



BEFORE

An Independent Commissioner
appointed by Tasman District Council

IN THE MATTER

of the Resource Management Act 1991

AND

IN THE MATTER

of an application by CJ Industries Ltd
for land use consent RM200488 for
gravel extraction and associated site
rehabilitation and amenity planting and
for land use consent RM200489 to
establish and use vehicle access on an
unformed legal road and erect
associated signage

**SUPPLEMENTARY EVIDENCE OF TIMOTHY GEORGE CORRIE-JOHNSTON
FOR CJ INDUSTRIES LIMITED
(CORPORATE AND OPERATIONS)**

19 December 2022

1. INTRODUCTION

1.1 My full name is Timothy George Corrie-Johnston.

1.2 I am Site Manager for CJ Industries' operations base at Hau Road and for all of CJ Industries' quarries (two at Riwaka, one at Marahau, and Douglas Road, Motueka). If this application is consented I will be site manager for the Peach Island Quarry. I am authorised to provide this evidence on behalf of the applicant, CJ Industries Ltd. I set out my qualifications in my brief of evidence dated 15 July 2022.

1.3 I live onsite at 134 Peach Island Road with my family. I purchased the property in 2019. I have a drinking water bore on my property.

1.4 In this statement, I provide supplementary evidence on two matters discussed at the hearing of this matter on 21 – 25 November:

(a) Alternative sources of rock for use in concrete and sealing chip.

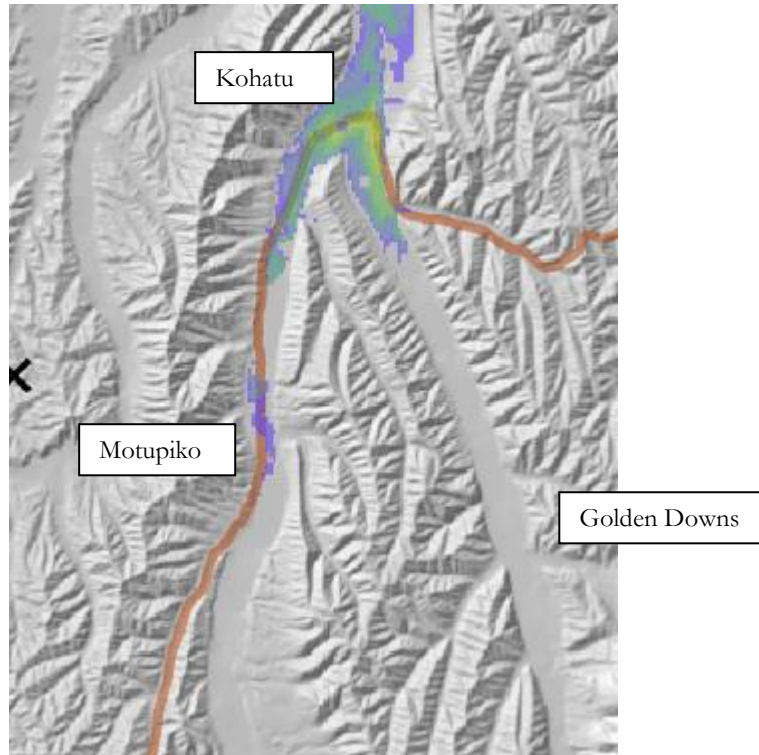
(b) Daily rate of extraction.

2. EVIDENCE

Alternative sources of rock for concrete and sealing chip

- 2.1 I disagree with statements that alternative sources of aggregate are available that provide the same benefit as extraction from Peach Island.
- 2.2 Dr Campbell says at paragraph 21 that alluvial aggregate is available from other sources nearby that will not impact on highly productive land, and these sources should be preferred over extraction from the productive soils at Peach Island.
- 2.3 As explained in my evidence in chief, CJ Industries uses aggregate sourced from in-river where possible (and that is in large part the reason why a longer consent term has been sought for the Peach Island quarry than the minimum time to quarry and restore the site), but there is no certainty over this source.
- 2.4 At 82, Dr Campbell says alternative sites for gravel mining exist, and gives the example of “the upper reaches of the Motueka River, between Motupiko and Golden Downs”. I am unsure whether this is referring to in-river gravel, or gravel from farmland:
- (a) If he is referring to in-river gravel in the area between Tapawera and Kohatu, I am familiar with this gravel as CJ Industries has had the opportunity in the past to extract gravel from this area. Gravel from Tapawera to Kohatu is contaminated by clay rocks which flow out from the Motupiko River. As a result, CJ Industries has had to turn down the opportunity to extract gravel beaches from the area. Clay rocks are much less strong than river run aggregate, so cannot be used to achieve the necessary specifications (for example, a 25MPA concrete would be normal for a driveway, where-as the clay rocks would only be around 10MPA, so if the clay rocks were included in the premix the driveway would not be constructed to the specified strength). Clay rocks cannot be washed or graded out.

- (b) If Dr Campbell is referring to quarrying on land in the Motupiko Golden Downs area, GNS Aggregate Opportunity Modelling (described in Mr Scott’s evidence) shows low availability at the confluence of the Motueka and Motupiko Rivers around Kohatu, a small “low availability” area at Motupiko, and no availability in the area between Motupiko and Golden Downs:¹



- (c) In either case, a round trip to and from Peach Island is 26km, compared to a 115 km round trip to Golden Downs. This makes a significant difference to the cost and carbon emissions:
- (i) As well as each truck travelling a longer distance, more trucks would be required. A single truck could make 9 trips per day to Peach Island, but only 5 per day to Golden Downs. CJ Industries’ 36 tonne HPMV vehicles could not cover this increase, so we would have to use some of the existing fleet of 28 tonne trucks which would further increase truck movements and CO₂

¹ Clip from R30-Tasman-Westport gravel map, part of Appendix 2 to Hill, M. P. (2021) “Aggregate Opportunity Modelling for New Zealand” GNS Science Report: 2021/10. 96 p. (doi:10.21420/1RKC-QB05)

emissions. These trucks would still need to use Motueka River West Bank Road.

- (ii) The inward travel cost of carting would increase by 150% (this is based on a standard hourly rate for truck and trailers, and assumes HPMV vehicles – in practice we would need to also use 28tonne vehicles so this cost would be higher). This means that the price of ready mix would have to be increased. The margins on ready mix are already very tight, so there is no room to absorb these extra costs.
- (iii) Sourcing aggregate from such a long distance away would significantly increase the cost of the end products and would also produce a large amount of additional CO₂ in its transport. Golden Downs to Hau Road is approximately a 115 km round trip. A 115 km round trip would produce approximately 172 kg CO₂ per load, where-as the proposed extraction site 134 Peach Island is a 30 km round trip to Hau Road which would produce 45 kg of CO₂. Over the total approximately 475,000 tonnes of aggregate estimated to be extracted from Peach Island, if sourced from Golden Downs this would equate to approximately 2, 263,111 kg (1,675,694Kgs of additional CO₂ compared to Peach Island). In future, if electric or hydrogen vehicles become available, it will be possible to cart gravel from further away without generating excessive CO₂, but at this stage that is not possible.

2.5 I disagree with statements that hard rock quarries can supply aggregates for concrete and sealing chip in the same way as river run aggregate.

2.6 At 86 Dr Campbell refers to my evidence that river aggregate is essential for high end concrete products and sealing chip and says that he is aware of hard rock quarries at Dunedin, Wellington, Tauranga and Auckland that produce a range of aggregates which are used for concrete products and sealing chip.

2.7 I refer to Mr Saavedra's evidence with respect to the technical requirements of stone for concrete, and add that:

- (a) Most Tasman quarries are limestone quarries rather than hard rock quarries. Soft rock that does not comply with the NZCCA certified concrete requirements.
- (b) River run aggregate has rounded edges. CJs' ready mix customers require rounds (river-run aggregate) for their driveways, ground floors and general concreting for reasons of gentleness underfoot and durability. River stone is also the best form of stone for workability (ease of laying) and for decorative work.

2.8 At paragraph 87, Dr Campbell says sealing chip for a large part of the Nelson area comes from the sandstone quarry at Marsden Valley and that the Mapua bypass road which was constructed several years ago used Marsden Valley chip for the sealing with a transport distance of up to 25 km. These statements are not correct. I have made enquiries with Operations Manager Kyle Paddon at Marsden Road Quarry:

- (a) All the sealing chip for the Mapua bypass was from the Waimea River and its bermlands.
- (b) It is sometimes possible to purchase sealing chip sourced from the Marsden Road Quarry – to produce this they would cart rock to their Appleby crusher to manufacture it, then it would need to be carted to Motueka. They do not have it in stock, and the cost would be between \$70 and \$80 per ton, compared to the \$46.56 which our sealing team currently pays (plus higher CO₂ emissions and truck movements).

2.9 The difference between a Peach Island round trip and Marsden Valley is 57 km, so the Marsden Valley trip would produce 84.85 kgs of CO₂ per trip. The total additional CO₂ for 475,000 tonnes of aggregate is 1,436,670 kgs.

2.10 At paragraph 88, Dr Campbell says that CJ Industries' website states they charge over \$48 per ton for builders' aggregate, that Horikiwi Quarries (hard rock) at Wellington charge \$42.50 per ton for builders' aggregate, and that hard rock quarries at several other locations also charge around \$48 per ton. CJ Industries' website does not include prices for products. To clarify - CJ Industries sells builders aggregate for \$42.67/ton but this is a low volume retail product where-as ready mix is sold in wholesale volume for a lower price.

- 2.11 Dr Campbell notes that gravel requires less processing compared with hard rock materials which need to be blasted out and crushed, which is correct.
- 2.12 Dr Harvey says that aggregate is readily available from other sources (e.g. Waimea River). I disagree. I addressed this in my primary evidence at 3.13 which said:

3.13 Generally, comparatively large volumes of aggregate can be sourced from the Waimea River, so there is less need for aggregate suppliers to have pit quarries to meet demand in and around the Richmond area. CJ Industries occasionally sources a small quantity of Waimea gravel from a Waimea aggregate supplier. That said, no aggregate supplier in Waimea is currently able to commit to supplying CJ Industries' river run demand. Council has also agreed that CJ Industries can access a small volume from Waimea River (5000 m³, which is about a month's demand). The Waimea River aggregate is a weaker gravel and not ideal for our ready mix. It can only be used by blending it with local river run.

- 2.13 If CJ Industries were able to source enough Waimea gravels to change to 100% Waimea gravels ready-mix, CJs would have to change its recipe to add more cement, resulting in a larger carbon footprint as discussed in Mr Saavedra's evidence.

Daily rate of extraction

- 2.14 At the hearing, the Commissioner asked about the rate of extraction advancing. The rate of advancement will vary depending on depth of topsoil and subsoil, and distance to groundwater. Based on 2.5m of raw aggregate beneath the topsoil and subsoil, and 300mm freeboard above groundwater, the daily rate of advancement is 16 linear m or 320m².

Tim Corrie-Johnston

19 December 2022