
in the matter of: the Resource Management Act 1991

and

in the matter of: an application for resource consent CRC071029 by the South Canterbury Irrigation Trust and Meridian Energy Limited to take and use water from the Waitaki River

Memorandum of counsel

Dated: 15 January 2010

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MEMORANDUM OF COUNSEL

May it please the Commissioners:

Introduction

- 1 This memorandum provides a response to the *Minute to Parties* (the '*Minute*') prepared by the Commissioners and dated 11 December 2009.
- 2 This memorandum addresses the three matters raised in the Minute namely:
 - 2.1 the need for an annual volume of 251 million cubic metres for the Hunter Downs Irrigation Scheme (*HDI*);
 - 2.2 the inclusion of the Timaru component of the HDI command area; and
 - 2.3 the 10 year lapsing period for the HDI scheme.
- 3 In preparing this memorandum Meridian Energy Limited and the South Canterbury Irrigation Trust (together '*the applicants*') have sought the expert advice of **Mr Rob Potts** and **Ms Sarah Dawson**. Given the nature of that advice and the applicant's position on the three matters raised in the Minute the applicants request that the hearing be reconvened for further evidence and submissions to be provided on the three matters raised in the Minute.
- 4 In the interim, to assist the Commissioners and other parties, the applicant's general position on the three matters raised in the Minute is summarised below.

Annual volume

- 5 The Commissioners have indicated in the extract from their draft decision that they are concerned over the proposed 251 million cubic metre annual volume sought for the HDI scheme. Specific concerns relate to:
 - 5.1 whether the Duffill Watts Group method meets the criteria of policy 16 of the Waitaki Regional Plan (WRP);
 - 5.2 errors in the last 3 columns of the fourth row of Table 1 of **Mr Potts'** evidence in chief (see paragraph 19 of the Commissioners' *Extract from Draft Decision*);
 - 5.3 the appropriateness of applying an intensive pastoral land use to the whole of the area for the WQN9 analysis given the evidence on likely future landuse (Agribusiness Group Report – HDI AEE);
 - 5.4 the possibility of reticulation losses exceeding 10% and whether this would exceed what might be reasonable and efficient; and
 - 5.5 whether a Schedule WQN9 analysis would result in a lower annual allocation figure?

6 Based on the above and the use of a WQN9 analysis the Commissioners have tentatively indicated their view that an annual volume of 190 to 215 million cubic metres per year (excluding any off farm losses) might be a more appropriate annual volume – depending on the actual percentage of the scheme that is in arable production. This, along with the desire to leave water for any future applicant (including the possibility of an Irrigation North Otago scheme taking water below BlackPoint) is currently being analysed by **Mr Potts**.

7 A summary of the evidence **Mr Potts** would produce at a reconvened hearing is:

- 7.1 the Duffill Watts methodology does not meet a literal interpretation of policy 16(c) but neither do other methods currently being used by consultants practising in the irrigation field as they do not involve soil moisture measurement - rather they use modelling of a water balance;
- 7.2 a revised Table 1 (Seasonal Demand) correcting the errors in **Mr Potts'** evidence in chief (page 7, paragraph 23) is set out below.

Amended Table 1 (based on Mr Rob Potts evidence in chief)

	Jan	Feb	Mar	Apr	May	Sep	Oct	Nov	Dec	Total
Timaru Area	d, e	d, e	a, b	a, b	c	a, b	a, b	d, e	d, e	
Mean Effective Deficit (mm/month)	81	51	30	11	-	3	48	67	79	370
Gross Scheme Application (mm/month)	113	71	50	18	0	5	81	113 93	133 110	583 541

- a On-farm irrigation efficiency taken as 70 %.
- b Off-farm efficiency taken as 85%.
- c There is on average no monthly soil moisture deficit in May. However in more extreme droughty years, some irrigation in May, may be required.
- d On-farm efficiency taken as 80%.
- e Off-farm efficiency taken as 90%.

Accordingly:

- (a) the amended average annual application depth for the Timaru area would reduce from 583 mm to 541 mm.
- (b) **Mr Potts'** evidence in chief used 583 mm to estimate the average annual volume for the HDI scheme which resulted in annual volume of 233 million cubic metres. Based on the amended annual depth of 541 mm, the average annual volume would be 216 million cubic metres. This gives an estimate of the average annual demand but not the statistical volume for allocation purposes. For seasonal allocation purposes WQN9v2 uses the demand for a 1 in 5 year dry year. The 1 in 5 year depth using WQN9 v2 ranges from 571 to 626 mm.
- 7.3 if WQN9v2 is used as the methodology with a mixed land use based on **Mr Stu Ford's** predicted land use combinations, then the annual volume on-farm will be in the order of 196 to 216 million cubic metres per year

- 7.4 a 90% off-farm efficiency is likely to be achievable for HDI as no operational bywashes are proposed - i.e. losses should only be evaporation and leakage. The off-farm volume using Mr Ford's predicted land use combinations is therefore 218 to 240 million cubic metres per year.
- 7.5 unlike an individual application it is more difficult to define what final land uses across the HDI scheme may be. Land use type will also be influenced to some extent by commodity prices and may vary from time to time. A conservative approach - and one which optimises the benefits from the HDI proposal - is to allow for intensive pastoral (an effective worst-case scenario) which **Mr Potts** has assessed under WQN9v2 to result in an overall annual volume of between 228 – 250 million (depending on lower or higher rainfall isohyets);
- 7.6 taking the average of the above would result in an annual volume of **239.3 M m³/yr** required by the HDI scheme.
- 7.7 the reduction in the annual volume from **251 to 239.3 M m³/yr** would also make additional water within that provided for Table 5 of the WRP available to another applicant such as INO without removing the Timaru component of the HDI scheme.
- 7.8 **Mr Potts** has also undertaken a preliminary review of the assessment of environmental effects and the original application by INO to assess the appropriate annual volume needed to meet realistic irrigation demand within the INO command area. At this stage that work is not finalised as **Mr Potts** considers it appropriate to also carry out a rainfall assessment in relation to the INO irrigation area. The applicants wish to present the results of **Mr Potts** analysis at a reconvened hearing.

Timaru District

- 8 Regardless of the final outcome of the assessment referred to in paragraph 7.8 above, the applicants wish to comment on the Commissioner's indication to exclude the Timaru area of HDI to provide for INO.
- 9 **Mr Potts** has calculated that the irrigable area within the Timaru District would be 4,024 ha out of the proposed 40,000 ha. He also notes that this area (unlike INO) has no viable alternatives for the supply of water – and on this basis Meridian maintains that this should be included within the HDI scheme.
- 10 Mr McKenzie for INO (in his paragraph 29) states that Policy 11 of the WRP suggests consideration should first be given to an area of local effects, the area including Waitaki, Mackenzie and Waimate Districts. He then asserts that the area of the HDI 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.

11 **Ms Dawson** has assessed this evidence and she does not read the wording of Policy 11 and the other WRP policies as stipulating an order or preference within which water must be allocated. A summary of the evidence she would give at any reconvened hearing is:

11.1 policy 11 is a 'definition policy'. It states that *"In considering effects when allocating to activities", "local effects" are to be taken as referring "to those that arise in the Mackenzie District, the Waimate District and the Waitaki District"*. Policy 11b also 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"*

11.2 the Explanation of Policy 11 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."*

11.3 the 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, there does not appear to be 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.

11.4 with regard to Waitaki District, the WRP Annexure to the decision (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."

Ms Dawson considers that the Board accordingly 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. However, 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.

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 indicated 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.

11.5 both Objective 3 and Policy 12., 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).

11.6 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 therefore necessary to consider the extent to which granting consent will reduce the availability of water to current and reasonably foreseeable in-catchment needs.

12 Overall, the effect 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 has already been outlined by **Ms Dawson** at paragraphs 195 to 202 of her evidence in chief – in short, any further evidence from Ms Dawson is likely to again conclude that the grant of HDI will not preclude future irrigation within the Waitaki catchment.

13 Meridian wishes therefore to present evidence and submissions to demonstrate why the Timaru area should be included – particularly given the absence of any other realistic irrigation sources in that area.

Lapsing

14 Following the decision of the Environment Court in the North Bank Tunnel matter¹ it is agreed that an alternative approach to lapsing might be appropriate.

15 The applicants maintain their request for a 10 year lapsing period but have asked **Ms Dawson** to draft a revised lapsing condition similar to the ones adopted in NBTC which require certain milestones to be achieved within defined time periods. The applicants will ask **Ms Dawson** to produce a revised condition at a reconvened hearing.

Request for resumed hearing

16 As noted above, it is requested that the hearing be resumed to allow for legal submissions and evidence from:

16.1 **Mr Rob Potts** on annual volume, the requirements of INO and the inclusion of the Timaru District area;

¹ C80/2009

16.2 **Ms Sarah Dawson** on planning aspects associated with the above;

16.3 **Mr Brian Ellwood** on lapsing and the inclusion of the Timaru District area.

Dated: 15 January 2010

A handwritten signature in blue ink, appearing to read 'Jo Appleyard', is written over a horizontal line.

Jo Appleyard / Ben Williams

Counsel for Meridian Energy Limited
and the South Canterbury Irrigation
Trust