropriate sediment control measures;
 - (b) completing all works in the minimum time practicable,
 - (c) avoiding working in extended wet periods; and
 - (d) ensuring, as far as practicable, soil and excavated material is kept well away from flowing water.
- (13) All works including tidy up on completion of the works shall be to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.



RESOURCE MANAGEMENT ACT 1991

Consent No. WGN050352 [24519]

Category: Water permit

Pursuant to sections 104B and 108, and subject to all the relevant provisions of the Resource Management Act 1991 and any regulations made thereunder, a consent in respect of a natural resource is hereby granted to:

Name	Kiwi Point Quarry Business Unit, Wellington City Council	
Address	P O Box 2199, Wellington	
Term of consent	Effective: 22 August 2005	Expires: 22 August 2040
Purpose for which right is granted	To permanently divert the upper section of a tributary of the Ngauranga Stream, and to temporarily divert the lower section of a tributary of the Ngauranga Stream.	
Location	Kiwi Point Quarry, Ngauranga Gorge between approximate map references NZMS 260: R27:609.955 and NZMS 260:R27:610.952, and at or about map reference NZMS 260: R27:612.948	
Legal description of land	Lot 1, 2 and 3 DP 72996, Lot 4 DP 72996	
Volume/quantity/rate	NA	
Conditions	1-8 as attached	

For and on behalf of
WELLINGTON REGIONAL COUNCIL

Manager, Consents Management

Date: 22 August 2005



Summary of your rights and responsibilities

(Not part of the resource consent)

This resource consent gives you the right to use a public resource (e.g. water, air, the coastal marine area) in the manner specified in the consent.

You may exercise the resource consent how you see fit provided that you comply with all the conditions of your resource consent and all other laws of the land.

If you wish to change the way you operate under this resource consent or if you wish to alter or delete any consent conditions, please contact the Wellington Regional Council (hereafter referred to as Greater Wellington) prior to making the changes. You may need a formal variation to your resource consent conditions.

You may transfer your coastal, discharge, or water permit to any other person. So if you sell your operation please contact Greater Wellington and we will arrange the transfer. The service is free of charge.

If your resource consent application contained inaccurate or misleading information Greater Wellington may ask the Environment Court to cancel or alter the resource consent.

Your resource consent does not:

- provide any warranty of any structure or process;
- provide any guarantee that the resource will be available at all times;
- provide any right of access through or over public or private land;
- negate the need for any approvals necessary under other legislation.

You, as the holder(s) of this resource consent and your agents (including contractors and employees), are jointly and severally liable for compliance with the conditions of this consent. It's important that anyone operating on your behalf fully understands and complies with the conditions of the resource consent.

You are required to pay any relevant charges that are associated with the consent. Greater Wellington fixes these charges under section 36 of the Resource Management Act 1991. The Act allows you to comment on any proposed charges prior to them being fixed. Charges are usually fixed every three years. If you would like a copy of our current Resource Management Charging Policy please ask us.

You are required to allow Greater Wellington Enforcement Officers access to your site and operation at any reasonable time so that we can inspect your operation and confirm that it is complying with the resource consent.

Your resource consent will lapse if you do not exercise it within five years of the date it was granted (unless otherwise specified in the resource consent conditions). If this lapsing is going to be a problem for you please contact Greater Wellington before the lapse date.

If you stop using your resource consent for a continuous five-year period, Greater Wellington may cancel your resource consent. We will advise you in advance if we propose to cancel your consent. You also have the right to object to your consent being cancelled.

This consent is issued without prejudice to any claim that is lodged with the Waitangi Tribunal in relation to the customary ownership of natural resources, whether it be a claim that is pending hearing or whether it is a claim that is awaiting settlement by the Crown.

Conditions to Resource Consent

WGN050352 [24519]

- (1) The location, design, implementation and operation of the works shall be in accordance with the consent application and its associated plans and documents lodged with the Wellington Regional Council on 2 June 2005 and 13 June 2005.
- (2) The Manager, Consents Management, Wellington Regional Council, shall be given a minimum of 48 hours notice prior to the diversion takes place.
- (3) The permit holder shall pass a copy of this permit including any relevant site plans and attachments to the operator undertaking the works.
- (4) The permit holder shall take all practicable steps to minimise sedimentation and increased turbidity in the stream as a result of the works, including:
 - (a) undertaking the work during dry weather and when stream flows are low to moderate;
 - (b) completing all works in the minimum time practicable;
 - (c) avoiding excavated material from entering the flowing channel;
 - (d) minimising works in the flowing channel where practicable;
 - (e) ensuring the digger spends as little time as practicable in the active flowing channel of the stream; and
 - (f) constructing diversion channels in the dry as far as is practicable.
- (5) No contaminants (including but not limited to oil, petrol, diesel and hydraulic fluid) shall be released into the water from equipment being used for the works. No machinery or equipment shall be cleaned, stored or refuelled within 10 metres of the stream bed, and all machinery shall be well maintained at all times to prevent leakage or spillage of oil or other chemicals into the stream.
- (6) Any erosion of the stream bank or bed (including at the confluence with the Ngauranga Stream) that is attributable to the diversion of water carried out as part of this consent shall be repaired by the consent holder, to the satisfaction of the Manager, Consents Management, Wellington Regional Council.
- (7) The permit holder shall ensure that any fish that are stranded during the diversion of water are immediately placed back in the active flowing channel.
- (8) All works affecting the stream including tidy up on completion of the works shall be to the satisfaction of the Manager, Consents Management, Wellington Regional Council.

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RESOURCE MANAGEMENT ACT 1991

Consent No. WGN060255 [25260]

Category: Land use consent

Pursuant to sections 104B and 108, and subject to all the relevant provisions of the Resource Management Act 1991 and any regulations made thereunder, a consent in respect of a natural resource is hereby granted to:

Name	Kiwi Point Quarry Business Unit, Wellington City Council	
Address	PO Box 2199, Wellington 6140	
Term of consent	Effective: 28 November 2006	Expires: 28 November 2041
Purpose for which right is granted	To pipe a 20-metre section of a tributary of the Ngauranga Stream and carry out associated disturbance of the stream bed.	
Location	Kiwi Point Quarry, Ngauranga Gorge at or about map reference NZMS 260: R27;613,949	
Legal description of land	Lot 5 DP 72996.	
Conditions	1-9 as attached	

For and on behalf of
 WELLINGTON REGIONAL COUNCIL

Manager, Environmental Regulation

Date: 28 November 2006

Summary of your rights and responsibilities

(Not part of the resource consent)

This resource consent gives you the right to use a public resource (e.g. water, air, the coastal marine area) in the manner specified in the consent.

You may exercise the resource consent how you see fit provided that you comply with all the conditions of your resource consent and all other laws of the land.

If you wish to change the way you operate under this resource consent or if you wish to alter or delete any consent conditions, please contact the Wellington Regional Council (hereafter referred to as Greater Wellington) prior to making the changes. You may need a formal variation to your resource consent conditions.

You may transfer your coastal, discharge, or water permit to any other person. So if you sell your operation please contact Greater Wellington and we will arrange the transfer. The service is free of charge.

If your resource consent application contained inaccurate or misleading information Greater Wellington may ask the Environment Court to cancel or alter the resource consent.

Your resource consent does not:

- provide any warranty of any structure or process;
- provide any guarantee that the resource will be available at all times;
- provide any right of access through or over public or private land;
- negate the need for any approvals necessary under other legislation.

You, as the holder(s) of this resource consent and your agents (including contractors and employees), are jointly and severally liable for compliance with the conditions of this consent. It's important that anyone operating on your behalf fully understands and complies with the conditions of the resource consent.

You are required to pay any relevant charges that are associated with the consent. Greater Wellington fixes these charges under section 36 of the Resource Management Act 1991. The Act allows you to comment on any proposed charges prior to them being fixed. Charges are usually fixed every three years. If you would like a copy of our current Resource Management Charging Policy please ask us.

You are required to allow Greater Wellington Enforcement Officers access to your site and operation at any reasonable time so that we can inspect your operation and confirm that it is complying with the resource consent.

Your resource consent will lapse if you do not exercise it within five years of the date it was granted (unless otherwise specified in the resource consent conditions). If this lapsing is going to be a problem for you please contact Greater Wellington before the lapse date.

If you stop using your resource consent for a continuous five-year period, Greater Wellington may cancel your resource consent. We will advise you in advance if we propose to cancel your consent. You also have the right to object to your consent being cancelled.

This consent is issued without prejudice to any claim that is lodged with the Waitangi Tribunal in relation to the customary ownership of natural resources, whether it be a claim that is pending hearing or whether it is a claim that is awaiting settlement by the Crown.

Conditions to Resource Consent WGN060255 [25260]

- (1) The location, design, implementation and operation of the works shall be in accordance with the consent application and its associated plans and documents lodged with the Wellington Regional Council on 10 March 2006 and further information lodged 3 April 2006, 29 May 2006 and 17 October 2006.
- (2) The Manager, Environmental Regulation, Wellington Regional Council, shall be given a minimum of 48 hours notice prior to the works commencing.
- (3) The consent holder shall provide a copy of this consent, including conditions, and site plans lodged with the application to any contractor undertaking works authorised by this consent, prior to works commencing.
- (4) A copy of this consent shall be held on site for the duration of the works and be made available to any Wellington Regional Council officer upon request.
- (5) The consent holder shall take all practicable steps to minimise sedimentation and increased turbidity in the stream as a result of the works, including:
 - (a) undertaking the work during dry weather and when stream flows are low to moderate;
 - (b) completing all works in the minimum time practicable;
 - (c) avoiding excavated material from entering the flowing channel;
 - (d) diverting or pumping, or both, the flow of the stream around the work site during excavation and construction works, and
 - (e) ensuring, as far as practicable, that no construction materials or debris enter flowing water.
- (6) No contaminants (including but not limited to oil, petrol, diesel and hydraulic fluid) shall be released into the water from equipment being used for the works. No machinery or equipment shall be cleaned, stored or refuelled within 10 metres of the stream bed, and all machinery shall be well maintained at all times to prevent leakage or spillage of oil or other chemicals into the stream.
- (7) The works shall remain the responsibility of the consent holder and shall be maintained so that
 - (a) any erosion of the stream bed or banks (including at the confluence with the Ngauranga Stream) that is attributable to the works carried out as part of this consent is repaired by the consent holder, to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council; and
 - (b) fish passage is not impeded upon completion of the works.
- (8) The consent holder shall ensure that any fish that are stranded during the works are immediately placed back in the clear flowing water.
- (9) All works affecting the stream including tidy up on completion of the works shall be to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.



RESOURCE MANAGEMENT ACT 1991

Consent No. WGN050352 [24518]

Category: Land use consent

Pursuant to sections 104B and 108, and subject to all the relevant provisions of the Resource Management Act 1991 and any regulations made thereunder, a consent in respect of a natural resource is hereby granted to:

Name	Kiwi Point Quarry Business Unit, Wellington City Council	
Address	P O Box 2199, Wellington	
Term of consent	Effective: 22 August 2005	Expires: 22 August 2040
Purpose for which right is granted	To pipe and reclaim two sections of a tributary of the Ngauranga Stream, and carry out the associated disturbance of the stream bed.	
Location	Kiwi Point Quarry, Ngauranga Gorge between approximate map references NZMS 260: R27,609.955 and NZMS 260:R27,610.952, and at or about map reference NZMS 260: R27,612.948	
Legal description of land	Lot 1, 2 and 3 DP 72995, Lot 4 DP 72996	
Volume/quantity/rate	NA	
Conditions	1-8 as attached	

For and on behalf of
WELLINGTON REGIONAL COUNCIL

Manager, Consents Management

Date: 22 August 2005



Summary of your rights and responsibilities

(Not part of the resource consent)

This resource consent gives you the right to use a public resource (e.g. water, air, the coastal marine area) in the manner specified in the consent.

You may exercise the resource consent how you see fit provided that you comply with all the conditions of your resource consent and all other laws of the land.

If you wish to change the way you operate under this resource consent or if you wish to alter or delete any consent conditions, please contact the Wellington Regional Council (hereafter referred to as Greater Wellington) prior to making the changes. You may need a formal variation to your resource consent conditions.

You may transfer your coastal, discharge, or water permit to any other person. So if you sell your operation please contact Greater Wellington and we will arrange the transfer. The service is free of charge.

If your resource consent application contained inaccurate or misleading information Greater Wellington may ask the Environment Court to cancel or alter the resource consent.

Your resource consent does not:

- provide any warranty of any structure or process;
- provide any guarantee that the resource will be available at all times;
- provide any right of access through or over public or private land;
- negate the need for any approvals necessary under other legislation.

You, as the holder(s) of this resource consent and your agents (including contractors and employees), are jointly and severally liable for compliance with the conditions of this consent. It's important that anyone operating on your behalf fully understands and complies with the conditions of the resource consent.

You are required to pay any relevant charges that are associated with the consent. Greater Wellington fixes these charges under section 36 of the Resource Management Act 1991. The Act allows you to comment on any proposed charges prior to them being fixed. Charges are usually fixed every three years. If you would like a copy of our current Resource Management Charging Policy please ask us.

You are required to allow Greater Wellington Enforcement Officers access to your site and operation at any reasonable time so that we can inspect your operation and confirm that it is complying with the resource consent.

Your resource consent will lapse if you do not exercise it within five years of the date it was granted (unless otherwise specified in the resource consent conditions). If this lapsing is going to be a problem for you please contact Greater Wellington before the lapse date.

If you stop using your resource consent for a continuous five-year period, Greater Wellington may cancel your resource consent. We will advise you in advance if we propose to cancel your consent. You also have the right to object to your consent being cancelled.

This consent is issued without prejudice to any claim that is lodged with the Waitangi Tribunal in relation to the customary ownership of natural resources, whether it be a claim that is pending hearing or whether it is a claim that is awaiting settlement by the Crown.

Conditions to Resource Consent

WGN050352 [24518]

- (1) The location, design, implementation and operation of the works shall be in accordance with the consent application and its associated plans and documents lodged with the Wellington Regional Council on 2 June 2005 and 13 June 2005.
- (2) The Manager, Consents Management, Wellington Regional Council, shall be given a minimum of 48 hours notice prior to the works commencing.
- (3) The consent holder shall provide a copy of this consent, including conditions, and site plans lodged with the application to any contractor undertaking works authorised by this consent, prior to works commencing.
- (4) The consent holder shall take all practicable steps to minimise sedimentation and increased turbidity in the stream as a result of the works, including:
 - (a) undertaking the work during dry weather and when stream flows are low to moderate;
 - (b) completing all works in the minimum time practicable;
 - (c) avoiding excavated material from entering the flowing channel;
 - (d) minimising works in the flowing channel where practicable;
 - (e) ensuring the digger spends as little time as practicable in the active flowing channel of the stream;
 - (f) constructing diversion channels in the dry as far as is practicable; and
 - (g) ensuring reclamation does not occur until piping has been completed.
- (5) No contaminants (including but not limited to oil, petrol, diesel and hydraulic fluid) shall be released into the water from equipment being used for the works. No machinery or equipment shall be cleaned, stored or refuelled within 10 metres of the stream bed, and all machinery shall be well maintained at all times to prevent leakage or spillage of oil or other chemicals into the stream.
- (6) The works shall remain the responsibility of the consent holder and shall be maintained so that:
 - (a) any erosion of the stream bed or banks (including at the confluence with the Ngauranga Stream) that is attributable to the works carried out as part of this consent is repaired by the consent holder, to the satisfaction of the Manager, Consents Management, Wellington Regional Council; and
 - (b) fish passage is not impeded during the works, or upon completion of the works.
- (7) The permit holder shall ensure that any fish that are stranded during the works are immediately placed back in the clear flowing water.
- (8) All works affecting the stream including tidy up on completion of the works shall be to the satisfaction of the Manager, Consents Management, Wellington Regional Council.

22/8/05



Resource Consent

RESOURCE MANAGEMENT ACT 1991

Consent No. WGN130058 [31916]

**Category: Water permit
Surface water take**

Pursuant to sections 104B and 108, and subject to all the relevant provisions of the Resource Management Act 1991 and any regulations made thereunder, a consent in respect of a natural resource is hereby granted to:

Name	Wellington City Council	
Address	PO Box 2199, Wellington 6140	
Duration of consent	Effective: 8 November 2012	Expires: 8 November 2022
Purpose for which right is granted	To take and use surface water from the Ngauranga Stream using an existing intake structure for use at a quarry including aggregate washing and dust suppression purposes.	
Location	Ngauranga Stream, Kiwi Point Quarry at or about map reference NZTM: 1751199.5433346	
Legal description of land	Lot 2 DP 72995	
Water meter ID number	N/A	
Volume/Quantity/Rate	To take up to 12,707.5m ³ /year, at 55.25m ³ /day, at a calculated average pumping rate of 2.36 litres/second.	
Conditions	1-8 as attached	

For and on behalf of
WELLINGTON REGIONAL COUNCIL


.....
Manager, Environmental Regulation

Date: 8 / 11 / 2012

Summary of your rights and responsibilities

(Not part of the resource consent)

This resource consent gives you the right to use a public resource (e.g. water, air, the coastal marine area) in the manner specified in the consent.

You may exercise the resource consent as you see fit provided that you comply with all the conditions of your resource consent and all other laws of the land.

If you wish to change the way you operate under this resource consent or if you wish to change or cancel any consent conditions, please contact the Wellington Regional Council (hereafter referred to as Greater Wellington) prior to making the changes. You may need a formal change to your resource consent conditions.

You may transfer your coastal, discharge, or water permit to any other person. If you sell your operation please contact Greater Wellington and we will arrange the transfer. The service is free of charge.

If your resource consent application contained inaccurate or misleading information, Greater Wellington may cancel or alter the resource consent.

Your resource consent does not:

- provide any warranty of any structure or process;
- provide any guarantee that the resource will be available at all times;
- provide any right of access through or over public or private land;
- negate the need for any approvals necessary under other legislation.

You, as the holder(s) of this resource consent and your agents (including contractors and employees), are jointly and severally liable for compliance with the conditions of this consent. It is important that anyone operating on your behalf fully understands and complies with the conditions of the resource consent.

You are required to pay any relevant charges that are associated with the consent. Greater Wellington fixes these charges under section 36 of the Resource Management Act 1991. The Act allows you to comment on any proposed charges *prior to them being fixed*. Charges may be reviewed every year. If you would like a copy of our current Resource Management Charging Policy please ask us.

You are required to allow Greater Wellington Enforcement Officers access to your site and operation at any reasonable time so that we can inspect your operation and confirm that it is complying with the resource consent.

Your resource consent will lapse if you do not give effect to it within five years of the date it was granted (unless otherwise specified in the resource consent conditions). If you wish to apply for an extension of this lapse date please contact Greater Wellington before the lapse date.

If you stop using your resource consent for a continuous five-year period, Greater Wellington may cancel your resource consent. We will advise you in advance if we propose to cancel your consent. You have the right to object to your consent being cancelled.

This consent is issued without prejudice to any claim that is lodged with the Waitangi Tribunal in relation to the customary ownership of natural resources, whether it be a claim that is awaiting hearing or awaiting settlement by the Crown.

Conditions to Resource Consent WGN130058 [31916]

General condition

1. The location, design, implementation and operation of the take shall be in general accordance with the consent application and its associated plans and documents lodged with the Wellington Regional Council on 21 September 2012.

For the avoidance of doubt, where information contained in the application is contrary to conditions of this consent, the conditions shall prevail.

Note: Any change from the location, design concepts and parameters, implementation and/or operation may require a new resource consent or a change of consent conditions pursuant to section 127 of the Resource Management Act 1991.

Rate and point of take

2. The rate at which water is taken from the Ngauranga Stream at or about approximate map reference NZTM: 1751199.5433346 shall not exceed 12,707.5m³/year, at 55.25m³/day at a calculated average pumping rate of 2.36 litres/second.

Note 1: This equates to 6.5 hours/day and 230 days/year based on the calculated average pumping rate. The point of take, as noted in the map reference above, is deemed to be the location of the intake pipe.

Low flow condition

3. The consent holder shall ensure that the intake structure is operated and maintained such that flows in the Ngauranga Stream immediately downstream of the intake structure are maintained at all times.

Note: The intent of this condition is that no water is abstracted during times of low flow in the stream. This condition does not apply if the stream is not flowing during drought conditions.

Low flow photographs

4. The consent holder shall take photographs during the summer months each year for the duration of this consent to record low flows in the Ngauranga Stream. The photographs shall be taken on at least three occasions during the summer months (December to March inclusive) when the stream is in low flow conditions to show that no water is being abstracted at these times.

The photographs shall show the stream flow at the location of the intake structure and the stream channel immediately downstream of the intake structure.

The photographs shall be submitted to the Manager, Environmental Regulation, Wellington Regional Council by 31 March each year.

All submitted photographs shall include:

- The date and time the photographs were taken
- A description of what the photograph shows

.....  9/11/12

The photographs and details shall be to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

Note 1: Photographic records i.e. electronic picture files from digital cameras can be emailed to notifications@gw.govt.nz. Please include the consent number WGN130058 date and time photographs were taken and a description of the site location (e.g. map reference, address).

Intake structure

5. The intake structure is the responsibility of the consent holder and shall be maintained to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

Water conservation and efficient use

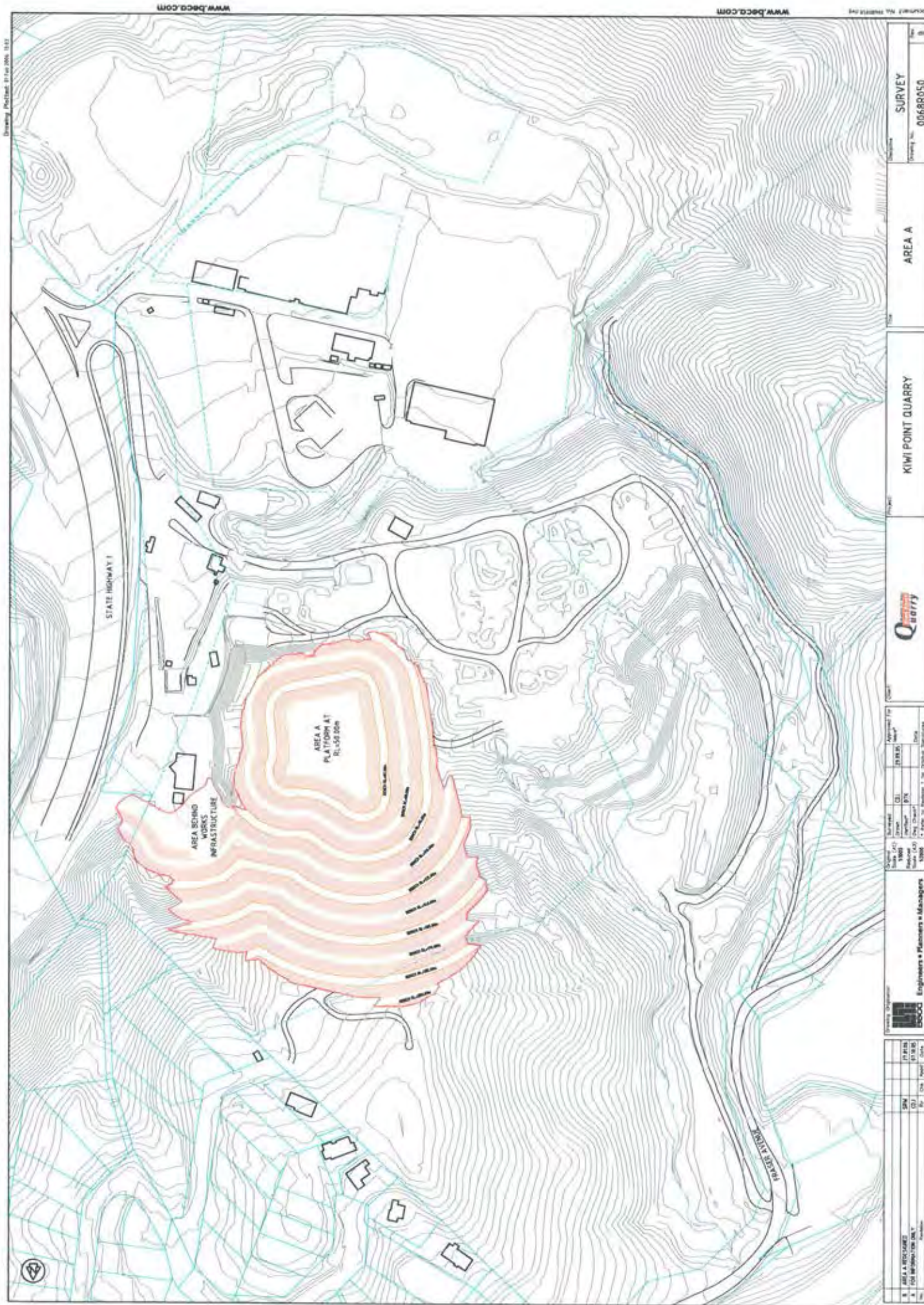
6. The reticulation system and connections shall be designed and maintained so that water does not run to waste.
7. The pump and associated equipment shall be well maintained at all times to prevent leakage or spill of oil or other chemicals into Ngauranga Stream.

Review conditions

8. The Wellington Regional Council may review any or all conditions of this consent by giving notice of its intention to do so pursuant to section 128 of the Resource Management Act 1991, at any time within three months of the 30 June each year for the duration of this consent, for the purpose of:
 - Reviewing surface water allocation requirements; and/or
 - Reviewing low flow restrictions and monitoring requirements; and/or
 - Reviewing metering and reporting requirements; and/or
 - Dealing with any adverse effects on the environment which may arise from the exercise of this consent, and which is appropriate to deal with at a later stage; and/or
 - Enabling consistency with the relevant Regional Plan(s)

..... 8/11/2012

APPENDIX 5 NORTH FACE STAGING PLANS



Drawing Modified: 21 Nov 2006 10:52

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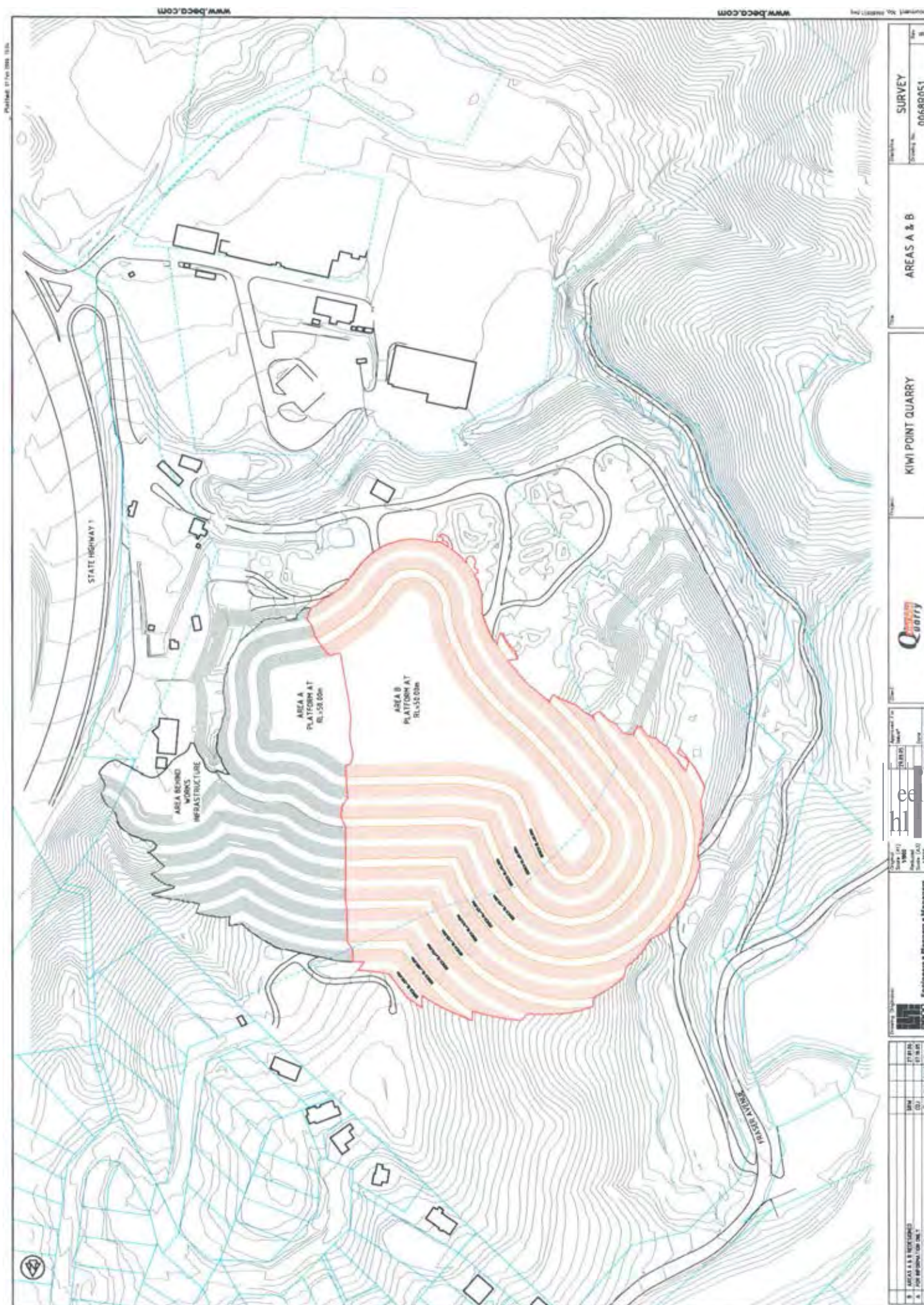
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AREA BOUNDARY WORKS INFRASTRUCTURE		KIVI POINT QUARRY	
STATE HIGHWAY 1		WATER TOWER	
AREA A PLATFORM AT RL 155.00m		AREA BOUNDARY WORKS INFRASTRUCTURE	
STATE HIGHWAY 1		WATER TOWER	



O'Connell & Barry
 Engineers & Planners & Managers
 100/102, The Esplanade, Sydney, NSW 1570
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 Fax: (02) 9550 1235
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 Website: www.ob.com.au

Scale: As Shown

01 667 8347

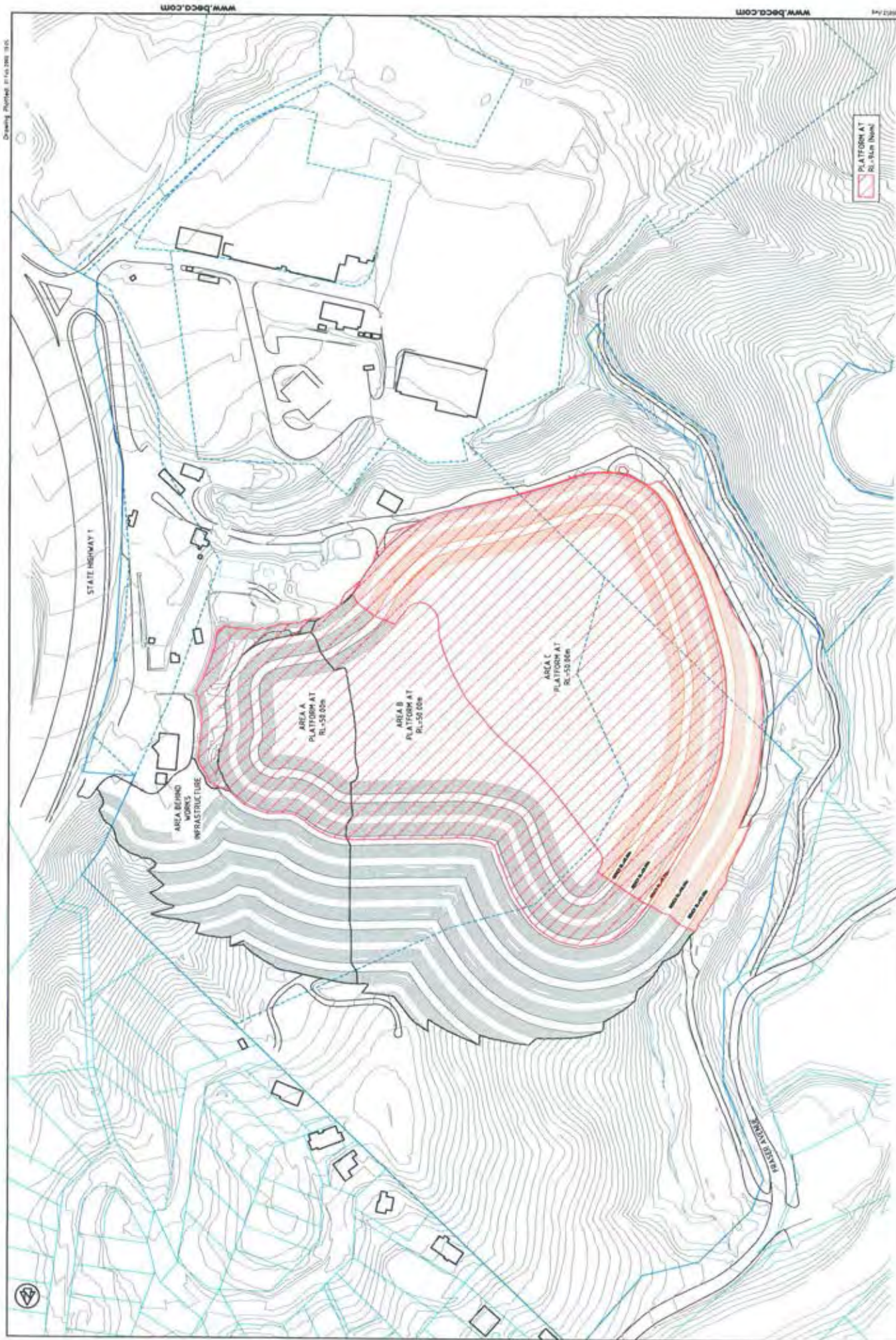


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www.beca.com

PROJECT INFORMATION PROJECT: KIWI POINT QUARRY SURVEY: 0068R051	
CLIENT INFORMATION CLIENT: Quarry	
DATE INFORMATION DATE: 17/10/2011 TIME: 11:18:00	
PROJECT MANAGER PROJECT MANAGER: Engineers & Planners & Managers	
PROJECT LOCATION PROJECT LOCATION: 10101	
PROJECT STATUS PROJECT STATUS: 10101	
PROJECT DESCRIPTION PROJECT DESCRIPTION: 10101	
PROJECT CONTACT PROJECT CONTACT: 10101	
PROJECT NOTES PROJECT NOTES: 10101	

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 Time: 11:18:00
 Project: 10101
 Survey: 0068R051
 Client: Quarry
 Project Manager: Engineers & Planners & Managers
 Project Location: 10101
 Project Status: 10101
 Project Description: 10101
 Project Contact: 10101
 Project Notes: 10101



Drawing Number: 01/15/2008/1015



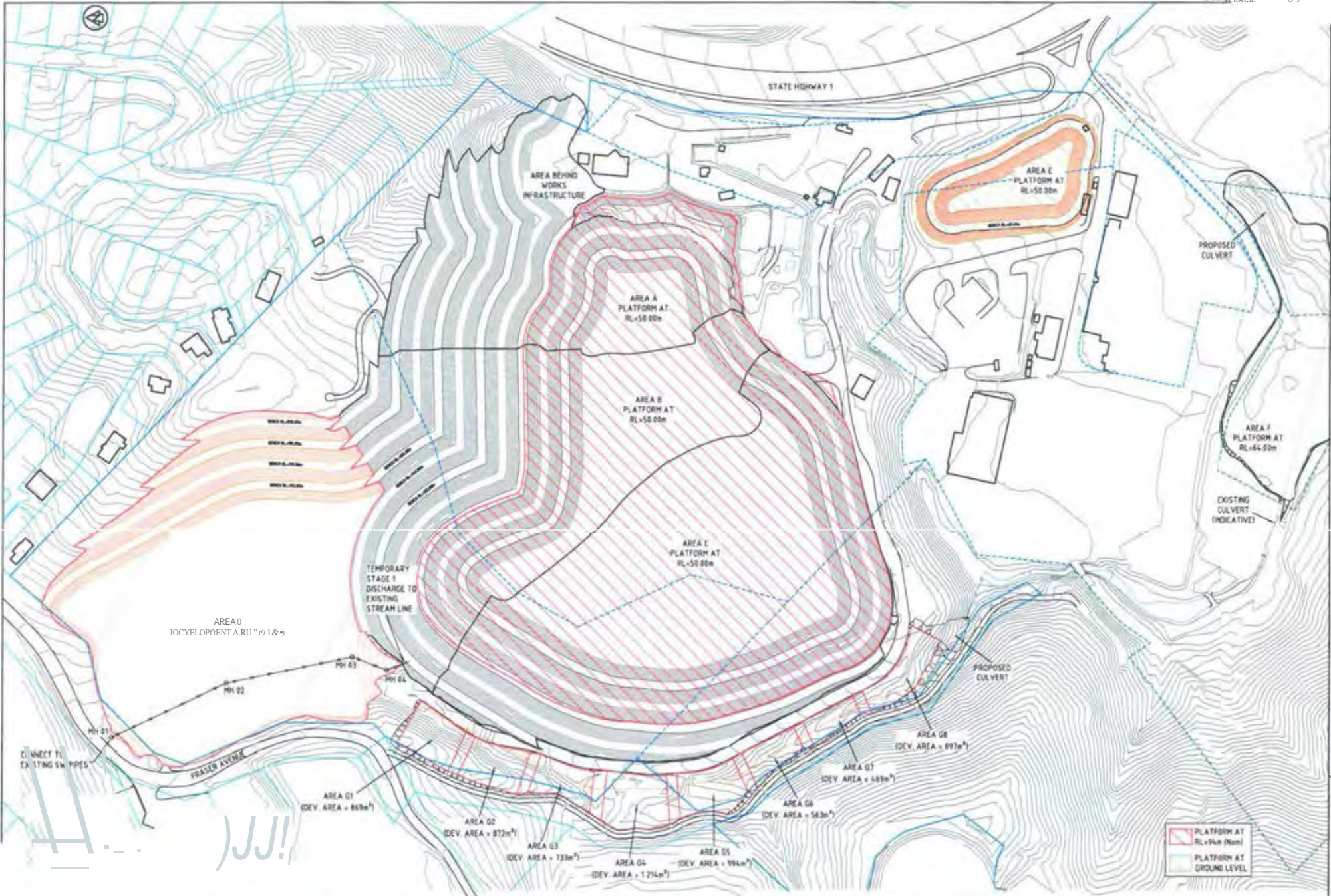
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PLATFORM AT
RL=50m (N/A)

DRCC Engineers & Planners & Managers		Quarry 05 407 5040		PROJECT KIWI POINT QUARRY		AREA AREAS A, B & C		SURVEY 0068R052	
Date: 01/15/2008 Scale: 1:1000 Author: [Name] Checker: [Name] Approver: [Name]	Project No: 0068R052 Drawing No: 01/15/2008/1015	Station: 100 Elevation: 55.00m Area: 10000 sqm	Station: 100 Elevation: 50.00m Area: 10000 sqm	Station: 100 Elevation: 50.80m Area: 10000 sqm	Station: 100 Elevation: 50.00m Area: 10000 sqm	Station: 100 Elevation: 50.00m Area: 10000 sqm	Station: 100 Elevation: 50.00m Area: 10000 sqm	Station: 100 Elevation: 50.00m Area: 10000 sqm	Station: 100 Elevation: 50.00m Area: 10000 sqm

Drawing Number: 01/15/2008/1015



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1	JAMU.BHUIS	CHM/CSC/GG/IN.YL.IF.AIOO
2	A. Fatt	

DATE	BY	CHK	APP
20.01.24	21.01.24	21.01.24	

 BEOG Engineers • Planners • Managers	Drawing Designer: Checked: Date:	Original Scale (A1): 1:500 Reduced Scale (A3): 1:2000 * Refer to Revision 1 for Original Signatures	Approved For: Date:
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Quarry

Project: **KIWI POINT QUARRY**

File: **AREAS A - G**

Drawing No: **0068R053**
 Sheet: **8**





KIWI POINT QUARRY
AREA A&B





KIWI POINT QUARRY
AREAS A, B, C, D & G





KIWI POINT QUARRY
AREAS A, B, C, D & G
BACKFILLED



APPENDIX 6 SOUTH FACE CONCEPT STAGING PLANS



Stage 1 - Initial Road Access to South Face (Volume=21,500m³)



End of Stage 1 - View looking towards South Face



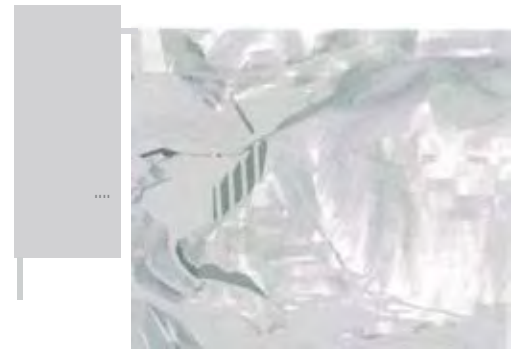
End of Stage 1 - View looking towards North Face

RL Q4

Stage 2 - Excavation of South Face to RL94 (Volume=305,400m³)



End of Stage 2 - View looking towards South Face



End of Stage 2 - View looking towards North Face

KIWI POINT QUARRY SOUTHERN EXTENSION Development - Stages 1-2

BOFFA
MISKELL

NOTES ON ILLUSTRATIONS

The view from the oblique viewpoints, shown in the illustrations, is for information only. The final design will be finished with detailed benching, gradients and ground conditions to appear more natural and in accordance with the site plan.

NOTES ON ILLUSTRATIONS

The view from the oblique viewpoints, shown in the illustrations, is for information only. The final design will be finished with detailed benching, gradients and ground conditions to appear more natural and in accordance with the site plan.

mm!!!J
m II: !D
FIGURE 20
1 - May 2004

Stage 3A- Excavation of South Face to

RL52(Volume=1,035,500m3)



End of Stage 3A- View looking towards South Face



End of Stage 3A- View looking towards North Face



End of Stage 36 - View looking towards South Face



End of Stage 36- View looking towards North Face

Stage 38 - Advanced Excavation of South Face at RL52

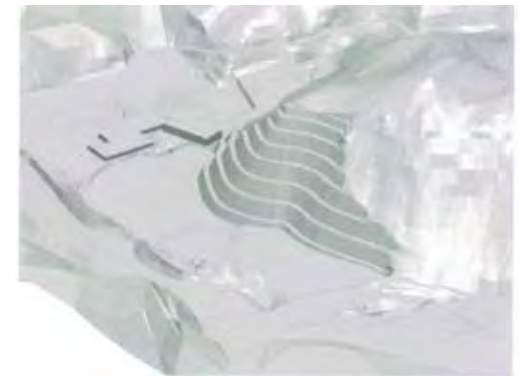
RL84

RL52

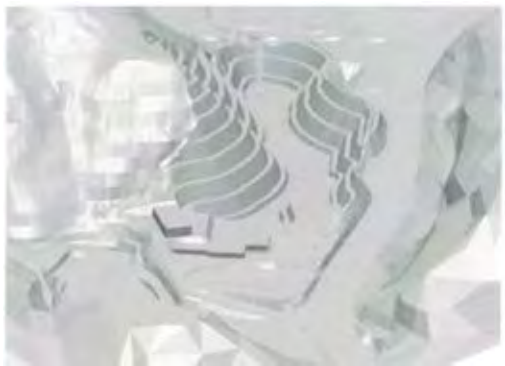
Stage 4 - Excavation to RL52 (Volume=1,078,800m3)



End of Stage 4 - View looking towards South Face



End of Stage 4 - View looking towards North Face



End of Stage 5 - View looking towards South Face



End of Stage 5 - View looking towards North Face



End of Stage 6 - View looking towards South Face



End of Stage 6 - View looking towards North Face

APPENDIX 7 BUDGET DETAILS 08/09 TO 18/19

C556 - Kiwi Point Quarry	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Re vegetation											
Retired pasture											
Fencing	5,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Planting	11,000	27,000	27,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000
Removal of pine trees- Buffer zone		13,000					2,000				
Planting buffer zone			2,000	1,000							
Weed and pest control buffer zone			1,000	1,000	1,000	1,000					
Annual rehabilitation planting plan preparation		8,000	5,000	5,000	8,000	5,000	5,000	8,000	5,000	5,000	8,000
Area A											
Plant removal			2,000								
Soil improvement/preparation			5,000	2,000	2,000	2,000					
Planting				10,000	2,000	2,000	1,000	1,000	1,000	1,000	1,000
Pest (e.g rabbits, possum)and weed control			2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Hydro seeding				2,000	2,000	1000					
Area B											
Plant removal					2,000						
Soil improvement/preparation					5,000	2,000	2,000	2,000			
Planting						10,000	2,000	2,000	1,000	1,000	1,000
Pest(e.g rabbits, possum)and weed control					2,000	2,000	2,000	2,000	2,000	2,000	2,000
Hydro seeding						2,000	2,000	1,000			
Area C											
Plant removal							2,000				
Soil improvement/preparation							5,000	2,000	2,000	2,000	1,000
Planting								10,000	2,000	2,000	1,000
Pest (e.g rabbits, possum)and weed control							2,000	2,000	2,000	2,000	2,000
Hydro seeding								2,000	2,000	1,000	
Building											
Mis items require replacement		5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Project management cost		31,200	31,200	31,200	31,200	40,000	31,200	31,200	31,200	31,200	31,200
Legal and consulting		10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Fencing											
Depends on the out come of Plan Change											
Total	16,000	95,200	91,200	83,200	86,200	98,000	87,200	94,200	79,200	78,200	78,200

APPENDIX 8 STORMWATER MANAGEMENT PLAN

Wellington City Council

Stormwater Management Plan

Kiwi Point Quarry

Stormwater Management Plan

Kiwi Point Quarry

Prepared By Romae Duns
Manager, Resource &
Environmental Management

Reviewed By Cathy Swan
Environmental Consultant

Opus International Consultants Limited
Environmental
Level 9, Majestic Centre
100 Willis Street, PO Box 12-003
Wellington, New Zealand

Telephone: +64 4 471 7000
Facsimile: +64 4 499 3699

Date: January 2005
Reference: 355226.00
Status: Final

Approved for
issue to Client

.....

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plan.doc

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1 Introduction

Kiwi Point Quarry (KPQ) is a Wellington City Council Business Unit, producing a range of quarry materials and products. KPQ is a site of naturally occurring hard rock that is mined for rock and gravels. The products from quarry operations are used for roading, building and the like. KPQ is an important provider of quarry products within a regional context. It produces about 350,000 tonnes of material per annum. Quarry material used in the Wellington Region is of the order of 2,000,000 tonnes per annum.

KPQ is ISO 9001:2000 registered and is operated to a high standard ensuring compliance with the ISO registration. The quarry is operated in accordance with the *Kiwi Point Quarry Quality Procedure*, which includes specific actions relating to stormwater control. While stormwater management has been addressed by that document, this stormwater management plan has been produced as a separate document at the request of Wellington Regional Council. This plan has been prepared with reference to Wellington Regional Council's *Erosion and Sediment Control Guidelines* and is considered consistent with those guidelines.

1.1 Resource Consent for Discharge to Water

KPQ operates a discharge of sediment laden stormwater under resource consent WGN950173 [2571]. Condition 9 of this resource consent states

The consent holder shall take all practicable steps to minimise the suspended solids content of the discharge to Ngauranga Stream. The water treatment system shall be operated and maintained efficiently and to the satisfaction of the Manager, Consents Management, Wellington Regional Council, upon request.

This stormwater management plan has been prepared to demonstrate compliance with this condition and to ensure that all practicable steps are taken to minimise the suspended solids content of the discharge to the Ngauranga Stream.

2 Site Layout

KPQ is located in the Ngauranga Gorge to the west of State Highway one, prior to the Newlands off ramp at or about map reference NZMS 260: R27; 611.952. Figure 2.1 shows the general location of KPQ. The legal descriptions of the land are DP 72995, Lot 1 DP 72995, Lot 2 DP72995, and Lot 1 DP65030. Wellington City Council owns the quarry land as well as surrounding land occupied by Taylor Preston Limited and Works Infrastructure. Access to the site is via the existing Quarry/Taylor Preston access way from Ngauranga Gorge.

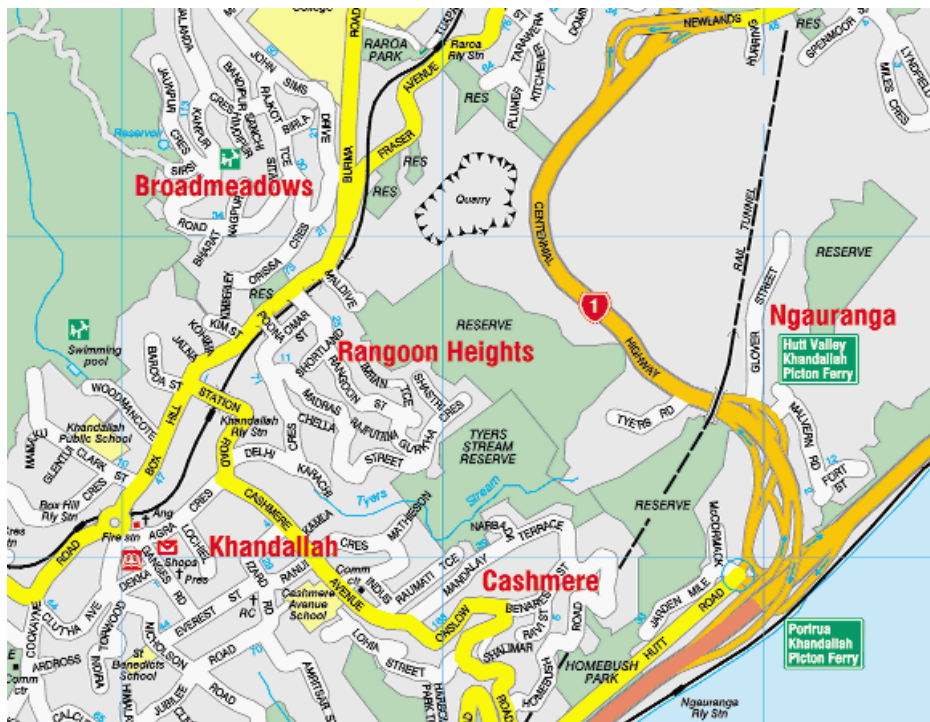
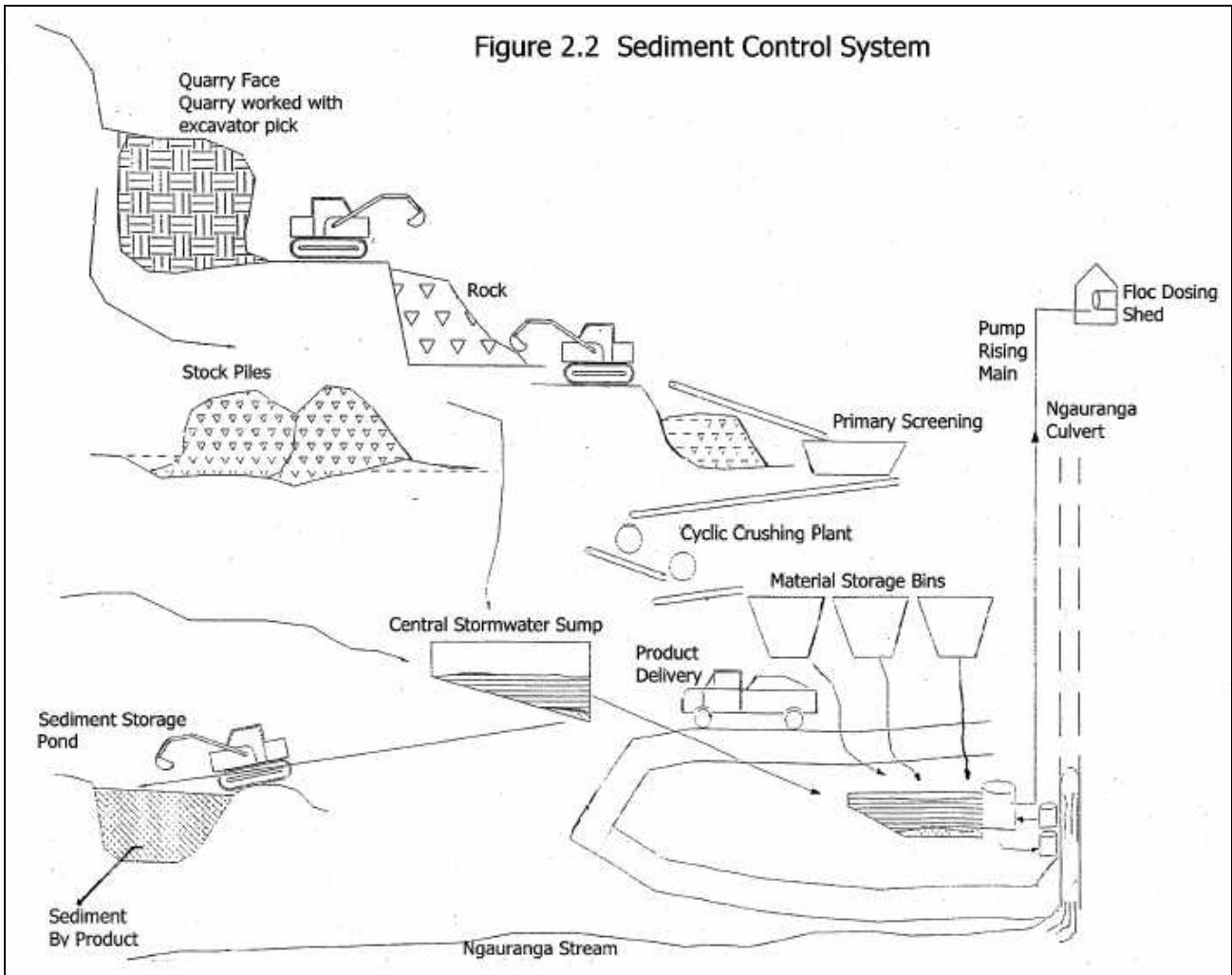


Figure 2.1: Site Location of Kiwi Point Quarry

Figure 2.2 shows the stormwater management system as well as the plant wash water treatment system. These two systems operate independently and the stormwater must be prevented from entering the plant system through maintenance of the bunds and channels discussed in section 4.

The stormwater management system allows for the collection of stormwater that may be contaminated with sediment via a series of bunds and channels. Such areas include the concreted area under the plant, the quarry road and the active face. This stormwater is diverted to a primary retention pond and settled solids are regularly cleared. From primary retention pond it is piped to the main holding pond. Once in the main holding pond the stormwater is dosed with a coagulant, to aid settling of solids prior to discharge to the plant treatment system.

The plant treatment system operates in the following manner. The system used includes a Krebs Cyclone and a Lamella Clarifier Thickener, LT 50. The cyclone removes grit and sand. The Lamella principle utilises a series of closely spaced inclined plates to increase the settling area available per unit of plant area. Solids settle onto and slide down each lamella plate for discharge into the sludge hopper. The process is aided by the addition of a viscous liquid coagulant and a powder flocculant. The coagulant and flocculant additions are controlled via an automatic dosing system. Thickened sludge is then pumped to a sludge pond and subsequently trucked off site for appropriate disposal. The clear treated water is of sufficient quality to be reused and is returned to a collection chamber beside the main settling pond. Any excess water is discharged to Ngauranga Stream.



3 Stormwater Management

Areas within the quarry may be left open for long periods of time and these can be exposed to erosion (wind action and rain). Consequently, KPQ has undertaken actions to ensure that the quarry is well managed to minimise the movement of sediment into Ngauranga Stream. This objective is consistent with condition 9 of resource consent WGN950173. KPQ has established a Quarry Management Plan. This plan sets out the operational (day-to-day) functions of a quarry. Included in that plan is the management of the quarry to minimise erosion and sedimentation. The following sections outline the specific issues that may arise from the on site operations.

3.1 Stormwater

The key to managing stormwater quality is by minimising the amount of water coming into contact with contaminants from the quarry operation. In accordance with this principal, the stormwater is collected in a network of drainage channels by which it is conveyed to the settling ponds. There are no natural watercourses running through the site.

To the maximum degree practicable, wash and process water is collected at the plant and recycled. The solids are removed as it passes through the Lamella plant and any spillage is conveyed via the drainage channels to the settling ponds. Water from the settling ponds is returned to the Lamella plant for processing and any surplus is discharged to the Ngauranga Stream.

As part of the procedures for monitoring and control of the stormwater systems at the quarry, it is the responsibility of the Quarry Manager that resource consent conditions are complied with.

In accordance with the Sediment Control and Erosion Guidelines for the Wellington Region all existing sediment control structures and drain are designed to cater to the 5% AEP rainfall event (20 year return period). Any further structures and drains will also be designed to this standard.

3.2 Sediment Ponds

The sediment ponds must be regularly inspected on a weekly basis to ensure ongoing functionality. The ponds must be emptied once a month and more regularly if required, i.e. after prolonged rainfall events when sediment build up is likely to be significant. If the material excavated is not of saleable quality, it must be disposed of to landfill, unless it is used for site rehabilitation.

3.3 Stockpile Areas

Stockpile areas are used for stockpiling both for raw or finished quarry products prior to further processing or final dispatch. Contaminated runoff in these areas is controlled by drainage channels that ensure all contaminated runoff is diverted to the settling ponds. The stockpiles are positioned and must remain well away from any waterbodies and runoff flow paths.

3.4 Road Access

The access road is a potential source of sediment. The road must be regularly watered to ensure not only dust suppression but also the removal of this sediment to the adjacent grassed area. The access road must be also regularly swept to further minimise sediment build up in this location. Watering must occur on a daily basis and sweeping once a week to ensure there is no sediment build up that could be flushed from the site and to Ngauranga Stream during a significant rainfall event.

3.5 Overburden Disposal

Overburden stripping must only occur over the minimum area practicable to extract the required volume of material. Any overburden material that is not of saleable quality must

be disposed of to landfill and must not be retained on site, unless it is suitable for site rehabilitation.

3.6 Rehabilitation of Worked Out Areas

Planning for rehabilitation is an integral part of all quarry operations. As part of a recent plan change in the Wellington City Council District Plan, KPQ is preparing a comprehensive rehabilitation plan for the quarry. This rehabilitation programme will maintain the site in a condition so that erosion and contaminated runoff are minimised. The plan includes the following

- Establishment of suitable final ground contours.
- Establishment of a suitable environment for vegetation growth.
- Revegetation of the site with suitable vegetation cover.

3.7 Riparian Protection Areas

Riparian protection areas use vegetation to provide a buffer between the quarry operations and the Ngauranga Stream. This margin acts as a physical barrier and sediment trap for diffuse runoff and/or unforeseen discharges. Riparian margins must be regularly maintained to ensure effectiveness.

4 Maintenance Schedule

It is important to develop a maintenance schedule for any control/treatment structures. Resources allocated on designing and constructing control/ treatment structures will be wasted if structures are not adequately maintained. Properly maintained structures provide optimum performance at all times, minimising the adverse environmental effects of the quarry operation. KPQ has made a significant investment ensuring sediment control structures are. Consequently it is important to ensure their functionality as poorly maintained structures are likely to result in unsatisfactory environmental protection despite initially being well designed and constructed.

Inspection and maintenance of control/treatment structures is a high priority at KPQ. Appropriate persons involved in the operation are familiar with all aspects of erosion and sediment control, including the quarry's resource consent conditions.

It is the responsibility of the Quarry Foreperson to ensure that various drainage channels and settling ponds are maintained regularly in accordance with the cleanup duties as listed and at the frequencies shown on the *Quarry Monitoring Check Sheet QF7.1*, Appendix 1.

It is also the responsibility of the Quarry Foreperson to ensure that all drains are maintained twice monthly, including the clearing of silt traps, inlet and outlet structures. The removal of litter, growth, silt etc. as necessary to protect the site from erosion, and to

ensure that surface water is prevented from entering the Ngauranga Stream before the removal of any contaminants. Sediment cleared from the silt ponds and drainage channels is either sold or disposed of to landfill.

Control/treatment structures are inspected after significant rainfall events, or during prolonged rainfall in addition to any regular scheduled inspections, to ensure they are working adequately at all times.

5 Monitoring

In accordance with the resource consents, the Quarry Manager will ensure that all sampling is carried out in accordance with the resource consent. The Quarry Manager shall arrange for the sampling and testing of stormwater and washwater discharge in 6 separate occasions per annum. Testing shall be undertaken by an independent certified testing laboratory, who shall submit their findings to the Quarry Manager with a copy to the Business Unit Manager.

Should the results reveal that any of the contaminant levels have been exceeded then the Quarry Manager shall take the following action:

- Immediately notify the Business Unit Manager, who will in turn notify the Manager, Consents Management, Wellington Regional Council.
- Immediately investigate the reasons for the occurrence and develop a plan to eliminate the cause.
- Retest the stormwater discharge immediately following the result in accordance with the above sampling procedure. This will help determine if it has been an isolated incident.
- If the results of the contaminants that failed the first time are still over the limits, then the following corrective actions shall be taken:
 - Immediately investigate the reasons for the occurrence and develop a plan to eliminate the cause.

6 Complaints Procedure

It is the responsibility of the Quarry Manager or his/her authorised representative to record all complaints. The Quarry Manager is responsible for acting on, rectifying the cause and reporting complaints.

All complaints received in respect of the Quarry discharge shall be recorded on a *Complaints Register Form QF 7.3, Appendix 1*, for the collation into the complaints register, which is maintained by the Office Administrator. The forms record the following details of each complaint received either verbally or in written form:

- Date of complaint
- Date of event
- Name, address and contact details of the complainant (where provided)
- Details of complaint
- Action to resolve the issue/complaint
- Action to prevent further similar complaints
- Date of oral response
- Date of written response

The Quarry Manager shall respond to complaints within the following timeframes following receipt:

- 8 hours – oral response
- 3 days – written response, which confirms details of the complaint and indicates what action has been taken or is proposed to be taken.

It shall be made clear that if the complainant is not satisfied; he or she can contact the Business Unit Manager. Copies of complaint records, including all details shall be forwarded to the Business Unit Manager within 3 days. A summary of all complaints received shall be presented in an annual report to the Manager, Consents Management, Wellington Regional Council.

Appendix One: Quarry Monitoring Check Sheet

Quarry Monitoring Check Sheet
KIWI POINT QUARRY

Quality Form QF 7.1

Completed by:..... Date:..... Signature:.....

Activity Description	D	W	M	6M	Y	Activity Description	D	W	M	6M	Y
Ground Maintenance						Security & Building maintenance					
Grass height within tolerance		✓				Security lights operational	✓				
Weed spraying complete			✓			Buildings clean and tidy	✓				
Sweep Car-park		✓									
Access Way Maintenance						Health & safety					
Potholes repaired		✓				First aid kit stocked			✓		
Access to Quarry face clear	✓					Fire extinguishers operational					
Access ways swept	✓					Check safety clothing stocks			✓		
Dust control measures in place	✓					Radio network operational	✓				
Quarry Operations						Administration					
Dust control measures in place	✓					Plant serviceability forms completed		✓			
Quarry face stable						Complaints system operating			✓		
Process water decontaminated	✓					Complaints doseout status check			✓		
Stockpiles tidy	✓					Annual report data recorded			✓		
Weightbridge area swept	✓					Annual report completed					✓
Signage clear and visible	✓					Training undertaken					
Process & Stormwater control						Non compliance system in place		✓			
Empty silt ponds						Audits undertaken				✓	
Check safety fences	✓					Quality system review undertaken				✓	
Sumps & silt traps clear		✓									
Drainage channels clear			✓								
Ngauranga Stream visual check	✓										
Ngauranga Stream samples tested x6					✓						
Storm water samples tested x6					✓						

