Before the Independent Commissioners

In the matter of the Resource Management Act 1991
And
In the matter of the hearing of submissions and further submissions on Proposed Variation 1 to the Proposed Canterbury Land and Water Regional Plan

Statement of Evidence of Bob Willis

on behalf of the Canterbury Aggregate Producers Group

(Submitter ID 52289)
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Introduction

1. My full name is Robert Bruce Willis. I am the Regional Environmental Manager for Fulton Hogan Limited (Fulton Hogan) in the Central South Island area. My professional background is in the field of Resource Management Planning, and I hold the Degree of Bachelor of Resource Studies from Lincoln University (conferred in 1995) with a focus on air, land and water management. I am a Full Member of the New Zealand Planning Institute.

2. I have previously worked for the Canterbury Regional Council (Environment Canterbury – ECan\(^1\)), as a Senior Planner, for approximately 17 years. That role principally revolved around the co-ordination of ECan's involvement in District Planning Liaison for the five southern district councils within the Canterbury Region, and promoting the integration and consistency of district and regional planning documents across the wider region.

3. In this role, I have also contributed to the development of the Natural Resources Regional Plan (NRRP) and the Canterbury Regional Policy Statement along with various other statutory documents.

4. I have also worked extensively with many of the various portfolios within ECan. Accordingly, I am very familiar with the resource management issues of significance to the Canterbury region generally, and to this Variation.

5. I have worked for Fulton Hogan for more than two years, and have participated in hearings before ECan in relation to the Canterbury Regional River Gravel Management Strategy and the proposed Flood Protection and Drainage Bylaw 2012. I have also been involved in the preparation of submissions on the proposed Canterbury Land and Water Regional Plan (LWRP, “the Plan”) and presented evidence on behalf of Fulton Hogan at the Hearing of this matter during February 2013.

6. I consider that my background with ECan provides me with the requisite understanding of the matters subject to submission by the Canterbury

\(^{1}\) Environment Canterbury or ECan is the promotional name of the Canterbury Regional Council and will be used in reference to the Canterbury Regional Council in this evidence.

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Aggregates Producers Group (CAPG). I have a level of expertise in the matters addressed in this evidence given my qualifications and past experience. I am not however providing this evidence as an independent expert, but rather in my capacity as Regional Environmental Manager for Fulton Hogan Limited and on behalf of CAPG.

Scope of Evidence

7. My evidence will address the nature of the operations undertaken by the broader CAPG in the context of the associated regulatory processes and identifying key elements that I consider require attention to secure sustainable management of the aggregate resource through Variation 1.

Outline of the CAPG contribution to the economy

8. Membership of the CAPG represents the majority of larger aggregate producers in the Greater Christchurch area. Details of CAPG members are set out in the evidence of Mr Tim Ensor at paragraph 8. Likewise, the diverse portfolio of CAPG activities is also described generally at paragraphs 9 - 11 of Mr Ensor’s evidence. I do not propose to reiterate that information here, suffice to note that this group is collectively responsible for the preponderance of aggregates\(^2\) supply (in its many forms) to the domestic market in Canterbury.

9. Collectively, the members of the CAPG employ several thousand people directly, and numerous others indirectly either as sub-contractors or as service providers allied to components of the wider areas of endeavour. By way of example, Fulton Hogan Canterbury directly employs 763\(^3\) staff across its portfolio of activities. In addition, other sub-contractors contribute in excess of 120 further jobs across the region.

10. Members of the CAPG also undertake public and private infrastructure construction (motorways, land remediation, utilities, etc.) and directly support the wider civil construction industry engaged in the Greater Christchurch rebuild, following the Canterbury Earthquake sequence. This occurs principally through the provision of aggregates, concrete and aggregate based products (asphalt, emulsions, bitumen chipsealing,

\(^2\) For the purposes of my evidence, unless otherwise described, the term "aggregates" refers to all coarse and fine materials (including gravels, sands, silts and clays) sourced from both land-based alluvial and river deposits in both its "raw" and processed forms.

\(^3\) Employment figures as on 20\(^{th}\) August 2014.
precast concrete etc.). This diverse portfolio is solely reliant on the availability of a suitable aggregates supply.

11. I understand that, within Canterbury, in the order of 8 to 9 million tonnes of aggregates are produced per year, with a total annual gate value of approximately NZ $100 million. The bulk of this can be attributed to CAPG's extensive land and river-based operations, which rely on a combination of fixed and portable processing plants. The diversity of uses of this product – as building blocks for housing, business and infrastructure – is fundamental to sustain the needs and wellbeing of people and communities.

12. It is against this background that the CAPG lodged its submissions on Variation 1 to the LWRP. As noted above, the group (individually or collectively) has also submitted on other ECAN documents, including the "Canterbury Regional Policy Statement", "Canterbury Regional River Gravel Management Strategy" and the "Proposed Flood Protection and Drainage Bylaw 2012", Draft Air Plan Review, and the proposed "Canterbury Land and Water Plan". A number of common "themes" exist across these submissions, relating to such matters as certainty, recognition of the importance of aggregates supply to sustainable communities, duplication of process and similar.

The Nature of Aggregate Extraction and Processing

13. In Canterbury, high quality aggregates have traditionally been available in close proximity to demand. Consequently costs for aggregates (and related products) are lower than other centres. This provides a substantial economic advantage over areas where aggregates supply and quality is constrained (for example, the Auckland and Wellington areas). Despite this, the crucial importance of aggregates to society is almost invariably under-recognised\(^4\).

14. The expected demand for aggregates over the medium to long term in the Greater Christchurch area will be substantial. This is as a result of the post-earthquake rebuild, but also to accommodate forecast infrastructure upgrades (for example, the northern motorway extension) and urban

\(^4\) A rare exception to this is contained in recently-crafted changes to the Christchurch City Plan, where "Quarry Zone" (RUQ and OD3(ICPIQ)) areas have been identified to recognise "Christchurch Areas of Existing and Proposed Quarrying" – see attached. Appendix 1.
growth. However, a number of the presently-available (consented) land-based supplies will be exhausted in the short to medium term.

15. By way of example, the Fulton Hogan Pound Road Quarry has a forecast remaining life of approximately nine months at the current rate of aggregate extraction.

16. In the same vein, ECAn has identified that river-based gravel extraction is an important means of controlling bed levels in many Canterbury rivers, while also supplying aggregate for roads and concrete. The current demand for gravel in Canterbury is high and is estimated to be more than three times the sustainable natural supply\(^5\). ECAn reports also state that river-based (fluvial) aggregates have, in general, been over-allocated, and more will progressively have to come from land-based sources\(^6\).

17. This will further compound the issues around cost, certainty and reliability of supply to the local domestic market. It is likely that the industry will increasingly focus on land-based quarries in response to the declining availability of fluvial aggregates and reduced reliability of supply.

18. Alongside the availability of aggregates, proximity to demand is a further key aspect. Transportation costs are often the biggest determinant of the end-price of aggregates. As a rule of thumb, it is generally accepted that the cost of aggregates doubles for every 20 kilometres of cartage required.

19. Transportation costs are, accordingly, a fundamental determinant of economic costs and the benefits that accrue to the wider economy\(^7\). Proximity to market is a critical factor for the establishment of aggregate quarries, as is evident from the existing pattern of quarry development on the northern and western fringes of the Greater Christchurch urban area.

20. Many of these quarries are situated within the West Melton Special Zone (WMSZ) and Selwyn-Waihora Zone (SWZ). It is anticipated that these areas will be subject to applications to establish future quarry sites as the existing quarries are worked out. A concomitant expectation to transfer existing water rights will accompany this.

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\(^6\) Regional Gravel Management Report, ECAn Report R06/1, December 2006 (Executive Summary).
\(^7\) Note, also, that other less-tangible environmental "costs" associated with greater haul distances include increased emissions, traffic congestion and roading safety impacts.
The need for water

21. Having identified the importance of aggregate quality, availability and proximity to demand, I highlight a further fundamental element to the viability of this resource; that of the need for sufficient water for processing and other operational needs.

22. Without a guaranteed water supply, it is considered unlikely that new quarries will be established. Water use typically involves a degree of consumptive use (for example, to service administration buildings, for dust suppression and/or to establish screen plantings), and for aggregate washing, where much of the water is recycled and, ultimately, returned to ground (i.e. non-consumptive use).

23. Maximum rates of take during operational periods may be in the order of 25 – 30 litres per second (where recycling occurs) or 35 – 40 litres per second where only clean water is used to produce aggregates with a high cleanliness specification. A substantial proportion of washdown water (for aggregate crushing and cleaning, for example) is recirculated through the plant and, ultimately, returned to ground. Where water is used solely for dust suppression, considerably lower rates of take are required.8

24. There are other "consumptive" uses, albeit relatively small in context. These include the use of water for irrigation of screen plantings – a standard requirement for the establishment of new quarries alongside dust suppression – and perhaps for potable use. These additional uses are, however, only small in the overall scheme of things.

25. If a new quarry is to be viable, a consistent quantity of water must be available for use. Naturally, this will depend on the scale and nature of the quarry and the activities undertaken. Water is however a critical component of all quarrying activities.

Surrender on Transfer

26. Quarries are, by their nature, transient land uses. Once available aggregate resources are worked out, a new site is sought. It is (quite reasonably, in my view) expected that the opportunity to transfer an

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8 For example, a plant producing 800 m$^3$ of processed aggregate per day would use water sprays at approx. 0.03 l/s, whereas a large plant producing 4,000 m$^3$ per day may use up to 0.085 l/s for dust suppression.
existing water right – integral to the operation of a quarry – will follow this shift to a new site.

27. Land-based gravel extraction demands a significantly greater investment in land, fixed plant and infrastructure, and statutory approvals, and requisite operational certainty. Any “clawback” of allocated water by requiring the “surrender” of 50% of allocated volume on transfer, will intrinsically affect the viability of this activity. If this approach were to be applied at every transfer, only 12.5% of the original legitimate allocation would be available after just three transfers.

28. Putting aside the merits of the arbitrary proposed clawback provisions, it is readily apparent that such an approach will cause significant difficulties for the aggregates industry. The associated costs of this will be borne by the wider community.

**Appropriate emphasis in the Plan**

29. As I noted in my evidence to the pLWRP in February 2013, in my opinion, greater recognition should be given to the central importance of the aggregates industry to the well-being of people and communities and, in particular, to recovery activities.

30. The *Recovery Strategy for Greater Christchurch Mahere Haumanutanga o Waitaha*\(^9\) includes Goals to contribute to the recovery and future growth of greater Christchurch by (inter alia) “facilitating a timely and efficient recovery, including intervening where necessary to remove impediments, resolve issues and provide certainty.”\(^10\) and to revitalise greater Christchurch by “collaborating with the private sector and government agencies to address obstacles to economic recovery and to match supply with demand for resources”\(^11\). However, the regime proposed through Variation 1 does, in my opinion, add both cost and uncertainty to the industry by substantially limiting, the transfer of water rights to new quarries.

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\(^9\) Discussed at page 1-13, Section 1.3.3 “Statutory Planning for Managing Land and Water, and the Role of the Land and Water Regional Plan”. Note, also, that Figure 1 does not identify the hierarchical status of this Strategy.


Conclusion

31. Significant investment has been made by members of CAPG in infrastructure to service legitimately-held Resource Consents for gravel extraction in Canterbury, and the proposed constraints on the ability to transfer water rights and prohibit new takes are opposed.

32. There is a concern that the adoption of these proposed provisions will significantly curtail the extraction of aggregates in close proximity to the Greater Christchurch market. Increased cost will inevitably affect demand. The associated (but apparently unanticipated) effects of this approach over the medium and long term will likely result in a significant increase in the cost (and thus market price) of aggregates to service private and public demand and infrastructural needs.

R B Willis
29th August 2014