
in the matter of: the Resource Management Act 1991

and

in the matter of: resource consent applications

applicant: Meridian Energy Limited and South Canterbury
Irrigation Trust (Hunter Downs Irrigation)

**SUPPLEMENTARY BRIEF OF EVIDENCE OF SARAH MARGARET
DAWSON**

Dated: 23 February 2010

Qualifications and Experience

- 1 My name is Sarah Margaret Dawson
- 2 I confirm that my qualifications and experience are those set out in my initial brief of evidence dated November 2007.

Introduction

- 3 In this supplementary evidence, I respond to the following matters raised by the Commissioners in its Minute to Parties dated 11 December 2009:
 - the part of the command area within Timaru District; and
 - the lapsing period.

Timaru District

- 4 The Commissioners have raised the matter of water being provided to land in the HDI command area that lies within Timaru District. It is stated that this matter was raised in the evidence of Mr McKenzie on behalf of Irrigation North Otago (INO).
- 5 In paragraph 34 of my previous evidence I discussed the definition of local area and noted that a small part of the HDI command area to the north of the Pareora River is in Timaru District. However, this discussion was in the context of whether the Waitaki Catchment Water Allocation Board (the Board) had clearly signaled, through the Waitaki Catchment Water Allocation Regional Plan (WRP), that a water allocation for irrigation over a large area to the north of the Waitaki River in the HDI area was a real possibility. At this point in my previous evidence, I did not discuss whether the WRP contemplated irrigation as far north as Timaru District. I discuss this matter further in this supplementary evidence.
- 6 In paragraphs 195 to 202 of my previous evidence, I discussed whether the proposed HDI water take and use would be consistent with the objectives and policies of the WRP relating to effects on other existing and potential abstractive water users. This included discussion of Policies 12h. and 14. I concluded that (my paragraph 202) *“the proposed HDI water take will not preclude existing and likely future water uses from having appropriate access to water from the Lower Waitaki River. In-catchment needs will also be able to be satisfied, with sufficient water left for allocation to HDI. Accordingly, I am satisfied that the HDI proposal cannot be considered contrary to the objectives and*

policies of the WRP relating to these matters". However, as I have stated I did not focus specifically on any potential effects on the provision of irrigation water to INO.

- 7 Mr McKenzie (in his paragraph 29) states that Policy 11 of the WRP suggests consideration should be given to an area of local effects, the area including Waitaki, Mackenzie and Waimate Districts. He uses this suggestion to assert that the area of the HDI command area in Timaru District should not be supplied with water from the Waitaki River, perhaps to enable supply to the full INO area in Waitaki District. Dr Brookes (in her paragraphs 15 – 19) makes similar assertions, stating that the Timaru District area should be removed from the HDI command area on the basis of the definition of "*local effects*" in Policy 11. I do not read this direction from the wording of Policy 11 and the other WRP policies that refer to the benefits of Waitaki River water use.

- 8 To my reading, Policy 11 is just a definition policy. It just states that "*In considering effects when allocating to activities*", "*local effects*" (under Policy 11c.) are to be taken as referring "*to those that arise in the Mackenzie District, the Waimate District and the Waitaki District*". Policy 11b. further states that "*national effects refer to those that arise within New Zealand*". The Explanation to this policy notes that effects are to be "*considered from both national and local perspectives*". The Explanation then goes on to state – "*It is recognised that local social and economic effects are likely to extend beyond the catchment boundary, and will vary unevenly with distance, depending on the circumstance of each case. For the purpose of this Plan however it is necessary to define the scope of local effects considered in order to define the basis of assessment, and this is provided in part (c) of this policy.*" In my interpretation, this explanation seems to be principally stating that local effects are more than just effects within the catchment boundary – that is, they are defined to include effects within the three Districts referred to. However, as I will go on to address, I cannot find any direction in other WRP policies which confines the consideration of effects, or of the allocation of water from the Waitaki River, to those three Districts.

- 9 In the section of its decision (Annexure 1) relating to WRP provisions on allocation to activities, the Board discusses (paragraph 200) the definition of local area in Policy 11 and the submissions it received about how far this should extend in relation to allocating water to activities. It seems to me that the "*allocation to activities*" the Board is referring to, in its discussion of "*local area*" in paragraph 200, is primarily the allocation of water to the various activities provided for in Rule 6, Table 5. However, the Board also refers to the benefits that can be considered on individual resource consent applications to

allocate water to activities located in areas that were not provided for by the Board in Rule 6 Table 5. I will go on to discuss this further.

10 With regard to Waitaki District, paragraph 200 states that *“The Board has extended the local area to include all of the Waitaki District so that the allocation to activities includes water for town and community water supply for settlements south of the Shag River catchment.”* I understand this statement to mean that the Board included all of the Waitaki District in its definition of *“local”* in Policy 11, in order that it could make a specific allocation for water for town and community water supply for the area outside the Waitaki catchment in Rule 6, Table 5. This does not indicate that the Board has made any other specific allocation for other activities, such as for irrigation, in this area of Waitaki District outside the catchment. I note that in paragraph 14 of her evidence, Dr Brookes refers to part of this paragraph of the Board’s decision – the part that refers to including all of Waitaki District in the local area. However, she does not refer to the qualifier in this sentence - that the Board did this in order that water could be allocated for town and community water supplies.

11 In relation to Timaru District, paragraph 200 goes on to state that:

“The Board appreciated that the Timaru area could benefit from using water from the Waitaki catchment, particularly for irrigation”. However, the Board “found that the Timaru District does have some access to alternative water sources, and judged that it should not be included in the local area for the purposes of allocating water to activities. Benefits arising to the Timaru District are treated in the same way as those arising in the rest of New Zealand”.

Accordingly, it appears that the Board has not made a specific allocation in Rule 6, Table 5 for water use in Timaru District. However, it indicates that the WRP does not preclude the consideration of a water allocation for use in that District, in the same manner as any other part of New Zealand.

12 This paragraph also states that *“In establishing allocations to activities, the Board needed to find a “community of interest” for which it would consider local (distributional impacts) as well as economic efficiency (benefits and costs) consideration”.* As I have said above, I consider that this *“community of interest”* or *“local area”* was primarily considered by the Board in determining its allocation of water to the various activities in

Rule 6, Table 5. However, it also forms the basis for differentiating “local” and “national” effects in Policies 11 and 12, which I will discuss further below.

13 Policy 12 sets out the detailed list of matters that was, and should be, taken into account when establishing allocations of water to the activities listed in Objective 2. These include:

9.1 Policy 12a. – *“having regard to the likely national and local effects of those activities”*. This aspect of Policy 12 follows from Objective 3 which states – *“In allocating water, to recognise beneficial and adverse effects on the environment and both the national and local costs and benefits (environmental, social, cultural and economic)”*.

9.2 Policy 12h. - *“giving a preference to needs for water within the catchment”*. The Explanation to Policy 12 also emphasises that any activity which falls outside the annual allocations set under the WRP must demonstrate the effect of granting the consent on the entitlements to other activities over the timeframe of the consent.

14 Policy 12h. is then followed by the related Policy 14 which states that – *“In considering whether to grant or refuse consents to take, divert or use water outside of the Waitaki catchment, the consent authority will have regard to the extent to which granting consent will reduce availability of water to current and reasonably foreseeable in-catchment needs”*. The Explanation to Policy 14 indicates that allocations to out-of-catchment use are not precluded, but primacy is placed on demands for water within the catchment and likely in-catchment needs must be considered before deciding whether not to grant out-of-catchment water use applications. The wording of the Explanation is as follows:

“In parts of the catchment there is insufficient water to reliably meet all current and future demands. This policy places a primacy on demands for water within the catchment by providing for current and project in-catchment needs for water to be considered before a consent authority decides whether or not to grant applications to take water out of the catchment. The policy does not preclude the grant of applications for out-of-catchment use, but provides for consideration of likely in-catchment needs when considering such applications.”

15 In considering these policies, I have not been able to find any indication that there is a priority for allocation of water to activities within the three Districts referred to in Policy 11c.. I can find no policy direction that gives primacy to “local” benefits of water use

(within the definition of “*local effects*” in Policy 11c.) over wider national benefits. Both Objective 3 and Policy 12a., which state the matters to be considered when allocating water, list national and local effects (costs and benefits) alongside one another. So, in terms of these policies, water use within Waitaki District (and its local benefits) is placed alongside water use in Timaru District (and its national benefits).

16 However, Policies 12h. and 14 do give primacy to allocation for water use within the Waitaki catchment. Most of the HDI command area and the INO area are outside the Waitaki catchment, and require to be considered in the same manner in terms of these policies. For an allocation to either HDI or INO, it is necessary to consider the extent to which granting consent will reduce the availability of water to current and reasonably foreseeable in-catchment needs.

17 In my previous evidence (paragraphs 28 to 38), I also discussed whether the Board, and accordingly the WRP, had considered the potential for water allocation for irrigation into the HDI area of South Canterbury and, although this is mostly outside the Waitaki catchment, has not precluded such a proposal.

18 At paragraph 208 of its decision, the Board found that:

“There were a number of submissions to the Board describing possible further expansions of irrigation based on takes from the lower catchment. It was asserted that there is potential for development of a further 70,380 hectares of spray irrigation, including a large area on the coastal plains to the north of Waimate extending as far as Timaru, coupled with further areas to the south of the river. On reviewing all this material in the context of the policy framework of this Plan, it is the Board’s judgment that there is realistic potential for further development of some 53,000 hectares of spray irrigation in the foreseeable future, with an associated annual volumetric requirement of 350 million cubic metres based on a peak take of 0.45 litres per second per hectare over 159 days. The total annual provision in the Plan for agricultural and horticultural activities in the lower catchment is therefore 1,250 million cubic metres (this included 900 million cubic metres of existing use water (para. 207))”.

19 Clearly, in its decision, the Board was contemplating making provision for a significant annual volume of additional water for irrigation from the Lower Waitaki River. Mr Potts has previously described how he considers that the allocation volumes contained in

Table 5 must include the area now proposed for HDI. Also, I can find no indication in the decision that the Board did not consider the area around and to the north of Waimate to have future potential for irrigation that may be able to be provided from the Lower Waitaki River. On this basis, it is not fully clear to me, from reading paragraphs 200 and 208 of the decision, whether or not the Board included water for irrigation of the small area of HDI in Timaru District, north of the Pareora River, in the allocation volumes in Table 5. However, whether it did, or did not, I consider that an allocation for irrigation of this area is not precluded. Its costs and benefits are to be considered in the same manner as an allocation for any other part of the country, having regard to its effects on water allocation to provide for likely in-catchment needs.

- 20 The Board states generally in paragraph 200 that it found that the “*Timaru District does have some access to alternative water sources*”, and therefore judged that it should not be included in the allocation of water to the activities in Table 5. However, I note from Mr Potts’ recent supplementary evidence that there are significant existing limitations in accessing water within the Otipua / Pareora area (within Timaru District), either through surface water (with or without storage), or groundwater resources, whether for individual or scheme supply. Mr Potts states that further significant development of water resources for an irrigation scheme within the Otipua / Pareora area is not considered viable. These statements are supported by Mr Ellwood in his supplementary evidence where he states that “*the only viable and realistic water supply for the Timaru area will be the HDI scheme*”.
- 21 With respect to the irrigation of the area of Waitaki District south of the catchment, paragraph 208 (that I have quoted above) refers to “*further areas to the south of the river*”, although there is no indication where those areas might be or whether they cover the INO area. Paragraph 207 of the decision also states:

“Evidence from the community irrigation schemes with takes from the lower catchment, together with the submissions of individual irrigators and evidence from a number of experts enabled the Board to gain a comprehensive appreciation of the extent of the current irrigation infrastructure in that area. Based on this information, the Board has based its peak flow requirement estimates on a currently irrigated area of around 46,000 hectares, whilst recognizing that Stage 1 of the proposed development of 10,000 hectares by the North Otago Irrigation Company Ltd. is currently under implementation, with the company also having consent for an additional 4 cubic meters per second

which could potentially irrigate a further 10,000 in Stage 2. The assessed peak-rate take associated with this total irrigation is around 60 cubic meters per second The annual volumetric requirement associated with this take for agricultural and horticultural activities has been assessed by the Board at 900 million cubic metres, reflecting, in part, the individual scheme volumetric estimates provided in evidence to the Board.”

The Board had, therefore, received evidence regarding water allocation requirements for 20,000 hectares of North Otago Irrigation Company Ltd (NOICL) and has included this allocation in the existing water use component of the 1250 Mm³ allocation from the Lower Waitaki River to agricultural and horticultural activities in Table 5. Again, it is not clear if the Board included water for irrigation of the INO area of Waitaki District, south of the NOICL area, in the allocation volumes in Table 5. However, an allocation for irrigation of this area is also not precluded. Its costs and benefits are to be considered in the same manner as an allocation for any other part of the local area outside the Waitaki catchment, having regard to its effects on water allocation to provide for likely in-catchment needs.

- 22 In paragraphs 195 to 202 of my previous evidence, I addressed the effects of granting the allocation sought by HDI on other existing and potential water uses within the Waitaki catchment, in terms of the objective and policies I have outlined above (amongst others). I based my assessment on Mr Potts’ analysis, at that time, of existing and future takes and uses of water from the Lower Waitaki River. Mr Potts has now updated his evidence regarding existing and future demand for water from the Lower Waitaki River for agricultural and horticultural activities.
- 23 One of the key points from Mr Potts recent supplementary evidence is that the proposed HDI take of 20.5m³/s would be within the WRP (Table 3) allocation limit of 90m³/s from the main stem of the Lower Waitaki River. It would leave 9.1m³/s still available for future users, after accounting for all existing takes and the resource consents currently being processed or lodged including the INO application (assessed by Mr Potts as 7.5m³/s). Accordingly, there is enough water within this allocation flow limit for all existing and proposed takes being processed, without relying on future efficiency gains from existing irrigators.
- 24 In addition, Mr Potts has assessed the annual water allocation in terms of the provisions in WRP Table 5 for agricultural and horticultural activities (his Table 10). As the HDI

intake is below Black Point, he concludes that all existing and future takes below Black Point (currently being processed or lodged), based on a maximum HDI allocation of 251Mm³ per annum (including the Timaru area of HDI) and his assessment of 71.5Mm³ per annum for INO, amount to 1103.94Mm³ per annum. This slightly exceeds the WRP allocation limit of 1100Mm³ per annum in Table 5. If the Timaru area of HDI is excluded, the total annual water allocation below Black Point would be within the allocation limit per annum in Table 5 (1078.71Mm³ per annum as shown in Mr Potts' Table 11), as it would also be if all or part of the allocation to INO is excluded.

- 25 In his previous evidence, Mr Potts confirmed that the new irrigation areas currently applied for, and being processed, include all areas that he had previously assessed (prior to the WRP hearing) as likely to be viable for irrigation. He stated that most of the irrigable area below Black Point within the Waitaki catchment is already irrigated, with most of the remaining areas that are suitable for irrigation having now been applied for as part of the current consenting process. Mr Potts considers that all in-catchment needs would be satisfied through the applications currently applied for and being processed (including that part of HDI within the catchment).
- 26 From this information, I feel satisfied that the proposed HDI water take would not preclude existing and likely future water uses within the catchment from having appropriate access to water from the Lower Waitaki River, as these areas are already included within the applications currently applied for and being processed. From Mr Pott's evidence, there is insufficient annual water allocation within Table 5 for existing and future water takes if both INO and HDI are included in the allocation analysis below Black Point (1103.94Mm³ per annum compared with 1100Mm³ in Table 5). However, as Mr Potts has stated, it is likely that efficiency gains over time, particularly for the large existing irrigation schemes, will result in decreases in the existing water allocations that are greater than this 4Mm³ per annum exceedance of the WRP Table 5 limit. Mr Potts has given the example of the Morven Glenavy scheme where significant efficiency gains have occurred recently.
- 27 In addition, as I explained earlier, I do not consider that the WRP expresses a preference for water allocation to either the INO area or the Timaru area of HDI. If the total water allocation below Black Point is to be kept within the maximum annual limit of 1100Mm³ in Table 5, then I can see no reason expressed in the WRP to give preference to a water allocation to INO over an allocation to the Timaru area of HDI.

Lapsing Period

28 I gave evidence at the Environment Court hearing for the water consents for the North Bank Tunnel Concept (NBTC) and prepared the proposed conditions put forward by Meridian Energy Limited (Meridian) at that hearing. I am familiar with the findings of the Environment Court's Interim Decision on those applications in relation to the lapsing period, and with the associated amendments to the condition of consent, as follows (Environment Court's amendments shown underlined):

Giving Effect to this Consent

Pursuant to Section 125 of the Resource Management Act 1991, the period within which the consent holder may give effect to this consent shall be 12 years from the grant of this consent provided that this condition will lapse automatically:

- a. unless within six years of the date of this consent the consent holder lodges with the Canterbury Regional Council:*
 - (i) evidence that it has commenced complying with the pre-commissioning conditions; and*
 - (ii) full applications for all other necessary resource consents; and/ or*
- b. if the necessary land use consents for a North Bank Tunnel Concept have been refused and all rights of appeal without leave exhausted.*

29 I refer to the supplementary evidence of Mr Ellwood in which he sets out the timeframes for the engineering feasibility study, stage 2 consents, detailed design, construction and commissioning of HDI. He concludes that 10 years is the shortest prudent minimum lapsing period for the water take and use consents for HDI.

30 Based on that evidence and the approach taken by the Court in relation to the NBTC lapsing timeframe, I have prepared the following amended lapsing condition for the HDI consent:

Giving Effect to this Consent

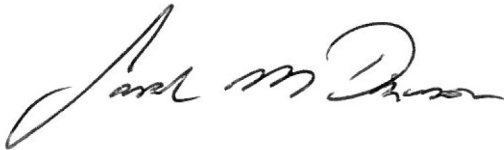
Pursuant to Section 125 of the Resource Management Act 1991, the period within which the consent holder may give effect to this consent shall be 10 years from the grant of this consent provided that this condition will lapse automatically:

- a. unless within five years of the date of this consent the consent holder lodges with the Canterbury Regional Council:*
 - (i) evidence that it has commenced complying with the pre-commissioning conditions; and*
 - (ii) complete applications for all substantive consents necessary for the construction and use of the intake, diversion channel and the primary irrigation delivery system for the Hunter Downs Irrigation Scheme, and/ or*
- b. if the necessary substantive consents for the construction and use of the intake, diversion channel and the primary irrigation delivery system for the*

Hunter Downs Irrigation Scheme have been refused and all rights of appeal without leave exhausted.

- 31 I consider this condition would reflect the approach taken by the Court to achieve efficiency in the allocation of this water to HDI. HDI would not be able to continue to hold these consents, if it does not take necessary actions, within a reasonable time period, towards using the consents for the purpose for which they were issued.

Dated: 23 February 2010

A handwritten signature in black ink, appearing to read 'Sarah M Dawson', written in a cursive style.

Sarah Margaret Dawson