

IN THE MATTER OF the Resource Management Act 1991

AND

IN THE MATTER OF an application by Central Plains Water Trust to:

Canterbury Regional Council for resource consents to take water from the Rakaia River for use by the Central Plains Water Enhancement Scheme and the Rakaia Terrace Hydro Scheme

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 River and to use water from the Rakaia River 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 to

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

AND

IN THE MATTER OF Notices 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

IN THE MATTER OF applications by Ashburton Community Water Trust to:

Canterbury Regional Council for resource consents to use and divert water from the Rakaia river for the purposes of hydro electricity generation and associated consents required for the construction and operation of the Rakaia Terrace Hydro Scheme.

**Minute 10 of Commissioners
Preliminary Recommendation
and summary of conclusions and reasoning in relation to the proposed
Waianiwaniwa reservoir and dam and the upper Wamakariri intake**

10 July 2009

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1. INTRODUCTION

- 1.1 In our Minute of 1 April 2009 we indicated that we would not be recommending the confirmation of that part of the principal Notice of Requirement (**NoR**) relating to the Waianiwaniwa reservoir and the Coalgate dam, nor the separate NoR in relation to the upper Waimakariri intake and tunnel. We also indicated that we would not be granting the associated resource consents for those components.
- 1.2 We concluded that we are required by section 103 of the RMA to hold off making a formal recommendation and decision on these components until we issue our decision on other components of the scheme. We also note that in relation to the principal NoR we could not recommend partial modification of that in advance of our recommendation on other components of that NoR.
- 1.3 Although our conclusions regarding these components will not change, this Minute is not a decision and will not be open to appeal by the applicant until such time as we issue a final recommendation and decision. We have however asked Central Plains Water (**CPW**) to confirm to us and to the community whether it will accept our recommendation. It has indicated that it is likely to do so but (quite reasonably) wants to see our reasoning before finalising its position. We note that it seems that CPW may not be able to formally withdraw part of the principal NoR before we have issued a final recommendation. However it could (and in our view should) write to each affected landowner in the valley, confirming its position in relation to our preliminary recommendation.
- 1.4 We are aware, that those who live in the valley and in the Coalgate area are anxious to obtain certainty in relation to this matter and in particular want to know whether CPW will accept or challenge our formal recommendation once it is issued. We apologise that we have not been able to release this Minute until now. We have been diverted by our Minute in relation to the Waimakariri take applications and by other commitments. We also decided that it was important to provide sufficient detail in this current minute to allow CPWT to determine how it should proceed. Accordingly we have gone into rather more detail than we originally envisaged.
- 1.5 The purpose of this Minute is to set out our primary conclusions and reasoning in relation to the components which we have concluded should not be approved. In the event that CPW indicates that it will not challenge that conclusion, we will not go into any further detail in our final decision. We have focussed our discussion on the Notices of Requirement rather than the consent applications, because our

conclusions primarily relate to effects of the proposed land use. We have also focussed on the issues and conclusions which have been most influenced our views. For example, we have not discussed the relevant plan provisions, since our conclusion is not dependent upon them. Inevitably there will be some impacts which we have not discussed and others which we have not done justice to in this Minute. However, for present purposes we think our approach is sufficient. In the event that CPW indicates that it will or may reject our final recommendation on these components, we may need to provide more detailed reasoning in our final decision.

1.6 The hearing is resuming in October to consider the CPW's proposal for a scaled back scheme. We would like CPW to inform submitters and the public as soon as possible as to whether or not it reserves the right to reject our intended recommendations in relation to the components under discussion. It seems to us that it may be problematic (but not necessarily impossible) for us to consider a reduced proposal if the full proposal is still on the table. At the very least it would make for a very complex decision. We note that at the resumed hearing we will not be hearing any further evidence in respect of these components other than to understand the consequences of their deletion.

1.7 We will commence this Minute by setting out the statutory context, our conclusions on relevant legal issues, and our conclusions in relation to the purpose and principles of the Act. We will then discuss our conclusions on factual matters and the principal reasons for those.

2. STATUTORY CONTEXT AND APPROACH

2.1 We will focus on the Notices of Requirement since our conclusions in relation to the consents are determined by our conclusions in relation to the NoR.

2.2 Section 171 provides that:

(1) *When considering a requirement and any submissions received, a territorial authority must, **subject to Part 2, consider the effects on the environment of allowing the requirement**, having particular regard to-*

(a) *any relevant provisions of-*

(i) *a national policy statement:*

(ii) *a New Zealand coastal policy statement:*

(iii) *a regional policy statement or proposed regional policy statement:*

- (iv) a plan or proposed plan; and
- (b) **whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work if-**
 - (i) the requiring authority does not have an interest in the land sufficient for undertaking the work; or
 - (ii) it is likely that the work will have a significant adverse effect on the environment; and
- (c) **whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought; and**
- (d) any other matter the territorial authority considers reasonably necessary in order to make a recommendation on the requirement. (Our emphasis)

2.3 This Minute will focus on the matters which we consider are most relevant. Although we have reviewed relevant plan and RPS provisions, we will not discuss these because they have not been the basis of our conclusion. We note however that these provisions provide some support for our views in relation to the components of the scheme we are discussing here.

3. LEGAL ISSUES

3.1 A number of legal issues arise which are relevant to our consideration of the merits of the dam and reservoir. In particular:

- *Are concerns regarding the requiring authority status of CPWT relevant?*

That is a matter beyond our jurisdiction, however we must consider whether it is reasonably necessary for CPWT to designate and we must consider the consequences of confirming a designation for affected landowners. Those consequences include the effects of the proposed works and the effects of confirming the designation.

- *Given that CPW has access to the Public Works Act, are the social and economic impacts of acquisition of land relevant?*

We have concluded that these matters are relevant.

- *Are potential effects on property values relevant?*

Effects on property values are an economic effect on people and accordingly are relevant, however our primary focus has been on the amenity effects which may cause secondary effects on property values. Valuation effects have not been determinative of our conclusions.

- *Does protection of Canterbury Mudfish habitat require preservation of the existing habitat or is it sufficient if it is replaced with artificial habitat?*

We think that replacement with new habitat, is within the scope of section 6(c). We would need to be satisfied however that there is a high probability that any artificial habitat would succeed in the long term in providing a significant habitat of comparable value for Canterbury Mudfish. We accept that this does not necessarily mean that the population of mudfish would need to be as large as it is at present. Adopting a precautionary approach to CPW's mitigation proposal we have not been able to conclude that it would necessarily provide adequate protection.

- *Could the regional importance of these components and the scheme as a whole, override section 6 matters?*

Yes, in theory but no in practice.

3.2 We have explained the reasoning behind those conclusions in appendix 1 to this Minute.

4. SUMMARY OF KEY CONCLUSIONS BY REFERENCE TO THE PURPOSE AND PRINCIPLES OF THE RESOURCE MANAGEMENT ACT

4.1 Our starting point is Part 2 of the Act which sets out the purpose and principles of the legislation. Our conclusions regarding Part 2 matters form the primary basis for our conclusions regarding the reservoir and dam but those conclusions are also supported to a degree by the section 171 (1) (b) and (c) considerations and relevant plan provisions.

4.2 So far as Part 2 is concerned, we have adopted an overall balancing approach. In terms of the sustainable management purpose of the Act (section 5) we have concluded that while the dam, reservoir may promote the economic wellbeing of

the wider Canterbury and national community, they would not promote the *social, economic or cultural wellbeing* of the Waianiwaniwa and Coalgate communities. Many of the negative impacts of the scheme would fall on these communities and few if any benefits.

- 4.3** We are not convinced that the additional economic benefits in terms of reliability and scheme area, which would result from having the reservoir in the scheme, are sufficient to outweigh the significant adverse impacts on the people and communities most directly affected. Indeed, even if those additional economic benefits would be significant, that would not mitigate the adverse effects. In other words, even if we could conclude that the reservoir would be regionally significant infrastructure (and we are not entirely convinced that it would be) we would not be able to conclude that it was sustainable in terms of section 5.
- 4.4** We do not intend to discuss the quite complex and contentious economic evidence. There is some doubt in our mind as to the magnitude of the net economic benefits which would derive from these components, given their high cost and some of the assumptions used by the applicant in its analysis. Notwithstanding this, for the present purposes we have assumed (but not concluded) that these components would together result in significant economic benefits to the region. However, we were not convinced that the additional net regional and national benefits which might be derived from this particular storage facility, could be sufficient to justify the adverse effects which it would cause. That view would be the same even if we were to fully accept the applicant's economic evidence.
- 4.5** In terms of section 5, the dam, reservoir and the upper Waimakariri intake would clearly have more than minor adverse effects on the environment and, we are not satisfied that those effects could be adequately mitigated to a point where they would become minor.
- 4.6** We fully appreciate that it is not necessary for CPW to demonstrate that adverse effects would be minor, but it is necessary for us to be satisfied that adverse effects could be adequately mitigated. We have concluded that the temporary and long term adverse effects on the Coalgate and Waianiwaniwa community would, together, be significant. We appreciate that the CPW has proposed to mitigate adverse effects so far as is practical, but the most significant effects are not capable of adequate mitigation. In particular, the monetary compensation can not compensate the affected communities for the social impacts of this part of the scheme.

4.7 In terms of section 5 of the Act, the principal adverse effects of the dam, reservoir and upper intake which we are not satisfied can be adequately avoided, remedied or mitigated include as follows (in no particular order):

- impacts on the social, economic and cultural wellbeing of the people and community in the Waianiwaniwa valley both during construction, and after the reservoir is constructed;
- effects on those who use the valley for winter grazing;
- effects on the amenity values of the valley including its visual amenity and heritage values;
- effects on the ability to extract the coal resource from the valley;
- loss of habitat for Canterbury Mudfish;
- loss of at least one area of significant indigenous vegetation;
- impacts on road access to and from the Valley;
- construction impacts on Coalgate residents;
- impacts on the wellbeing of Coalgate residents arising from the perceived risk of dam failure; and
- impacts on the visual amenity of the Colgate area arising from a 2 km long and 50 m high dam very close to and overlooking the town;
- detracting of the proposed upper Waimakariri intake from the natural character, visual amenity and landscape values of that area;
- minor impacts on kayaking and jet boating amenity; and
- impacts on the wilderness/natural experience offered by Alpine Jets, the Coast to Coast event and enjoyed by other river users.

- 4.8** In terms of section 6 (a) the proposed upper intake would not *preserve* the high *natural character* of the river and its margins and accordingly we doubt that allowing this intake at this location would protect the river from *inappropriate development*.
- 4.9** In terms of section 6 (b), we accept that this part of the valley may well be an *outstanding landscape*. We consider that the Gorge upstream of the site is an outstanding landscape. Although the part of the river where the upper intake is proposed is not recognised in the relevant planning documents as being an outstanding landscape, we accept that given that it is the gateway to the upper Waimakariri Gorge, it could be regarded as outstanding within the context of its setting and the high intrinsic value of the landscape. If it is as an *outstanding landscape*, then the upper intake would not be an "*appropriate development*". However, given our views regarding natural character, we do not at this stage need to make a final determination on this point.
- 4.10** Together, the diversion within the river channel, the intake works, the channel maintenance works, the settling pond and sediment removal operations, would be inconsistent with the high natural character, visual amenity and landscape values of this landscape. This is in contrast for example to the proposed CPW and Ashburton Community Water Trust (**ACWT**) intake works on the Rakaia River which we do not see as being in such a sensitive location.
- 4.11** Turning then to section 6 of the Act we have been unable to conclude that the artificial Canterbury mudfish habitat proposed by CPW will protect the significant habitat of mudfish as required by section 6 (c) of the Act. The existing habitat would be destroyed and even though we consider that replacement of existing natural habitat with new habitat could in appropriate cases amount to "protection", there can be no guarantee in this case, that this offset will be successful. Adopting a precautionary approach to this matter of national importance, we are not satisfied that what is proposed would protect the significant habitat.
- 4.12** The reservoir would also result in a loss of at least one area of significant indigenous vegetation. This is the raised peat bog in Bush Gully. There was no effective mitigation proposed in relation to this feature, nor for two other wetland sites as their removal is effectively irreversible. Accordingly these areas, and in particular the rare peat bog, would not be protected in terms of section 6(c).

4.13 In terms of section 6(f) of the Act, the reservoir would not protect the historic heritage in the valley. Accordingly we are not convinced that it is an "*appropriate development*" in terms of section 6(f). Potential issues with the location of the intake canal and a possible pa site were raised, but there was no clear evidence on this matter. These heritage impacts are not determinative but contribute to our overall conclusion.

4.14 In terms of section 7 of the Act, our tentative conclusions are as follows:

- We have reservations as to whether approving the upper intake is consistent with the stewardship role of both Councils (section 7(aa)).
- We have reservations as to whether the conversion of the Waianiwaniwa valley to a reservoir, with consequential loss of farm land and coal resource is an efficient use, and development of natural and physical resources (section 7(b)).
- The upper intake, the reservoir and dam would not maintain or enhance amenity values or the quality of the environment. They would each detract from those values and the overall impact would be significant (section 7(c)).
- The reservoir would provide limited recreation amenity but would be unlikely to be appealing during periods of significant draw-down.
- The reservoir would have a more than minor effect on the intrinsic values of ecosystems (section 7(d)).
- The Waianiwaniwa valley in its current form has some finite characteristics which would be lost (eg. intrinsic amenity, heritage values, coal resource) (section 7(g)).
- The upper intake may fail to protect salmon spawning habitat in Hacketts Creek (though it seems that these effects could be adequately mitigated) (section 7(b)).

5. OVERALL BALANCING

- 5.1 The relevant Part 2 issues have been discussed above. Although none of these on their own may have been sufficient to defeat the dam and reservoir proposal, taken together they lead us to the conclusion that this part of the scheme is inconsistent with the purpose and principles of the Act. The overall adverse effects are in our view, of such a magnitude that they outweigh the positive effects of the particular storage scheme currently proposed by CPW.
- 5.2 We are not required to consider whether what is proposed is the "*best*" option for enhancing the value of water and enhancing agricultural production through irrigation and water harvesting. However, it does seem likely that there are alternative are options which would be more sustainable and which would better ensure that the environmental and social costs of the scheme fall more on those who will primarily benefit rather than on the local community. We accept that it is possible that alternatives may not produce as much net economic benefit as the proposed full scheme, however it is not for us to compare this proposal against others, nor is it our role to try and maximise net benefits.
- 5.3 We fully appreciate the value of storage and we agree that in terms of reliability and efficiency of use of water, storage is critical (at least in this part of New Zealand). However, adopting an overall balancing approach, we are firmly of the view that that the storage **as currently proposed** by CPW is unsustainable. It is unlikely that our view would be any different if a lower dam and smaller reservoir had been proposed. However in any event, that was not the proposal before us.
- 5.4 We took into account CPW's offer during the hearing, to compensate those who would be directly affected by more than market value. We have also taken into account its very recent suggestion that it would not use the Public Works Act to compulsorily acquire land for the dam and reservoir. However these proposals are not sufficient to change our conclusion. Furthermore, given the level of opposition by landowners in the Valley it is difficult to see how the scheme could proceed on the basis of negotiated acquisitions. We might have seen things differently if CPW had options to purchase most, or all of the necessary land. However even if that were the case, we would still be required to consider the significant environmental impacts which may still have been insurmountable.

- 5.5** The upper Waimakariri intake, whilst having some advantages over the lower intake in terms of kayak safety issues, would have significant impacts on the natural character and landscape values of this entrance way to the Waimakariri Gorge. It would also affect the experience tourists and others have on the Alpine Jets boating tours and the experience of other visitors to this part of the river. Whilst those adverse impacts may not necessarily have been insurmountable, they would be significant. The upper intake is only necessary as a result of the reservoir, therefore the two are linked, and the consequences of both must be considered in determining the overall outcome.
- 5.6** Our overall conclusion regarding this intake site is that the proposed works would have a significant adverse effect on the natural character of the river and the high visual amenity and landscape values of the area. Those effects would be mitigated to a degree by the form of the proposed works. If it were not for our conclusions regarding the reservoir, this may not have been fatal flaw in relation to the upper intake. However, it is certainly a matter about which we have significant concerns.
- 5.7** One of the benefits of not having the reservoir is that this would limit the scheme to one intake, in a location (at the Gorge Bridge) where we believe there is more scope to mitigate adverse impacts. We make no finding regarding the lower intake at this stage, but are of the preliminary view that landscape and natural character effects at that location could potentially be addressed by moving the site as far upstream as is possible (even if that means taking it outside of the current NoR area). However kayaker safety will also need to be addressed.
- 5.8** We have no significant concerns regarding the effects of the proposed tunnel to convey water to the reservoir, but obviously this is an integral part of the upper intake and Waianiwaniwa reservoir proposal, and is unnecessary without the reservoir.
- 5.9** We will now proceed to discuss the key factual issues in more detail and set out our conclusions and reasoning in respect of each of these.
- 5.10** Our conclusions can be summarised under three broad headings as follows;
- Adequacy of consideration of alternatives;

- Necessity of the works and proposed designation;
- Adverse effects on Coalgate Township;
- Adverse effects on the Waianiwaniwa valley associated with the proposed dam and reservoir;
- Adverse effects associated with the proposed Upper Waimakariri intake location and associated infrastructure;
- Benefits of the reservoir.

6. ADEQUATE CONSIDERATION OF ALTERNATIVE SITES, ROUTES AND METHODS

- 6.1** We are required by section 171 to have particular regard to whether CPW has given *adequate consideration to alternative sites routes and methods of undertaking the work*. This encompasses the overall project and in our view also requires us to consider each of the particular works which the notices apply to, at least where those works would have significant adverse effects if they proceed.
- 6.2** Quite apart from section 171, the potential availability of more sustainable alternatives also comes into play where, as here, aspects of a proposal would have significant adverse effects on the environment and would in our view, would not be consistent with some aspects of Part 2 of the Act.
- 6.3** In terms of section 171, CPW is not required to demonstrate that it has adopted the best or most sustainable alternative, nor that its consideration has been exhaustive. We are required to give consideration to whether CPW has demonstrated that its consideration of alternatives has not been cursory or arbitrary.
- 6.4** An outline of the alternatives considered by CPW was set out in the evidence of Mr Cliff Tipler (paragraphs 51 – 76). The cornerstone of the applicant's case is that only water from the catchments of the Rakaia and Waimakariri Rivers provide sufficient flow to be a realistic source of surface water for irrigating the central plains area; that significant additional groundwater was unlikely to be available;

and that to achieve an acceptable level of reliability for intensive farming on the versatile soils of the central plains, storage is an essential component.

6.5 The NoR summarises the alternatives considered as:

- No further irrigation
- Multiple small schemes
- Alternative headrace routes
- Alternative intake areas
- Alternative water storage sites

6.6 There were a range of storage options which emerged from an initial scoping study. We do not need to describe these in detail, but essentially four of these were shortlisted as follows, and were described in "*Appendix D: Extract from Feasibility Report Alternatives Considered*".

Lake Coleridge

6.7 This option would involve using Lake Coleridge for storage. Water from Lake Coleridge would be discharged to the main run of river races near Glenroy. This option was discarded because the use of Lake Coleridge water would conflict with the National Water Conservation Order for the Rakaia River and Trust Powers' rights to the water. There were also geotechnical difficulties and associated costs with getting the water from Coleridge to Glenroy.

Highpeak Reservoir on the Upper Selwyn River

6.8 This option would involve construction of a storage reservoir on the Selwyn River at High Peak Station, Flagpole Hill. The storage reservoir would be supplied from Lake Coleridge by a water race to the head of the Selwyn River and then down the river. Water from the reservoir would be discharged from storage via the Selwyn River with an offtake to the main run of river races at the downstream end of the gorge.

Whitecliffs Reservoir on the Selwyn River

6.9 This option would involve construction of a storage reservoir on the Selwyn River at Whitecliffs. The storage reservoir would be supplied from Lake Coleridge via a water race to the head of the Selwyn River and then down the river. Water from

the reservoir would be discharged from the storage to the main run of river races near Glentunnel via a race.

Wairiri Reservoir

- 6.10** This option would involve construction of a storage reservoir in the Wairiri Stream Valley. The storage reservoir would be supplied by pumping from the main Rakaia race or from Lake Coleridge via a water race via the Selwyn River or directly via Windwhistle. Water from the reservoir would be discharged from the storage by a race to the main run of the river races near Glentunnel.
- 6.11** An initial selection process favoured the Wairiri option. Subsequently, as part of the selection process a *"pumped Waianiwaniwa option was included as it was an option that had not previously been considered"*.
- 6.12** The previously favoured Wairiri reservoir site was eventually discarded for a variety of reasons, including the need to pump in order to fill the reservoir; the limited storage volume provided by the Wairiri Valley; unfavourable dam site conditions; the need for ridge and saddle dams to provide storage; and no future ability to increase storage (Tipler, evidence in chief, paragraph 64).
- 6.13** The Waianiwaniwa valley was seen as offering the ability to be filled by pumping or gravity flow from the Waimakariri River. The Waianiwaniwa valley would also offer future capacity for increasing storage from 280,000,000 m³ to 450,000,000 m³.
- 6.14** While the Waianiwaniwa reservoir, undoubtedly offers some significant operational (and perhaps economic) benefits over the other alternatives considered, it also generates a higher level of adverse environmental effects than other options. For example, although we are satisfied that CPWT has given *adequate consideration* to the Lake Coleridge option, we think that it is an option which warrants further consideration.
- 6.15** We observe that although CPW considered the possibility of other parties developing multiple smaller schemes it does not appear to have considered the option of scaling down its own scheme.
- 6.16** We have some reservations as to whether CPW has (at least until now) given adequate consideration to the following alternatives, or a combination thereof:

- a smaller scale scheme which focuses on supplementing ground water takes rather than replacing them;
- use of on farm storage in conjunction with smaller scale storage (such as has recently been consented for Rangitata South Irrigation Ltd);
- using winter water from the rivers to supplement groundwater for use during the irrigation season (ie using the aquifers as storage);
- using groundwater recharge from upland irrigation to increase downland irrigation by groundwater and thus avoid potential mounding issues
- a scheme with lesser reliability.

6.17 At our request, CPW provided some evidence regarding the economics of on farm storage, and its reasons for seeking very high reliability, however it is not clear that CPWL assessed lower reliability and/or scaled down proposals **before** it lodged its NoR in relation to the Waianiwaniwa Scheme.

6.18 We accept that these options may not have been consistent with the preferences of CPW and its shareholders in terms of reliability and extent of the command area. However, we note that the requirement to adequately consider alternatives is not constrained by the Requiring Authority's preferences. What was required in our view was a careful weighing up of the environmental and economic costs and benefits of alternative methods of providing irrigation water, guided by and principles of the RMA as well as the proponent's preferences. We have not reached a final conclusion regarding the adequacy of CPW's consideration of alternatives, however we do have some reservations as to whether its consideration put sufficient emphasis on Part 2 matters and in particular on minimising adverse effects.

6.19 We are of the view that the Canterbury Strategic Water Study may be a better means of considering alternative methods of providing further irrigation to the Central Plains and other parts of Canterbury (at least for a large-scale scheme as ambitious as that proposed). However, we accept that CPW was not obliged to await the outcome of that process. We have not put any weight on the CSWS, but note that it does canvas some alternatives.

6.20 Notwithstanding these reservations we have not at this stage put much weight on the question of adequacy of consideration of alternatives. In view of our

conclusion on Part 2 matters this is not a matter which is critical to our conclusions.

6.21 In our view, the potential availability of alternatives means of “water enhancement” with lesser environmental impacts is relevant, given our conclusions on the likely impacts of the scheme as advanced. In other words, we think that we are entitled to look beyond the question of adequacy of consideration of alternatives. There is case law which suggests that where it is likely that an activity would have significant adverse effects and/or where matters of national importance are involved, the potential availability of less damaging options is relevant. This issue overlaps with the question of necessity of the works.

7. NECESSITY OF THE DESIGNATION AND THE WORKS TO ACHIEVE CPWL’S OBJECTIVES

7.1 We are also required to have particular regard to *whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought*.

7.2 We accept that reasonably necessary does not mean "essential". However nor does it mean desirable or expedient. This is not a threshold test, but it is a matter we must put significant weight on, where (as here) the works involve other peoples land and where the works would have significant adverse effects and infringe upon matters of national importance as set out in section 6.

7.3 Although it was not a matter we heard argument on, we do not think that this provision is limited to the overall works. We think that we must apply this provision to any parts of the Notices of Requirement which relate to land not owned by CPW and/or which would have significant adverse effects. Accordingly, we have given specific consideration to whether the Waianiwaniwa reservoir and associated works and designation are reasonably necessary for achieving the objectives of the Requiring Authority (being CPWL rather than the Trust).

7.4 In terms of section 171 our starting point is CPWL's objectives. We are not required to consider the appropriateness of those objectives.

7.5 There is no clear statement of the relevant objectives. The scheme is described as a *water enhancement* scheme. We take this to mean that the overall objective is to enhance the value of water for productive purposes by means of irrigation.

7.6 Rather unusually, CPWL's objectives were not set out in the Notices of Requirement. Nor does the supporting document contain any detailed discussion as to why the designation or the works are necessary to achieve the objectives. The NoR does contain the following brief statement as to the necessity of the works:

*"To achieve the objectives of the project including **improving the security of water supply and hence the prosperity of Central Canterbury through a water management scheme that enhances ecological and recreational values while providing opportunity for agricultural and horticultural diversity**".*

7.7 These objectives broadly reflect the objects of the CPW Trust which are:

- to encourage, support and facilitate sustainable development of the water resources of the Regions for the benefit of the inhabitants;
- to provide and facilitate opportunities for agriculture and horticulture diversity in the Regions;
- to provide and facilitate education to the inhabitants of the regions in relation to water issues affecting the Regions; and
- to appropriately balance enhancement of economic benefits for the Regions with the enhancement of ecological, social and recreational values for the Regions.

7.8 If these are also the objectives of the Requiring Authority (which is not clear to us) it would be difficult to conclude that the reservoir is reasonably necessary to achieve these very broad and environmentally focussed objectives.

7.9 For our present purposes, we will take the **stated objectives** of the Requiring Authority to be:

- to provide economic benefits to the Canterbury region by improving security of water supply so as to provide opportunities for agricultural and horticultural diversity and (presumably increased production); and

- to enhance ecological and recreational values.

7.10 Clearly, the reservoir is not reasonably necessary to enhance ecological and recreational values and indeed we have some difficulty seeing how any part of the scheme is necessary for that objective. The reservoir would provide some recreational benefits, but these would have to be balanced against adverse effects on other recreational values. Whether or not the outcome would be positive is debatable, but clearly it can not be said that the reservoir is necessary in order to enhance recreational values let alone ecological values..

7.11 It is of note that there is no stated objective to maximise the area served by the scheme, or to achieve any particular level of reliability. The reservoir is for the purpose of allowing water to be harvested from the rivers and stored for use at times when the rivers can not meet the irrigation needs of those in the command area. However, water storage is not a stated objective of the scheme. We also note that the objective of "*improving security of supply of water*" does not of itself necessitate any particular scheme area or reliability of irrigation. (A small scheme with lesser reliability would still achieve that objective.)

7.12 Accordingly, we have some doubts as to whether we have sufficient basis upon which to conclude that the Waianiwaniwa reservoir, dam and associated works are reasonably necessary to achieve the requiring authority's **stated** objectives.

7.13 We accept that high reliability of supply is desirable from a farmer's perspective and from an economic perspective (although whether that needs to be 95% + reliability is another matter). We fully accept that if one leaves aside environmental and capital costs, it is highly desirable from an economic perspective to include large scale storage in the scheme and have high reliability. Given the existing allocations from the Rakaia and Waimakariri and given the restrictions on take from those rivers, we accept that the only way high reliability can be achieved is by way of provision of significant storage. Accordingly we accept that storage of some form is reasonably necessary to achieve the wider objectives of the scheme.

7.14 Although we accept that some storage is likely to be necessary, we note that the Rangitata South Irrigation Ltd (**RSIL**) scheme utilises a combination of on farm storage and a small scale riverside reservoir, to achieve the objective of providing irrigation water from the Rangitata River which is subject to both a minimum flow

and a maximum abstraction limit at lower flows. Other schemes in the region are also pursuing storage in various forms. We visited the Opuha scheme and heard evidence regarding the success of that scheme in providing economic benefits as a result of large scale storage.

7.15 Even accepting that storage is reasonably necessary in order to provide adequate irrigation to the area concerned, we have not been able to conclude that storage of this size, at this location is reasonably necessary.

7.16 The size and nature of the storage solution adopted by CPWL is determined by the size of the command area and the level of reliability it seeks to achieve. Neither of these controlling factors are reflected in the objectives as stated in the NoR. We have reservations as to whether the areas sought to be irrigated by CPW and the volumes of water it seeks are reasonably necessary to achieve its objectives. We also have reservations as to whether the very high level of reliability it seeks to achieve is reasonably necessary to achieve its objectives. Indeed, it seems to us that there is an element of the tail wagging the dog. The cost of the storage option necessitates as many shareholders as possible and a high degree of buy in by them. It may be that this can best be achieved with a large command area and a high level of reliability. We suspect that a less costly scheme may require lesser reliability and/or a smaller command area, however that is somewhat speculative.

7.17 As discussed above, we are not convinced that other options involving a combination of: lower reliability, less irrigable area, on farm storage, supplementary storage elsewhere, ground water storage, supplementing existing groundwater takes and/or utilising the natural storage provided by Lake Coleridge are untenable. Accordingly we have not been able to conclude that the Waianiwaiwa reservoir is reasonably necessary to achieve, the objectives of the Requiring Authority.

7.18 To some extent, the fact that CPW has now indicated that it considers that there are viable (albeit presumably less beneficial) options tends to confirm that this part of the scheme may not be reasonably necessary in order to achieve adequate irrigation. However, we have not put any weight on that.

7.19 There is also room to question whether a designation as opposed to a resource consent is reasonably necessary to achieve the stated objectives The NoR claims

that designation is necessary to protect the land from other uses and to enable acquisition under the Public Works Act if required.

7.20 So far as the first point is concerned, the land in the valley is not under any threat of use for anything other than its current farming purposes. Even given the long lapse period sought for the designation, it is unlikely that any works would have been proposed which would have prevented the dam or the reservoir. At most, new uses might have occurred which might have increased the cost of acquiring the land. (eg. possible additional buildings and possibly some "lifestyle" developments).

7.21 It may well have been necessary for CPW to have the **option** of utilising the Public Works Act. (Although we note that CPW now suggests that it would not need to utilise the Public Works Act powers).

7.22 Although it may be necessary for CPW to have Requiring Authority status, it is less apparent that it is necessary for it to seek to designate the site with all of the restrictions on landowners that this brings. For the purposes of the Public Works Act a resource consent coupled with Requiring Authority status would achieve the same result (designation is not necessary to allow use of the PWA).

7.23 We do not reach any final conclusion as to whether a *designation* is reasonably necessary to achieve CPWL's objectives..

7.24 We have concluded that the *works* in question (in particular the reservoir and dam) are not reasonably necessary to achieve CPWL's **stated** objectives and may not be reasonably necessary to achieve what we consider to be its primary objective of providing adequate irrigation to the area between the rivers. We note that this has not been a primary determinant of our conclusion regarding these components, however when coupled with our conclusions on Part 2 matters we consider that we have no choice but to recommend against these components.

8. ADVERSE EFFECTS ON THE COALGATE TOWNSHIP

8.1 We have concluded that if the dam is built, there would be significant adverse effects on the township. Our conclusions in respect of effects on Coalgate have been strongly influenced by the unusually close proximity of the proposed dam. This would be a very large structure 55 m high and 2 km long (at its crest) at a distance of less than half a kilometre (at its nearest point) from the edge of the

township. We say unusually close on the basis that while there are other townships close to, or associated with dams throughout the country, few if any existing communities appear to have the same degree of physical proximity and visual dominance that would occur in this case. It is also somewhat unusual to locate a dam in an area where, if the dam failed (which is highly unlikely) a town would be inundated.

The scale and duration of construction activity

- 8.2** On the evidence before us, we have concluded that it is inevitable that there will be moderate to significant adverse effects associated with noise, dust, and general construction activity (particularly movement of vehicles and machinery) as a consequence of dam construction. These adverse effects would be exacerbated by canal construction on two other sides of the township.
- 8.3** We appreciate that with any significant construction project, elevated noise levels must inevitably occur and that NZS6803: 1999 is an appropriate measure for regulating construction noise. Mr Lewthwaite stated that the earthworks for the dam are expected to take at least 12 months with a further 12 months for finishing the associated hydraulic controls and landscaping. The lengthy two-year construction period and the large scale of the proposed dam distinguishes this proposal from many construction projects. We note also, that the noise standards under NZS6803 are much more liberal than those applicable to activities generally in the District Plan.
- 8.4** So far as dust is concerned, the edge of the township would be very close to a large scale construction site (by our calculation it would be 200m or less from the nearest dam construction works to the Coalgate pub). Whilst all of the normal dust control measures would be put in place, we think that it is likely that during the north to north west winds there would be a dust nuisance.
- 8.5** There would be an increase in heavy vehicle traffic near to the town during the dam construction. It appears likely that most of the fill materials required for the dam would have been sourced from within the Waianiwaniwa valley, but if this were not the case then substantial truck movements through the township would be likely. In any event, there would be significant truck movements immediately east of the township on State Highway 77. The movement of heavy vehicles and construction machinery associated with the dam would be highly visible from a

wide area of the township and would increase as the dam structure increases in height.

- 8.6** We also think that it is likely that the proposed construction works would have an adverse effect on property values leading up to and during the construction period, and perhaps beyond that. Although potential effects on property values are not normally a relevant factor, we consider that they have some bearing in circumstances where adverse effects cannot be adequately mitigated. If there were adverse effects on property values or the ability to sell property this would be both a social and economic impact. .
- 8.7** While we accept that some parts of Coalgate will be less affected by noise, heavy vehicles and dust than others, the proximity and visual scale of the proposed works are such that the combined effects on amenity during the prolonged construction period would, in our view, fail to maintain the amenity of the township and the quality of the environment for a prolonged period of time. During the construction period, we expect that construction works would be highly visible, which we consider would magnify perceptions of any dust and noise nuisance. The combined construction impacts may well be significant.
- 8.8** These combined construction impacts would not of themselves have resulted in an unfavourable recommendation in relation to the dam. However, they reinforce our overall conclusion.

The visual and landscape impacts of the proposed dam

- 8.9** The sheer scale and proximity of the dam to Coalgate is such that all three landscape witnesses agreed that its visual impacts could not be avoided. The most that could be done would be to undertake some screen planting close to the township and grassing the approximately 27 degree sloped earth face of the dam. The end result, although softened by treatment, would still clearly be a very large man made structure at the entrance to the valley. Although in the long term the structure may or may not dominate the wider landscape, we think that it would dominate residents' perceptions of their immediate environment.
- 8.10** We do not accept the views of Ms Lucas that the dam location forms part of an "*outstanding heritage landscape*", nor do we think that it is necessarily a landscape of regional significance. However, we agree that it is a landscape

which is attractive and to a large degree natural or at least pastoral and forested in nature. It is also a landscape which dominates the township of Coalgate and which is integral to the visual amenity of the town.

8.11 We expect there would to some extent, be a resigned acceptance of the dam over time, if it were built. However the adverse effects of this large and inevitably bland structure combined with perceptions of risk and dominance would persist beyond the construction period. We regard Ms Lucas's simulations as exaggerated, because the dam crest would recede from a viewer in Coalgate. Nevertheless it is clear from her simulation and the applicant's evidence, that the current vegetated treed entrance to the Waianiwaniwa valley, forming the northern backdrop to the township would be replaced by a visual environment of considerably lower quality. The proximity and scale of the proposed dam is such that its presence would be a constant reminder of its physical dominance to the township.

8.12 CPW does not need to establish that landscape values would be "protected" however we must have particular regard to maintaining and enhancing the environment and the amenity of the area. We have concluded that the dam and reservoir would fail to maintain the quite high visual amenity of the area. Again, this is not a matter which on its own would have been sufficient to defeat the proposal, but these effects reinforce our overall conclusion.

The social impacts on Coalgate and nearby community

8.13 We acknowledge that not all residents in Coalgate have opposed the dam, but there is nevertheless a very significant degree of local disquiet and little support. There is also clearly a "David and Goliath" feeling amongst many in the town and valley.

8.14 There has been much criticism of the consultation carried out by CPW. We have listened carefully to the views expressed. We do not need to reach a conclusion regarding consultation and we do not express a view either negative or positive on that matter. We do however observe that given the nature of the dam proposal, no amount or quality of consultation would have been likely to result in support for this part of the scheme. (We note, by way of comparison that the level of opposition to the Headrace component of the scheme is significantly less.)

8.15 We heard social impact evidence from Dr Charles Taylor for CPW and from Di Buchan as part of the Selwyn District Council officer's report. Both assessors concluded that the dam and reservoir would have adverse social impacts on Coalgate. Dr Taylor's evidence outlined the nature of potential impacts but did not endeavour to quantify those, and indeed it would be impossible to do so. We found his evidence to be fair. We also found Ms Buchan's evidence helpful.

8.16 We also heard evidence from a number of residents of Coalgate. Their opinions relate to perceptions of how they and others may feel in the future if the dam proceeds. Although we cannot put much weight on heartfelt opposition to the dam (no matter how strongly held) we do put weight on residents' views about what effects the construction period and the presence of the dam may have on the social fabric of the community and their perceptions of Coalgate as a place to live.

8.17 If the dam proposal is confirmed it would have a number of effects on the Coalgate community which would in combination, inevitably result in adverse social impacts. These include:

- Ongoing uncertainty as to whether and when the dam would be built.
- The potential for division in the community between those who oppose the dam and those who may be perceived to support it, or who "sell out" to CPW.
- Likely consequential impacts on property values or at least the number of potential buyers who would want to move to the town during the period leading up to construction and for at least a period after completion.
- Inevitable construction impacts for an extended period if the dam proceeds.
- Long term impacts on the visual amenity of the town.
- Perceptions of risk associated with dam failure
- Changes to the way people feel about their town and community.

- A feeling that the valley and the town has been sacrificed for the benefit of others.
- Changes to the nature of the wider community as a result of the flooding of the Waianiwaniwa valley (ie a loss of part of the existing community).

8.18 Notwithstanding the best efforts of the applicant to manage the effects of construction activity through its proposed management plans, the relative scale of the project will make the avoidance of adverse effects difficult or impossible. The almost total displacement of the adjoining Waianiwaniwa valley farming community will have an adverse affect on the communities of both Coalgate and Glentunnel. More significantly, Coalgate is likely in our view to be perceived as a less desirable and pleasant place to live even after the construction period.

8.19 Effects on property values are in essence an indirect measure of effects or perceived effects on amenity values. We think that it is likely that if the proposal were approved, that property values would suffer at least until construction is complete. There are likely to be less people wanting to move to the town. We cannot judge whether there would be any long term adverse impact on property values, but we think that an interim effect is likely. If it has already occurred, this effect would be prolonged if the designation is confirmed. These effects amount to an adverse economic and social impact.

8.20 We heard of the concerns of Coalgate residents that the dam might fail and decimate the town with consequential risk to life and limb. We accept the applicant's evidence that the probability of failure is very low. Nevertheless we also accept that dams do on rare occasions fail and at least some of the people living under the "shadow" of the dam would continue to have a perception that they are at risk. Whilst we do not put much weight on these perceptions, they are a contributing factor in terms of overall adverse social impacts. The impact is perhaps best regarded as the imposition of an unwelcome detraction from peoples feeling of wellbeing.

8.21 We acknowledge the initiative presented by the applicant during the course of the hearing to provide a community fund for the Coalgate and Glentunnel communities. This would provide a total sum of \$300,000 in three equal instalments over an initial three-year period, followed by a further \$20,000 per annum (inflation-adjusted) after this time. While we commend this proposal, we

do not consider it would be sufficient to address the adverse effects associated with the construction and operation of the proposed dam.

8.22 In summary, we have concluded that the dam and reservoir would detract in a significant way from the social, economic and cultural wellbeing of the people and community of Coalgate and the surrounding area. When these social impacts are added to the social and economic impacts on the residents of the Waianiwaniwa valley, the net result would, in our view be a significant adverse social impact. That impact may reduce over time, but in our view the impacts over the years (up to a decade) leading up to construction and for the initial years after construction are unsustainable.

9. ADVERSE EFFECTS ON THE WAIANIWANIWA VALLEY AND ITS PEOPLE WHICH WOULD RESULT FROM THE PROPOSED DAM AND RESERVOIR

Summary

9.1 The proposed reservoir, if built to the maximum scale sought by CPW, would at capacity contain 280,000,000 m³ of water and inundate 12 km² of the Waianiwaniwa valley. In an average year, the reservoir would be lowered by an average of 11 metres, exposing what we estimate to be a shoreline of approximately 60 km, and leaving aside climate change, in one year in 2034 it would fall to its minimum storage level whereby the reservoir would occupy only 4 km².

9.2 The dam and reservoir would have a number of adverse effects which can not be fully mitigated. Although none of these may be unsustainable on their own, we are firmly of the view that the combined adverse effects on the amenity values of the valley and on the people and community in the valley would be significant and unsustainable.

9.3 We do not see the recreational value of the reservoir as providing any significant offset of these impacts. Those limited benefits would largely derive to users from outside the community and accordingly are not providing mitigation for those in the valley. Two rifle clubs would be displaced, with no consented sites as alternatives. Obtaining replacement sites may be difficult.

- 9.4 We accept that the reservoir would most likely provide significant economic benefit to CPW shareholders and **may** provide significant secondary benefits to the region and the nation. However it will provide little, if any, economic benefit to those most directly affected.
- 9.5 Clearly CPWL as a requiring authority is entitled to pursue a designation on land in which it has no financial interest in. However, in our view this makes it all the more important for us to be satisfied that the resulting impacts on those who are already directly and significantly impacted are reasonably necessary, in order to serve the wider public interest. Although we accept that there is public benefit in providing storage to enhance the reliability of the scheme, we do not regard a large scale reservoir at this location as being "*reasonably necessary*" for the regional economy. .
- 9.6 We emphasise that the views expressed in the last paragraph do **not** form a primary basis of our decision. However they have influenced our overall balancing. What has been determinative, is that, the adverse impacts of the dam and reservoir would be significant and many can not be avoided, remedied or mitigated. We are left with potential economic benefits which we do not regard as being sufficient to make **this part** of the scheme sustainable and consistent with the principles of the Act.

Economic effects on the people of the Waianiwaniwa valley

- 9.7 The dam footprint reservoir and roading changes would directly affect 29 properties and displace approximately 45 residents. Of 11 affected farms, five would lose the majority of their land 13 or 14 dwellings would be lost. The most versatile soils on the valley floor would be lost leaving residual farm properties on hillslopes. Of the 29 landowners only one was a submitter in support and the majority were in opposition. Some of the landowners or occupiers in opposition presented in their own right and others presented under the auspices of the Malvern Hills Protection Society. We note that CPW did not advance any evidence to suggest that it had options to purchase or lease any of the affected properties.
- 9.8 Most potential economic losses could be addressed through land acquisition. CPW has offered to pay market value (at the time of the acquisition as if the designation were not present) plus 25% and has indicated that it would extend that offer to those whose properties would only be partially affected. Although

criticised by landowners, this offer is considerably more generous than compensation required under the Public Works Act. We think that this offer would largely mitigate any economic impacts on the affected landowners. There may however be residual economic impacts on those who stay and on those lowland landowners who use this land for wintering over stock, who may not be able to replace that facility. However on balance, we think that the economic impacts on landowners are unlikely to be significant given the compensation offered.

Social impact on the people and community of the Waianiwaniwa valley

- 9.9** We traversed the valley by vehicle and helicopter and visited the property of Brian and Liz Deans. We also heard submissions from most of the most affected landowners.
- 9.10** Although property purchase and compensation would likely address most if not all economic impacts within the valley, it would not address social impacts. It is clear to us that considerable human capital has been invested in developing a number of these properties over many years. There is a strong sense of attachment by many of the landowners and their families to their properties. This tie to the land is an integral part of the social and cultural fabric of the Valley and the wellbeing of its residents. Some of these attachments go back generations and but for the dam, would likely continue for more generations. Others have had a shorter association with the land but still regard it as a special place. These attachments and the wellbeing which goes with it are not matters which can be adequately addressed through compensation. We have no evidence before us, to suggest that those who are affected (and are not in support) regard acquisition at above market value as in any way being an adequate means of mitigating the impacts on them and their families.
- 9.11** CPW did recently indicate, that if it would make any difference to our decision, it would undertake not to compulsorily acquire any land in the Valley. However, we have to make our decision on the case which was presented to us. This was not an offer which was on the table when we were considering the dam and reservoir proposal and accordingly we do not put any great weight on it. In any event, given the level of opposition to the scheme, it is very difficult for us to see how this could be achieved, let alone how it would address the issues which have raised. For present purposes we must proceed on the basis that only one of the most affected landowners is fully supportive of the proposal.

- 9.12** CPW argued that the social and economic impacts of the dam and reservoir on the existing residents and landowners in the valley are irrelevant. Its argument was that economic impacts are a matter for the Public Works Act and that the reservoir and the dam would not effect the social and cultural wellbeing of the people and community of the valley, because by the time construction has commenced those people would no longer have any property interest in the affected land.
- 9.13** For the reasons set out in Appendix 1, we do not accept that argument at least in relation to social impacts. The people concerned have been adversely affected at least since the NoR was lodged if not before. If this part of the Notice is confirmed these people and this community will continue to be affected up to and beyond construction. Although their land would be acquired by CPW (with or without using compulsory acquisition) that acquisition would not disconnect those people from their association with their land and "their" valley. We could only disregard these impacts if we concluded that it was likely that most if not all residents of the Valley would be happy to leave if they are paid enough. The evidence suggests the opposite.
- 9.14** Except for the very few who may be happy to move on if the price is right, the remainder would, in effect, be leaving the land and the community which they have had attachments with for many years (and in some cases generations) in circumstances where they have little, if any, choice.
- 9.15** Even in the unlikely event that all of the affected landowners agreed to be bought out, it could not be said that there was no social impact. The community as it currently exists would cease to exist. We also suspect that if the dam depended upon whether or not the whole of the Valley "sold out", that would cause significant division between the Coalgate community and the Valley community, and between those in the Valley who might be happy to "move on" and those who wanted to "hold out". In any event this is speculation. We must proceed on the basis that the majority of affected landowners are opposed to the scheme and only one was in support.
- 9.16** For the purposes of this summary it is not necessary for us to canvass the evidence from the affected landowners and families, suffice to say that we found it compelling. We acknowledge without criticism, that much of this evidence was emotive and subjective. That is understandable and does not detract from the weight we give to those who are in the best position to assess the effects of the

proposal on the people and the community concerned. We have endeavoured to bring an objective view to a matter which inevitably involves a high degree of subjective feeling, however ultimately, social impact and "*wellbeing*" do involve feelings.

- 9.17 We note that as with the Coalgate issues, it is not necessary for us to comment on the history of consultation or the claims of poor consultation. Nor have we put any weight on the fact that the scheme would take land from some for the benefit of others. We have focussed on the effects on people and communities of allowing the Notice of Requirement.

Loss of mudfish habitat

- 9.18 Section 6 (c) of the Act requires us to recognise and provide for:

*The **protection** of areas of significant indigenous vegetation and **significant habitats of indigenous fauna.***

- 9.19 We heard uncontested evidence which established that the Waianiwaniwa valley was the single most important habitat of the indigenous and threatened Canterbury Mudfish (*Neochanna Burrowsius*), and that it may comprise up to 25% of the species known habitat. It was also accepted that the valley provides a critically important predator free environment for mudfish. Fieldwork has revealed that mudfish are present in 24 km of the main stem of the Waianiwaniwa River and its tributary waterways: Oyster Gully, Tara Hills Stream, and Bush Stream. This population is genetically distinct from population outside of the valley.

- 9.20 Virtually all of the existing mudfish habitat in the valley would be inundated and therefore destroyed by the proposed reservoir. The tunnel would also introduce predators in the form of trout, salmon and eels to the reservoir and potentially the streams which would flow to it.

- 9.21 We have set out our views regarding how we should apply section 6 in Appendix 1 of this Minute. However, in summary, the case law suggests that in this context the word "*protect*" means "*keep safe from harm*" and is to be distinguished from "*preserve*" which has the connotation of keeping something in its current state.

- 9.22 We are required to adopt measures which will avoid harm to "**areas** of significant indigenous vegetation" and "**significant habitats** of indigenous fauna". So far as

the former is concerned, the focus is on the area of vegetation involved and accordingly on the particular type of vegetation. So far as the latter is concerned the focus is on protecting the habitat so that it remains significant. We do not think that this necessarily requires the existing habitat to be protected.

9.23 We think that our focus should be on ensuring that the valley continues to provide *significant habitat* for the mudfish if the reservoir proceeds. In our view this requires, as a minimum, that there would remain extensive areas of safe high quality habitat in the valley. We must be satisfied that the habitat would support an abundant mudfish population. That does not necessarily require that there be an equivalent area of habitat, or that it support an equivalent sized population, however in our view, in order to satisfy section 6(c) we must be satisfied that there is no significant risk to maintaining an abundant genetically distinct population.

9.24 During the hearing, the applicant amended its proposed mitigation and proposed by way of "biodiversity offset", the construction of a 24 km long system of waterways parallel to the proposed reservoir edge above both ends of the dam, replicating as far as practicable typical mudfish habitat and protecting that area from predators. The waterways would be fed by pump and would be isolated from the reservoir to avoid predators populating the new habitat.

9.25 The concept of biodiversity offsets has been accepted by the Environment Court. In most of the cases we are aware of the Court has sanctioned an offset where part of an area is to be enhanced to offset the destruction of another part. Thus in *Department of Conservation v Wairoa District Council* (W081/07) the Court allowed an area of significant vegetation to be destroyed on the basis that the protection of the adjoining areas would be enhanced. The decision in respect of the *Kate Valley* landfill case was to similar effect: *Canterbury Too Good To Waste Inc v Canterbury Regional Council* (C029/04). The *Solid Energy* case: (*Solid Energy NZ Ltd v West Coast Regional Council* (074/05) is similar to the *Wairoa* case. It involved transplanting native snails from the area which will be destroyed, to an adjoining area of existing suitable habitat. We note that in contrast, in the present instance the proposed replacement habitat would be entirely man-made and although still in the valley, would be at a different location and would be of a very different nature from the current habitat.

9.26 In our decision on the Ashburton Community Water Trust applications, we agreed to a proposal to offset the destruction of areas of kowhai with protection of a greater area in a different location. However, that was in the context where the

areas to be destroyed were not protected from predators or indeed from clearance and were therefore not viable in the medium to long term. In the present instance, the significant mudfish habitat in the valley is not under any threat other than from this proposal. The other difference there, was that the area to be enhanced (as was the case in *Kate Valley*) was an existing area of kowhai rather than an entirely new area.

9.27 In the present instance, we have some reservations as to whether it could be guaranteed that the new habitat would remain as significant as the existing habitat. We accept that it is possible or perhaps even probable, that this transplanting of mudfish into an artificial and controlled environment may succeed in maintaining a large and viable population. *Neochanna Burrowsius* have been successfully established in the Ilam stream at Canterbury University by way of experiment. However, the Ilam stream is not an entirely artificial habitat.

9.28 In essence, what the applicant proposes would be a large scale experiment. It may well have a good chance of success. However, because this is a matter of national importance and given the significance of the species and the extensive high quality nature of the existing habitat, we consider that we should adopt a precautionary approach. The evidence from Dr Meredith and Assistant Professor McIntosh suggested that there was at least a moderate degree of risk, that the proposal may not be entirely successful at the large scale proposed. On balance, we are not satisfied that allowing the reservoir to proceed on the basis of this mitigation measure would satisfy section 6 (c). In addition, we think that there is a risk of adverse effects on the mudfish population which may have a low probability of occurrence but which would have a high potential impact in terms of loss of biodiversity.

Sites of ecological significance

9.29 Three known wetland sites were described in evidence, two of these being in Bush Gully, and the third in Tara Hills Stream. During the course of the hearing our notice was drawn to a virtually unmodified "raised peat bog" which had been identified in Bush Gully. It was accepted by all expert witnesses on ecological matters that this site was highly significant, containing 35 indigenous species, and being one of only three known sites of this nature in Canterbury. This bog would be inundated and would be destroyed. It could not be replaced. The other two wetland sites are not as significant but would also be destroyed.

9.30 We conclude that the overall effects on biodiversity would be more than minor. We also think that the destruction of the Bush Gully site would be contrary to section 6(c).

Landscape and amenity values

9.31 We do not consider the Waianiwaniwa valley to be an *outstanding "heritage" landscape*. (We also think that the concept of a "heritage landscapes" mixes and confuses section 6 matters.) Nevertheless the valley does have a pleasant character and level of amenity in terms of sections 7(c) and 7(f) of the Act. The Waianiwaniwa valley is isolated and not on a route frequented by travellers. However it is an attractive valley which provides high visual and aesthetic amenity levels for local residents and visitors.

9.32 Much of the valley would be inundated when the reservoir is full. We accept that storage reservoirs, particularly those associated with irrigation schemes, will of necessity have fluctuating levels depending on seasonal drawdowns. We observed this effect during our visit to the (albeit much smaller) Opuha scheme in South Canterbury. Given the expected vertical fluctuations in the level of the reservoir, combined with the irregular and lengthy shoreline, there will be extensive areas of unsightly muddy slopes revealed.

9.33 Although some modest recreational benefits may be possible in spring and early summer, the recreational potential often associated with artificial water bodies is unlikely to be realised in this case. On a 'before and after' basis, the amenity values and overall quality of the environment in the Waianiwaniwa valley would be substantially degraded. Although these amenity effects would not of themselves be sufficient to defeat the proposal, they do in our opinion amount to a significant adverse effect which feeds into our overall balancing.

Other adverse effects on the environment and amenity values

9.34 Other contributory adverse effects include:

- Displacement of two rifle clubs, where the primary concern is the availability of alternative sites, rather than compensation per se;

- Severance of the existing north/south road connection between Coalgate and Sheffield;
- Loss of access to the regionally important coal resource;
- Loss of at least two unlisted heritage buildings, notably the dwelling on 'Kirkless' and another on the Robertson property;
- Potential adverse effects of slope failures in areas within the reservoir basin exposed by drawdown of the reservoir. This may be exacerbated by erosion from wave action;
- Potential nuisance from dust generated from the dried areas of the reservoir basin during periods of prolonged drawdown.
- Loss of the best farmland and associated productive potential in the valley is a factor to be weighed in the balance, although we accept that this would be substantially outweighed by increased production on the plains.

9.35 Because the existing community would have been vacated and the area inundated prior to construction, potential adverse effects associated with construction traffic, noise, and dust would not be of major significance. A small number of dwellings in the Valley would remain where these are above the reservoir level or in the upper Waianiwaniwa valley. The potential dust nuisance during drawdown periods is difficult to quantify. There would be potential for odour resulting from stratification of water in the reservoir, although this could be addressed through aeration of the water, an apparently successful measure adopted the following problems at the Opuha Reservoir.

10. THE UPPER WAIMAKARIRI INTAKE SITE AND HEADRACE

10.1 CPW has sought that we recommend confirmation of two alternative intake sites and their associated works for taking up to 40 cumecs of water from the Waimakariri River to the proposed Waianiwaniwa storage reservoir. The first is by way of an intake point at the Lower Waimakariri Gorge near Sheffield. This would involve a headrace along an escarpment on the southern side of the Waimakariri River, thence across the plains and the base of the Homebush Ridge to the foot of the dam. Water would then be pumped into the storage reservoir. The second

alternative is for a take from the Waimakariri River near Kowai Bush adjacent to the Taege property and an associated jet boat tourist operation. This would involve an intake channel from the mainstem of the Waimakariri River (currently adjacent to the southern bank) and settling pond, intake structure, and a diversion race, followed by a short headrace through riparian farmland including the Merhtens property. En route this would cross Hacketts Creek and the Kowai River before entering a 10 km tunnel supplying water by gravity to the northern end of the proposed reservoir.

- 10.2** We had some reservations regarding the necessity and appropriateness of designating two alternative intake sites. But for our conclusion in respect of the reservoir we think that we may have had to choose between the two sites. However our conclusions regarding the reservoir make the upper site redundant. Nevertheless given that we must view the proposal in the round, we will summarise our conclusions on the upper intake.

Effects on natural character and landscape

- 10.3** The proposed point of take is located shortly below the upper gorge of the Waimakariri River where it enters an incised channel across the Canterbury Plains. The intake point would be very near the existing Alpine Jets get in point adjoining the Taege property.
- 10.4** The Regional Policy Statement sets out criteria for identifying outstanding landscapes (but does not list them) while the two relevant district plans (Selwyn and Waimakariri Districts) have not recognised the landscape in the vicinity of the point of take as an outstanding landscape.
- 10.5** After hearing the evidence and visiting the site by foot, jet boat and helicopter we have concluded that there is some merit in the opinion of two landscape witnesses, Ms Lucas for Environment Canterbury (in its submission in opposition rather than its officer report), and Mr Craig for the Selwyn District Council; that the area containing the proposed take site may well be an outstanding landscape. In particular it is the point where the river, the mountains and the plains intersect and is the gateway to the upper gorge which is in our view an outstanding and iconic landscape. We have concluded that the intake area is at least a landscape of regional significance and may well be an outstanding landscape.

- 10.6** The proposed diversion channel and associated works in the riverbed would introduce an intrusive non natural artificial element into the area. It is also possible that the main stem of the river could revert to its long-standing position closer to the northern bank, which would exacerbate this effect, since in that event an artificial diversion channel would have to be maintained across almost the entire width of the riverbed.
- 10.7** The periodic presence of machinery to maintain the diversion channel, and associated stockpiling would also contribute to potentially significant adverse visual impacts. While we recognise that some activity is associated with maintaining access for the jet boat operator, that activity is on a very much smaller scale.
- 10.8** During the course of the hearing we did consider an alternative site involving a take point and tunnel from a bluff a short distance upstream. This was referred to as the "Millikens bluff" site. This site would have a lesser landscape and visual impact, but was opposed by the affected landowner and by CPW, and is outside the area covered by the NOR. For this reason we assessed the proposal at the point of take chosen by the applicant.
- 10.9** For international and other visitors to the jet boating operation and the associated visitors' centre run by the Taeges the training works in the river, the intake channel in the river bed, the sediment pond intake and fish screen would detract from the current, predominantly natural, character of the area. The road to the jetboating launch site has good visibility over all of these proposed works. The jetboating launch site would be in the new channel or visitors would need to cross the channel to get to the launch site.
- 10.10** The canal, pond and intake works would not be so obtrusive for recreational users of the river since they would be at a similar height. Nevertheless, the river works required to maintain the intake channel and sediment pond and the nature of the kayak safety measures, would together detract from the natural character and landscape values of the site. We are mindful too, that the Coast to Coast event would pass by the site and the proposed works may have some negative impact on how participants view the character of the river and the event.
- 10.11** Our conclusion is that the proposed upper intake site would detract from the natural character, visual amenity and outstanding or at least regionally significant

landscape in this location and would therefore be an *inappropriate development* in terms of section 6 of the Act.

Effects on the Alpine Jets operation

10.12 The effects on the commercial jet boating operations undertaken from the river frontage of the Taeye property by Waimakariri Alpine Jets. This was explained to us as a 365 day per year operation attracting 20,000 clients annually, mainly overseas tourists. Concerns expressed by the landowner and the operator related to potential interruptions to launching boats resulting from construction and river training works undertaken by CPW, and potential 'image' issues associated with such works. We are satisfied that a practical solution could be found to secure access through negotiation. However we also find that there would be some detrimental effects associated with clients' perceptions of a modified environment as a result of the CPW scheme. The extent of such perceptions is difficult to quantify, but it could be quite significant on an important tourist operation which is marketed based on a remote experience in a largely pristine landscape.

10.13 We are satisfied that the Alpine Jets operation could co-exist with the upper intake. If we had been able to recommend in favour of this part of the scheme, we would have imposed conditions ensuring that the current level of access by Alpine Jets to the river would be maintained.

10.14 We are also satisfied that if these works proceed, they would detract from the natural character and amenity which significantly contribute to the Alpine Jets experience. As discussed earlier, the necessary works would be visible from the access road and the visitors centre. They would also be apparent to visitors boarding the jet boats. The river works would be apparent at the start and finish of a "wilderness" trip through otherwise natural, albeit (in part) farmed, landscapes. We are not certain whether this detract from the amenity values enjoyed by Alpine Jet clients would be moderate or significant, however it is another factor which has influenced our decision.

Effects on other river users

10.15 We consider that the infrastructure and the periodic river training and gravel removal works would detract from the natural character and amenity provided to other river users and in particular jet boaters and kayakers. We doubt whether

such impacts would be significant but they would likely to be more than minor. We bear in mind that those who jet boat, raft or kayak the river do primarily because of its natural character and scenic values.

Kayak safety

10.16 We were satisfied that the intake race could be managed to ensure kayak safety. If we had recommended in favour of this site we would have recommended conditions which ensured proper auditing of any final design to that any risk to kayakers was avoided.

10.17 We appreciate that one of the advantages of this site is that designing to avoid such risk would be easier than for the proposed Gorge Bridge intake site, however it is not for us to choose between the two sites.

Effects on salmon angling amenity

10.18 We have addressed the possible impacts of various take regimes in Minute 9. Although that focussed on takes at the lower intake, without a reservoir, similar issues would have arisen in relation to the upper intake to Gorge Bridge section which is also at a low gradient and braided. If we had approved the upper intake we would have imposed conditions on the take permit to address potential effects. Accordingly, these potential impacts do not form a basis for our conclusions regarding the upper intake. Nevertheless, we do note that one of the benefits of not having the reservoir is that the impacts of taking water on fishing amenity and boating amenity in this reach is avoided. There may also be benefits downstream from the reduction in maximum take from 40 to 25 cumecs without a reservoir.

Effects on the fishery

10.19 With the upper intake we would have had to pay particular attention to the potential for the take regime to disrupt upstream fish movement. However we are confident that this could have been addressed. Similarly we think that fish screening issues could have been addressed. Indeed, it is likely that the fish screening could more readily be addressed at this location than at the Gorge Bridge site.

Effects on salmon spawning values in Hacketts Creek

10.20 The proposed headrace would cross a stream known as Hacketts Creek on the Merhtens property downstream from the intake. The evidence before us established that this was an important spawning stream for salmon, and hence significant in terms of section 7(h) of Act. It was also apparent that considerable effort had been put into enhancing the site as a salmon hatchery by Fish and Game and anglers. Construction work and a long culvert to enable the headrace canal to cross Hacketts Creek has the potential to detract from the value of the creek for spawning purposes. However it seemed likely that a design solution could address most or even all of these concerns.

Effects of the Upper Waimakariri Canal

10.21 The potential impacts of the headrace on a feature known as the "Keens Road Wetland" near the southern end of the headrace, and on a nearby site above the proposed tunnel portal containing remnants of dryland indigenous vegetation. All relevant witnesses recognised the particular importance of the Keens Road site as remnant wetland containing indigenous plant species. The evidence before us suggested that while there would be some impact on the margins of these sites, the headrace alignment could avoid them, although more detailed work would be necessary to establish the extent to which this is the case.

10.22 We consider that there would be no significant impacts of the upper Waimakariri headrace on farming activities which could not be compensated for, or addressed through conditions. However there would be some adverse effects on the landscape values and enjoyed by the two most affected properties (the Taeges and the Merhtens) Although it is not a matter which has greatly influenced us, we note that the Mehrtens are shareholders in the scheme and would benefit from the upper intake but are nevertheless opposed to it. That is in part because of concerns with effects on their farming operation, but also because of concerns regarding effects on the natural character enjoyed by them and surrounding properties. We visited their property (by helicopter and vehicle) and the Taege property by vehicle, jet boat and helicopter. We appreciate the value which these submitters attach to the landscape and natural character values which surround them.

11. EFFECTS OF THE TUNNEL

11.1 The evidence was that there would be little impact on the environment as a result of the construction of the tunnel. There was some suggestion of a site of significance to Tangata Whenua at Kowai Bush where the tunnel would commence. However in the absence of a full survey of the site it was not clear whether any sites of significance to maori would be disturbed. We have been unable to reach a conclusion on this point.

12. THE BENEFITS OF THE PROPOSED SCHEME

12.1 The potential adverse impacts of this part of the scheme, need to be balanced alongside any benefits that can be expected to result from the scheme as a whole and the reservoir in particular.

12.2 We have concluded that the reservoir would not serve CPWL's objective of enhancing recreational and/or ecological values. There would be some recreational value associated with the reservoir but we do not regard those as sufficient to balance the loss of overall amenity provided by the valley in its current form.

12.3 On weighing the evidence, we were satisfied that the CPW scheme would probably result in significant net economic benefits at a regional level, and to some extent at the national level. We consider that the provision of very reliable irrigation resulting from the scheme as proposed (with the reservoir) would facilitate high levels of production, greater diversity of production (looking beyond short-term returns from dairying) and greater investment security and innovation among the farming community than a scheme without significant storage.

12.4 Although we have some reservations regarding some of CPW's economic assumptions, we did not accept evidence which suggested there would be little if any economic benefits from the scheme proceeding. While we fully understood criticisms that the scheme's direct benefits would be largely confined to the 300 shareholders, we think it is important to acknowledge the inevitable secondary benefits that would flow from increased agricultural production in the region. However these benefits need to be weighed against the social and environmental costs of the scheme as well as the economic costs of it.

- 12.5** We do not have the qualifications or the evidence to be able to assess the changes to the economic costs and benefits of the scheme resulting from the removal of the dam and reservoir, nor do we need to do so. We do however observe that the capital costs associated with the dam, the tunnel, the intake works and the land acquisitions required for the reservoir and other infrastructure would be very significant and will be avoided without those items. We also note that the local, national and international economy has changed somewhat since the hearing commenced in February 2009.
- 12.6** We will **assume** for the present purposes that notwithstanding changed circumstances, that the additional costs associated with this part of the scheme would, at least over the long term, have been more than offset by the additional economic benefits deriving from the increased reliability of supply and larger command area which could be achieved with a reservoir. We will also assume (but do not make a finding) that the net economic benefits of a scheme with the reservoir would be significantly greater than without.
- 12.7** We accept that in order to maximise the economic benefits of the scheme, a high level of reliability is required. We do have reservations as to whether the very level of reliability which CPW seeks is necessary. However we accept that without any large scale storage the scheme may not produce any net economic benefit or the net benefits may be significantly less.
- 12.8** We do not have sufficient information to be able to assess the consequences of removing the reservoir from the scheme. We have assumed for present purposes that there may be a significant negative impact on the net economics of the scheme in doing so, but that makes no difference to our conclusions.
- 12.9** We note that the applicant put some emphasis on the fact that the Trust is the primary applicant and it sees this as effectively a community scheme to enhance the value of water for the benefit of the region. The Requiring Authority (Central Plains Water Limited) is a privately owned company. CPWL is responsible to its farmer shareholders to deliver water to them (presumably) in as reliable and cost effective way as can be achieved. The fact that the Trust stands behind the company is of little relevance in terms of benefits of the scheme.
- 12.10** We do not see the reservoir proposal in the same light as critical infrastructure such as roads, prisons, landfills, transmission lines and wastewater plants. Firstly, many of these facilities are proposed on land which the requiring authority has

already acquired or has a option to purchase. Secondly where that is not the case, the infrastructure is usually necessary to achieve local authority or government objectives.

- 12.11** The current proposal, whilst developed by a Trust settled by Christchurch City Council and Selwyn District Council has not been set up to achieve council objectives. Thus, although the enhancement of economic activity via harvesting of water is worthy objective, it is not an objective which the councils or the wider community have developed through the LTCCP's or any other process. Although we fully accept that the storage provided by the valley would provide economic benefits to the region, we do not see this as community infrastructure or a community project. Although the beneficiaries of the Trust are the people of Canterbury, the Requiring Authority is a private company and its shareholders are the farmers who would benefit from increased irrigation. There would be no direct benefit flowing to the beneficiaries of the Trust.
- 12.12** The difficulty which CPW faces is that those who would benefit are not those who would suffer the adverse effects. The primary benefits would be to the shareholders of the scheme, any community benefit would be secondary. That is not a criticism of the Trust or the scheme. Nor is it a matter which is fatal to the scheme. However it is relevant to our consideration of whether the regional and national economic benefits deriving from the reservoir are sufficient to offset the significant adverse impacts including on matters of national importance.
- 12.13** We did consider there was merit in one of the criticisms made of the benefits of the proposed scheme. We think it would be artificial to quantify the benefits on the basis of the CPW scheme in isolation, versus the 'do-nothing' option. We believe that it is likely that if CPW does not proceed, then other schemes will be undertaken in its place. These schemes, either individually or in combination may result in lower levels of economic output than the CPW proposal, but would still confer economic benefits with lesser environmental cost.
- 12.14** We do not put any great weight on the benefits which the scheme (with a reservoir) may bring in terms of reduced use of groundwater for irrigation. To the extent that there may be adverse effects from groundwater abstraction, those effects will need to be addressed by the Regional Council. We do accept that recharge from irrigation via surface water will bring some benefits in terms of recharging the aquifers, but the extent of those benefits and their dependency on the reservoir are unclear.

12.15 It is our conclusion, that the likely net benefits of the scheme would be insufficient to outweigh the actual and potential environmental and social costs resulting from the scheme as proposed. The concept of water harvesting and storage has considerable merit, and our conclusions do not preclude the possibility that other storage options may be developed by CPW or others which may achieve major benefits without the environmental costs associated with the scheme as proposed.

13. CONCLUSION

13.1 Adopting an overall balancing approach and focussing on the total effects of this part of the proposal (including the beneficial aspects) we have concluded that approving the dam, reservoir and upper intake components of the CPW scheme would not promote sustainable management as required under section 5 of the Resource Management Act 1991. In particular we do not consider that the dam and reservoir would enable the social and cultural wellbeing of affected people and the affected communities. Nor would approval of these components be consistent with the principles in sections 6 and 7 of the Act.

13.2 In terms of the matters of national importance in section 6, even if the proposed reservoir is regarded as regionally significant infrastructure on the basis of the regional economic benefits it might bring (and we have some doubts about the magnitude of net benefits which would derive from these particular components) this would not alter our view that the benefits to be derived from the project are insufficient to outweigh section 6 matters.

13.3 We are required to make a value judgement on behalf of the community as a whole, as to whether these components of the scheme and the scheme as whole, will enhance social, economic and cultural wellbeing sufficiently to overcome any Part 2 matters which we believe may not be achieved. Taken together, our reservations are such that they can not be overcome by the economic value of the reservoir. We appreciate that it is possible, that without the reservoir the scheme may not be viable, however, if that is the case (and we have yet to hear evidence on this) our conclusions on the dam and reservoir would be no different.

13.4 For all of these reasons, when we issue our final decision on this proposal, we will be recommending to CPWL that it withdraws its NoR for the upper Waimakariri intake and tunnel and that it modifies or withdraws its principal NoR so as to exclude the dam and reservoir.

- 13.5** We have not yet reached any final views on other parts of the proposal and nothing in this Minute should be taken as an indication of what we may ultimately decide. In particular, there are submitters on the Headrace, lower intake and other components of the scheme whose concerns we have not yet considered. We will of course do so and indeed intend to make progress on these other issues between now and October.
- 13.6** We suggest that it would be appropriate for CPWT to advise submitters and the public as soon as possible as to whether it intends to accept our recommendations in relation to these components. We note that it may not be legally possible for CPWL to withdraw the dam and reservoir aspects of that NoR until we issue a final decision. However, there would seem to be no barrier to it withdrawing the upper intake and tunnel.
- 13.7** If necessary we will expand upon our reasoning in our final decision. However if CPWT indicates that it will accept our recommendation, then this Minute will become the basis for our final decision on these components.



Philip Milne
Commissioner (Chair)



Andrew Fenemor
Commissioner



Ray O'Callaghan
Commissioner



Bob Nixon
Commissioner

Dated: 14 July 2009

APPENDIX 1 LEGAL ISSUES

1. During the course of the hearing, we heard submissions on a number of legal issues which are relevant to our consideration of this part of the proposal. The key issues which arise are as follows:

- *Are criticisms of the Minister's decision to make CPWL a Requiring Authority relevant?*
- *To what extent should we take into account the effects of the proposal on the social, economic and cultural wellbeing of those whose land will be required in whole or in part if the Notice of Requirement is confirmed in relation to the Waianiwaniwa dam, the reservoir, the headrace, the intake works and the terrace canals?*
- *How should we apply section 6(c) of the RMA in relation to the habitat of Canterbury Mudfish in the Waianiwaniwa valley?*
- *Should the significance of the works in question override section 6 matters.*

2. The Granting of Requiring Authority Status and ability of CPWL to Compulsorily Acquire Land

2.1 There has been much criticism of the Minister for the Environment's decision to grant Requiring Authority status to CPWL. There has however been no challenge to that decision by way of judicial review and we do not have jurisdiction to inquire into the merits or otherwise of that decision.

2.2 We are permitted to inquire into the effects of confirming the NoR, but are not able consider whether the company should be a Requiring Authority.

2.3 Those who raised this issue were concerned that the Minister's decision has the effect of allowing CPWL access to the Public Works Act compulsory acquisition powers and what some see as an easier designation option rather than obtaining resource consents. (An option which also has interim effects on what landowners can do with their land).

2.4 It is clear that CPWL comes within the statutory description for a Network Utility Operator because it proposes to undertake the distribution of water for irrigation supply. (It is up to Parliament to determine whether that should include private schemes). CPWL was entitled to Requiring Authority status provided that it (not the Trust) could satisfy the Minister that such status is appropriate for carrying on the project and that it was likely to carry out all the responsibilities of a Requiring Authority under the Act and give proper regard to the interests of those affected and to the interests of the environment. (section 167 of the Act). To some extent CPWL has relied on the current process to address environmental matters.

2.5 The Minister was satisfied on these points and we have no jurisdiction to reconsider those matters. However, clearly it is up to us rather than the Minister to ensure that environmental interests, can be adequately addressed, and if we recommend in favour of the designation, that they are addressed so far as is required, by conditions.

2.6 We appreciate that many people feel that it is unfair for a private company such as CPWL to be able to potentially use the Public Works Act to have the Minister of Lands acquire private land on behalf of the Company, against the will of the owners, so as to benefit others. However, that is what the law provides for. Furthermore, with a project as vast as what is proposed here, it is difficult to see how the project could proceed without having the backstop of the Public Works Act. If it was not for this backstop, one or two strategically placed landowners could stymie the project.

3. To what extent should we take into account the effects of the proposal on the social, economic and cultural wellbeing of those whose land will be required in whole or in part?

3.1 In the event that the designation is confirmed, then unless land has been obtained by negotiation, the PWA powers will be available to CPWL pursuant to section 186 of the Act, as if the project were a Government project. This means that CPWL could apply to the Minister of Lands requesting him or her to acquire any land which can not be obtained by negotiation.

3.2 Landowners or lessees may object to a proposed taking to the Environment Court. If there are objections, the Court must inquire into the adequacy of consideration, of alternative sites routes and methods, and whether it would be fair, sound and

reasonably necessary for achieving the objectives of CPWL for the land to be taken. However the Court does not have jurisdiction to consider environmental effects.

3.3 To some extent the PWA criteria overlap with the matters which we must consider when deciding whether or not to confirm the designation. However our primary focus is on whether the proposal is sustainable and what effects it may have on the environment. We are required to have regard to the adequacy of consideration of alternatives which may have less environmental impact and the necessity of the designation and works, whereas under the Public Works Act the focus is on the necessity of acquiring the land and the adequacy of consideration of alternatives to avoid such acquisition.

3.4 The legal issue which arises and which is highly relevant to the particular components of the scheme we are currently considering is:

To what extent are we required to, or even allowed to, take into account the effects of the Notice of Requirement and the proposed works on those whose properties are affected? Are such effects solely matters for the Public Works Act?

3.5 CPWL argues that we should disregard the fact that people will be displaced from their land against their will and what was once their land would be inundated in whole or in part. The landowners, and the Malvern Hills Protection Society argue that this is a relevant effect which is significant and which the requiring authority can not mitigate.

3.6 The starting point for discussion is section 171 which requires us to ..."*consider the effects on the environment of **allowing the requirement**, having regard to ...various matters*". We note that this suggests that our inquiry is wider than just considering the effects of the *works* which would be authorised by the designation, if confirmed. It also seems to encompass effects between the time of confirmation of a designation and the commencement of works.

3.7 Effects on the environment include actual and potential effects on:

(a) *Ecosystems including people and communities;*

- (b) *All natural and physical resource;*
- (c) *Amenity values; and*
- (d) *The **social, economic aesthetic, and cultural conditions** which affect the matters above.*

3.8 Mr Casey QC argued for CPWL, that we should not consider the effects of the loss of land on the existing owners nor the amenity effects on existing owners who lose their land entirely. For example, in relation to the reservoir, he submitted that the loss of land will be a result of the flooding of the land. Whilst that would be authorised by the designation, there would be no effect on the existing landowners since by that time their land would have been acquired either by negotiation or by compulsion. The argument was that the inundation is an effect of the designation, but the acquisition of land would be a result of the Public Works Act or private contract and is not therefore a relevant effect. Indeed, he took this one step further, and submitted that for the same reason, the loss of amenity to those who choose to leave or who are required to leave, is an effect of the PWA not the RMA. He accepted that amenity effects for visitors to the valley and for those who remain is an RMA effect.

3.9 Mr Casey made the following points:

- The acquisition of land does not constitute an adverse effect on the environment;
- Acquisition and compensation are PWA not RMA issues;
- It is not our function to assess adequacy of compensation;
- Nor is it relevant to consideration of the notice of requirement that if upheld it will lead to acquisition of interests in land;
- Designation is not a prerequisite to compulsory acquisition, a requiring authority can request the Minister of Lands to take land at any time, including prior to the designation being confirmed and could rely on resource consents rather than a designation to authorise the works; and
- The power to acquire land and the concomitant right to compensation are addressed solely through the PWA.

3.10 If we accept these arguments in their entirety, then the concerns of the affected landowners about effects on them, their families and their land would be irrelevant. This would include such matters as:

- The perceived unfairness of one set of farmers taking other farm land for private benefit;
- The loss of family heritage and association with the land for those who would be forced of their land (some of whom have been there for many generations);
- The loss of property specific amenity as a result of the flooding of properties and/or earthworks;
- Effects of the works and the acquisitions on the *social, economic aesthetic, and cultural conditions* which affect people who would no longer be there once the works commence.

3.11 Rather surprisingly, there is very little case law on the relationship between the PWA and the RMA. We asked Selwyn District Council to provide us with legal advice on this matter, which was provided by Mr Paul Rogers.

3.12 Mr Rogers pointed us to the decision of the High Court in *Takamore Trustees v Kapiti Coast District Council* (AP191/02). There the appellant argued that compensation under the PWA was outside of the jurisdiction of the Environment Court and was not a matter which the should be taken into account when considering a notice of requirement. The Court stated as follows:

The decision-maker must first consider whether balancing all the relevant material and the predominant s5, the notice of requirement should be confirmed. It will need to consider avoidance, mitigation of affect and other matters set out in paragraph 5. If mitigation, then it will be implicit that some affect remains, and in all probability compensation will be all that will be left to an affected party. Compensation will be considered only after it is concluded (if it is) that the balance lies in confirming the notice of requirement and all effort to avoid or mitigate has been undertaken.

3.13 Mr Rogers was of the view that this decision is authority that the right for compensation should not be considered as a mitigating factor when assessing the level of effects and should not have any bearing on whether the NoR is confirmed.

However he was of the view that so far as CPWL is now offering compensation in excess of what is required under the PWA that the additional compensation is a relevant matter, although in his view it should not be regarded as mitigation.

- 3.14** No counsel pointed us towards any decision which had grappled with the question of whether effects on landowners or occupiers whose land would be needed for a designated work is a relevant effect under the RMA. The *Takamore* decision does not deal with that point. This situation also arises where land is required for roading and other infrastructure projects, so we are surprised that there is no clear case law on the point. We are left with the position that as far as we are aware, there is no case law which says that such effects are **not** effects for the purpose of the RMA.
- 3.15** We are not convinced that in the context of the broad definitions of *environment effect* and *sustainable management*, in the RMA that such effects can or should be excluded from our consideration. In particular, "**environment**" includes *the social, economic, aesthetic, and cultural conditions which affect people and communities*. "**Effects**" include actual and potential effects. Most importantly "**sustainable management**" includes a focus on enabling the *social, economic and cultural wellbeing of people and communities*.
- 3.16** In the present case affected landowners have been told by successive Ministers for the Environment (and CPW) that their opportunity to raise concerns regarding the effects on them and their land was in front of us. It would seem artificial and unfair for us to now say: "those are Public Works Act issues" . That would be akin to saying that we can not consider effects on those most directly affected. In our view, the converse is true. The Public Works Act does not deal with non monetary effects on landowners because those are dealt with under the RMA.
- 3.17** We accept that CPWL's power to seek that the Minister of Lands to acquire land derives from the Minister for the Environment's decision to approve it as a Requiring Authority, rather than from whether or not the designations are confirmed. We also accept that it is not our role to determine the adequacy of compensation. However, applying the basic test of causation, in our view it is an inescapable conclusion that the acquisition is unlikely to occur **but for** the confirmation of the designation (or the granting of equivalent consents if they had been applied for).

3.18 We are obliged to assess *the effects on the environment of allowing the requirement*. If the requirements are not confirmed ("allowed") the project will not proceed and the land will not be *required*. While CPWL may choose to negotiate the purchase of some land, or at least options to purchase, without having a designation or consents in the bag, it seems improbable to us that the Minister of Lands would exercise his or her powers unless the necessary RMA approvals have been confirmed. Furthermore, if there were an objection to the Environment Court it is unlikely to be satisfied that compulsory acquisition is reasonably necessary, if the project does not have at least most of the necessary RMA approvals in place. Accordingly, it seems to us that confirmation of this part of the NoR would lead to people being forced into moving from their land albeit that they would be compensated for that.

3.19 As discussed earlier, where people have to give up their properties other than on a willing seller basis, then that will have social and cultural effects which in our view are effects on the environment. We have no evidence before us to suggest that most, let alone all affected landowners would be happy to move if paid enough.

3.20 In our view, it is inevitable that if the NoR is confirmed, there will be adverse effects on the *social, economic, aesthetic, and cultural conditions* of the *people and community* of the Waianiwaniwa valley (and on those who are affected by the headrace and terrace races). It seems to us, that what we must do, is compare the effects of what is proposed with the existing and reasonably foreseeable future environment if the requirement is not confirmed. On that basis, the effects of *allowing the requirement* for the dam and reservoir in our view include:

- The economic impacts of restriction on the rights of landowners or occupiers to carry out improvements to their properties;
- The changes to the **general** amenity values of the valley resulting from the dam and the flooding of the valley and subsequent management of lake levels;
- The changes to the **specific** amenity and aesthetic values currently enjoyed by individual landowners occupiers and visitors on particular properties as compared to what would exist if the scheme proceeds (eg those whose land will be flooded will no longer be able to enjoy those amenities, nor will their visitors or their heirs);

- The **social and cultural impact** of requiring people to leave properties with which they have had years, or in some cases generations of association and memories and in which they have invested in hopes, dreams and hard work. In our view the cultural conditions of people and communities include their associations with the land;
- The social impact on the remaining valley community and wider community of displacing at least 14 households from the valley;
- Impacts on the viability of farming, transport convenience and general amenity for those who remain;
- Any economic impacts which are not fully compensated for under the PWA.

3.21 In our view all of these are relevant social and economic effects, which will derive from the confirmation of this part of the NoR. Most of them are effects which can not be avoided, remedied, or effectively mitigated. We do not accept that the scheme of the legislation is that the RMA leaves such effects to be addressed by the Public Works Act which is not concerned with environmental effects at all. If that had been intended then we think that would be made clear in the RMA. (For example the RMA specifically provides that we are not permitted to consider effects on people or properties if they have provided their written approval).

3.22 CPWL have offered a compensation package which goes beyond what is required under the PWA. Mr Rogers suggested that this should not be regarded as *mitigation*. He referred us to *Haka International NZ Ltd v Auckland RC* (A097/07) where the Court observed that : "*Compensation does not carry a sense of the lessening of the adverse effect in question, but rather of offering recompense for the loss or impairment of whatever advantage or amenity has been affected*".

3.23 The suggested compensation can perhaps be regarded as mitigation of economic effects on landowners, however it is not in our view mitigation of the social and cultural effects. Whether or not we regard it as mitigation, we can take into account the additional compensation offered by CPWL as a relevant matter. However, ultimately we have to decide whether the residual unmitigated adverse effects referred to above, are outweighed by wider economic benefits of the scheme to the region and less directly the nation.

4. Are effects on property values relevant?

- 4.1** The Courts have concluded that effects on property values are economic effects under the RMA, but those effects tend to be symptomatic of amenity effects. The Courts have noted that if one focuses on property values there is a danger of double counting amenity effects. The Courts have also observed that it is usually preferable to focus on likely physical/amenity effects rather than speculate as to how those effects may affect property values.
- 4.2** In the present case, if the designation is confirmed that will have effects on the value of the properties on which the designation lies. That is an effect which the Public Works Act addresses and which we think we should disregard. In this instance CPWL (late in the hearing) offered to compensate landowners 25% over market value for areas of land required for works. It also offered to purchase the whole of an affected block, even if only part of it is affected, if that is what the owner would prefer. In our view this goes a long way towards avoiding, remedying or mitigating the economic effect on directly affected landowners including effects on property values.
- 4.3** There may be residual economic effects on some landowners arising out of interference with farming activities (eg loss of wintering over land). However, on the whole we think that we are safe to assume that most of these economic effects will be addressed by the proposed compensation package.
- 4.4** We also heard submissions regarding potential effects on the values of properties in Coalgate or between Coalgate and the dam which are not directly affected. These owners will not be compensated.
- 4.5** Mr Rogers for the Selwyn District Council was of the view that we should not take into account effects on property values. We think that this is an economic effect on people and the community which must be taken into account. However, we accept that in the absence of valuation evidence we are safer to focus on the amenity and social effects which may lead to such reduction in value, rather than on speculating as to whether such effects will occur and if so how significant that will be. We have concluded that there would be significant adverse amenity effects which would likely result in secondary effects on property values.

5. **How should we apply section 6 (c) of the RMA in relation to the habitat of Canterbury mudfish in the Waianiwaniwa valley?**

5.1 We are required to:

*recognise and provide for the following matters of national importance:
...The **protection** of areas of significant indigenous vegetation and
significant habitats of indigenous fauna.*

5.2 There is case law to the effect that "*protection*" means "*keep safe from harm*". It is not the same as *preservation*, which would require keeping something in the same state or better than present.

5.3 The issue which arises in relation to Canterbury mudfish is whether we need to protect the current "*areas of ...significant habitats*" of mudfish. That could only be achieved by not allowing the reservoir.

5.4 Alternatively, would it be sufficient if CPW *protects the significant habitat of mudfish* by ensuring that the valley continues to provide a significant (viable, extensive and protected) habitat albeit different in nature and location from the present habitat?

5.5 If one adopts a grammatical interpretation of section 6 (c) this suggests that the latter approach may be acceptable. If Parliament had intended to require the protection of **areas of significant habitat** as opposed to the protection of *significant habitats*, then the "s" would be absent from habitat.

5.6 A purposive approach, to the subsection also suggests the same result. The purpose of the Act requires that the life supporting capacity of water and ecosystems be protected. It also requires that adverse effects on biodiversity and ecosystems be adequately avoided remedied or mitigated. It seems to us that in terms of this issue, our focus should be on considering whether the bio diversity offset proposed by CPW will ensure that the Canterbury mudfish habitat in the valley is kept safe from harm, in the sense that it would remain a viable, extensive and safe habitat for a significant population of Canterbury mudfish.

5.7 In other words, whilst the focus of the sub section is on the habitat, not the mudfish population, it is the safeguarding of the mudfish population by providing

good habitat, which is the objective of sustainable management. Accordingly, we do not consider that it is essential that the applicant protect the current areas of significant habitat. The only thing which makes the habitat special is the mudfish, and it is therefore the mudfish population which should be our focus.

5.8 We had extensive submissions on this topic which we found helpful, but for present purposes it is not necessary to consider the case law in any detail. We can not see any real difference between the approach we have adopted and that which was adopted in the *Solid Energy* case. There the Courts found that although an area of native snail habitat would be destroyed, it was sufficient to protect the snail population and then transplant them back into adjoining suitable habitat.

5.9 We have considered whether CPW's proposal to create artificial habitat would provide a safe and extensive area of high quality mudfish habitat such that this particular population would remain abundant in the long term. As in the *Snail* case, it is not the nature of the proposal but the likelihood of success or the risk of failure which are important. Given that this is a matter of national importance, and given that the current habitat and ecosystem would be destroyed to be replaced by a man-made and human controlled habitat, we consider that a *precautionary approach* is required. We have outlined our preliminary conclusions regarding this earlier in this Minute.

6. Can the regional importance of the project override section 6 matters?

6.1 We have been mindful of the comments of Justice Greig in *NZ Rail Ltd v Marlborough District Council* [1994] NZRMA 70, where he expressed the view that there was a deliberate openness about the language of Part 2 of the RMA. He held that an overly literal approach is not appropriate. It is up to decision makers to give this part of the Act the weight that they think appropriate in the circumstances of the case. The High Court upheld the Planning Tribunal's decision that another section 6 matter (preservation of the natural character of the coastal environment) was not to be achieved at all costs and could (in that case) be overridden by nationally significant infrastructure. The Court found that the preservation of natural character is subordinate to the primary purpose of the promotion of sustainable management. It is not an end to itself.

6.2 In that case and the decision of the Tribunal in the Fast Ferry case, the Courts found that in appropriate cases projects of national importance could in effect

trump a section 6 matter. *"That is not to say that the activity can override the primary purpose of the Act as enshrined in section 5, but is indicative of the fact that in certain circumstances the matters expressed in Part II as being of national importance can be balanced against a specific activity which is proved to be of national importance in any particular case."*

6.3 In the present case we do not regard the reservoir as being of national importance. There is some obiter suggestion in the High Court decision in the *Auckland Volcanic Cones Society Inc v Transit NZ* ([2003] 7NZRMA 316) decision, that in appropriate cases, projects of regional or district importance might also prevail over a matter of national importance in section 6 if that best enables social economic and cultural wellbeing. However, even if that is correct, we are not convinced that the dam and reservoir are necessarily of regional significance. The Requiring Authority is in essence a private entity and the primary beneficiaries of the benefits obtained from the reservoir would be the shareholders of the company. While both Selwyn District Council and Christchurch City Council are supportive of the scheme and settled the CPW Trust, that does not in our view make this a community scheme, nor one of regional importance.

6.4 In any event, even if the proposed reservoir is regarded as regionally significant infrastructure on the basis of the regional economic benefits it might bring, that does not alter our view that the benefits to be derived from the project are insufficient in this case to outweigh the combined effects on sections 5, 6 and 7 matters.