# QUARZ — Quarry Zone

The purpose of the Quarry Zone chapter is to provide for quarrying and ancillary activities within existing quarry sites in Kelson and Haywards, whilst ensuring that adverse effects beyond the site are managed appropriately and that the site is remediated on completion of the quarrying.

Quarries, and ancillary activities, are critical source of materials associated with infrastructure and development in the Lower Hutt Aggregate is used in the constructions of roads, concrete, manufactured concrete building materials, asphalt and other products.

Quarries can have a range of adverse effects on surrounding areas. These include noise and vibration, dust and odour, loss of ecological values, and visual amenity. Rehabilitation of the land following quarrying is an issue. The benefit of future use is dependent on the rehabilitation.

While this chapter includes the core objectives, policies, and rules that apply to the Quarry Zone, other district-wide chapters of the District Plan set additional objectives, policies and rules for all or part of the zone. As such, this chapter should be read alongside the district-wide chapters of the District Plan. However, the Earthworks chapter does not apply to quarrying activities within the Quarry Zone, including earthworks associated with rehabilitation.

### Role of Wellington Regional Council

Wellington Regional Council also have functions under the Resource Management Act that relate to the management of quarrying activities. This includes the control of discharges of contaminants (including dust, odour and sediment) into or onto land, air, or water.

As a result, the objectives, policies and rules of the Regional Council's Natural Resources Plan for the Wellington region are also likely to apply to quarrying activities and associated activities, and resource consents may be required under the rules of that plan.

## Objectives

| QUARZ-O1 | Purpose of the Quarry Zone |
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| The Quarry Zone contributes to well-functioning environments by providing a source of aggregate and products manufactured from aggregate for use in construction and development. | |
| **QUARZ-O2** | **Activities in the zone** |
| The Quarry Zone:<br>1. Primarily provides for quarrying, processing of quarried material, and manufacturing of products from quarried material,<br>2. Provides for ancillary activities that are directly associated with quarrying, and<br>3. Provides for other activities that are compatible with quarrying activities within the Zone and have a functional need or operational need to be within the zone. | |
| **QUARZ-O3** | **Adverse effects** |
| Adverse effects of activities and development within the Quarry Zone are effectively managed within the Zone. | |
| **QUARZ-O4** | **Site rehabilitation** |
| Quarry sites within the Quarry Zone, including exposed and cut faces, are rehabilitated as soon as practicable on the completion of quarrying at the site. | |

## Policies

| QUARZ-P1 | Enabled activities |
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| Enable the operation and development of quarrying activities and conservation activities within the Quarry Zone. | |
| **QUARZ-P2** | **Potentially incompatible activities** |
| Only allow activities other than quarrying activities and activities ancillary to quarrying where:<br>1. They are compatible with the quarrying activities and ancillary activities, undertaken at the site, or<br>2. There is a functional need or operational need to be in that location. | |

| QUARZ-P3 | Recognition of significance of aggregates and finite nature |
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Recognise:
1. The importance of aggregates and products of quarries for regional development and land use,
2. That aggregates are a limited resource, and
3. There are limited opportunities to establish new quarries, due to geology, size of sites, access, and the existing environment, including existing land use and development.

| QUARZ-P4 | Built development |
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Manage the effects of built development in the Quarry Zone by:
1. Enabling the repair, maintenance, demolition and removal of existing buildings, and
2. Manage the visual effects of new buildings and structures and additions to existing buildings and structures including by controlling their height.

| QUARZ-P5 | Zone interfaces |
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Require land use and development in the Quarry Zone to maintain reasonable amenity for adjoining zones, including through management of:
1. Impacts on visual amenity,
2. Light and glare,
3. Traffic,
4. Noise,
5. Vibration, and
6. Dust.

| QUARZ-P6 | Vibration |
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Enable the generation of vibration in the Quarry Zone where it:
1. Is for quarrying activities or ancillary activities, and
2. Does not compromise people's health.

| QUARZ-P7 | Retention of indigenous vegetation |
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Minimise the adverse effects of quarrying activities and ancillary activities on the visual amenity and character of the surrounding area through:
1. Firstly, retaining existing indigenous vegetation that screens views of disturbed areas where practicable, having regard to whether there are functional needs or operational needs to clear the vegetation to enable quarrying on the site.
2. Where existing indigenous vegetation is not retained (under point 1):
    a. Screening the disturbed areas as far as practicable with new planting.
    b. Minimising the length of time that newly disturbed areas are visible and adversely affect visual amenity values beyond the site, including through prompt rehabilitation of these areas, having regard to functional and operational needs for quarrying activities on the site and any impacts rehabilitation of these areas may have on the effectiveness of rehabilitation within the site in general.

| QUARZ-P8 | Land stability |
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Manage quarrying activities so that there is no increased risk from erosion and landslide hazards to people’s health and safety.

| QUARZ-P9 | Quarry Management Plan |
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Ensure appropriate management and rehabilitation of quarry sites within the Quarry Zone by requiring the preparation and implementation of a Quarry Management Plan for quarrying activities within Zone.

## Rules

**Note:**
Resource consent may be required under rules in this chapter as well as other chapters. Unless specifically stated, resource consent is required under each relevant rule. The steps to determine the relevant rules and activity status of an activity are set out in the General Approach chapter.

**Buildings and structures**

| QUARZ-R1 | Repair and maintenance of buildings and structures |
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| 1. **Activity status:** Permitted | |

| QUARZ-R2 | Demolition and removal of buildings and structures |
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| 1. **Activity status:** Permitted | |

| QUARZ-R3 | Construction of new buildings and structures and alterations and additions to existing buildings and structures |
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1. **Activity status:** Permitted

   Where:
   a. Compliance is achieved with:
      i. QUARZ-S1: Height, and
      ii. QUARZ-S7: Quarry Management Plan.

2. **Activity status:** Restricted discretionary

   Where:
   a. Compliance is not achieved with QUARZ-R3.1.

   **Matters of discretion are restricted to:**
   1. The matters of discretion in any standards not met.

**Land use activities**

| QUARZ-R4 | Conservation Activities |
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1. **Activity status:** Permitted

| QUARZ-R5 | Quarrying activities |
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1. **Activity status:** Permitted

   Where:
   a. Compliance is achieved with:
      i. QUARZ-S2: Hours of operation,
      ii. QUARZ-S3: Vibration associated with blasting,
      iii. QUARZ-S4: Quarry Setback Overlay,
      iv. QUARZ-S5: Special Amenity Area Overlay,
      v. QUARZ-S6: Natural hazards, and
      vi. QUARZ-S7: Quarry Management Plan.

2. **Activity status:** Restricted discretionary

   Where compliance is not achieved with QUARZ-R5.1.

   **Matters of discretion are restricted to:**
   1. The matters of discretion in any standards not met.
   2. Any positive benefits that can only be achieved through non-compliance with any standards not met.

| QUARZ-R6 | Industrial activities ancillary to quarrying |
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1. **Activity status:** Discretionary

| QUARZ-R7 | Residential activity |
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1. **Activity status:** Non-complying

   Where:
   a. There is no more than 1 residential unit on the site, and
   b. The residential unit is ancillary to a quarrying activity on site (such as a caretaker's quarters).

2. **Activity status:** Prohibited

   a. Where compliance with QUARZ-R7.1 is not achieved.

| QUARZ-R8 | Activities not otherwise provided for |
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1. **Activity status:** Non-complying

## Standards

| QUARZ-S1 | Height |
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1. Buildings and structures must not exceed a maximum height:
   a. On any part of the area where the ground level is RL 45 metres or lower at the time of installation or construction of the structure: 24 metres above ground level.

b. On any part of the area where the ground level is greater than RL 45 metres at the time of installation or construction of the structure: 12 metres above ground level.

For the purpose of this standard, RL = MSL, 1949 Geodetic Datum.

**Matters of discretion if the standard is breached:**

1. The extent to which the additional height is necessary to provide for functional need or operational need of a quarry.
2. The effect on visual amenity of the surrounding area.
3. The effectiveness of any proposed landscaping, screening or other mitigation at mitigating the effects on visual amenity of the surrounding area.

| QUARZ-S2 | Hours of operation |
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1. The hours of operation are 6.00am to 10.00pm, Monday to Saturday (excluding public holidays) for all activities except:
    1. Administrative activities,
    2. Maintenance of plants and machinery, and
    3. Loading/unloading and movement of vehicles,

   which may occur at any time.

**Matters of discretion if the standard is breached:**

1. The impact on adjacent sites and residential units in adjacent zones, including effects from:
    a. Noise and vibration, and
    b. Light and glare.
2. Impacts on the transport network.

| QUARZ-S3 | Vibration associated with blasting |
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1. Blasting shall be carried out in accordance with the operating practice described in *Appendix J. Section J5 of AS 2187 2 — 2006 Explosives — storage, transport and use. Part 2 Use of explosives*.
2. Blast noise (airblast) created by the use of explosives when measured at the notational boundary 20 metres from occupied dwellings shall not exceed a peak overall sound pressure of 120 dBC (126 dBL).
3. All blasting shall be restricted to between 10:00am and 4:00pm, Monday to Saturday (excluding public holidays) except where blasting is necessary for safety reasons.
4. Blasting shall be confined to two occasions per day except where necessary for safety reasons.
5. Where blasting is irregular and the occupiers of neighbouring sites could be alarmed, they shall be advised of impending blasts at least one hour before any such blast.
6. Monitoring to obtain records and data representative of the effects of blasting on the Quarry Management Area (shown on the District Plan maps) shall be carried out at such frequency to ensure there is sufficient data (at least 10 blasts) to ensure continued compliance with clauses 11 and 12 (below) and shall be maintained on an ongoing basis at a frequency of at least 1 in 20 blasts.
7. Every blast shall be recorded, including:
    a. The date and time of the blast,
    b. Location of blast, and
    c. Blast size and charge mass per delay.
8. Where vibration monitoring is carried out in accordance with 6 above, blasts shall be recorded with particular attention to details of:
    a. Location of monitoring points,
    b. Distance from the blast to the monitoring points,
    c. Type and serial numbers of the monitoring instruments and transducers,
    d. Peak noise level (air blast), and
    e. Vibration velocity time history and absolute maximum vibration velocity for each of the three components.
9. The blast records and monitoring results shall be made available to the Council on request.
10. Vibration from blasting shall be measured at appropriate monitoring points established between the closest dwelling and its nearest boundary in accordance with Appendix J4 2.2 of AS2187.2 2006.
11. When blasting, the maximum absolute value of the vector sum of three time-synchronised velocity components shall not exceed the guideline values for evaluating the effect of short-term vibration in AS2187.2 - 2006, Table J1.
12. Evaluation of the effect of vibration on building occupants shall be also carried out in accordance with *NZS/ISO 2631: 1997(E) Mechanical vibration and shock Evaluation of human exposure to whole body vibration; Part 1: General requirements and Part 2: Continuous and shock induced vibration in buildings (1 to 80 Hz)*. The multiplying factor of the base curves to be used in evaluating satisfactory magnitudes will be 60, as defined in Table 2 of Annex A in *ISO 2631: Part 2*.

**Matters of discretion if the standard is breached:**

1. The effects of vibration on adjacent sites and residential units in adjacent zones.
2. Any relevant Australian/New Zealand vibration standard for quarries.
3. Any practicable measures taken to manage the vibration effects.

| QUARZ-S4 | Quarry Setback Overlay |
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1. The indigenous vegetation cover within the Quarry Setback Overlay shall be maintained.

**Matters of discretion if the standard is breached:**

1. Effects on amenity values beyond the site.
2. Effects on slope stability.
3. The effects of any remedial or mitigation works.
4. Any functional need or operational need for the works.

| QUARZ-S5 | Special Amenity Area Overlay |
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1. The indigenous vegetation cover within the Special Amenity Area Overlay shall be maintained.

**Matters of discretion if the standard is breached:**

1. Effects on character and amenity beyond the site.
2. Any functional need or operational need to remove vegetation.

| QUARZ-S6 | Landslide hazard and erosion |
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1. Quarrying activities must be undertaken in a way that the susceptibility of land prone to erosion and landslide hazards is not increased.

**Matters of discretion if the standard is breached:**

1. The increase in risk of landslides.
2. The increase in risk of erosion.
3. The sensitivity of activities in areas at risk of erosion or landslides.
4. Any adverse effects on the character and visual amenity beyond the site.

| QUARZ-S7 | Quarry Management Plan |
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1. A Quarry Management Plan must be prepared and maintained for all quarrying activities.
2. Quarrying activities and rehabilitation of the site must be undertaken in accordance with the Quarry Management Plan.
3. As a minimum, the Quarry Management Plan must describe:
    a. The quarrying activities covered by the Quarry Management Plan,
    b. Planned measures to mitigate impacts of quarrying activities beyond the site, including:
        i. Hours of operation,
        ii. Noise management,
        iii. Vibration management,
        iv. Dust management,
        v. Management of visual amenity, including landscape plans, and
        vi. Management of natural hazards, including slope stability.
    c. The rehabilitation that is planned for the site on the completion of the quarrying activities, including:
        i. The intended end use of the site or parts of the site on the completion of quarrying activities,
        ii. When rehabilitation will occur,
        iii. The landform and drainage pattern of the site following completion of quarrying activities and rehabilitation,
        iv. Any change in natural hazards resulting from quarrying and any proposed mitigation, and
        v. Any adverse effects associated with the rehabilitation.
4. A copy of the Quarry Management Plan shall be provided to the Council's Head of Planning prior to undertaking quarrying activities covered by the Plan.
5. At least every two years, the Council's Head of Planning shall be provided with:
    a. A progress report on the effectiveness of the Quarry Management Plan, and
    b. Any changes that have been made to the Quarry Management Plan.

**Matters of discretion if the standard is breached:**

1. Alternative measures to ensure adverse effects of quarrying activities beyond the boundary of the sites will be managed appropriately.
2. Alternative measures to ensure suitable rehabilitation of the site.