

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

BRIEF OF EVIDENCE OF RICHARD WAYNE DAVISON

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INTRODUCTION

1. My name is Richard Wayne Davison. I am a registered public valuer, and, up until 2007, farmed 314 hectares of land in Culverden, North Canterbury.

Experience and Qualifications

2. I graduated from Lincoln University with a Diploma of Agriculture (1969) and a Diploma of Valuation and Farm Management (1970); and graduated with degree of master of Professional Studies in Agribusiness Management from Lincoln in 2007
3. From 1970 to 1973 I was employed by the Rural Bank, gaining valuer's registration in 1973. In 1986 I was awarded a Nuffield Agricultural Scholarship and during my tenure of that Scholarship I produced a report on European food and agricultural policy.
4. I have held a number of appointments and directorships. These include being the Chairman of the Federated Farmers Meat & Wool Council from 1990 to 1993, being appointed to the Agricultural Strategy Council and the Agricultural Development Steering Committee by the Minister of Agriculture. The Agricultural Strategy Council was required to examine, in depth, strengths and opportunities for agriculture and rural communities and the Agricultural Development Steering Committee advised on priorities and opportunities for agriculture, post GATT.
5. I have been a shareholder of Amuri Plains Irrigation Limited with our farm property irrigated with border-dyke and spray systems.
6. I currently am a partner in the valuation practice of Mossman & Davison Limited, Registered Public Valuers. I served as a director of Ravensdown Fertiliser Co-operative from 1992 to 2007 and as deputy chairman of Landcorp Farming from 2000 to 2006; and current serve as a director of AgResearch Crown Research Institute and the chairman of Amuri Healthcare Limited and Hurunui – Kaikoura Primary Health Organisation. I am also a Trustee of several Trusts including the Amuri Community Trust, and the Central Plains Water Trust. Last year I completed a master of professional studies at Lincoln University majoring in agri-business management. My dissertation was on the Amuri Basin – the social, economic and environmental impact of large-scale irrigation (1975 – 2005).

Role as a Trustee

7. I have been involved in the Central Plains project since 2003, which is when the original joint steering committee, having received and considered the reports regarding the Scheme's feasibility, decided to set up the Trust structure as the entity which would hold the resource consents once obtained.

8. I was appointed to the Trust by the Selwyn District Council and Christchurch City Council. My appointment followed an interview process by the joint steering committee of those two Councils where applicants, like me, were vetted to ensure there was an appropriate mix of persons appointed as Trustees.
9. Initially, the Trust was a relatively large body of approximately 14 Trustees. That structure proved unwieldy. An executive group was formed in the Trust which comprised the two Ngai Tahu representatives, plus Doug Marsh, Denis O'Rourke, David Haslam and me. In due course, a number of the Trustees were also appointed as directors on Central Plains Water Limited, the company established by the Trust. Subsequently most of the director trustees have stood down and the Trust now is in effect that executive group which has proved to be a tighter, more effective unit.
10. One of the skills I brought to the Trust was my own experience farming in Culverden over a period of more than 30 years, and being involved in the Amuri irrigation scheme throughout that time. That gave me first hand knowledge of the changes which a scheme such as this can bring to a community, and an insight into how we could plan to maximise the benefits and minimise the potential downsides of the Scheme's operation.

Farming with a Community Irrigation Scheme

11. When I commenced farming in 1976, the Amuri scheme was just being set up. At that time I farmed sheep and beef as a dry land farmer. In 1978/9 we received our first water from the Amuri scheme and, by 1982, we could irrigate 80 hectares, or about 25% of our land using a border dyke irrigation system.
12. The Amuri scheme was a logical development in the Amuri basin. This area is very dry, but it has two large rivers running through it, being the Waiau and the Hurunui. The scheme takes water from both rivers, although our farm's water comes from the Waiau River.
13. Irrigation allowed us to intensify what we were currently doing, although I can say unequivocally that the first few years were very difficult. Borrowing to buy the farm and to put in irrigation put us as at risk. Although we got through, it didn't look good for some time and we couldn't capitalise on the water, as we couldn't afford to be adventurous. However, had it not been for irrigation, the farming community would inevitably have changed to fewer large farms as properties would have been forced to amalgamate to remain economically viable, and families would have moved out of the area. My farm of 314 hectares would not have been economic or viable without irrigation and Culverden would have suffered as a consequence of the shrinking population.

14. In the last 10 years of having the scheme, our farm went from strength to strength. We were able to fully exploit the available water and, by shifting from border dyke irrigation to spray irrigation, it has allowed our farm to be fully irrigated. New technology has had a big impact on our ability to maximise the benefits of the irrigation water. New spray irrigation technology allowed us to be much more precise in the application of water. By combining this with new developments in fertiliser and the accurate application of it, and matching our stock numbers to the production capacity of the land, we have experienced dramatic benefits to the way we farm and to the income which can be made on this size block of land.
15. The changes which have happened on our property have been reflected throughout the Amuri region and, in my view, have been good for our community. It has allowed some farms to convert to dairying, which requires a larger labour force, and has meant that smaller farms are economically viable. As a consequence the population has increased steadily in the Amuri area, whereas in towns like Cheviot, with limited irrigation capacity, they have experienced a population decline of 10 – 15%. In those small rural communities young people don't stay on because of limited work opportunities and older people also move out because they rely on the health services and other facilities which urban centres can provide, and which can't be sustained with a dwindling rural population. I have seen such rural communities having to battle to maintain their viability with the drift to the city. However, in my community, irrigation has allowed people to stay here to live and work on moderate sized farms and earn a living. This has ensured that schools and health services are maintained, making it a good place to live in and be part of.

Lincoln University – Masters Paper

16. Because I have had an overview of the implementation of a large-scale irrigation scheme and its effects on social, economic and environmental aspects of the community, I wrote a paper on this issue in completion of my Master of Professional Studies at Lincoln University. The paper covered:
 - (a) The genesis and construction of the Amuri scheme;
 - (b) The expectations of the Government, communities and farmers;
 - (c) The crisis created by the escalating costs, economic restructuring and low revenue prices in the late 1980s;
 - (d) Negotiation with and purchase of the scheme works in the Crown in 1990;
 - (e) The impact of the arrival of dairy farming in the 1990's on the farms and community; and

- (f) A review of the economic environmental and social changes that have resulted from the irrigation of the Amuri Plains;
17. In my conclusions I recorded that the Amuri is a very different place from the dry, basin suffering extended droughts and destined to remain in low fertility extensive sheep grazing with a declining population which it would have been without irrigation. Sometimes ignored by the opponents of irrigation are the massive changes to soil, plants and animal life flourishing alongside the farming operation. Those who remember the horrendous dust storms in the early 1970's and the painful attempts to plant and support trees, will have no hesitation in endorsing the very real ancillary benefits of irrigation.
18. It was worth reflecting on the forecast scenarios and predictions made in 1975. None of them included dairy farming and most assumed that farming practice and community life would only change gradually and marginally. It comes as no surprise that the plans and predictions were wrong and, in my view, it is equally likely that the Amuri area in 2035 will be a much different place from the Amuri area today. Reliable water will remain one of the underlying strengths of the region, given the limited availability of fresh water to support farming enterprises.
19. The two issues of irrigation water availability and reliability form the key platform that allows choice and provides the security for investment in new ventures. Irrigation is all about creating new opportunities and reducing risk. This is also why is it impossible to predict exactly how the resources of land and water will be used in the future, but reliable water creates the surety that releases the shackles of risk that restrain dryland farming.
20. The Amuri community was becoming increasingly alert and concerned about the potential consequences of land use intensification for water quality. However, the response from irrigators has now been to accept the challenge of farming with minimal downstream effect on water quality and other environmental impacts. While I feel that sustainability is an overworked term, the major conclusion of my dissertation was that, measured against the three criteria of environmental, social and economic sustainability; the Amuri irrigation scheme was a "sustainable and life giving force".

Relevance to the Central Plains scheme

21. I believe we can learn a great deal from what has happened with such schemes in the past and apply those lessons to the Central Plains Scheme to ensure that the benefits to be gained from such a scheme are enjoyed, while ensuring that there are no untoward environmental or social impacts. In particular, I consider that looking to the future with a scheme like Central Plains, we cannot fully comprehend what will happen

in terms of land use change and, possibly, we should not try too hard to do that. We simply don't know what opportunities people will develop with irrigation being available. We also should accept that things might be "bumpy" in the first few years. There will be some teething troubles as we move from dry land use to land uses which are facilitated by highly reliable irrigation, but these are not insurmountable.

22. We have learnt from the Amuri Scheme, and others, to better anticipate the likely environmental issues, and to prepare for them before the scheme is implemented rather than react to them as they arise. With the Amuri scheme, we experienced a problem with nutrient run-off out of the drains and back into waterways. However, this was largely because of the border dyke irrigation scheme, the lack of precision in water application, and an absence of environmental requirements such as fencing off streams, managing fertiliser use and the like. I should add, though, that the problems experienced have been able to be managed without significant adverse effects on the environment.
23. However because we now have the experience of the operation of such schemes, we can plan proactively for the management of these environmental risks. I am confident that the Central Plains Scheme can manage such risks and one of the key methods for doing this is the Sustainability Protocol which has been developed, and which will be required to be adhered to by farmers using the Scheme's water. The Central Plains Scheme also has the benefit of a suite of new technology and science to ensure the precise application of water and nutrients, and to measure and monitor the impact of the changes, which was not available when schemes such as the Amuri scheme were established.
24. I am also satisfied that no other scheme has ever been as thorough as this one has in integrating environmental protections into the Scheme. I have been involved, as a Trustee, in overseeing the development of the sustainable farming protocol and have been able to bring my experience as a farmer and as director of Landcorp to that task.
25. In my role with Landcorp, I was involved in projects that have overseen major land use changes. One of these was a project on the West Coast in Pakihi soils where certain poorly drained soils in Westport and Greymouth were converted to high producing land. Similarly, north of Taupo, Landcorp undertook conversions of forestry land into pastoral farming land.
26. In both cases, the environmental consequences had to be managed and these were dealt with proactively as an integral part of undertaking the land use change. In my view the same principles apply with the Central Plains proposal. We have to protect the environment from the potential consequences of implementing the Scheme and

this involves doing a whole lot of small things which will allow land use to be intensified without adverse environmental consequences. These include buffer planting around by-washes to ensure that water carrying high levels of nutrients does not enter the waterways unfiltered, fencing of streams, management of fertiliser use, and use of nitrification inhibitors (eg Eco-N) to ensure that intensive farming practices do not cause adverse environmental effects. The Trust will also look to see that any practicable new developments to minimise the environmental effects of intensive farming are incorporated into the protocol. The farm management plans are an excellent tool for implementing such developments.

27. One other benefit I can see with the Central Plains Scheme is the flexibility it will offer to trade water between users. Trading of water can only happen with a large scale scheme such as that as proposed, because it has the infrastructure to deliver water where and when it is required.
28. Another benefit of having a community scheme such as this is that there is a collective approach to managing water. If one farmer chooses not to comply, then the whole irrigation community will put pressure on that farmer. Where an individual water abstractor doesn't comply with the obligations attached to his right to take, he might risk sanctions from the Regional Council if those non-compliances are discovered. However where there is a community scheme, one of the major sanctions is that fellow farmers will not tolerate non-compliance as it puts at risk their right to take.
29. Finally, I consider that the role of the Trust is innovative, constructive and vital to public confidence in this Scheme, and I support entirely the Trust holding the consents. The Trust will have to receive credible reports of what is going on in the Scheme and discuss with the Company whether things are being managed well. The ultimate sanction is that the Trust could withdraw the right to use the consent. In this way, the Central Plains Scheme would have an entity acting with an extra supervisory role to that of the Regional Council.
30. In my view the alternative of piecemeal irrigation development, is a second class option. From my experience with community based schemes these work well. This is why I have taken on roles in other community based projects such as our local community health scheme. This collective and collegial approach to managing and administering resources encourages a sense of responsibility to and accountability to the wider community, and inevitably has positive effects for the community.
31. My vision for the Central Plains Water Scheme is that it provides the same sort of benefits to the Central Plains area as the Amuri scheme has delivered to that community. Because we are operating with the benefit of hindsight, we can be

proactive in managing those issues which can be problematic, such as the environmental issues. This should ensure that this Scheme can benefit rural Canterbury and Christchurch in the way envisaged.

Richard Davison