

IN THE MATTER OF

the Resource Management Act
1991

AND

IN THE MATTER OF

applications by Central Plains Water
Trust to:

Canterbury Regional Council for
resource consents to take and use
water from the Waimakariri and
Rakaia Rivers and for all associated
consents required for the
construction and operation of the
Central Plains Water Enhancement
Scheme

Selwyn District Council for resource
consents to construct and operate
the Central Plains Water
Enhancement Scheme

AND

IN THE MATTER OF

a notice of requirement by Central
Plains Water Limited to:

Selwyn District Council for the
designation of land for works
associated with the construction and
operation of the Central Plains
Water Enhancement Scheme

SECOND BRIEF OF EVIDENCE OF JOHN WILLIAM DONKERS

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1. My full name is John William Donkers.
2. I have previously provided a brief of evidence for this hearing in which I set out my qualifications and experience.
3. I am providing this evidence in my capacity as a director of Central Plains Water Limited to respond to two matters which were raised in the Commissioner's minute and directions issued on 31 March 2008.
4. The first issue is listed in a bullet point under the heading "*for the Rakaia*" in paragraph 3 of the Commissioners' minute. It asks the applicants to comment on the effects on the viability of the CPWT scheme if Synlait attains priority consent.
5. Mr Tipler's evidence explains how, if the Synlait applications have priority, this would affect the Central Plains take from each river while still complying with the terms of the National Water Conservation Order for the Rakaia River, and remaining within the scope of the application to take water from the Waimakariri River. In short,, because of the capacity to store water, the loss of the Synlait water can be compensated for by providing additional storage, and without having any material difference on the flow regime of the Waimakariri River. The alternative is to accept a small loss in reliability of supply. I understand from this that it is still possible to provide a highly reliable irrigation scheme to irrigate 60,000 ha within the scheme area even if Synlait has priority..
6. The Board of Central Plains Water Limited has considered the impact of Synlait having priority and makes the following points.
7. Synlait currently owns approximately 3-4,000 hectares in the Te Pirita area, much of it within the scheme boundary. It has also recently purchased land that was owned by a CPW shareholder. Synlait irrigates its land from water sourced from groundwater and along the margins of the Rakaia River, water sourced directly from the Rakaia River and subject to the NWCO rules.
8. The majority of land owned by Synlait is located in the Rakaia-Selwyn groundwater zone. This zone has for some time been classified "red" by Environment Canterbury. The red zoning has had the impact of making it virtually impossible to obtain resource consent for a reliable water supply from groundwater.
9. A number of Synlait resource consents to take water from the Rakaia-Selwyn groundwater zone have recently been renewed as part of "The Group of 69

Consent Applications". The impact of this renewal appears to have reduced the reliability of the groundwater supply to Synlait. Synlait is appealing the decision.

10. This reduction in reliability of the water supply from groundwater, its aim to expand its irrigated farming business, and the relatively high cost of irrigating from deep groundwater in the Te Pirita area (refer to my earlier evidence) are likely to be the drivers for Synlait to apply to take water from the Rakaia River.
11. If Synlait is able to retain priority to 6 cumecs from the Rakaia River it will "potentially" have sufficient water to supply 10,000 hectares, assuming an irrigation requirement of 0.6 litre/second/hectare (5.2mm/ha/day). CPW understands that Synlait intends to use this water supply to: -
 - Improve the water supply to land they already own in the Te Pirita/Hororata area (an estimated area 3-4,000ha).
 - Supply other landowners in the same area, some of whom could be CPWL shareholders.
12. CPW has made application for sufficient water from the Rakaia and Waimakariri Rivers to irrigate 60,000 hectares. However, earlier work by CPW had determined that there were 84,000 hectares that could be irrigated within the command area. Optimisation analysis undertaken prior to the prospectus issue in 2004 indicated a scheme of about 60,000 hectares would be the most cost-effective option. As a consequence there is a further 24,000 hectares within the scheme area that could be irrigated (29% of the land area). The 84,000 hectares also excluded the land along the Rakaia and Waimakariri Rivers riparian strips, which it was assumed would be irrigated directly from the rivers and would not require scheme water.
13. Synlait currently owns some of this land, while other landowners will elect to retain their existing system, irrigating from groundwater. Some other landowners, in the short term at least will remain unirrigated.
14. Consequently, in the long term, if a CPWL shareholder were to take water from Synlait, CPW believes there will be sufficient demand from other non CPWL shareholders for shares in the scheme, which are likely to become available due to the requirement that a shareholder pay the costs of the scheme regardless of whether they take water or not. The CPWL structure will see shares and access to water move to landowners that want to irrigate.

It would in most situations be extremely costly for a shareholder to retain shares and not take CPWL water.

15. It is conceivable that if Synlait were to get priority and put a scheme in place before CPW got its scheme off the ground, CPW shareholders might, in the short term, take supply from Synlait (especially existing irrigators) but still commit to CPWL long term because of higher level of reliability of the CPW scheme.
16. I said earlier that the 6 cumecs could "potentially" irrigate 10,000 hectares. However, the reliability of supply of Band 5 run-of-river water from the Rakaia must be questionable. It may be a useful and relatively inexpensive source of supply to already irrigated farms, as either the main supply or as a backup to an existing groundwater supply, but for a farm with only Band 5 water supply, reliability will not be high as discussed in Mr Tipler's evidence.
17. The low reliability of Synlait water when compared with the 98% reliability proposed for CPW, will, in my view, make it unattractive long term. This is my experience of the situation on the Waimakariri River where Waimakariri Irrigation Ltd. (WIL) in the last three years has supplied water for less than 50% of the time over the period from February to May. This has had a very significant impact on farm operations and profitability. Ironically relatively low reliability is driving WIL shareholders to build on-farm storage or seek backup groundwater consents to supplement scheme supply.
18. In short, the Board does not consider that Synlait having priority means that the scheme is not viable.
19. The second matter I have been asked to address arises under paragraph 38 of the Commissioner's minute. That paragraph seeks, among other things, information on "*which intakes are likely to be constructed, or the order of preference for construction of each, including any factors affecting those choices*".
20. CPW is keen to retain the flexibility of consenting both Waimakariri intakes.
21. The basis for this flexibility is the uncertainty around the shape and cost of the final scheme, which will be determined by the resource consent conditions.
22. Retaining the two intakes provides two options for filling the reservoir from the Waimakariri River by pumping (lower Waimakariri intake) and by gravity through the tunnel (upper Waimakariri intake). Maintaining the pump fill option also enables Rakaia River water to be used to fill the reservoir.

23. A significant future hurdle for the Scheme will be to raise the funds to build it. The more restrictive the resource consent conditions, particularly relating to levels of take from the rivers, the higher the probable final cost.
24. Conventional funding models for irrigation infrastructure rely on borrowing 40-60% of the cost as term debt, with payback periods of generally less than 30 years. This system places a significant burden on the generation that decides to build such a scheme relative to future generations. To relieve some of this burden it is useful to be able to "stage" aspects of the development of a scheme. The system for filling the reservoir provides such an opportunity for CPW.
25. Filling the reservoir by pumping has a lower up front capital cost than the tunnel fill option, although operating costs for the pump option are higher. Whole of life cost for the pump fill option and lower Waimakariri intake is approximately \$23M as discussed in Mr Tipler's evidence. The pump fill option is considered stage 1, with the tunnel as stage 2. The decision to proceed with the tunnel option would most likely be made by a future generation, which would also pay for it. The decision to proceed or not with the tunnel would be dependent on replacement costs for pumps relative to the cost of building the tunnel and system operating costs (particularly the cost of electricity for the pump fill option) and I believe it is premature to make that decision now.
26. However, in the event that the Commissioners determine that it is only appropriate for CPW to seek a designation for one option then CPW would elect the tunnel option with the upper Waimakariri intake.
27. Although more expensive to construct, it would have lower operating costs and, considering matters from a wider perspective, it would make the scheme very energy efficient.
28. The design of the scheme to the north of the reservoir outlet would change as a consequence of constructing only the upper intake. CPW is currently proposing a level headrace on the 235m contour running between the Rakaia and the Waimakariri Rivers. With the tunnel feed option the race from the reservoir north could be downgraded to a supply race, which would be more hydraulically efficient and cost less.

29. Another factor which favours the upper Waimakariri intake is the construction of the race and tunnel for that intake would be simpler than for the intake leading to the level headrace and as a consequence it is likely to be less imposing. There would not be the same requirement for earthworks and structures in the Waimakariri riverbed and along the terraces reducing the visual impact of the scheme.
30. Mr Tipler has presented data showing the reliability of the scheme if there were to be no storage. The reliability of supply would fall from 98% to approximately 60%. I do not believe that a scheme with such a low level of reliable would be a bankable option, as the on farm risks associated with poor reliability would not provide the security needed to finance the debt. In my opinion the need for storage is essential.

John William Donkers