

**Before the Wellington City Council Proposed District Plan Hearings  
Panel**

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Under the Resource Management Act 1991 (the Act)

In the matter of the Wellington City Council Proposed District Plan–  
Hearing Stream 6:  
**Special Purpose Zones and Development Areas:**

- **Quarry Zone (QUARZ)**

Between **Wellington City Council**  
Local authority

And **Horokiwi Quarries Limited**  
Submitter 271 and Further Submitter FS28

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**Statement of evidence of Ross Baker for Horokiwi Quarries Limited**

Dated 5 February 2024

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## 1 Executive Summary

- 1.1. Horokiwi Quarries Limited (“**Horokiwi Quarries**”) operates the Horokiwi Quarry located off State Highway 2 in Horokiwi, north of Wellington City. The quarry produces a wide range of products, such as specialty sands for the concrete and asphalt industries, basecourse and sealing chip for roading and builders mix and drainage metal for the construction industry. The quarry site also contains an asphalt plant.
- 1.2. Horokiwi Quarry is a significant source of aggregate for Wellington City and wider region. This aggregate is vital to infrastructure and construction projects in the city and region. The quarry currently provides aggregate for the Te Ara Tupua Alliance, Petone to Ngauranga Cycle Way, Wellington Water Drainage Work, various residential subdivisions and commercial building projects. Past significant projects include Transmission Gully, Wellington Childrens Hospital, Wellington Airport upgrade and runway overlay, Omaroro Reservoir Construction, Port of Wellington rebuild and WCC road maintenance contracts. This aggregate directly and indirectly has significant economic and social benefits for the city and region, including increased employment, increased resilience, enabling efficient movement of people and goods and supporting housing supply.
- 1.3. A quarry has been operating from this location in Horokiwi for nearly 90 years. Since its establishment, the quarry has progressively expanded in response to demand for aggregate. The existing quarry areas are projected to have capacity for the next 5 – 20 years. To cater for future demand, the quarry will need to expand to ensure there is a local supply of suitable aggregate to meets the needs of infrastructure and construction projects in Wellington City and wider region. A local source of aggregate from expanding an existing quarry has many benefits, including:
  - a. lower transport costs and emissions for supplying aggregate with a short distance between the quarry and project(s) where aggregate is needed;
  - b. lower impacts associated with heavy vehicle movements on nearby communities;
  - c. local employment opportunities;
  - d. existing quarry is part of the existing location.

- 1.4. Planning documents, such as the Wellington City Council Proposed District Plan (“PDP”) can impose regulatory constraints on the operation and future development of the quarry. Horokiwi Quarries is seeking that the PDP recognise the importance of the quarry in supplying aggregate that supports the ongoing functioning and development of the city and region. The PDP needs to enable the ongoing operation and expansion of the quarry to meet the current and future needs of the city and region.
  
- 1.5. Based on my understanding of the PDP zoning, overlays and associated provisions that apply to Horokiwi Quarries, I am supportive of identifying and zoning Horokiwi Quarry as Quarry Zone. This zoning should apply to the full extent of land owned by Horokiwi Quarries to recognise the operational needs of the quarry and provide for expansion in the future. In addition, the overlays should be accurately mapped and only apply to areas where it can be demonstrated these places have important values. Ms Whitney in her evidence outlines the specific relief sought by Horokiwi Quarries.

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## **2. Qualifications and Experience**

- 2.1. My full name is Ross Alan Baker.
- 2.2. I hold the position of Quarry Manager at Horokiwi Quarries and have held this position for 45 years. I have been employed by Horokiwi Quarries for 49 years and during that time I have overseen the expansion of the quarry throughout the site, and various rehabilitation projects on the site.
- 2.3. I hold the qualifications of "A" Grade Quarry Manager from 1980 I am a Member of NZ Institute of Quarrying and Aggregates Association.

## **3. Evidence Preparation**

- 3.1. In preparing this evidence I have discussed the PDP Quarry Zone Chapter with Pauline Whitney of Boffa Miskell Limited. While not directly relevant to this particular hearing (but later hearings), I have also discussed the Natural and Coastal Environment matters in the PDP with Dr Vaughan Keesing of BlueGreen Ecology (ecology matters) and Shannon Bray of Wayfinder (landscape matters) which has provided background and context for this evidence.
- 3.2. In preparing my evidence I have considered the following:
  - a. Submissions on the PDP by Horokiwi Quarries (Submission 271 and Further Submission FS28);
  - b. Section 42A Report – Quarry Zone.

## **4. Scope of Evidence**

- 4.1. Horokiwi Quarries lodged a comprehensive submission to the PDP with the overall intent to ensure the district plan recognises and provides for the current and future use and development of Horokiwi Quarry.
- 4.2. This hearing addresses the proposed Special Purpose Quarry Zone and sought rezoning of two areas of land currently owned by Horokiwi Quarries. Relevant other matters in the PDP to Horokiwi Quarries' submission points will be addressed at the next two hearings (hearings 7 and 8).

- 4.3. As outlined in the evidence of Ms Whitney, Horokiwi Quarries also lodged a hearing statement to hearings 1 and 3, largely agreeing with the officer recommendations. As this first hearing appearance directly relevant to Horokiwi Quarries, my evidence will address the following matters:
- a. Use and need for aggregates and quarries in Wellington City and wider region, including benefits to the city and region.
  - b. My experience of planning constraints on establishing and operating quarries, including new greenfield quarries.
  - c. Overview of Horokiwi Quarries, a summary of the existing quarry including its history and operational details, as well as the use of material sourced from the quarry.
  - d. Future use and expansion of the existing quarry.
- 4.4. This information, in turn, can then provide a useful basis to inform subsequent hearings.

## **5. Use and Need for Aggregates and Quarries in Wellington City and Wider Region**

- 5.1. As outlined later in my evidence, the majority of aggregate quarries at Horokiwi Quarries is hard, fractured greywacke (light grey) rock, with some thin layers of black argillite. For 2020 to 2022, 52% of aggregate from the quarry was used for drainage and construction works, 28% for roading, and 20% for fill. Horokiwi Quarry is located on the main Wellington fault as is the other local operational quarry in the Hutt Valley and as a result of this the rock available is varied. The best rock is suitable for making concrete and asphalt products while all other rock quarried can be used for roading, drainage, commercial and domestic construction and bulk filling. Current projects include the Petone to Wellington Cycleway, Wellington Water Drainage works and numerous residential and commercial developments. The quarry has also been a significant supplier of key projects over the past 20 years in the Wellington region including Transmission Gully, The Wellington Childrens Hospital, Wellington Airport upgrade and runway overlay, the Omaroro Reservoir construction and numerous residential and commercial projects.
- 5.2. According to the latest (2021) aggregate production statistics produced by New Zealand Petroleum and Minerals, the majority (52%) of aggregate in New Zealand is used for roading. The other uses of aggregate are building/construction (29%),

reclamation and protection (1%) and fill and other purposes (18%). These figures are nationwide, and in my experience, these proportions would be similar for Wellington City and Wellington Region over the long term. However, these proportions can fluctuate year-to-year depending on the large-scale infrastructure and construction projects in the city or region.

- 5.3. In terms of the quantity of demand, according to the Aggregate and Quarry Association of New Zealand, demand in New Zealand equates to about 8.5 tonnes per person per year. Another example of the demand for aggregate is that each kilometre of motorway uses about 40,000 tonnes of aggregate, including basecourse, sealing chip, and asphalt. Another example is a single new house is estimated to require about 250 tonnes of aggregate for its construction, which includes the foundations, concrete, building materials, and drainage.
- 5.4. There has been sustained demand for quarry products in the Wellington Region. Ongoing demand is also anticipated to be strong with the current construction forecasts for the Wellington region indicating significant growth.
- 5.5. The existing quarries in Wellington City are a significant contributor to the productivity and economic growth of the city and region. Aggregate from quarries are used extensively in local and regional projects. For example, recently Horokiwi Quarry has supplied 45,000 tonnes (towards the total of 180,000 tonnes of quarried aggregate to the Petone to Ngaurang (25%) a Cycleway project. Over 300,000 Tonne to Transmission Gully, 35,000 Tonne annually to drainage work in the region and over 120,000 Tonne to the Concrete industry for the supply of concrete in Wellington.

5.6. The other quarries in the Wellington region are shown below in Figure 1. Those quarries within the insert are within 30km of the Wellington CBD and all produce hard rock aggregate.

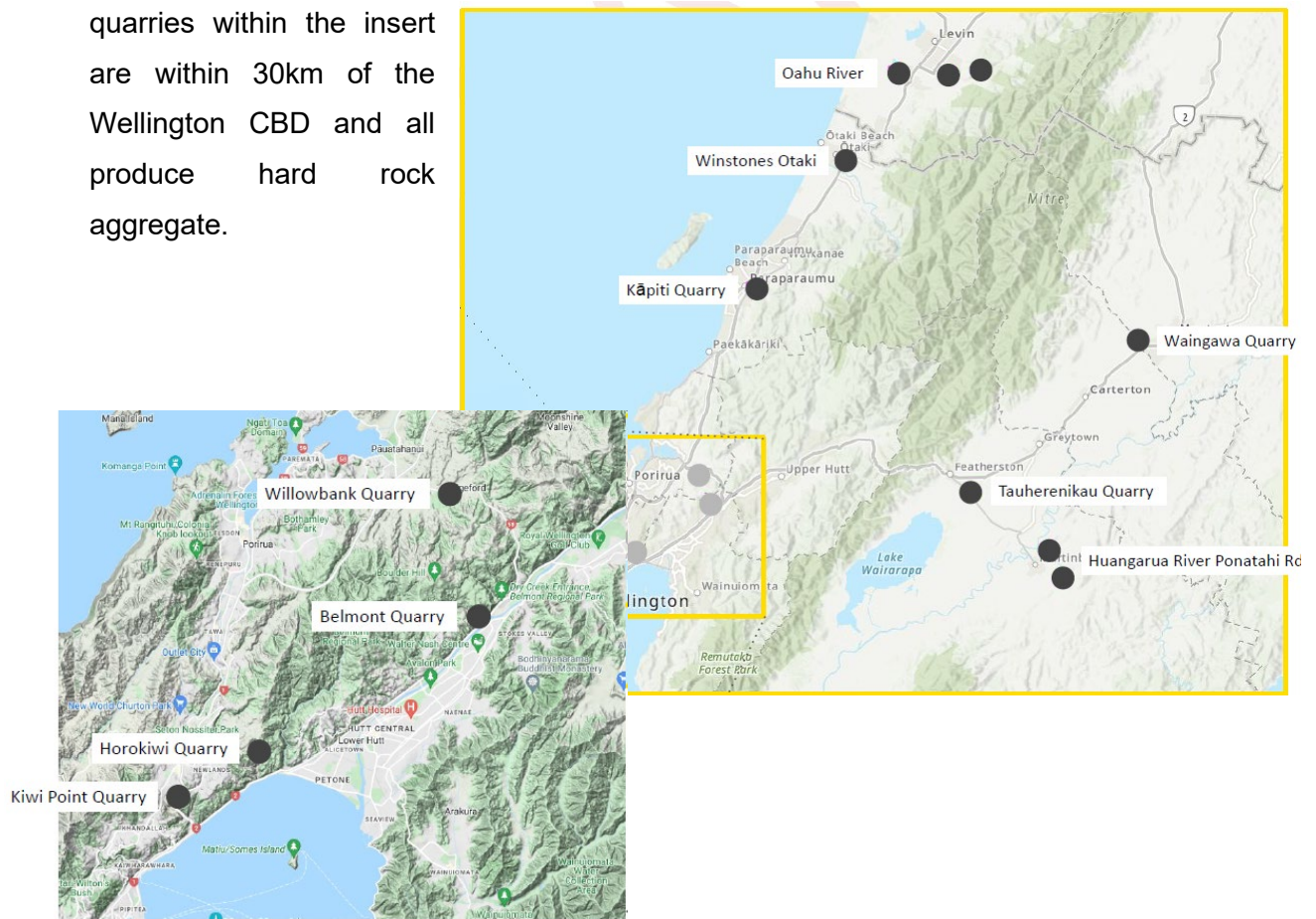


Figure 1. Quarries in Wellington region

5.7. A key influence on providing affordable aggregate to projects is the proximity of the quarry (aggregate source) to where the aggregate is needed. The closer a quarry is located to where the aggregate is needed to better for various reasons. These reasons include costs and effects associated with heavy vehicle movements (noise, traffic safety, emissions). According to the Aggregate and Quarry Association of New Zealand, once a load of aggregate is taken more than 30km from a quarry, the consumer is generally paying more in cartage costs than for the actual aggregate. For example to source aggregate from the Manawatu would add approx. \$30/T and from the Wairarapa \$20/T to the delivery cost to a Wellington project. This is assuming the aggregate specified is available in these locations.

## 6. Planning constraints on establishing and operating quarries, including new greenfield quarries

6.1. In my experience there are a number of barriers or constraints in establishing and operating quarries, in particular establishing new greenfield quarries. The Commerce



Commission identified the following barriers to entry in the quarry and aggregate industry<sup>1</sup>:

- a. Appropriate resource: The rock needs to be of sufficient quality to be utilised.
  - b. Land: Land needs to be available next to the appropriate resource.
  - c. Equipment/capital: There is significant investment required to establish and develop a quarry. Hard rock quarries have higher equipment needs than river gravel extraction.
  - d. Resource consent.
- 6.2. In my experience, there can be considerable difficulty in obtaining resource consent for establishing new quarries and expanding existing quarries. The first difficulty is finding a location with an appropriate resource to establish new quarry or expand an existing quarry. For the hard rock aggregate required for roading and construction projects, this aggregate is mostly located close to fault lines, with limited areas that have been identified with suitable rock with quality aggregate production. In the Wellington region, this suitable rock is more commonly located in places with major environmental constraints or sensitivities for the establishment of new quarries or expansion of existing quarries. For example, these places may have important biodiversity, cultural or landscape values, or may be located in close proximity to residential areas or rural residences, or within open space or reserve areas. Suitable road access is a key factor in the Wellington region.
- 6.3. By way of example, in 2019 Horokiwi Quarries investigated a potential new quarry site in a location north of Plimmerton. This location was identified based on suitable rock, good access to a State Highway for heavy vehicles, close proximity for current and future roading and construction projects, and relatively few houses. However, following consideration of the resource consent requirements and strong initial opposition from the local community, Horokiwi Quarries decided not to pursue this new quarry site.
- 6.4. These planning and resource consent requirements and constraints can apply to existing quarry sites. For example, the Significant Natural Area and the Coastal Environment overlays in the PDP as applied to the Horokiwi site pose constraints on the future development and operation of the existing quarry in terms of the consenting

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<sup>1</sup> Commerce Commission decision: Fletcher-Building-Holdings-NZ-Ltd-Higgins-Group-Holdings-Ltd-and-Horokiwi-Quarries-Ltd clearance-application-16-February-2016

requirements. Ms Whitney and other experts for Horokiwi Quarries will elaborate on these constraints in future PDP hearings.

**7. Overview of Horokiwi Quarries, a summary of the existing quarry including its history and operational details, as well as the use of material sourced from the quarry.**

7.1. Horokiwi Quarries is one of the largest quarry operators in Wellington City. Horokiwi Quarries is jointly owned by Fulton Hogan Limited and Hirock Limited (subsidiary of Higgins Family Holdings Limited). Horokiwi Quarries currently supplies ~650,000 tonnes per annum of aggregate. The majority of this aggregate is hard, fractured greywacke (light grey) rock, with some thin layers of black argillite. For 2020 to 2022, 52% of aggregate from the quarry was used for drainage and construction works, 28% for roading, and 20% for fill. The concrete industry alone accounts for 22% of the quarries production.

7.2. The existing quarry located at 39 Horokiwi Road, Horokiwi was established circa 1934 and has been used for quarry activities since that time. The asphalt plant was established between 1972 and 1974. The site now comprises nine land parcels as shown in Figure 2 below.



Figure 2. Horokiwi Quarries site and landholdings

7.3. The quarry is able to operate 24 hours per day 7 days per week but it's normal operating hours are 6.30am to 4.30pm Monday to Friday and 6.30am to 12.00 noon on a Saturday. If extra production is required for large contracts these hours are extended and on occasions the quarry will open for emergency works where aggregate is required. There are up to 25 people working on site including permanent staff and subcontractors and these people operate heavy machinery including excavators, loaders, bulldozers, dumptrucks and quarry processing plant necessary for the production of the 50 types of material required to supply the Wellington market. The cost of purchasing and maintaining mobile and fixed plant is substantial and the additional cost of meeting environmental requirements increase every year. This alone has seen millions spent on the recent installation of a water treatment plant and a Filter Press to clean the water used in production.

7.4. A photo of the site is shown below in Figure 3



Figure 3. Quarry site photo

7.5. Visual images of the existing quarry are provided below in Figure 4 and Figure 5.

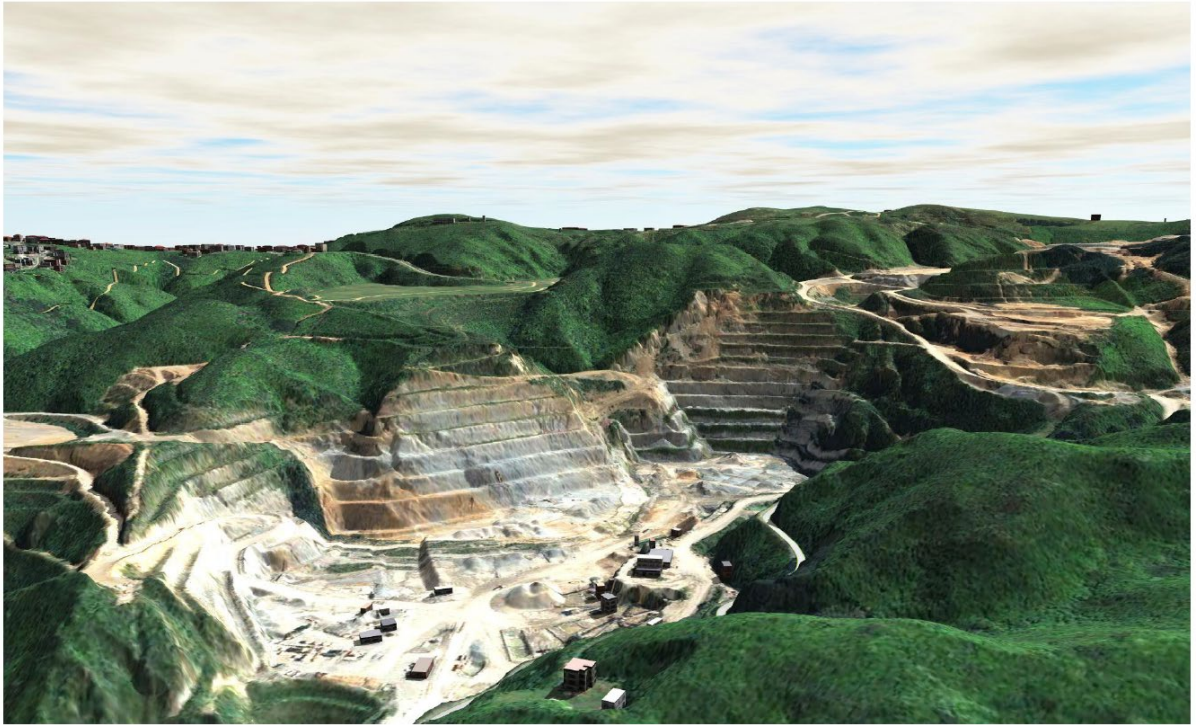


Figure 4. Existing quarry image



Figure 5. Existing quarry image

7.6. In 2012, an Existing Use Certificate was issued by Wellington City Council (file reference 1048648) for the quarry activity and overall site (As attached to the planning evidence of Ms Whitney). This Certificate confirmed that the existing and future quarry

plans at that time were authorised. This authorisation provided certainty for Horokiwi Quarries to continue to invest and develop the quarry.

- 7.7. In terms of the two areas sought to be rezoned, these form part of the Horokiwi quarry landholding. The area currently zoned Open space (shown as striped area below in Figure 6) currently accommodates the sediment pond and forms part of the quarry operation. This pond is now at capacity and the area will be used for fill. When the filling is complete the area will be recontoured and planted with suitable vegetation cover. There is part of a WCC walking track on the site but Horokiwi Quarries can withdraw the right of access at any time, subject to 6 months notice to council (not that the quarry intends to withdraw access at any stage.)



*Figure 6. Area sought to be rezoned from Open Space Zone to Special Purpose Quarry Zone*

- 7.8. The area currently zoned General Rural Zone (shown as striped area below in Figure 7) is not currently being quarried but forms part of the Horokiwi landholding and is a potential expansion area.



*Figure 7. Land sought to be rezoned from General Rural Zone to Special Purpose Quarry Zone*

7.9. Based on current extraction rates, the existing quarry site has approximately 5-20 years of quarry resource remaining. This timeframe is also subject to maintaining compliance and obtaining future resource consents from the Regional Council.

## **8. Future use and expansion of the existing quarry.**

8.1. Due to the limited lifespan of the existing Horokiwi quarry and in response to increasing demand for aggregate within the Wellington region, since 2019 Horokiwi Quarries has been considering its future quarry expansion plans at the existing quarry, both within the existing landholding and behind the current ownership area. Expanding the existing quarry is favoured due to the significant challenges with establishing a new quarry (as I outlined earlier), having a known good quality quarry aggregate resource, good access to transport network, existing on-site infrastructure, and the close proximity to where aggregate is demanded.

8.2. There are a few options for how and where the quarry could expand around the existing site. These options include expanding in different directions based on the type and quality of aggregate, as well as landownership and operational considerations. While I understand any expansion plans beyond the existing quarry landholding are outside the realms of the PDP, as outlined in the evidence of Ms Whitney, a key consideration for the quarry is ensuring the PDP better recognise and provide for the operation and development of the existing quarry and future expansion.

## **9. Conclusion**

9.1. Horokiwi Quarries plays an important role in the development of Wellington City and wider region. The supply of aggregate in a cost effective way contributes to the economic and social wellbeing of the city and region. The existing Horokiwi Quarry is the valuable physical resource and brings significant local and regional benefits.

9.2. Recognition of the existing quarry and provision for future expansion in the PDP would provide certainty to Horokiwi Quarries to invest and further develop the quarry.

9.3. Horokiwi Quarries is supportive of the general approach in the PDP of applying a Special Purpose Quarry Zone to Horokiwi Quarry. However, Horokiwi Quarries is seeking amendments to the PDP to better recognise and provide for quarrying activities as outlined in the evidence of Ms Whitney.

**Ross Alan Baker**

5 February 2024

