

BEFORE THE CANTERBURY REGIONAL COUNCIL

In the matter of the Resource Management Act 1991

and

In the matter of Variation 6 to Chapter 4 Water Quality of the Proposed Natural Resources Regional Plan

BRIEF OF EVIDENCE OF BRIAN STUART WARREN

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1. **Introduction**

1.1 My name is Brian Stuart Warren I am the Chief Executive of The Isaac Construction Co Limited but my evidence today is made on behalf of Fulton Hogan, Road Metals, Winstones, KB Contracting, Christchurch Ready Mix and Isaac who are all quarry operators in Canterbury. I hold a Bachelor of Engineering (Civil) degree and I have been involved in the Roading and Infrastructure industry for 32 years with 18 of those years based in Christchurch.

1.2 My evidence is to outline, in general terms, the state of the aggregate industry in Canterbury; the general industry growth patterns; the limitations faced by the industry in locating alternative sources of supply; cleanfill.

1.3 I will also quantify from reports and decisions the importance which is placed on continued availability of aggregates as a regional resource

2. **Background**

2.1 Over recent years a considerable amount of “mis-information” regarding the quarrying industry in Canterbury has circulated within the community:

- Canterbury will never run out of aggregate – simply dig a hole anywhere on the Plains and you will find stones
- The Waimakariri River could provide all of Canterbury’s aggregate requirements
- The existing quarries have huge reserves of aggregate to extract
- The existing quarries are a major source of groundwater contamination and thus ought to be limited in order to improve the quality of the environment.

Regional importance of quarrying

3. The supply of aggregate has a direct link with economic performance. To build a house, re-surface a road or develop infrastructure of regional importance, aggregate is required.

4. In 2008 alone the industry produced nationally approximately 50 million tonnes of aggregate. This equates to 11 tonnes per person. In order to improve the

standard of living in New Zealand economic growth is vital and without a continued source of aggregate all development including the development of houses, factories, large infrastructure projects such as roads, and water schemes is at risk.

Availability

4.1 In response to growing industry pressure and comment made by the Environment Court in the recent *Road Metals v CCC* case (Decision ENV C 163/05) the Christchurch City Council (“the City Council”) initiated an independent review to determine future aggregate demand and existing capacity within the greater Christchurch area. This report, compiled by Twelfth Knight Consulting – Richard English a Civil Engineer with over 15 years experience of the quarrying and roading industry, was completed in December 2009 (“the Report”). The Report considered the Christchurch City and Selwyn and Waimakariri District Council areas and included all land based quarries and all river extraction operations. The Report stated:

4.1.1 In 2008 aggregate production from all sources from within the study area was 3,400,000 tonnes pa.

4.1.2 Predicted regional demand for the period 2009 to 2041 would be approximately 200 million tonnes.

4.1.3 Total available resource within study area estimated at 75 million tonnes.

4.1.4 In theory the presently zoned areas will be exhausted by 2024.

4.1.5 To satisfy demand to 2041 an additional 100 million tonnes over what is currently available will be required.

4.2 Graph 12, from the Report shows historical and predicted forward demand for aggregates within the Canterbury area. Whilst this report was compiled with input from the quarrying industry we have subsequently submitted review comments to the UDS Committee regarding some aspects and deficiencies as we see it.

- 4.3 The quarry industry has been working very closely with the Canterbury Regional Council (“Ecan”) over recent years to gain a more accurate understanding of the aggregate volumes available from Canterbury’s rivers. The Report concludes the long term sustainable yield from all rivers within the study area is approximately 700,000 tonnes per year. Thus an ever increasing volume of aggregate will need to come from land based quarries. The supply from our river systems is not always able to be quarried for practical reasons. You need a consent to extract at any given time and consents take time! Public interest groups – and even our own desire to be good environmentally, accountable operators means that consents cannot be obtained on a season by season basis to reflect the aggradation of gravel in a certain area. Thus there can be a build up of gravel in one area which simply cannot be obtained because the consent process does not allow for it.
- 4.4 By the same token river based extraction often poses problems with access to the resource – in that not all gravel areas can be reached through “traditional” river access points. For safety reasons we need to keep away from the access points used by jet boaters and other recreational users of the river.
- 4.5 For other reasons such as close out periods for floods and the need to keep separation distances from the main channel, the ability to fully use the available resource is limited. We can work around these restrictions but they serve to illustrate the importance of a land based facility to enable year round supply.
- 4.6 As stated elsewhere in our evidence river extraction does not always allow extraction on our commercial doorstep. Long access routes along riverbeds, unformed haul roads, and the need to protect stopbanks make some locations financially less attractive than others.
- 4.7 Taking all these factors into account the river aggregate supply is problematic for the long term sustainability of the industry.
- 4.8 There is a perception that the industry holds a number of river consents providing more than an adequate annual resource for the industry. However, many consents are restricted by minimum bed level limits which results in actual volumes able to be extracted being significantly different than consented volumes. At many sites on the Waimakariri River minimum bed level conditions may prevent any extraction at all.

- 4.9 The *Road Metals* case was also interesting from an industry perspective from a number of other view points. Firstly the case was opposed by both the City Council and Ecan on the basis that there was sufficient resource available to the industry and that the industry itself was a significant source of groundwater contaminants. I understand that the Court discounted both of these factors – which lead to recognition that there needed to be further studies on zoning options for quarries – given the high need for aggregate resources based on projections going forward. It also recognised that new areas for quarrying could not be developed within a short timeframe given the degree of opposition from residents or other groups which may be expected.
- 4.10 The case was also interesting in that one operator went to the extent of applying for a non complying activity simply to get some security for ongoing operations - knowing the demand for aggregates was likely to continue on its projected growth path.
- 4.11 The Officer’s Report recommends the adoption of Rule WQL40 which makes quarrying of material outside the Zone 1B a non-complying activity. This will significantly restrict the industry’s ability to satisfy the demand for aggregate as the supply of aggregate within Zone 1B is depleted.
- 4.12 There is considerable community pressure to restrict quarry areas. They are seen as unsightly, a source of dust, and rely heavily on the roading network. I do not want to debate those issues here but this makes it imperative that the maximum possible volume is extracted from the existing quarries.
- 4.13 We are somewhat frustrated with the plan’s intentions to further restrict quarrying within the area we currently operate in. Whilst the council has probably heard it many times before we feel that we know our industry very well and we have a sound track record in the area in which we currently work in. In our view this is the case despite the fact that quarrying itself removes the natural buffer between the natural ground level and the groundwater level. From a “whole of community” perspective it would seem prudent to allow further controlled quarrying in the area which is already an operational area.

4.14 I say this given the huge community response to new areas being developed – whether through individual consent applications or a plan change to provide for further quarry expansion.

4.15 Quarrying is a capital intensive business which requires a long term perspective. In assessing the business case for any specific operation the overall resource volume to be extracted is a key factor. The “life” of the quarry and thus its economic viability depend on achieving the pre-assessed volume. The industry has very significant investment in our current quarries through:

- Initial land purchase
- Consenting costs
- Plant – both fixed / stationary processing plant and mobile plant (loaders, excavators, off-road trucks)
- Infrastructure – buildings, weighbridges, roading, landscaping

4.16 All of this investment (sunk money) has been made based on our ability to expand our operations within the existing quarry zones. Variation 6 makes quarrying a discretionary activity in Zone 1B which means that consent may be either granted or declined. This approach does not recognise and provide for the continuation of existing quarrying activities.

5. **Alternative Sites**

5.1 To establish a new quarry is a long process. Identifying possible sites is extremely difficult, particularly given that virtually all the land currently zoned for quarry activity within the City Plan is already part of existing quarries and any application to quarry land outside Zone 1B would be considered as a non-complying activity. The quarry industry is working with the respective local authorities to identify and ultimately secure long term aggregate resource. This is vital for the region not only to maintain the existing infrastructure but also to provide the resource to support growth.

5.2 Our advisors constantly tell us of the difficulties of the consenting process as a non complying activity. This generally “ups the ante” in terms of the number of consultants we need to employ for any given project and inevitably leads to compromise or a cutting back of the available resource – which has the follow on

effect of needing to find further areas with greater frequency – this in itself does not seem to sit well with the concept of a non complying activity.

- 5.3 Quarrying consents generally attract a high degree of public input – that in the end may be a positive aspect in achieving a “best result” for the community – but couple that with the starting point being a non complying activity and our industry does feel threatened. It generally means that our project lead in times need to be long to contemplate delays at council level – and even more unenviable appeals through the Court process.
- 5.4 All of these costs need to be passed on which ultimately is reflected back into the costs that the community pays for roading and infrastructure projects – particularly those that are very large users of the aggregate resource.
- 5.5 The industry has signed a memorandum of understanding with the CCC, which will shortly include ECan, to assist in amendments to the City Plan to better reflect both the quarrying industry and the resource it is based on. The industry believes we can and should operate within the communities we supply. We can “co-exist”.
- 5.6 The relatively high costs of transporting heavy aggregates or bulky rock means that the needs of a community for aggregates are best served when quarries and extraction and processing sites are located close to where that material is used.
- 5.7 As at May 2008, it is estimated that on average, the cost of transporting aggregates within the Canterbury Region exceeds the cost of the aggregates themselves at around a 60 -65 km round trip (based on an average selling price of \$15 per cubic metre and cartage of \$3.70 per kilometre for a truck and trailer with an average load of 15m³). As this cost is ultimately passed onto the people of the Region, it does not make sense for aggregates to have to be provided at significantly higher costs than they need to be, considering they are an essential commodity on which everyone relies.
- 5.8 The transport costs associated with the movement of aggregate incorporate both the running costs of operating vehicles (such as fuel, oil, tyres, road user charges and distance-related vehicle depreciation) as well as the standing (or time) costs associated with owning and operating a vehicle (time-related vehicle depreciation, insurance, driver’s wages and required return on capital). However, in addition to the direct economic costs incurred as set out above there are also

external effects associated with road transport, which need to be taken into account.

- 5.9 Firstly, there are the environmental costs associated with road transport including the emission of CO2 and other pollutants.
- 5.10 Secondly, as will always be the case when significant additional vehicle movements are added to the roading network there are potential road accident costs, including the costs to other traffic and public health and policing agencies.
- 5.11 And thirdly there are the congestion effects of road transport for other road users. Congestion costs in this context relate to the higher vehicle running and standing costs and travel time costs for users of the road other than the trucks carting aggregate.
- 5.12 Mention has been made of the areas of gravel to the south of Christchurch as an alternative to the gravel in Zone 1. You cannot overlook the increased transport costs outlined above, the cost of consenting future areas, purchasing land and trying to deal with residents who never envisaged quarrying would occur in their backyard. Our industry believes there are potentially large quantities of resource within the boundaries of the existing quarries that, through our modern methods of operation, could and should be quarried with no additional adverse environmental effects.
- 5.13 Nobody wants a prison or a quarry for a neighbour but our society can't function without both. That shouldn't be construed to imply that quarries can't be good neighbours. The quarrying industry has a poor reputation - some of which was rightfully obtained, as a "neighbour". However, the industry has moved on considerably in the last 20+ years. Whilst it inevitably creates both noise and dust to make small stones out of big ones, today's plants are a far cry from those of yesteryear. All our quarries have "bunds" where appropriate, which provide both noise and visual separation from our neighbours on their boundaries. The internal roads are either sealed or dampened to control dust, the crushing plants have dust suppression spray systems, the plants themselves are often positioned "down" in the quarry to further lessen their impact on neighbours.

6. **Cleanfill**

6.1 Most quarries also operate as “cleanfills” where inert material, sourced from roading and infrastructure projects throughout the region, is used to backfill the quarry following excavation of the aggregate. This process is also closely controlled and monitored by Resource Consent conditions and by-laws which are all designed to prevent possible contamination of the groundwater. Should the groundwater level rise above previously recorded highest levels it could potentially come into contact with cleanfill placed in the quarries. The potential for groundwater contamination is extremely low with respect to “today’s” quarries, because of the controls placed on the type of materials being accepted in the cleanfills.