

**IN THE MATTER OF** the Resource Management Act 1991

**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 for the Central Plains Water Enhancement Scheme and for associated consents required for the construction and operation of the Central Plains Water Enhancement Scheme

**AND**

**IN THE MATTER OF** applications by Central Plains Water Trust to:

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

**JOINT DECISION AND RECOMMENDATION OF  
INDEPENDENT COMMISSIONERS  
28 MAY 2010**

**PART 3**

**Beneficial effects of the scheme, economic impacts, social impacts, effects of the scheme on the relationship of Maori to water and other taonga**

## **GUIDE TO DECISION DOCUMENTS**

- PART 1** – Introduction, Part II RMA, assessments, objectives and policy summary, conclusions, decisions and recommendations
- PART 2** – Disputed conditions
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- PART 4** – Intakes and headraces
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## **1. BENEFICIAL EFFECTS OF THE PROPOSED SCHEME**

**1.1** We have summarised our conclusions in relation to the effects of the scheme in Part 1 of the decision and in **Minutes 9, 11, and 12**. In this section of our decision and the following parts we will provide our reasoning. We will start by considering the beneficial effects of the scheme and then discuss the potential adverse effects of the scheme.

**1.2** This document (Part 3) addresses the beneficial effects of the scheme, economics, social and cultural impacts. Part 4 then discussed the effects of the intakes, terrace canals, headrace, and other Notice of Requirement works. Part 5 addresses the distribution network. Part 6 discusses the taking of water from the Waimakariri, and Part 7 considers the use of water and discharges from the scheme, including water quality, mounding and efficiency issues. Part 8 is an assessment against relevant objectives and policies. Parts, 9, 10 and 11 contain consent conditions and recommended conditions in relation to the Notice of Requirement.

### **Economic benefits and economic efficiency**

**1.3** We have already summarised our views on the economics of the scheme in Part 1 of this decision. We also discuss efficiency issues in Part 7 (the use of water). This discussion below provides a little more detail for some of our conclusions.

**1.4** To provide some context, we note that the economic wellbeing of people and communities is a key aspect of sustainable management. The economic conditions which affect people are included in the definition of environment. Economics is also relevant in the context of the requirement to have particular regard to the efficient use and development of natural and physical resources. Essentially the rationale for this scheme is to utilise water which is surplus to environmental requirements to enhance the economic wellbeing of the shareholders and the wider community. CPW argues that the benefits from the scheme will outweigh any residual adverse effects.

**1.5** In 2008 we heard a substantial body of evidence from four economists, these being Mr Philip Donnelly for CPW; Mr Michael Copeland for Ngai Tahu; Prof. Timothy

Hazledine for the Malvern Hills Protection Society; and Mr Geoffrey Butcher for the Selwyn District Council. We also heard from two experts on farm economics, these being Mr Andrew McFarlane for CPW, and Mr Stuart Ford for the Selwyn District Council. We note however that nearly all of the economic evidence from submitters related to the original much more costly scheme.

- 1.6** Mr McFarlane and Mr Donnelly updated their evidence in 2009 to address the revised scheme. The only contrary evidence to that of Mr McFarlane and Mr Donnelly for the applicant, was that provided in a short written brief by Mr Butcher on behalf of the Selwyn District Council as part of its officers' report. However that evidence did not in our view seriously challenge the applicant's revised evidence. Accordingly, to a large degree, we are now faced with unchallenged economic evidence.
- 1.7** There was much debate about the scale of economic benefits from the original scheme. This revolved around debate as to whether CPW's assessment of increased production was an over estimate and whether its assessment of the costs of the scheme and increased on-farm costs were over-estimates. It was also pointed out that the economic assessment did not take into account costs to the environment of the scheme, or the value of water left in stream.
- 1.8** In the context of the original scheme, these issues were important. Given the scale of impacts from the dam and reservoir, we would have needed to be satisfied that there would be quite significant benefits to offset those impacts. In view of the reduced scale of the modified scheme, and the reduced extent of adverse impacts associated with it, we no longer think that the debate regarding the *scale* of benefits is critical. We think that it is sufficient that we be satisfied (as we are) that there will be significant economic benefits from the scheme. We now review the key evidence which supports that conclusion.
- 1.9** Mr Macfarlane emphasised that it was not simply a matter of irrigation increasing levels of production and income, but also farmer confidence and consequent decisions about land use. He said that reliability under the modified scheme would be poor, except for the farms where irrigation will be supplemented by groundwater. For those farms without their own groundwater bores, he considered 1500 m<sup>3</sup> was a practical upper economic limit on farm storage. In his paragraph 7.4 he noted that

"such storage would bring reliability up to adequate levels for mixed arable land uses, but would still be limiting to dairy development, as a result of less predictable pasture growth in February/March".

**1.10** A comparison of the existing and anticipated land uses pre-scheme, under the 2007 scheme, and under the current reduced scheme, was prepared by Mr Macfarlane, and is set out below in Figure 2. This shows substantial changes to anticipated land use, particularly in respect to its limited scope for further dairying.

	Pre scheme (ha)	2007 assumptions (ha)	2009 assumptions (ha)
Dryland livestock	55,250		9,250
Mixed livestock/arable (50% water)		20,500	32,000
Mixed livestock/arable (100% water)	8,000		
Finishing livestock/arable		3,000	-
Dairy (100% water)	22,000	46,500	25,000
Arable and process crop		15,250	5,000
Arable/winter finishing		-	14,000
	85,250	85,250	85,250
Less dryland			9,250
Total area affected by irrigation			76,000

**1.11** He said the capital associated with projected on farm costs, and budgeted at \$6826/ha in December 2007 would reduce to \$2860/ha under the amended scheme. In conclusion, he stated in his paragraph 23 that:

*"Despite the lack of reliability, farmers are just as likely to support this revised scheme initiative as the original concept. Offsetting the lack of reliability will be the huge cost savings, which will generate an easier debt component to service and gain banking approval."*

- 1.12 Mr Donnelly prepared further evidence based on the modified scheme, and estimated (based on a range of assumptions) that direct and indirect per annum agricultural output would rise by \$263 million, and processing output by \$328 million, a total of \$592 million per annum. The additional jobs anticipated were 416, 714, and 1130 respectively.
- 1.13 His conclusion was that while the costs of the scheme would fall by 56% compared to the original proposal (which provided much higher reliability water), overall farm revenue would only drop by 51% as a result of the changes to the scheme, which meant that the modified scheme would still provide significant net benefits. In his opinion, sensitivity analysis showed that even with changing assumptions, his findings were robust and the project would remain economically efficient. Finally, he added that most of the additional production to be gained from irrigated agriculture would be exported, and noted that increased exports were vital not only to increase New Zealand's standard of living, but even to maintain it.
- 1.14 Mr Butcher remained critical of the applicant's case, firstly because he considered that Mr Macfarlane was relying on short-term price increases for dairy products rather than an analysis of longer-term prices. He drew attention to **Minute 10** of the Commissioners, noting that if CPW did not proceed, other schemes would proceed in its absence anyway. He said that the applicant had not taken account of the cost of land lost to on farm storage. He concluded that the applicant had still not demonstrated that the amended scheme would be an efficient use of resources.
- 1.15 We earlier heard arguments from opposing economists and others that there are other realistic alternatives available for using surplus water from the rivers and that some of these might be more efficient than the CPW scheme. However, we are not in a position to judge whether or not that is the case and in any event we must decide whether this scheme is efficient not whether other schemes might (or might not) be more efficient. It is not for us to make speculative comparisons.
- 1.16 We are satisfied that the amended scheme, albeit producing lower benefits than the original, is still viable and considerably more affordable for participants than the original scheme. We are satisfied that there are likely to be significant net benefits if the scheme is built. If the likely benefits are insignificant it is unlikely that the scheme will get built.

- 1.17** The revised scheme will have significantly less adverse environmental effects than the original dam proposal. The scheme will be similar in character to the long-established Rangitata Diversion Race (RDR) scheme in Ashburton District, where on farm storage is now becoming common. With the fullness of time additional storage and reliability might become available in association with the use of Lake Coleridge water for example. If the scheme is able to attract investment, this suggests that it will be an efficient use of resources. If it does not, the scheme will not proceed and might be replaced by another proposal. However, sooner rather than later surplus surface water is likely to be used for irrigation. Ideally that will be in conjunction with storage so as to harness water outside of the irrigation season.
- 1.18** We accept that it would have been more efficient, at least in terms of reliability, to have large scale storage in the scheme, however the environmental and construction costs of providing that storage may well have made the scheme inefficient. In any event that is not a matter which we now need to consider. Nor do we need to consider whether it would be more efficient to await a scheme that has large scale storage. It is speculative as to whether such storage will occur. Furthermore, the current scheme can potentially be connected to eventual storage from Coleridge or elsewhere if such storage is found to be sustainable. Finally, we note that the scheme is in effect using groundwater storage to supplement surface water and will be providing some on-farm storage.
- 1.19** We accept that the proposed use of water is an efficient use of the resource in terms of allocative efficiency. We do not need to determine whether it is the *most* efficient use of the resource, or more, or less efficient than other potential uses. In our view, provided that the taking of water from the rivers does not have any significant adverse effect on instream values, it is an efficient use of that resource to use it for irrigation. That will enable increases in productivity and economic activity far beyond what would occur if the scheme did not proceed at all. We prefer the evidence of Mr Macfarlane and Mr Donnelly on this point.
- 1.20** Over time, factors such as commodity prices, interest rates, availability of capital, the regulatory framework, exchange rates, the inflation rate, tariffs, access to overseas markets and other influences could increase or reduce the anticipated benefits of a scheme such as the CPW project. Any assessment by us can only be

a "snapshot" of scheme viability based on the information available to us at the time of the assessment. The volatility of the situation has been spectacularly demonstrated by international economic developments since the hearing took place, which has led to major fluctuations in the exchange rate and the returns for milk solids.

**1.21** Despite some contradictory evidence on the subject, we do not consider the profitability or otherwise of the project for its shareholders as being a relevant matter for us. That is a matter of commercial risk for CPW shareholders. Even if we accepted some of the criticisms, we doubt that it could be established that the revised scheme will not result in some significant economic benefits. In the absence of Government subsidies, the scheme will only be built if the shareholder farmers are satisfied that they will increase profits after they have deducted off the costs of the water and the cost of irrigation infrastructure and other cost increases.

**1.22** The benefits of the scheme are relevant in terms of arriving at a balance as to whether the *magnitude* of these benefits outweighs the environmental costs. We were doubtful as to whether the benefits of the dam proposal outweighed the associated environmental costs. In the event, we did not need to determine this since we concluded that the reservoir and the dam were not consistent with the purpose and principles of the Resource Management Act 1991 (RMA). We are now satisfied that the benefits of the revised proposal, without the reservoir and dam, will outweigh the much reduced environmental costs of the revised scheme. We are of the view that it is enough for us to be satisfied (as we are) that the scheme will have substantial economic benefits. We no longer need to weigh those benefits against the significant adverse effects which we considered likely with the scheme as originally proposed.

**1.23** We accept the evidence for CPW that there is likely to be significant increase in profitability for shareholders and consequent flow on benefits for the regional and national economy. We also accept that it is government policy to increase export earnings and this scheme will result in a significant increase in farm exports.

**1.24** A number of submitters voiced concerns about the fact the primary beneficiaries of the scheme will be CPW shareholders (the irrigators). We have concluded that although indirect benefits to others in the regional economy are more difficult to

define, they are likely to be significant. We heard evidence of the regional economic benefits of the Opuha scheme which we visited, and of the Waimakariri Irrigation Limited scheme north of the Waimakariri River.

- 1.25** We do not accept the submissions from the Medical Officer of Health on behalf of the District Health Board, that because the rural community will benefit it follows that the urban community will be relatively worse off and will suffer health inequalities as a result. In our view if there are significant benefits to the rural economy, as seems likely, those will flow through to the urban community. In any event, even if the rural economy benefits more than the urban economy, we do not accept that this will lead to social or health inequalities.

#### **Benefits from the farm protocol**

- 1.26** We accept that there will be some benefits from having most of the farms within the command area dependent upon scheme water to some extent and therefore "locked in" to the Sustainability Protocol and compulsory Farm Management Plans requiring best management practices (BMP). While this can largely be seen as mitigation of effects of the scheme, there will also be an element of benefit to the region as a whole since some of these farms are irrigating already, or would do so irrespective of CPW. It will be useful to have these farms within the ambit of the Protocol.
- 1.27** If CPW does not proceed it is almost inevitable that other schemes will proceed and there is no guarantee that these farmers will be subject to any (BMP) requirements, since there are no rules in the Proposed Natural Resources Regional Plan (PNRRP) or the District Plan requiring that. Furthermore there is an extensive area of land within the scheme area which is already irrigated by ground water or will be soon as a result of the Waimakariri Selwyn and Rakaia Selwyn groundwater consent decisions. None of these farms will be subject to a BMP requirement unless they are part of CPW. We are optimistic that CPW will provide a model which will spread either voluntarily or if necessary by regulation, to the remainder of the farming community.
- 1.28** We heard evidence from an irrigation scheme in North Otago where a similar approach has been taken. We heard that the voluntary approach has been

successful with respect to both compliance and outcomes. We agree that a voluntary approach to BMP is likely to be more effective than a regulatory approach. In the present case the approach is effectively voluntary, but is backed up by conditions which can if necessary be tightened if the semi-voluntary approach does not prove to be effective.

### **Benefits to lowland stream flows and groundwater supplies**

- 1.29** We accept the evidence that the increased recharge of ground water from the scheme will have beneficial effects in terms of flows to lowland streams and possibly in terms of more reliability of lowland groundwater takes. The increase in flows to lowland streams will have some ecological benefits. Trout habitats should increase and angling opportunity may also increase in the Selwyn River and other streams. There will also be amenity benefits associated with increased flows.
- 1.30** The increased flows will of course be less than they would have been with the full scheme including the reservoir. However there will still be a significant increase in the amount of recharge to groundwater. This will to some extent replenish this zone which is deemed to be over allocated in the PNRRP.
- 1.31** We were told that the original scheme would result in significant reductions in groundwater usage as farmers swapped to cheaper CPW water. With the modified scheme, reliability of CPW water alone will not be very high. As a consequence it is unlikely that those with existing ground water consents will surrender them. However, CPW shareholders who currently have access to ground water will use CPW water when it is available. This may result in some reduction in groundwater usage which is likely to have beneficial effects in terms of lowland stream flows. We have not put much weight on this potential benefit because we think it is likely that spare capacity will be transferred to other persons at least in the absence of restrictions on that in the PNRRP or the relevant consents.
- 1.32** Nevertheless we think that there may well be some overall reduction in ground water use, which when coupled with increased recharge, will result in increase ground water levels and increased flows in the lowland streams. There may also be some increase in reliability for those reliant on ground water, particularly in the lowland areas east of State Highway 1.

**1.33** We also note that there is potential for the scheme to be utilised to provide direct winter recharge to groundwater. This is not part of the current proposal but is something which is under consideration. Winter recharge could provide benefits in terms of higher ground water levels at the start of the irrigation season. If this eventuates, there may be even greater reliability for those who are reliant on groundwater and benefits in terms of lowland stream flows to the extent that these streams are partially supplied by deep groundwater as maintained by ECan officers (deeper groundwater being subject to time lags between recharge/extraction and effects on springs and streams).

#### **The environmental enhancement fund**

**1.34** CPW proposes a levy amounting so around \$250,000 per year (inflation adjusted) will be put into a trust fund to be used for environmental education and enhancement. This money will not be used to provide the mitigation measures that are required by way of conditions, nor will it be used to implement the On-Farm Protocol. It is intended that this fund will be used for additional environmental enhancement. Given that the fund is not for mitigation of adverse effects it can be regarded as being a benefit deriving from the scheme. We think that such a fund is appropriate. It is probably not something which we could have required as a matter of condition but since it has been offered by CPW it can be incorporated into conditions.

**1.35** In **Minute 11** we expressed some reservations as to the adequacy of the enhancement fund. We doubt that we have the power to require a fund at all, let alone to require an increase in the levy. We note however that this is a community scheme set up initially by the City and District Council and run by a trust which has environmental enhancement as one of its objectives. While the scheme will result in some benefits, which we have outlined above, its overall environmental effects will be negative. Accordingly, the main way that the Trust's objective of environmental enhancement can be achieved is via the fund.

**1.36** We remain of the view that the proposed levy is low given the increases in profits which CPW predicts its shareholders will make. It must also be remembered that currently there is no charge for taking water from the rivers even though that water

clearly has a very significant value to farmers. It also has value when left in the rivers. In this context we **recommend** that CPW revisit the size of the levy before it commences taking water. We have also suggested that it makes the levy inflation adjusted and that it seed the fund with an initial \$300,000 before the first irrigation commences.

**1.37** We also have some reservations about the means of administering the fund. As discussed in **Minute 15**, it seems to us that there would be some merit in a separate trust or committee being set up to administer the fund and that appropriately qualified trustees/members be appointed. The role of Central Plains Water Trust (CPWT) in terms of its primary objective of providing water for irrigation, appears to be in conflict with its administration of the fund. Furthermore, at the present time the trustees of CPWT are dominated by farming rather than environmental interests. We have **recommended** that CPWT and the two settler councils further consider this suggestion.

**1.38** Notwithstanding these qualifications, we accept that the fund can be regarded as a reasonably significant benefit which will result from the scheme if it proceeds.

## **2. POTENTIAL ADVERSE EFFECTS FROM THE SCHEME**

### **Adverse economic effects**

**2.1** Potential adverse economic impacts vary from area to area, but can be categorised as follows:

- Those shareholders affected by the headrace whose long-term loss of land to the scheme and farming disruption is such that it outweighs any benefits from irrigating the balance of their properties, for example the Bull, Judd, and Austin families, unless compensation makes up for such loss.
- Non-shareholders who lose land to the scheme unless the compensation exceeds the loss.

- Those whose tourist businesses and goodwill may be adversely affected by disruption caused during the construction period, for example the business of Ms. de Jong and two landowners along the base of the Homebush Ridge.
- Those who experience raised groundwater levels and/or surface drainage difficulties in areas where groundwater levels are already near the surface.
- Those whose water supplies may be affected by increased nitrate levels, or whose on-site effluent treatment systems may be compromised.
- Gravel extractors if they are affected by groundwater mounding.
- The Christchurch International Airport if it is adversely affected by increased bird strike and/or increased fog (both of which we think are unlikely).

**2.2** There are also other potential adverse effects such as effects on landscape, heritage, and ecological values upon which one could potentially place an economic value.

**2.3** It is also appropriate that positive economic and social effects can be taken into account. Those parties who may benefit from the scheme include:

- The 300 CPW shareholders.
- Those who indirectly benefit in the region as a whole from increased farmer income, in areas such as services and retail.
- Those who may gain employment directly in expanded agricultural production, or in downstream processing industries.
- Those who will temporarily benefit from employment or income derived from construction activity.

**2.4** We have discussed the economic benefits of the scheme above. We have addressed the adverse economic impacts on landowners and nearby residents in

Part 3 of this decision. So far as adverse effects on land owners affected by the headrace or distribution races are concerned, we have concluded that those effects will be adequately addressed by the compensation package offered by CPW or compensation under the Public Works Act 1981. Residual issues such as loss of farming income can be addressed by way of negotiation, or if needs be litigation. Overall, we have concluded that economic benefits will far outweigh economic dis-benefits.

### **Social impacts**

**2.5** We have accepted that there will be social benefits deriving from the economic benefits which the scheme will bring. We also accept that the scheme will have some adverse social impacts. In particular:

- Detraction from the *wellbeing* of landowners and occupiers affected by the headrace in particular and less so the distribution network, particularly those who oppose the imposition on their land.
- Disruption from construction works.
- Detraction from amenity.
- Some (very limited) detraction from recreational amenity of the Waimakariri River.
- Claimed social inequity.

**2.6** We also heard concerns relating to the social impact of increased dairying. We have decided that this is not a matter for us. Dairy conversions and farming generally are permitted activities under both regional and district plans.

**2.7** In terms of 'social equity' Mr Taylor (paragraph 87) stated that:

*"Those who stand to be significantly negatively affected will not necessarily be the same people who are likely to benefit directly from having improved access to irrigation water. The issue of the social equity of the scheme seems*

*especially to be foremost in the minds of those who stand to suffer negative impacts on their material well-being and livelihoods, quality of the physical living environment, and health and well-being, and among those who are concerned about the effects on local communities and their development".*

- 2.8** Another factor raised in Mr Taylor's report was that the CPW scheme promoted divisions in the community. The withdrawal of the dam and reservoir and upper intake component of the proposed scheme significantly reduced, but did not eliminate, this issue. Controversy was exacerbated by the perceived powers that CPW as a private entity was seeking to exercise, notably the right of compulsory acquisition of private property. In contrast, a number of farming witnesses drew attention to the greater personal and financial security from the risk of drought that the proposed scheme would provide. Conversely, a number of farmers close to Lake Ellesmere were concerned that already high water tables in that area could rise further as the result of mounding, albeit delayed perhaps by 1 to 2 years.
- 2.9** We heard from Mr Charles Taylor for CPW, Ms. Diane Buchan for the Selwyn District Council and Dr. Alastair Humphrey for the Canterbury District Health Board (CDHB) in respect to social impacts. We also heard from Mr Jeffrey Canham on behalf of Fish and Game and the Department of Conservation, whose evidence addressed the social significance of recreation activities, particularly those related to the Waimakariri River. The significance of the Waimakariri River played an important part in our decision with respect to our determination of the flow regime.
- 2.10** Mr Taylor and Mr Macfarlane suggested that experience from other irrigation schemes in North Otago and in the Amuri basin showed that many "traditional" farmers would retire from the business (particularly sheep farmers) and that they would be replaced by younger farmers. In his opinion changing farming patterns were benefiting rural communities in the command area, and cited the example of Hororata village (his paragraph 151) which had lost population for some years, and was now seeing a reversal in its fortunes.
- 2.11** We were made aware that there had been some influx of overseas workers into the dairy industry in Canterbury, but it was uncertain in the absence of objective evidence whether the effects of CPW would substantially alter population growth in the command area, given already rapid residential growth in Selwyn District. There

has already been significant land-use intensification in the command area. Irrigation has the potential to bring about further social change within the command area, and to a lesser extent beyond. Quantifying the extent of this change is difficult, and overall effects are likely to be spread over the region as a whole. Overall however, we consider that diversification and strengthening of the rural economic base is likely to be positive for existing and future employment.

**2.12** It was apparent throughout the hearing that the scheme had polarised opinion between 'plains' farming interests on one hand, and conservation/recreational interests on the other and to a certain extent between town and country. Some farmers whose land was adversely affected by the headrace canal found themselves as 'allies' of conservation/recreational interests opposed to the scheme. We were left with an impression that some scheme proponents saw rivers flowing to the sea as a 'wasted' resource and recreation as a luxury having little importance compared to production and economic growth, while some submitters did not appear to have an appreciation of the uncertainty and stress of farming in the absence of reliable water. However there was a reasonable level of acceptance that irrigation within the command area would be beneficial.

**2.13** One of the strongest themes arising through submissions came from directly affected parties concerned about uncertainties and lack of detail associated with the effects of the headrace canal on their properties. There was widespread dissatisfaction with the consultation process undertaken by CPW and its response that details would be clarified after the designation was confirmed and through management plans. This resulted in a feeling that their lives were 'on hold' and it was not possible to make investment or personal decisions in such a context. There was also a feeling by some that if they simply relied on the good faith of CPW they would be in a very weak negotiating position once the designation was confirmed.

**2.14** Many major designations have resulted in people's lives being placed "in limbo". While financial losses can be addressed through compensation, this cannot compensate for feelings of attachment to land, or to remove ongoing uncertainties and associated stress while attending meetings, finding out what is happening, or obtaining professional and legal advice. Although this is a factor that cannot be entirely mitigated, we have concluded that there is a need to require CPW to submit

outline plans within a specified time frame, in order to provide greater certainty for affected parties.

- 2.15** A more fundamental attack on the social, economic and health effects of the scheme was presented by Dr Humphrey for the District Health Board, both in respect to the original proposal and the modified scheme. In paragraph 43 of his evidence to the October 2009 hearing, Dr Humphrey stated:

*"The CPW scheme is inherently inequitable, as it vests control of much of Canterbury's drinking water in the hands of a little over 300 investors. These investors stand to derive the most benefit from the scheme, while the employment opportunities conferred by the scheme are likely to be limited to people migrating to Canterbury from elsewhere in New Zealand or overseas".*

- 2.16** He added that a more equitable approach was proposed through the Draft Canterbury Water Management Strategy, in which representatives of the District Health Board were participants. As indicated in **Minute 11**, we held considerable reservations about the nature of this 'evidence'. The 'Social Impact Assessment' he cited appeared to be a statement of advocacy opposing CPW rather than an objective assessment of social impacts and had little expert input.

- 2.17** While we accept that there is a correlation between deprivation and social inequality, there was no evidence that this particular scheme (as distinguished from others) would have this result. We found his opinion that job creation would simply benefit people from out of the region or 'immigrants', to be unrealistic and rather unfortunate. Further, our understanding was the Canterbury Water Management Strategy clearly anticipates further irrigation (as has happened throughout other parts of Canterbury) and we note that both land use intensification and irrigation are anticipated under the district plan.

- 2.18** Dr Humphrey insisted that further land intensification would inevitably increase the health risk to the wider community downstream of the scheme with associated social consequences. We have concluded that with conditions any increase in risk will be very small.

**2.19** We also consider that CPW will be obligated, at least to the extent that monitoring reveals future issues relating to water supply and groundwater levels, to mitigate the effects of increased irrigation. These would require additional drainage works and providing alternative water supply in the event of increases in nitrate levels.

**2.20** Our overall conclusion in relation to the social impacts of the scheme is that until constructed the scheme has and will continue to have adverse social impacts. After it has been constructed we consider that the scheme is likely to have positive social impacts in the medium to long term and is unlikely to have long lasting significant adverse social impacts.

### **The effect of the scheme on the relationship of Maori to their taonga**

**2.21** Ms Dyanna Jolly on behalf of CPW, Mr David O'Connell of Te Runanga o Ngai Tahu, Mr Paul White on behalf of Ngai Tahu, and Te Porohau Ruka Te Korako presented evidence on the potential cultural effects of the CPW scheme on Tangata Whenua. The primary concern was the potential effects on lowland streams and particularly on Te Waihora.

**2.22** Ms Jolly began by saying that she was not providing expert evidence on Ngai Tahu cultural values, but rather "*the processes used to facilitate meaningful and effective participation of the iwi in impact assessment*" (paragraph 4). The preparation of the (CIA) in consultation with the Runanga revealed the following areas of concern (relating to the modified proposal):

- Concerns about the large-scale abstraction proposed from the Waimakariri, and the inadequacies of the Waimakariri River Regional Plan (WRRP) in protecting its values.
- The mixing of waters, particularly in terms of discharges to surface water bodies.
- Effects on archaeological sites and natural diversity affected by the headrace.
- Potential adverse effects of further land use intensification, with particular emphasis on lowland streams and Te Waihora.

- The possible need for additional lake openings, raised groundwater levels, and the impact of by-wash releases.
- Enhanced nitrate levels.

**2.23** Following the preparation of a Cultural Impact Assessment (CIA) on behalf of Ngai Tahu, she said four hui were held between 6 March and 28 July 2006. She said this resulted in a number of outcomes including recommendations, some accepted by CPW, others not (e.g. the proposed take regime for the Waimakariri River) and other matters requiring further investigation/information (e.g. archaeological sites). There were also unresolved issues such as the unknown effects on Te Waihora.

**2.24** According to Ms. Jolly, funding for her role ceased after the fourth hui. Her conclusions as to the success of the process were rather qualified and noncommittal, and she concluded by saying that *"only Ngai Tahu can offer conclusions with respect to the extent to which cultural issues were resolved"*.

**2.25** Mr O'Connell stated that he was an active member of Te Taumutu Runanga, being of Ngai te Ruahikihiki descent. His evidence set out the background after the importance of Te Waihora to Ngai Tahu, and its traditional significance as a source of mahinga kai.

*"Ko nga hau ki etahi waahi,ko nga kai ki Orariki"*

*"No matter from which way the wind blows, one can procure food at Te Waihora"*

**2.26** He reiterated the key points of concern expressed by Ngai Tahu as described above. Of particular concern was the deterioration in the quality of Te Waihora over the last 130 years as a result of farming activity, and Mr O'Connell cited comments made by the Environment Court in *Lynton Dairies Ltd v Canterbury Regional Council (C108/05)*. The significance of the lake was emphasised by its vesting by fee simple title in Ngai Tahu in 1998. His key point was Ngai Tahu's concern was that the CPW scheme would compound the already adverse impacts of dairying on water quality in the lake.

**2.27** He considered that from 2006 there had been little meaningful attempt by CPW to address the concerns of Ngai Tahu, or to have regard to their own planning initiatives such as the Te Taumutu Natural Resources Plan (2002) and the Te Waihora Joint Management Plan (2005). His conclusion was (paragraph 41):

*"I am forced to conclude that the consultation process, despite its initial potential, ended up being largely unsuccessful".*

**2.28** Te Porohau Ruka Te Korako, introduced himself as "the Tohanga Ahureikona of Waitaha (servant of the nation of Waitaha) and resident of Whitecliffs. From what we were able to ascertain, he was strongly opposed to interference with water resources generally. He described the abuse of land and water resources through European farming practices, particularly those associated with recent conversions to dairying. He was of the view that the scheme was being imposed by outsiders on the Waitaha people as well as the long-standing members of the local farming community, and represented a dangerous interference with the processes of nature.

**2.29** Mr White said that Ngai Tahu consider that all natural resources had to be considered holistically, not separately. He said the preservation of the *mauri* of natural resources was paramount to Ngai Tahu, and was consistent with the outcomes sought by the RMA. He said:

*"For Ngai Tahu, mauri is the life force that comes from wairua - the spirit, or source of existence and all life. Mauri is the life force in the physical world".*

**2.30** The modified scheme proposed by CPW did not allay the concerns expressed by Ngai Tahu, who were convinced that the scheme would exacerbate water quality issues within Te Waihora, and accordingly impede the ability of the iwi to restore the lake. The hearing raised difficult issues with respect to values fundamental to Ngai Tahu, and the *mauri* of Te Waihora and the affected waterways, particularly the Waimakariri. We acknowledge that the CPW project will not have a beneficial effect on Te Waihora, but we are satisfied that with the mitigation and land management measures proposed it should not adversely affect qualities of the lake. We consider, however, that regardless of the CPW scheme, there is a pressing need for action (including possible regulatory measures) to be taken on the management of existing land use practices in the environs of the lake.

**2.31** There was criticism of the lack of investigation undertaken by CPW of the effects of the scheme on archaeological sites. Our conclusion in respect to this issue is that more detailed investigations are required only in locations where, based on previous findings, there is a greater likelihood of archaeological sites being discovered - for example, along the base of the Homebush Ridge. However, as identified in our comments on heritage matters generally, we did not consider that a full detailed archaeological survey was justified along the hundreds of kilometres of route traversed by the headrace canal or the distribution races, where these crossed terrain typical of the Canterbury Plains.

**2.32** With respect to the issue of 'mixing of waters', this matter was not entirely resolved through the hearing. Unlike the much older RDR scheme however, the CPW proposal does not involve taking water from one river and transporting it to another. Neither does it involve taking water from the Rakaia or Waimakariri Rivers and discharging it directly to waterways entering Te Waihora. Irrigation water would enter indirectly through wetlands or groundwater. However it could directly enter these waters in the event of an emergency discharge. Although the matter was not entirely clarified, our tentative conclusion is that this scheme does not involve a mixing of waters except to the restricted extent set out above.

**2.33** We are not in a position to judge the impact of the limited mixing which may occur, on the relation of Maori to water. We have concluded however that this is not a matter which would warrant declining consent for the scheme.

**2.34** We have recognised the relationship of Maori to the waters, land and other taonga which will be affected by the scheme. We have provided for that relationship by way of conditions to the extent that this is practicable. We are hopeful that Ngai Tahu's representation on the Trust and on the Drainage Committee will recognise its status as kaitiaki. The scheme is not contrary to the principles of the Treaty of Waitangi.

### **3. CONCLUSION IN RELATION TO SOCIAL, ECONOMIC AND CULTURAL IMPACTS**

**3.1** We have concluded that the overall economic and social effects of the scheme will be positive. There will however be adverse social impacts on some directly

affected people. We deal with these in more detail in **Part 4**. We have concluded that these effects are not such as to justify rejection of the scheme.

**3.2** To a large extent the effects on individual land owners are for processes beyond the Resource Management Act. We have done our best to address residual effects on "well being" and amenity through conditions. However we acknowledge that in some cases effects on people and properties will still be significant.

**3.3** We have concluded that the scheme will not compromise the relationship of Maori to the land or water, has regard to kaitiātanga and is not contrary to the principles of the Treaty of Waitangi.

**Independent Commissioners 28 May 2010**



Philip Milne (chair)



Bob Nixon



Andrew Fenemor



Ray O'Callaghan