Minerals

Issues

The management of *mineral* resources is addressed in several pieces of legislation; the main Acts being the Crown Minerals Act 1991 (CMA) and the Resource Management Act 1991 (RMA). Access to Crown-owned *mineral*s is addressed in the Crown Minerals Act, while the mining activity itself, and its effects, is managed under the Resource Management Act.

Minerals are expressly excluded from 'sustainability' in section 5(2)(a) of the Resource Management Act in terms of sustaining the potential of *natural and physical resources* to meet the needs of future generations. However, *mineral*s are included in 'sustainability' as it applies (in section (2)(c)) to avoiding, remedying or mitigating any adverse effects of activities on the environment. To this extent, the activity of *exploration*, quarrying, mining and any other disturbance of land is covered by the Resource Management Act and addressed and regulated in district plans.

The Whangārei District contains *mineral* deposits that are of considerable social and economic importance to the district, region and the nation, but in some cases can be constrained by conflicting land uses. Mineral development and associated land restoration can provide an opportunity to enhance the land resource and landscape, and has done so in the past. However, the development of *mineral* resources has the potential to have significant adverse effects upon soil, *water* and air resources, and landscape and historic heritage values if not appropriately controlled.

The five iwi/hapū management plans for the Whangārei District identify as significant issues the following: the management of *mineral*s within their rohe, the adverse effects from mining and the rehabilitation of *site*s. For example, Maunga are a particularly important feature of the historic and cultural landscape yet also a source of *mineral* deposits.

Significant *mineral* resources that are being extracted are identified on the District-Wide Matters Maps and provided for through district-wide provisions (refer Quarrying Resource Area provisions of this Chapter). This recognises the need for *mineral* (including aggregate) resources to be available for infrastructure and development. It also allows for the management of *reverse sensitivity* effects.

Mineral resources that are not currently being extracted are not identified on the District-Wide Matters Maps due to a lack of information on their significance. Smaller scale *mineral extraction* activities which are directly associated with *rural production activities (farm quarries)* are provided for and assessed in accordance with the relevant zone provisions.

All other *mineral extraction* activities which involve *exploration*, extraction or processing of minerals are either managed under MIN-R1 – R3 or where located in a Quarrying Resource Area they are managed under Quarrying Resource Area provisions. District-wide provisions may apply more restrictive rules to the consideration of both *farm quarries* and *mineral* extraction due to the presence of significant or sensitive features.

Notes:

1. *Rules for farm quarries are located in the zone sections of the District Plan.*
2. *The following shall form the basis for resource consent applications for mineral extraction activities (including exploration, extraction and processing):*
    a. *The objectives, policies and provisions for MIN and other District-Wide provisions in the District Plan.*
    b. *The objectives, policies and provisions for Zones in the District Plan.*
    c. *The Strategic Direction objectives and policies.*
    d. *The district-wide objectives, policies and provisions in the District Plan.*

Objectives

MIN-O1 Management of Mineral Resources

Whangārei's *mineral* resources are efficiently and effectively managed recognising the social and economic benefits of such resources, while ensuring adverse effects are associated with *mineral extraction* are avoided, remedied or mitigated.

MIN-O2 Activities in Quarrying Resource Areas

Mineral extraction activities are enabled within identified Quarrying Resource Areas

MIN-O3 Adverse Effects

Exploration, extraction and processing of *mineral*s avoids, remedies or mitigates any adverse effects on the environment and community.

MIN-O4 Tangata Whenua

Exploration, extraction and processing of *mineral*s avoids, remedies or mitigates any adverse effects on the relationship of *tangata whenua* with their ancestral lands, sites, *water*, *wāhi tapu* and other *taonga*.

MIN-O5 Existing Mineral Extraction Activities

New *subdivision*, use and development of land does not compromise existing *mineral extraction* activities (including within Quarrying Resource Areas), including access to and development of these identified regionally significant *mineral* resources.

MIN-O6 Regionally Significant Mineral Resources

New *subdivision*, use and development does not constrain the potential to access and develop identified regionally significant *mineral* resources.

Policies

MIN-P1 Nationally and Regionally Significant Mineral Resources

To identify and provide for nationally and regionally significant *mineral* resources (where extraction rates are known) by mapping Quarrying Resource Areas and applying provisions to facilitate *mineral extraction* activities.

MIN-P2 Avoiding, Remedying or Mitigating Adverse Effects

To avoid, remedy or mitigate the adverse effects of *exploration*, extraction and processing of *mineral*s on the ecological, landscape, historic heritage and *amenity values* of surrounding areas and on the amenity values of existing residential areas by applying zone and district-wide provisions.

MIN-P3 Mineral Extraction and Tangata Whenua

To avoid, remedy or mitigate adverse effects of *exploration*, extraction and processing of *mineral*s on the relationship of *tangata whenua* with their ancestral lands, sites, *water*, *wāhi tapu* and other *taonga* by requiring a Cultural Impact Assessment for all resource consent applications for *mineral extraction.*

MIN-P4 Effects on Sites of Significance to Māori

To avoid adverse effects on significant areas by avoiding *mineral extraction* within identified Sites of Significance to Māori.

MIN-P5 Managing Conflicting Activities

To manage conflicts between *mineral extraction* activities and other land uses by ensuring that activities that are incompatible with the effects of *mineral* extraction activities are not established close to existing *quarry* or mining activities.

MIN-P6 Rehabilitation of Sites

To rehabilitate *site*s used for *mineral exploration* and extraction to enable the land to be used for other activities.

MIN-P7 Provision of Farm Quarries

To enable *rural production activities* to utilise aggregate resources by providing for *farm quarries* where they are limited in scale and operation and are not located within areas with significant or sensitive features, or in zones intended to accommodate *sensitive activities*.

MIN-P8 New Mineral Extraction Activities

To require proposals for new *mineral extraction* activities outside of a Quarrying Resource Area to provide adequate information on the establishment, operation and rehabilitation of the *mineral extraction* activity.

Rules

MIN-R1 General Rules

1. Mineral extraction activities within overlays shown in the District-Wide Matters Maps may be subject to more stringent controls.
2. Mineral extraction activities not provided for as a permitted, controlled, discretionary, non-complying or prohibited activity will be considered as a discretionary activity.

MIN-R2 Mineral Prospecting as Defined in the Crown Minerals Act 1991

Activity Status: Permitted

Where:

1. No disturbance of land occurs.

MIN-R3 Mineral Extraction Activities

1. Activity Status: Discretionary

   Where:

   a. In the RPROZ, LIZ, HIZ.

   Matters of Discretion:

   When assessing resource consent applications for discretionary activities the assessment shall include (but is not limited to) the following matters (where relevant):

   1. The size and scale of extraction activities and the expected length of operation of the extraction *site*;
   2. The design and layout of the *site*, access roads and supporting facilities;

3. The measures proposed to manage:

    a. Noise, vibration, *dust* and illumination to maintain *amenity values* of the surrounding land uses, particularly at *night*-time;

    b. Adverse effects of traffic generation and maintain safety to all *road* users, particularly measures to manage *heavy vehicles* entering or exiting the *site*;

    c. Adverse effects on soil and *water*, watercourses and fauna and flora;

    d. Effects on or exacerbation of natural hazards including land stability;

    e. Significant adverse effects on visual and landscape values;

    f. The values of identified historic heritage or *archaeological site*s, *buildings*, places or areas.

4. Effects on the relationship of *tangata whenua* with their ancestral lands, sites, *water*, *wāhi tapu* and other *taonga*;

5. Options anticipated for the rehabilitation of the *site*, either by a staged process or at the end of the economic life of the *quarry*, having regard to the expected life of the *mineral extraction site*;

6. The benefits likely to be derived from the *mineral extraction* activities;

7. Any positive transport effects from having a *mineral extraction site* closer to the area of demand;

8. Having regard to 1 – 7 above, the extent to which significant adverse effects can be avoided; and the extent to which adverse effects can be remedied, mitigated or, where not mitigated, can be offset.

2. Activity Status: Non-Complying

    Where:

    a. In the RLZ.

3. Activity Status: Prohibited

    Where:

    a. In the SETZ, FUZ, OSZ, SARZ and Urban Zones, excluding LIZ and HIZ.

Information Requirement Rules

MIN-REQ1 Resource Consent Applications

1. All applications for resource consent for *mineral extraction* activities, including applications for *farm quarry*ing where resource consent is required for the extraction of more than the permitted volume of material in any 12 month period, shall include:

    a. The size and scale of *exploration*, extraction or processing activities and the expected length of operations of the extraction *site*;

    b. The design and layout of the *site*, access roads and supporting facilities;

    c. The proposed measures to manage noise, vibration, *dust* and lighting to maintain *amenity values* of the surrounding land use;

    d. The proposed measures to manage effects on the surrounding *road* network and maintain safety to all *road* users, particularly measures relating to *heavy vehicles* entering or exiting the *site*;

    e. The proposed measures to avoid, remedy or mitigate adverse effects on the natural environment including watercourses within the extraction *site* and the effects from the *site* into the neighbouring environment;

    f. As relevant how land stability will be impacted and the measures in place to prevent the exacerbation of existing natural hazards;

    g. The proposed measures to mitigate adverse effects on visual and landscape values; and identified historic heritage; and maintain the relationship of *tangata whenua* with their ancestral lands, sites, *water*, *wāhi tapu* and other *taonga*;

    h. Options anticipated for the rehabilitation of the *site*, either by a staged process or at the end of the economic life of the *mineral extraction* activity, having regard to the expected life of the *mineral* extraction *site*.

2. All applications for resource consent for *mineral extraction* activities, including applications for *farm quarry*ing where resource consent is required for the extraction of more than the permitted volume of material in any 12 month period, shall include a Cultural Impact Assessment.

3. Where no Sites of Significance to Māori are shown on the district plan maps applicants should check with Council to determine if further information on areas or Sites of Significance to Māori is held in relation to their proposed *mineral extraction* activity.

    a. If Council holds information indicating that there are areas or Sites of Significance to Māori within the proposed *mineral extraction* area a Cultural Impact Assessment is required to address these areas/sites; and

b. The Cultural Impact Assessment shall address if there are adverse effects on *natural and physical resources* having historical, spiritual or cultural value.

Quarrying Resource Area Provisions

Issues

Nine Quarrying Resource Areas are shown on the District-Wide Matters Maps. The purpose of identifying Quarrying Resource Areas is to facilitate the operation of commercial extraction activities.

The Quarrying Resource Areas identify established *mineral extraction* activities primarily aggregates, which are, at a volume, among other factors, that qualify these as nationally and/or regionally significant *mineral* resources (refer MIN-QRA Appendix 1 - Quarrying Resource Area). Currently the mapped Quarrying Resource Areas contain *quarrying activities* involving extraction and processing *mineral* resources.

The extent of the Quarrying Resource Areas shows the area of *mineral* extraction where the effects of the activities will generally be contained. However, some effects such as noise, vibration and visual effects may be evident beyond the boundary of the Quarrying Resource Areas.

Within each Quarrying Resource Areas there is a *Mining Area* where the full range of *mineral extraction* activities may be undertaken. In some cases, the Quarrying Resource Area also contains a *Buffer Area* beyond the *Mining Area* where effects such as noise and vibration cannot reasonably and economically be contained within the *Mining Area*.

Beyond the mapped Quarrying Resource Areas area, a Setback Area is also identified. This Setback Area has rules associated with it and are contained within the underlying Zone adjacent to the mapped Quarrying Resource Areas.

It is important to note that there are rules applying to the underlying zone and other district-wide rules that must also be taken into account.

Specific exemptions from rules within the underlying zone are provided for some components of *mineral extraction* activities. For example, stockpiles for *mineral extraction* purposes in Quarrying Resource Areas are excluded from the rules applying to outdoor *storage* in the *Rural Zones*. In some instances where the underlying zone allows for a greater level of development, the activity will be exempt from the Quarrying Resource Area provisions and assessed in accordance with the provisions in the underlying zone.

Note:

1. *The following shall form the basis for resource consent applications for land use and subdivision in Quarrying Resource areas:*

    a. *The objectives, policies and provisions for Quarrying Resource areas and other District-Wide provisions in the District Plan.*

b. *The objectives, policies and provisions for Zones in the District Plan.*

c. *The district-wide objectives, policies and provisions in the District Plan.*

2. *The rules of this chapter apply to any site or portion of a site mapped as Quarrying Resource areas.*

Objectives

MIN-QRA-O1 Extraction Activities in Quarrying Resource Areas

Mineral extraction activities including the processing in the Quarrying Resource areas are enabled.

MIN-QRA-O2 Adverse Effects

The adverse effects of *mineral extraction* activities in the Quarrying Resource areas are avoided, remedied or mitigated.

Policies

MIN-QRA-P1 Provision of Mineral Extraction

To provide for the continued *mineral extraction* in the Quarrying Resource Area, *Mining Area* and *Buffer Area*.

MIN-QRA-P2 Conflict Avoidance

To avoid conflicts between the effects of *mineral extraction* activities and other land uses by ensuring that *sensitive activities* are not established close to Quarrying Resource Area through the identification of Quarrying Resource Area Setback Areas.

MIN-QRA-P3 Buffer Areas

To identify a *Buffer Area* within a Quarrying Resource Area to:

1. Ensure that *reverse sensitivity* effects are avoided on the *Mining Area*.

2. Ensure that adverse effects, including those from noise, vibration and *dust*, associated with the *Mining Area* of the Quarrying Resource Area are appropriately managed within the Quarrying Resource Area.

3. Maintain an effective separation between incompatible land uses by limiting *mineral extraction* activities in the *Buffer Area* to ensure that adverse effects on adjoining land uses, particularly existing sensitive land uses, are first avoided and otherwise remedied or mitigated.

MIN-QRA-P4 Mining Areas

To identify *Mining Area* within the Quarrying Resource Area to enable *mineral extraction* activities within this area having particular regard to policies MIN-QRA-P5 – P8.

MIN-QRA-P5 Adverse Effects

To avoid, remedy or mitigate the adverse effects of *mineral extraction* within Quarrying Resource areas, on the ecological, landscape, historic heritage and *amenity values* of surrounding areas.

MIN-QRA-P6 Adverse Visual Impacts

To avoid, remedy or mitigate adverse visual impacts from Quarrying Resource areas on significant landscapes, significant natural areas and significant natural features by applying the district-wide provisions.

MIN-QRA-P7 Height Requirements

To provide for the height requirements of *mineral extraction* activities, such as *overburden* placement and *buildings* such as silos, while mitigating the potential adverse effects by requiring *setback*s and considering screening and topography in *site* design.

MIN-QRA-P8 Roading Network

To avoid compromising the safety and efficiency of the roading network by limiting *traffic movement*s on minor roads associated with Quarrying Resource areas and by providing for traffic controls and forming or upgrading roads in the vicinity of the Quarrying Resource Area where necessary.

Rules

MIN-QRA-R1 General Rules

1. All activities and development (except *mineral extraction* activities) proposed within a Quarrying Resource Area will be subject to the controls in the underlying zone.

2. Proposals for extensions or changes to existing Quarrying Resource areas, or for new Quarrying Resource areas will require a plan change.

3. The Quarrying Resource Area rules do not apply to *earthworks* which are not associated with *mineral extraction* activities as defined in the Definitions Chapter.

Note:

1. *All mineral extraction activities are subject to the notification tests of the Resource Management Act 1991.*

MIN-QRA-R2 Minor Building

Activity Status: Permitted

Note:

1. *Minor buildings are exempt from MIN-QRA Rules.*

MIN-QRA-R3 Construction or Alteration of any Building and Major Structure

Activity Status: Permitted

Where:

1. In the *Mining Area*:
    a. The maximum *building* height and *major structure* height is 15m above *ground level*.
2. In the *Buffer Area*:
    a. The maximum *building* height and *major structure* height is 15m above *ground level* or the limit allowed by the *building* height rules in the underlying zone, whichever is the greater.

Note:

1. *Mineral extraction activities with the Strategic Rural Industries Zone are exempt and will be assessed through the Zone provisions.*

Activity Status when compliance not achieved: Discretionary

MIN-QRA-R4 Building and Major Structure Setbacks

Activity Status: Permitted

Where:

1. All *buildings* and *major structures* are *setback*:
    a. At least 10m from the boundary of the *Mining Area*.
    b. More than 10m and less than 20m from the boundary of the *Mining Area* where the *building* or *major structure* height is greater than 10m above *ground level*.

Note:

1. *Mineral extraction activities with the Strategic Rural Industries Zone are exempt and will be assessed through the Zone provisions.*

Activity Status when compliance not achieved: Discretionary

MIN-QRA-R5 Outdoor Areas of Storage or Stockpiles

Activity Status: Permitted

Where:

1. The stockpile is *setback* at least 10m from the boundaries of a *Mining Area*.

Note:

1. Outdoor areas of storage or stockpiles within a QRA and may exceed the building and major structure height, setbacks and height in relation to boundary rules within the underlying zone they are located in.

Activity Status when compliance not achieved: Discretionary

MIN-QRA-R6 Quarry Face

Activity Status: Permitted

Where:

1. The excavation of a *quarry* face is *setback* at least 20m from the boundaries of a *Mining Area*.

Activity Status when compliance not achieved: Discretionary

MIN-QRA-R7 Traffic Generation

Activity Status: Permitted

Where:

1. Traffic generation from the Quarrying Resource Area does not exceed:

    a. 100 *traffic movement*s in any 24-hour period; where the *site* directly connects to a public road with a sealed carriageway of at least 6m wide or where all vehicle manoeuvring associated with the activity occurs within the *site*; or

    b. The limit allowed by the *traffic movement*s rules in the underlying Zone where that limit is less than 100 movements in any 24-hour period.

Note:

1. Mineral extraction activities with the Strategic Rural Industries Zone are exempt and will be assessed through the Zone provisions.

Activity Status when compliance not achieved: Discretionary

MIN-QRA-R8 Accessways, Road or Parking Space

Activity Status: Permitted

Where:

1. The establishment of any *accessway*, *road* or parking space or associated facility which complies with the Transport Chapter.

Activity Status when compliance not achieved: Discretionary

MIN-QRA-R9 Disturbance or Removal of Material

Mining Area

Activity Status: Controlled

Where:

1. The disturbance or removal of more than 5,000m3 of material within the *Mining Area* of the Quarrying Resource Area in any 12 month period where a *Mineral Extraction* Management Plan is submitted to Council and which addresses the relevant matters identified in information requirement rule MIN-QRA-REQ1.

Matters of Control:

1. The extent to which off-site effects (such as *dust*, odour and glare) adversely affect the *amenity values* of *site*s in the vicinity.
2. The extent of any adverse effects on land stability.
3. The extent of any adverse effects on ecological values or *water* quality.
4. The extent to which landscape proposals (including the height, shape and form of topography and screening) and the provision of *setback*s mitigate potential adverse effects on the amenity of land adjoining the Quarrying Resource Area.
5. The extent to which any rehabilitation programme will enable the land to be returned to a state suitable for use for other activities.

MIN-QRA-R10 Sensitive Activity

1. Activity Status: Discretionary
    a. In the *Buffer Area*:
        i. The establishment of *sensitive activities* or the construction of or *alteration* to any *building* containing a *sensitive activity* within the *Buffer Area* of a Quarrying Resource Area.

ii. The establishment of any *sensitive activity* in the General Residential Zone, Medium Density Residential Zone or the Low Density Residential Zone within 500m of the *Mining Area* of the Quarrying Resource Area 8 - Dicksons Quarry Urban Expansion Setback Area.

2. Activity Status: Non-Complying

   a. In the *Mining Area*:

      i. The establishment of *sensitive activities* or the construction of or *alteration* to any *building* containing a *sensitive activity* within the *Mining Area* of a Quarrying Resource Area.

Assessment Criteria for Discretionary Activities:

1. When assessing resource consent applications for discretionary activities the assessment shall include (but is not limited to) the matters of control in MIN-QRA-R9 and the following matters (where relevant):

   a. *Reverse sensitivity* effects from new *sensitive activities* establishing in close proximity to existing *mineral extraction* activities.

   b. Hours of operation of the activity.

   c. The outlook, privacy, health, safety and amenity of adjoining and adjacent neighbours.

   d. Effects on *river* maintenance and hazards.

   e. Effects on the natural functioning of ecosystems.

   f. Type, frequency and timing of traffic.

   g. Effects of increased traffic on *road* safety, maintenance and efficiency.

   h. Need for forming or upgrading *road*s in the vicinity of the *site*.

   i. Need for traffic control, including *signs*, signals and traffic islands.

   j. The scale and bulk of any *building* or *major structure* (excluding *minor building*s) in relation to the *site*.

   k. The extent to which the effects of height can be mitigated by *setback*s, planting, design or the topography of the *site*.

Note:

1. *Rules requiring a 500m setback from a Mining Area of a Quarrying Resource Area, for sensitive activities, are found in the relevant zone chapters: FUZ-R10, RPROZ-R9, RLZ-R11 and LLRZ-R11.*

MIN-QRA-R11 Mineral Extraction Activities

Activity Status: Discretionary

Where:

1. The activity is within the *Buffer Area* of Quarrying Resource Area.
2. The activity is within the *Mining Area* of the QRA which do not meet the requirements for a controlled activity under MIN-QRA-R9.

Matters of Discretion:

1. When assessing resource consent applications for discretionary activities the assessment shall include (but is not limited to) the matters of control in MIN-QRA-R9 and the following matters (where relevant):
2. *Reverse sensitivity* effects from new *sensitive activities* establishing in close proximity to existing *mineral extraction* activities.
3. Hours of operation of the activity.
4. The outlook, privacy, health, safety and amenity of adjoining and adjacent neighbours.
5. Effects on *river* maintenance and hazards.
6. Effects on the natural functioning of ecosystems.
7. Type, frequency and timing of traffic.
8. Effects of increased traffic on *road* safety, maintenance and efficiency.
9. Need for forming or upgrading *road*s in the vicinity of the *site*.
10. Need for traffic control, including *signs*, signals and traffic islands.
11. The scale and bulk of any *building* or *major structure* (excluding *minor building*s) in relation to the *site*.
12. The extent to which the effects of height can be mitigated by *setback*s, planting, design or the topography of the *site*.

Note:

1. *Mineral extraction activities within the Strategic Rural Industries Zone are exempt from MIN-QRA-R3, MIN-QRA-R4, MIN-QRA-R7 and MIN-QRA-10.1 and will be assessed by applying the Strategic Rural Industries Zone provisions.*
2. *Mineral extraction Activities that are not controlled activities or discretionary activities are permitted activities.*

3. *All mineral extraction activities are subject to the notification tests of the Resource Management Act 1991.*

MIN-QRA-R12 Subdivision and Quarrying Resource Area 8

Activity Status: Discretionary

Where:

1. All *subdivision* in the General Residential Zone, Medium Density Residential Zone or the Low Density Residential Zone within 500m of the *Mining Area* of Quarrying Resource Area 8 – Dicksons Quarry Urban Expansion Setback Area.

MIN-QRA-R13 Subdivision within the Quarrying Resource Area

Activity Status: Discretionary

Matters of discretion:

1. When considering *subdivision* within QRAs, the potential for subdivision to compromise *mineral extraction* activities needs to be recognised. Any *subdivision* should only occur if it avoids, remedies or mitigates adverse effects on *mineral extraction* activities.

Note:

1. *Refer to the How the Plan Works Chapter for Assessment of Discretionary Activities.*
2. *All subdivision activities are subject to the notification tests of the Resource Management Act 1991.*

Information Requirement Rules

MIN-QRA-REQ1 Mineral Extraction Management Plan

1. All applications for *mineral extraction* activities shall include a *Mineral Extraction* Management Plan.
2. A *Mineral Extraction* Management Plan shall include a description of the extent of the *mineral extraction* to be undertaken, and the means by which the Consent Holder will comply with the relevant rules in the Plan and the conditions of the consent. In particular it shall include:
    a. A plan showing the boundaries of the Quarrying Resource Area including the *Mining Area* and any *Buffer Area*.
    b. A plan showing topography, drainage, natural watercourses, existing *vegetation cover* and any other significant landforms or features.
    c. The design and location of *buildings* and *major structures* (excluding *minor buildings*) and any plant or machinery to be used in a fixed position.

d. The anticipated life span of operation, the estimated volume of material to be excavated and any staging of works.

e. The proposed location and dimensions of *overburden storage* and deposition areas and stockpiles of *mineral* material.

f. The proposed location and dimension of areas of excavation, including pits and faces.

g. Any proposed *setback*s, *landscaping* or screening measures.

h. Assessment of slope stability including, where applicable, a slope stability analysis allowing for an appropriate surcharge.

i. Proposed access to the Quarrying Resource Area and internal circulation within it.

j. The anticipated average daily number of vehicle movements to and from the Quarrying Resource Area.

k. The number of people proposed to be employed, and parking spaces provided on-site.

l. A description of the proposed methods of *overburden* stripping and *mineral extraction.*

m. A description of the proposed excavation and blasting programme.

n. A description of the methods by which the environmental effects of the operation will be managed and controlled to comply with all relevant rules of the Plan and the conditions of consent and to avoid, remedy or mitigate any adverse effects in regard to those matters which are relevant to the Council's assessment.

o. A description of the methods for protecting and maintaining areas of significant landforms or features.

p. A description of any future objectives for the *Mining Area* of the Quarrying Resource Area and any proposed rehabilitation programme.

MIN-QRA Appendix 1 - Quarrying Resource Areas

Table MIN-QRA 1. Quarrying Resource Areas

Quarry Name	Quarrying Resource Area	Planning Map Number	Noise Limit
GBC Winstone – Portland Quarry	QRA1	15, 50	Daily, between the hours of 06:30 and 21:30 - 55dB L_{Aeq}; and Daily, between the hours of 21:30 and 06:30 - 45dB L_{Aeq}; and 70dB L_{AFmax}
GBC Winstone - Wilsonville Quarry	QRA2	7, 28	The noise limit imposed by Land Use Consent LU 00/573
GBC Winstone – Otaika Quarry and accessway	QRA3	12, 45	Daily, between the hours of 06:30 and 21:30 - 55dB L_{Aeq}; and Daily, between the hours of 21:30 and 06:30 - 45dB L_{Aeq}; and 70dB L_{AFmax}; and Subject to any restrictions on *night* time operation of the accessway contained in LUC RC38907, as may be amended from time to time
McBreen Jenkins – Takahiwai Quarry	QRA4	15	Daily, between the hours of 06:30 and 21:30 - 50dB L_{Aeq}; and Daily, between the hours of 21:30 and 06:30 - 40dB L_{Aeq}; and 65dB L_{AFmax}
United Carriers – Woods Road Quarry	QRA5	11	Daily, between the hours of 06:30 and 21:30 - 50dB L_{Aeq}; and Daily, between the hours of 21:30 and 06:30 - 40dB L_{Aeq}; and 65dB L_{AFmax}
Balance Agriculture – Mata Quarry	QRA6	15	Daily, between the hours of 06:30 and 21:30 - 50dB L_{Aeq}; and Daily, between the hours of 21:30 and 06:30 - 40dB L_{Aeq}; and 65dB L_{AFmax}
Mountfield Road Quarry	QRA7	18	Daily, between the hours of 06:30 and 21:30 - 50dB L_{Aeq}; and Daily, between the hours of 21:30 and 06:30 - 40dB L_{Aeq}; and 65dB L_{AFmax}

Quarry Name	Quarrying Resource Area	Planning Map Number	Noise Limit
Dicksons Transport – Dicksons Road Quarry	QRA8	12, 36	The noise limit imposed by Land Use Consent RC 37434
J Pullman – Robsons Quarry, Otaika	QRA9	45	The noise limit imposed by Land Use Consent LU 98/904