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*in the matter of:* the Resource Management Act 1991

*and*

*in the matter of:* a number of applications to take and use water from  
the Upper Waitaki catchment

Synopsis of submissions on behalf of Meridian Energy Limited

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## **SYNOPSIS OF SUBMISSIONS ON BEHALF OF MERIDIAN ENERGY LIMITED**

### **INTRODUCTION**

- 1 Meridian Energy Limited (*Meridian*) appears at this hearing in its capacity as the owner and operator of the Waitaki Hydro-electricity Power Scheme (*HEPS*).
- 2 The Waitaki HEPS includes eight hydro power stations, four canal systems, and numerous dams, weirs, and other control structures with a combined generation capacity of 1,723 MW.<sup>1</sup>
- 3 Meridian's Waitaki HEPS infrastructure is located in a surrounding environment of both intensive (already irrigated) and extensive agricultural uses. These support an existing and strong agriculturally-based regional economy. Meridian supports that status quo continuing.
- 4 Meridian also recognises that there is potential for further irrigation development in the Upper Waitaki Catchment and there is a need to consider the value of any improvements in the regional economy in the decision making process.
- 5 However, all of the applications being heard have the potential to affect the wider environment in terms of impacts on water quality. Meridian needs to carefully consider the extent to which effects on water quality could impact the infrastructure of the Waitaki HEPS and Meridian's operating conditions. Impacts on the Waitaki HEPS are impacts on the nation's supply of electricity.
- 6 In today's society, electricity is critical to everyday life. It shapes how we live and work. It meets our basic needs, such as heat and light and it is the foundation upon which communications, transport, industry, commerce and domestic functions are based.
- 7 Meridian is the single largest generator of electricity in New Zealand generating solely from renewable resources. Its hydro generation and storage capacity accounts for approximately 30% of New Zealand's electricity capacity and 75% of New Zealand's hydro storage capacity.
- 8 The Waitaki HEPS alone provides the most significant source of storage to the New Zealand electricity system and also provides variable daily supply. In doing so it clearly a critical contributor to the New Zealand economy and to the social wellbeing of its communities and people. The importance of renewable energy is

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<sup>1</sup> Raewyn Moss, evidence 16 September 2009, para 26.

recognised in section 7(b) of the Resource Management Act 1991 (RMA).

- 9 So what is Meridian's position on the applications? Ideally Meridian would have reached a point by now of being satisfied that the cumulative effects on the environment of new irrigation have been adequately assessed such, that with a robust set of conditions, it could appear in support of the current irrigation proposals.
- 10 Unfortunately this is not the case. Meridian has significant concerns about the adequacy of the assessment of effects carried out by MWRL. Based on the monitoring and assessments that have been undertaken to date, **Ms Sutherland, Dr Snelder** and other experts engaged by Meridian have recommended that a minimum baseline of at least 18 months of water quality, physio-chemical parameters and biological data also needs to be established for the lakes, canals and Wairepo Arm before Meridian (and a decision maker) would be in a position to properly assess the effects of granting the applications.
- 11 Meridian does not rule out the potential for at least some of the applications to be granted in the future but at this time there is insufficient information to allow the effects to be assessed, or the conditions of consent to be framed, to respond to the level of risk.

#### **PRIMARY ISSUES**

- 12 The primary issue for Meridian is the potential effects of further irrigation on water quality in the Upper Waitaki Catchment. There are four areas of concern:
- 12.1 **Lake Benmore** – impacts on water quality in the lake, being the main receiving environment in the Upper Waitaki Catchment. Meridian does not agree with the analyses and nutrient loads calculated by MWRL which are needed to ensure that a trophic level index (TLI) of 2.75, as a summer average, is not exceeded;
- 12.2 **Wairepo Arm** – the change in TLI in the Wairepo Arm and the implications for the growth of aquatic weeds and periphyton, including didymo, in the Ohau B – C Canal;
- 12.3 **Tekapo River Catchment** – the approach to the establishment of the nutrient threshold for this catchment, the impact of nutrient increases on values in the river, and the future risk of a requirement to provide supplementary flows to flush periphyton and didymo from the river; and

12.4 **Lower Ohau River Catchment** – same issues as the Tekapo River Catchment.

13 More specifically Meridian’s interests and its appearance at this hearing is linked to the potential effect of the proposals on the Waitaki HEPS infrastructure and the impact on wider environment such that conditions / requirements could be imposed on the Waitaki HEPS in the future to mitigate effects caused by irrigation development. This includes:

13.1 **Lake Benmore** –the lake is the key receiving environment in the Upper Waitaki Catchment. It is a feature of significant amenity and recreational value - and in this context it provides mitigation for effects of the Waitaki HEPS. Meridian is concerned that water quality in the lake is not impacted by irrigation development;

13.2 Meridian also seeks to ensure that water quality in Lake Benmore is suitably maintained so as to ensure that:

- the potential for operational issues at Benmore Power Station are minimised; and
- downstream water quality (i.e. the lower Waitaki River) is suitably maintained.

13.3 **Wairepo Arm** (and the Ohau B – C Canal) – Meridian’s concerns relate to the potential for nutrients to stimulate the growth of weed and didymo in the Canal and the implications that this could have for the operation of the Ohau B and C Power Stations through a requirement for the installation of screen cleaners and cooling water intake screens;

13.4 **Tekapo River Catchment** – under the current water permits for the operation of the Waitaki HEPS there is no requirement for a minimum flow or flushing flows in the Tekapo River. This has been a matter of some controversy over the years and there are parties who seek the return of flows to the river which would have a resulting loss in terms of generation foregone.

13.5 Meridian wants to ensure that the environment is not degraded to such an extent that it ultimately inherits the responsibility to mitigate water quality effects by for example providing flushing flows. Such an occurrence could have severe implications for loss of generation in the Waitaki HEPS;

**13.6 Lower Ohau River Catchment** – same issues as the Tekapo River Catchment.

- 14 Meridian has been granted 'water only' consents for the construction of the North Bank Tunnel (*NBT*) in the lower Waitaki River which enables the taking of water from Lake Waitaki and to discharge it at Stonewall, approximately 34 km downstream (confirmed by the Environment Court). The conditions of consent require the release of flushing flows in response to the potential for nuisance periphyton growth downstream.
- 15 Meridian is also the joint applicant with the South Canterbury Irrigation Trust in relation to an application to take 20.5 cumecs of water from the lower Waitaki River (downstream of the tunnel outfall) for the irrigation of 40,000 hectares in South Canterbury (*Hunter Downs*).
- 16 Meridian is therefore also interested in the quality of water reaching the Lower Waitaki River and it is also interested in ensuring consistency in interpretation of the Waitaki Regional Plan (*WRP*) and the Proposed Natural Resources Regional Plan (*PNRRP*) between the different decision makers in relation to NBT, Hunter Downs and the current applications as these applications are all subject to the same specific catchment plan and the PNRRP.
- 17 Overall, it is Meridian's case that the Waitaki HEPS should not have to carry the risk or wider responsibility (whether current or future) of dealing with operational difficulties in the event of changes in water quality or the risk of being the party who should mitigate adverse effects in future if they occur as a result of the applications being granted.

**BACKGROUND TO MERIDIAN'S INVOLVEMENT IN IRRIGATION IN THE UPPER CATCHMENT**

- 18 In order to understand why Meridian entered in the agreement with Mackenzie Irrigation Company Limited (*MIC*) to resolve issues around water allocation on the one hand, and yet continues to submit on the basis of concerns about water quality on the other, it is helpful to traverse the key aspects of Meridian's involvement in the Waitaki Catchment and the historical basis of hydro-generation in the catchment.

**The Waitaki Catchment**

- 19 The presence of hydro-generation in the Waitaki Catchment dates back to the commissioning of the Waitaki Power Station (Waitaki Dam) in 1935. Since then, the construction of 7 further power stations has occurred with the Waitaki HEPS being completed to its current form with the commissioning of Ohau B and C in 1984/85.

- 20 Prior to 1990 the Waitaki HEPS was authorised by various Orders in Council including a relevant one in 1969 which envisaged that in future in catchment farmers might wish to make applications to the relevant authority for water for irrigation, and setting aside an amount of water for that purpose.
- 21 Meridian was formed on 1 April 1999 and acquired the assets associated with the Waitaki HEPS including the authorisations to operate the Scheme which by this time were contained in a suite of resource consents granted in 1990 the Orders in Council having expired.
- 22 The terms of the resource consents granted in 1990 were the outcome of a collaborative process involving many interested stakeholders although in terms of aspirants for water for irrigation the main interest group was limited to what would become Benmore Irrigation Company Limited.
- 23 Prior to 2001 there was very little interest by individual farmers in taking water for irrigation from the upper Waitaki Catchment – but with changes in the agricultural industry Meridian was faced with a number of applications to take and use water for irrigation, including a significant proposal to take water out of the catchment from Lake Tekapo for the irrigation of South Canterbury by the Aoraki Water Trust.
- 24 It was recognised by Meridian that the risk of lost generation due to further irrigation abstraction could be significant and potentially uncapped. In the face of the growing number of applications to take water from the Upper Waitaki Catchment (as well as a lack of understanding by third parties over Meridian’s entitlements), Meridian therefore sought a declaration in 2003 from the Environment Court as to the extent of its entitlements.
- 25 The Environment Court’s decision was issued on 9 September 2003 and confirmed that Meridian’s consents were to take or use water at specified rates and maximum volumes, 24 hours per day, all year round – with the effect that all remaining water in the catchment was allocated under consents held by Meridian.
- 26 With pressure on the demand for water in the catchment, on 11 September 2003 the Minister announced the call-in of all outstanding applications for resource consents to take water within the Waitaki Catchment. This included Meridian’s own applications for Project Aqua together with over 200 other applications for water in the catchment – many of which will be determined by the outcome of the current hearing process.

- 27 The Resource Management (Waitaki Catchment) Amendment Bill (the Bill) was introduced to Parliament on 3 December 2003 and was the first step in what would eventually culminate in a statutory directive to develop an allocation plan for the Waitaki catchment.
- 28 In addition, on 19 December 2003, Pukaki Farms Ltd, Star Holdings Ltd, Aoraki Water Trust together with the Timaru District Council and Mackenzie District Council applied to the High Court pursuant to the Declaratory Judgements Act 1908 for declarations relating to various aspects of Meridian's rights, and the rights of others to apply for and take water from the Waitaki catchment (the *Aoraki* matter). The Aoraki Water Trust had lodged an application to take water from Lake Tekapo and use it out of the catchment.
- 29 The Aoraki matter eventually advanced to substantive hearing on 22 and 23 September 2004 before Justices Chisholm and Harrison in a sitting of the full bench of the High Court at Timaru. However, Pukaki Farms and Star Holdings withdrew prior to the hearing on the basis of commencing discussions with Meridian in relation to the aspirations of farmers within the Upper Waitaki Catchment for water. This was the genesis of the MIC agreement.
- 30 The Court issued a written decision on 30 November 2004 and declined to grant any of the declarations sought. The Court instead confirmed that the Upper Waitaki Catchment is fully allocated via the grant of consents to Meridian and other existing users, and further consents could not be granted as these would derogate the rights Meridian had to take all available water flowing into the Catchment. This meant that under any agreement with the MIC farmers Meridian had to give its approval to water being allocated to MIC whether by allocation in the WRP or via the grant of resource consents.
- The MIC agreement**
- 31 In light of the pending formation of the WRP through the Resource Management (Waitaki Catchment) Amendment Act Meridian commenced discussions in October 2004 with farmers in the Upper Waitaki Catchment with a view to reaching agreement on a volume of water that would be included in the Plan which could be the subject of applications for consent to take water for irrigation in the Upper Catchment.
- 32 To avoid complex multi-party discussions with numerous individual farmers, the Mackenzie Irrigation Company Limited (*MIC*) was formed with a mandate to represent the farmers of the Upper Waitaki Catchment in their negotiations with Meridian.
- 33 By the end of 2004 an 'agreement in principle' had been reached between the parties. Under the MIC agreement Meridian agreed

that 150 million m<sup>3</sup> of water could be available for new applicants on certain terms as to timing and geographical area and that Meridian and MIC would both ask the Water Allocation Board to include this in the WRP.

- 34 The volume provided was based on the amount of water left for in catchment irrigation in the 1969 Order in Council that had originally authorised the construction and operation of much of the Waitaki HEPS.
- 35 Accordingly, and although the 1969 Order in Council had expired and had no ongoing legal status at the time of entering negotiations, Meridian recognised the moral obligation that the Order in Council conferred on the operator of the Waitaki HEPS to ensure that water was available for in catchment needs for irrigation if farmers chose to make an application to the consent authority.
- 36 In this context the MIC agreement formalises the historical expectation of water availability in the catchment.
- 37 The figure of 275 million m<sup>3</sup> in Rule 6, Table 5 is made up of the estimated volume of existing consent entitlements (125 million m<sup>3</sup>) plus the 150 million m<sup>3</sup> referred to in the MIC agreement.

#### **POSITION ON WATER QUALITY**

- 38 Despite agreement over the amount of water available for allocation to in catchment irrigators Meridian has consistently maintained its rights to oppose applications on grounds unrelated to allocation, i.e. applications which adversely affect water quality with a resulting potential impact on Waitaki HEPS.
- 39 Meridian's reservation of those rights has been acknowledged by the MIC applicants including in MIC's own prospectus.
- 40 Further detail on the background to Meridian entering the MIC agreement, the details of the agreement and the reservation of rights to submit on these applications is set out in the evidence of **Ms Moss** and **Mr Turner**.

#### **DEROGATION APPROVALS**

- 41 The requirement for applicants to seek and gain a 'derogation approval' is derived from the *Aoraki* decision and from the decision of the High Court which dealt with an appeal to the High Court by Meridian and MIC together relating to the WRP.
- 42 The *Aoraki* decision provides that the Canterbury Regional Council cannot grant rights to take water in the Upper Waitaki Catchment

that would derogate from the existing rights Meridian (and other existing users) to take all available water flowing into the Catchment.

- 43 A summary of the Court's approach and the practical application of the principle is set out in paragraph 55 of the judgment:

[55] ... in our judgment that there is nothing in ss 104-104D or elsewhere in the Act that would authorise CRC to grant Aoraki or any other party a water permit for Lake Tekapo if the grant would have the effect of reducing the amount of water available to satisfy the terms of Meridian's consents. Expressed in another way, while, as Mr Kos accepted, the consent authority has power to receive, process and consider an application from Aoraki, it would be acting unlawfully if it granted Aoraki's application in circumstances where the resource was already fully allocated to Meridian's permits and a new permit would have the effect of diminishing or derogating from the existing consents..."

- 44 The need for applicants seeking to take water to have Meridian's consent was reinforced by the High Court in the appeal relating to the WRP, who added footnote 23A to Rule 6, Table 5.
- 45 The form of "*derogation approval*" is not a section 95E approval under the RMA. It is a document which sets out the terms on which Meridian is prepared to give its approval to subsequent applications being granted. Meridian is at liberty to dictate those terms albeit in practical terms these are determined by negotiation with the applicants.
- 46 In the current instance each derogation approval (as specified by the MIC agreement for new applicants) provide that each applicant comply with:<sup>2</sup>
- 46.1 geographic and time limits placed on where water may be abstracted from in the Upper Waitaki Catchment (tranching);
  - 46.2 controls around the location and design of off take structures for irrigation where these are proposed to be attached to Meridian's infrastructure;
  - 46.3 a requirement that all applications by MIC shareholders are made on terms seeking an expiry on the 30<sup>th</sup> of April 2025 (the expiry date of Meridian's consents for the Waitaki HEPS); and

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<sup>2</sup> Where an application is straight renewal then the applicant does not need to worry about the matters set out in paragraphs 46.3 and 46.4.

46.4 a requirement to agree and form the application to proffer common consent conditions for applications by MIC shareholders.

- 47 In **Mr Turner's** evidence on individual applications dated 30 November 2009 he has set out the applicants who are not complying with the conditions of derogation approvals provided by Meridian. I also understand that the Commissioners may have queried the extent to which they could grant an application that varied from the derogation approval previously provided.
- 48 The simple answer is that the Panel has no jurisdiction to grant consent which is not in accordance with the terms of the derogation approval as Meridian's approval is contingent on certain matters being provided as pre conditions.
- 49 If the relevant applicants have not complied with the relevant requirements by the end of the hearing process then the derogation approvals will be withdrawn and the Commissioners will be asked to decline the applications on the basis that they do not have the necessary derogation approval from Meridian to allow the Panel to go on and consider them. This would be an unfortunate position and it is not where Meridian wishes to find itself.

### **THE EXISTING ENVIRONMENT**

- 50 Section 104(1)(a) of the RMA provides that when assessing the current applications consideration must be given to "*any actual and potential effects on the environment of allowing the activity*".
- 51 The definition of effect includes:
- "3 Meaning of "effect"**
- ...
- (d) Any cumulative effect which arises over time or in combination with other effects – ..."
- 52 In the decision of *Queenstown Lakes District Council v Hawthorn Estate Limited Ltd (Hawthorn)* the Court of Appeal confirmed that the "environment" in the context of section 104 embraces the future state of the environment as it might be modified by permitted activities under the operative plan.<sup>3</sup> It also includes the environment as it might be modified by the implementation of resource consents that have been granted at the time a particular application is considered, where it appears that those resource consents will be implemented. (However, the effects on future

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<sup>3</sup> *Queenstown Lakes District Council v Hawthorn Estates Limited* [2006] NZRMA 424, at para [84] (CA).

activities for which consents must be sought and granted are not factors to be taken into account when considering the section 104(1)(a) assessment.<sup>4</sup>)

- 53 Therefore, when assessing the actual and potential effects on the environment of the current proposals, consideration must be given to the effect on:
- 53.1 activities that already exist;
- 53.2 effects of the proposals on activities that could exist as of right under the planning framework; and
- 53.3 any activity for which consent has been granted and is likely to be implemented.
- 54 As a starting point therefore it is necessary to properly understand what the environment would be if the effects of activities which exist are fully realised (i.e. lag) and the effects of full implementation of existing consents (e.g. full use of consent by say the Benmore Irrigation Company ).
- 55 It is my submission that the experts engaged by MWRL have not correctly assessed the environment either as it is now or as it would be if the effects of existing activities are fully realised and/or implemented. For example, in response to a question Ms Robson confirmed that MWRL's assessment of the existing environment had not included existing but as yet unimplemented consents in the Upper Waitaki catchment. Other consents have been initially exercised but are not yet fully implemented (e.g. Benmore Irrigation Company).
- 56 The importance of correctly assessing the existing environment as a starting point is obvious because unless that is fully understood it is impossible to assess the cumulative impact of adding more irrigation to the existing fully realised situation.
- 57 The easiest point to begin with is to break 'what a cumulative effects assessment is' into its two constituent parts:
- 57.1 the first is to take the current state of the environment as has been described above. This forms a necessary starting point for assessment; and
- 57.2 it is then necessary to analyse in detail the current state of the environment under the 'existing regime' for the purposes

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<sup>4</sup> *Queenstown Lakes District Council v Hawthorn Estates Limited* [2006] NZRMA 424, at para [84] (CA).

of using this to understand and assess what the cumulative effect of proposals will be in combination with the existing regime.

- 58 On this basis the cumulative effect of the proposals and the existing regime can then be compared to the effects of the existing regime and the wider existing environment.
- 59 Even leaving aside the extent to which existing but as yet unimplemented consents form part of the existing environment, this is clearly not the approach that has been adopted by MWRL. In simple terms MWRL have taken the existing state of water quality as an arbitrary proxy for the existing environment and then used an equally arbitrary ecological value (i.e. a maximum of a 25% increase in periphyton) to validate and justify the acceptability of any increase in effects. An example of this approach arises in evidence of **Dr Coffey** who describes the "*existing aquatic environment in the catchment of Lake Benmore*" and concludes that "*existing land use is already having an impact*" and concludes that "*further significant deterioration would be a concern*". He then in essence concludes that a 25% increase in periphyton biomass would constitute a minor effect.
- 60 It is also the case that when assessing cumulative effects the "*whole*" must be considered not just the incremental effect, e.g. an extra 25%.
- 61 The fact of the matter is that the existing environment is already experiencing the effects of existing activity. This includes the Waitaki HEPS and both existing and (on a legal basis) unimplemented consents. As was set out by the Environment Court in *Emerald Residential Ltd v The North Shore City Council*:<sup>5</sup>
- "(27) ... what must be considered is the impact of any adverse effects of the proposal on the environment. The environment is to be taken as it exists, with whatever strengths or frailties it may already have, which make it more, or less, able to absorb the effects of the proposal without a breach of the environmental "bottom line" – a principle of sustainable management."
- 62 Two cases in particular have discussed cumulative effects in the context of existing activities, namely the Environment Court in *Kuku Mara Partnership Ltd v The Marlborough District Council*,<sup>6</sup> and the High Court in *Herzog Investments v Waitaki District Council*.<sup>7</sup> Both

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<sup>5</sup> A031/2004

<sup>6</sup> W037/2005

<sup>7</sup> CIV 2006/485-1061

Courts sought to apply their cumulative effects assessments on the basis of there being a "synergetic" effect between the proposals and already consented activities that formed part of the existing environment (where synergy can be defined as the working together of two matters to produce an effect greater than the sum of their individual effects).

- 63 In other words, the Courts found that there was more than just a cumulative intensification of effects – but rather that the existing plus the proposed activities created a new scale of unacceptable adverse effects that would need to be considered as a whole. And in each the synergetic result of the cumulative effect tipped the level of adverse effect over the edge of what is acceptable in the context of sustainable management.
- 64 The High Court in *Herzog* was considering the reasoning from the Environment Court below, which is quoted in the High Court decision after paragraph 8. The Environment Court said:

"[38] Support for the argument of Mr and Mrs MacTavish can be found in the following passage from the Environment Court in *Kuku Mara Partnership v Marlborough District Council*. In discussing the meaning of effect as defined in the Act the Court said that the definition of effect means:

**...that if an existing activity has adverse effects, and a proposed activity also has an adverse effect even if only minor, which would add to the existing effects, then the definition requires a consideration of both.** It would be an exception to the permitted baseline concept, but only to the extent that one could have regard to existing adverse effects when, and only when, taken together with the new effect, they produce a synergetic impact on the environment.

[39] We agree with that analysis." [Emphasis added]

- 65 The High Court confirmed that the Environment Court which, on a practical basis meant that:
- [35]...The Court was entitled to consider the cumulative effect of 13 houses, versus the status quo of nine.
- 66 This is consistent with the 'standing position' of the Courts. The Courts have always emphasised that cumulative effects are relevant, so as to protect environments that have reached saturation or breaking points. This is also consistent with this new "synergetic" terminology – the causing of saturation or breaking

point is a total effect that is greater than the sum of the individual effects.

- 67 Within this it is acknowledged that where no new or synergetic effect or change can be detected or identified as the consequence of a proposed activity in combination with existing activity, compared to just the existing activity, it is arguable that there is no material cumulative effect of any relevance. Equally, if the environment is clearly and safely capable of supporting the new activity, in addition to the existing activity, the combined cumulative effect is not a new effect as such, but is an effect that is only marginally different in scale to the current, stable, sustainable situation.
- 68 The point here is that unless the existing environment is properly assessed and understood the cumulative effects assessment including a 25% increase cannot be properly carried out.

#### **HAS THIS BEEN COMPLETED BY MWRL?**

- 69 Meridian has had little involvement with the monitoring and assessments undertaken by MWRL in the lead up to the current hearing process. Meridian did however make its experts available for discussing and has provided the available data it does have to the authors of the GHD Water Quality Reports.
- 70 That aside, on the basis of the evidence that has been presented at this hearing Meridian is concerned that there are fundamental information gaps and there are also errors in assessment methodology that lead to uncertainty over the reliability and extent of the environmental effects. Collectively all these matters cast significant doubt on the accuracy of the cumulative effects assessment undertaken by MWRL.
- 71 Examples of issues that will be raised by Meridian witnesses to highlight the inadequacy of the effects assessment by MWRL include:
- 71.1 MWRL's analysis of the existing water quality state in Lake Benmore and the Wairepo Arm is characterised by a complete paucity of data. **Ms Sutherland** will also discuss how it appears that the MWRL assessment has failed to properly comprehend nutrient behaviour and cycling in the hydro lakes and the implications of omitting the deeper (i.e. 15 metre) water data. This has significant implications for the quantification of assimilative capacity;
- 71.2 there is a complete lack of baseline data to determine the existing state and ecological condition of rivers and lakes. This appears to be based on only two sampling runs. Beyond

that there is a heavy, and Meridian submits, inappropriate reliance on modelling. **Dr Snelder** and **Ms Sutherland** will discuss how it appears that insufficient sampling has been completed over an insufficient timeframe. Even where sampling has been completed, key parameters such as *chlorophyll a* have not been measured with the predicted levels being assumed through modelling;

- 71.3 the use of the TLI index is flawed. **Ms Sutherland, Dr Snelder** (and also **Dr Schallenberg**) have significant reservations around the use of a TLI to determine nutrient loads. The TLI index was created to define ranges of measurable water quality parameters that in combination characterize the trophic status of lakes. It was never the intention of the developers of the TLI that it be used to forward calculate the appropriateness of nutrient loadings;
- 71.4 the use of a 25% increase in periphyton as the main ecological indicator in streams and rivers is arbitrary. **Dr Coffey** continues to state that the 25% increase represents a minor effect relative to current conditions but has not provided any evidence on what the existing baseline is nor what an increase of 25% represents as a cumulative effect. The test is not whether an effect is minor "*relative to existing conditions*". The test is to assess overall whether the situation of combining the existing environment together with additive effects is acceptable;
- 71.5 didymo has also been excluded from the threshold and no assessment has been provided on the implications of increased nutrients for didymo growth;
- 71.6 **Dr Snelder** and **Ms Sutherland** will give evidence on how the effects assessment should have been completed, based on a sound analysis of the biological responses to increased loads, and the flow on effects of these such as effects on frequency and duration of nuisance growths, impacts on aquatic food webs, and changes in other physio-chemical variables that affect all the values of these waterbodies;
- 71.7 Even if a 25% increase in periphyton was determined to be the main assessment criterion, the MWRL assessment should have considered both the effect of maximum periphyton biomass and the duration of biomass above specified levels on all the values considered in setting nutrient criteria for the streams and rivers of the Basin. The MWRL assessment has failed to comprehend the true extent of 'cumulative effects'. These will be discussed by **Mr Turner Dr Snelder** and **Ms Sutherland**. **Mr Greenaway** will also present evidence on

the uncertainties and the potential amenity and recreational effects of the approach proposed by MWRL; and

- 71.8 there is considerable uncertainty around the rates and extent of surface and groundwater N and P migration. It appears that temporal and spatial variations in the groundwater pattern have not been properly considered in the MWRL groundwater assessment. **Mr Callander** will provide evidence on the fact that quantification of groundwater flow and its emergence into surface waterways is uncertain, and that there is insufficient data to reliably calibrate the MWRL calculations. This in turn leads to further uncertainty in the assessment of ecological and wider environmental values that will be discussed by **Dr Snelder** and **Ms Sutherland**.
- 72 Overall the MWRL approach to date therefore appears to be much closer to an incremental 'death by a thousand cuts' assessment (i.e. assessing the acceptability of an incremental effect in isolation) rather than a proper determination of the existing baseline and then overall cumulative effects. The alleged imperceptibility of a 25% increase in periphyton is a case in point.

#### **THE RELATIONSHIP BETWEEN THE PNRRP AND THE WRP**

- 73 The relationship between the WRP and the objectives of Chapter 4 (Water Quality) of the proposed Natural Resources Regional Plan (*PNRRP*) is important for the consideration of the applications subject to the current hearing.
- 74 Objectives WQL1.1 and WQL1.2 (along with Issue WQL1) set out the anticipated water quality outcomes for rivers and lakes in the Canterbury Region (surface water quality objectives). Beyond this the detail and subtleties of Objectives WQL1.1 and 1.2, along with the applicable tables and maps, is complex and will be addressed in detail by **Mr Gimblett**.
- 75 The exact relationship between the WRP and the PNRRP is also not immediately clear. **Mr Kyle, Mr Gimblett** and the **Section 42A report writers** nevertheless appear to agree that both Plans have a role to play in the consideration of the use of water for irrigation.
- 76 In short it appears that although applications to take and use water should be made under the provisions of the WRP, the WRP was never intended to address matters of water quality in relation to the use of land or associated discharges, and defers to Chapter 4 of the PNRRP for the relevant provisions.

- 77 The application of the objectives, policies and rules of the PNRRP to these applications will be discussed in the evidence of **Mr Gimblett** and later in these submissions.
- 78 However, there is one matter that needs be addressed on a preliminary basis. This is the fact that the WRP incorporates by specific reference Objectives WQL1 - 3.
- 79 By way of background:
- 79.1 the WQL Chapter of the PNRRP was publicly notified in July 2004. A large number of submissions and further submissions were received, hearings on which have only recently been concluded. The relevant aspects of the PNRRP had therefore been publicly notified when the draft WRP was itself publicly notified in February 2005;
- 79.2 although it is accepted that there is still a considerable way to go through the statutory processes before the final form of the PNRRP is known, the WRP has become operative and incorporates the as notified Objectives WQL1-3 of the PNRRP. The WRP has a specific volume "*material incorporated by reference*" which includes these objectives as notified, and the definition of NRRP in the WRP refers to the PNRRP as at its date of notification.
- 80 The Court addressed this issue in relation to the WRP in the NBTC decision<sup>8</sup> where it said:

"[168] Clause 30 of the First Schedule to the RMA provides that certain material<sup>258</sup> may be incorporated by reference in a plan and if it is then it "... has legal effect as part of the plan"<sup>259</sup>. We have already mentioned that the Waitaki Catchment Water Allocation Board used that power in respect of an Appendix to Chapter 7 (Wetlands) of the proposed NRRP. In fact the full list of material incorporated by reference in the WCWARP is as follows<sup>260</sup>:

...

[172] Finally we draw attention to the potential confusion in incorporating provisions of a proposed (regional) plan into an operative plan — which is that the proposed plan may change due to submissions or be withdrawn. However, once part of any proposed plan is included in an operative plan it becomes part of the latter plan so that a general regional plan may (when the proposed plan becomes operative, perhaps after changes are made as a result of

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<sup>8</sup> *Lower Waitaki River Management Society Incorporated v CRC* C 80/2009, 21 September 2009

submissions) have provisions dealing with the same issues that are different from, and perhaps inconsistent with, a more specific regional plan. We suspect the Waitaki Catchment Water Allocation Board was alert to these problems because of the care it took in having the relevant provisions of the proposed (general) NRRP printed as a separate volume of the WCWARP.”

81 In short even if final decisions on the PNRRP change the objectives this will not have implications for the Waitaki unless and until a change to the WRP occurs.

82 In this respect **Mr Gimblett** will give evidence on why it is inappropriate to speculate over what changes may occur to the provisions of the PNRRP – and in short, it is my submission that the WRP ‘is the plan’ and that it is the framework within which these applications must be determined.

#### **THE RELEVANCE OF THE PNRRP**

83 It is however acknowledged that the Panel should have regard to the level of uncertainty when considering the degree of weight to be given to the PNRRP provisions themselves in the overall determination of these applications.

#### **RULES WQL 59 AND 62 AND NON-COMPLIANCE**

84 The rules around landuse in the PNRRP are complex. They will be covered in the evidence of **Mr Gimblett**.

85 There is, also, a legal matter that requires submission as it potentially determines the status of the activities under consideration and therefore whether the applicants are required to meet the jurisdictional threshold for non-complying activities. The issue relates to the requirement to gain consent for either discharge or land use under the PNRRP.

86 The starting point is Rule WQL18 which relates to the use of land as a permitted activity that may result in the discharge of nitrate-nitrogen into groundwater in an unconfined or semi-confined aquifer.

87 However, Rule WQL18 does not apply where consent needs to be obtained under Rule WQL19 (which applies to land within the Inland Basins, including the Upper Waitaki Basin). In any event Rule WQL18 is not applicable at this time as the PNRRP states that it does not take effect until the rule becomes operative.

88 Rule WQL19 relates to the use of land that may result in the discharge of contaminants into groundwater in an unconfined or

semi confined aquifer or surface water in an inland basin. The Rule provides:<sup>9</sup>

**Rule WQL19 Use of land that may result in the discharge of contaminants into groundwater in an unconfined or semi-confined aquifer or surface water in an inland basin - discretionary activity**

The use of land in Zone IB shown on Map Volume Part I - Planning maps that may result in:

- (a) contaminants entering groundwater or surface water;
- or
- (b) the disturbance of the bed of a permanently flowing river, or lake arising from livestock in the bed or on the margin of a permanently flowing river, or lake;

**and**

**the use of water for irrigation is authorised under Rule WQN26;**

is –

1. a discretionary activity, if such use complies with Condition 1 of this Rule;
2. a non-complying activity if the discharge does not comply with Condition 1 of this Rule, in which case a resource consent under Rule WQL 61 is required.

- 89 The difficulty is that the applicants have not got, and cannot get, authorisation under Rule WQN26 because water allocation is dealt with by the WRP not the water quantity chapter of the PNRRP.
- 90 To confirm this I point out section 13(c) of the Waitaki Act<sup>10</sup> which provides that in carrying out its functions the Board was required to include objectives, policies, and methods (including rules, if appropriate) in the WRP, to provide for the "*allocation of water to activities*". In my submission the 'allocation of water to activities' was an express direction to the Board to consider and provide for the taking and use of water from the catchment.
- 91 In addition the Waitaki Act specifically states that the Waitaki Plan is "*the Regional Plan for the allocation of water in the Waitaki Catchment*".
- 92 At page 19 of the WRP the Board provides that:

<sup>9</sup> The Zone 1B referred to in the Rule includes all of the areas for which applicants have applied for water in the upper Waitaki catchment.

<sup>10</sup> Resource Management (Waitaki Catchment) Amendment Act 2004.

The Plan applies to the **taking, using, damming or diverting of water from water bodies within the Waitaki catchment**, whether the water is used within or outside the catchment. Other matters should be addressed through the relevant statutory planning instruments of the regional and district councils. [Emphasis added]

- 93 On this basis, the WRP applies to all applications to take **and** use water from the Waitaki Catchment (including associated damming or diversion) and the PNRRP continues to apply in the context of all other applications (the most obvious example in the present instance being a land use consent under the water quality chapter).
- 94 It also means that Rule WQN26 has no application in the Waitaki Catchment as it has now been superseded by an operative allocation plan. This means that applications would not be able to come within the ambit of Rule WQL19 as the requirement to also obtain an authorisation under Rule WQN26 is not possible in the Waitaki Catchment.

#### **OTHER ISSUES WITH WQL19**

- 95 Difficulties with Rule WQL19 also lead to further issues around the application of the PNRRP. In my submission the suggestion by **Mr Kyle** that no land use consent is necessary due to the inability to apply Rule WQL19 (or WQL18) is overly simplistic. It ignores other relevant rules of the water quality chapter of the PNRRP dealing with land use. This includes Rules WQN59 and 62.

#### **Rule WQN59**

- 96 As drafted, if Rule WQL18 cannot be met, and consent has not been obtained under Rule WQL19, then consent is required as a discretionary activity pursuant to Rule WQL59(1). Rule WQL59(1) provides:

The following uses of land are discretionary activities, and require a land use consent:

1. The use of land which may result in the discharge of nitrate-nitrogen into groundwater in Zone NN or Zone IB shown on the Map Volume Part 1 Planning Maps, except where the use of land is authorised by a resource consent granted under Rule WQL 19, that does not comply with any one or more of the conditions of Rule WQL18; or

...

- 97 On the basis of that interpretation, if the application is not permitted under Rule WQL 18 ( which it cannot be here) and as it is not currently possible to gain consent under Rule WQL19 so the exception in Rule WQL59(1) cannot apply, the land use activity would become discretionary under Rule WQL59(1).

**Rule WQL62**

- 98 The picture is however further complicated by Rule WQL 62 which also appears to apply to Inland Basins.

- 99 Rule WQL62 of the PNRRP provides that the use of land for certain activities will be non-complying. The relevant part of the Rule for present purposes, is paragraph 1 which provides that:

**Rule WQL62 Use of land for certain activities – non-complying activity**

1. The following uses of land in Zone IB shown on Map Volume Part I –Planning Maps that may result in
  - (a) contaminants entering groundwater or surface water; or
  - (b) the disturbance of the bed of a permanently flowing river, or lake arising from livestock in the bed or on the margin of a permanently flowing river, or lake; and the use of water for irrigation is authorised under Rule WQN 26; that does not comply with Condition 1 of Rule WQL 19; or

...

- 100 The reference in paragraph 1(b) to Rule WQL19 (and the previous discussion around the inability to apply that rule) seems to have led the Council to treat all applications as discretionary. In my submission that is wrong.
- 101 On the basis paragraph 1(a) of Rule WQL62 it appears that Rule WQL62 applies specifically to the use of land in the Upper Waitaki where “contaminants” may enter groundwater. In this context, Rule WQL62 is effectively the ‘mop up rule’ which serves the function of ensuring that all inland basin applications have an additional consenting and assessment requirement (section 104D) which needs to be passed prior to gaining consent.
- 102 It is also my submission that Rule WQL62 is sufficiently explicit to ensure that there is no issue with section 9 of the principal Act and for this reason, I submit that there is a strong argument to suggest that in the absence of any other statutory provision or rule applying, all applicants should have applied for consent on a non-complying basis under Rule WQL62.

**Two counters to the application of Rule WQL62**

103 The two counters to the application of Rule WQL62 that I will discuss in these submissions are:

103.1 the possibility of the second part of paragraph 1(b) (from "*and the use of water*") being meant to apply to both paragraphs (the '*typo argument*'); and

103.2 the application of section 88A.

104 The first is also reliant on an understanding of the appropriate approach to plan interpretation that will also be addressed in these submissions.

***The typo argument***

105 I accept that there could be an argument that the second part of paragraph 1(b) (from "*and the use of water*") which relates to the cross-reference to Rule WQL19 might have been intended to apply to both paragraphs – particularly if its general layout was meant to be the same as Rule WQL19.

106 This would need to be attributed to a drafting error – in short the absence of a paragraph break at the appropriate point in the rule. This is discussed by **Mr Kyle** in his evidence and results in a narrow interpretation of Rule WQL62 – i.e. that the *intent* of the Rule was that the whole Rule (and not just (b)) was intended to apply where Rule WQL19 was not complied with.

107 It is however my submission that it is difficult to interpret Rule WQL62 as not applying to the proposed activities. This is due to the strong emphasis of the PNRRP towards protecting water quality in Inland Basins. **Mr Gimblett** will discuss Policies WQL4 and WQL9 which specifically consider the use of land for irrigation to be a non-point source discharge with the potential for impacts on water quality that need to be controlled.

108 The fact that the words in the rule are written as they are only supports this approach – the presence of the cross reference to the policies (along with the plain meaning of the words themselves) appears to have been ignored by **Mr Kyle**.

109 In any event the Environment Court has also confirmed that when interpreting a rule it will be mandatory to consider the objectives and policies that are relevant to the zone within which the rule falls as the purpose of a rule is set out in the objectives and policies of the plan.<sup>11</sup> The '*cross-reference*' to the relatively wide ranging

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<sup>11</sup> *Beach Road Preservation Soc Inc v Whangarei DC* (2001) 7 ELRNZ 1; [2001] NZRMA 176; [2001] NZAR 483 (HC).

policies referred to in the rule discussed above supports this approach.

**Section 88A**

- 110 Against the above, I also acknowledge that section 88A of the RMA may have some application to the PNRRP aspects of individual applications (and especially those made after notification of the July 2004 notification of the PNRRP).
- 111 Section 88A(1A) provides that an application will continue to be processed, considered and decided as an application for the type of activity that it was for, or was treated as being, at the time the application was first lodged. It will have no application to the WRP applications (as that has been removed by the Waitaki Act) – but there is an argument that it will continue to apply to the applications made under the PNRRP.
- 112 This is again a relatively complex issue as it is obviously because of the WRP that the PNRRP aspects no longer apply – but ultimately, the PNRRP aspects that remain are not fettered by the Waitaki Act and section 88A will apply.
- 113 The specific application of section 88A would need to be considered in the context of any determination on the actual application of section WQL62.

**Overall comments on activity status**

- 114 Overall, and as will be discussed by **Mr Gimblett**, it would appear that further consideration of land use should have been given to all applications subject to hearing. In many instances it appears, at least on a prima facie basis, that the possibility of further consent requirements should have occurred prior to the matters advancing to hearing.
- 115 I also note that based on the more recent analysis provided by **Ms Penman** (s42A Investigating Officer), the Council appears to remain relatively uncommitted to any particular interpretation of the PNRRP. The s42A report suggests that as Chapter 4 would not provide a better understanding of the nature of the proposals, it is not necessary to defer consideration of the applications until any necessary land use consent application is provided:

85. It is clear from the explanation to Rule WQL19 that the general purpose of this rule is to enable the effects of land-use intensification on surface water and groundwater quality to be controlled. This is the generally the same issue and effects being considered as part of the applications before this hearing. Consequently, the land use consent requirements found in proposed Chapter 4 would not provide a better

understanding of the nature of the proposals before this hearing. For this reason, Environment Canterbury's approach is not to defer the consideration of the current applications pursuant to section 91 of the RMA.

86. This does not avoid the obligation of a land owner or occupier to obtain any necessary land use consent required by proposed Chapter 4 prior to land-use intensification occurring.

- 116 This obviously ignores the fact that the planning framework is what it is and it also ignores the implications that it may have for the activity status, and statutory criteria for assessing the applications currently under consideration.

### **BUNDLING AND STAGING**

- 117 Although bundling and staging are in practice two different concepts there is a sufficient degree of overlap between the two to merit discussing each together. To recap, assuming the Panel is familiar with both concepts:

117.1 the issue of bundling and whether applications should be bundled together applies where an applicant has sought multiple consents with varying activity status' individually, the applications are inextricably linked such that they should be considered together and have the more restrictive status applied; whereas

117.2 the issue of staging is relevant to applications not yet made in that an applicant can make an application under section 91 for some of the applications necessary for a project to be heard at a later stage.

- 118 However, the effect of a staging decision may be to prevent applications that would otherwise be bundled, from being bundled together (and thus why both staging and bundling have been discussed under the same heading).

### **Staging in this hearing**

- 119 As the Panel is well aware, the issue of staging has already arisen in this hearing in relation to the discharge and other applications set out in **Mr Kyle's** supplementary evidence. These, and an argument that these applications did not need to be processed along with the other applications by these applicants, were also explored in detail by Mr Whata in his submissions dated 16 October 2009.
- 120 The Panel has in turn issued a response to the section 103 issue via a minute dated 6 November 2009.

- 121 On a more general basis, Mr Whata also made a number of comments around the processes that occurred in the lower Waitaki Catchment and its relevance for the upper that also require comment in the context of the current hearing.

**What is staging?**

- 122 Obviously the most relevant provision to any staging process is going to be the application of section 91.

**91 Deferral pending application for additional consents**

- (1) A consent authority may determine not to proceed with the notification or hearing of an application for a resource consent if it considers on reasonable grounds that—
  - (a) Other resource consents under this Act will also be required in respect of the proposal to which the application relates; and
  - (b) It is appropriate, for the purpose of better understanding the nature of the proposal, that applications for any one or more of those other resource consents be made before proceeding further.
- (2) Where a consent authority makes a determination under subsection (1), it shall forthwith notify the applicant of the determination.
- (3) The applicant may apply to the [Environment Court] for an order directing that any determination under this section be revoked.

- 123 However, the accepted starting point is always going to be that:

“Good resource management practice requires that in general all resource consents required should be carefully identified from the outset and that application is made so that they can be considered together jointly.”<sup>12</sup>

- 124 It is nevertheless accepted that the statement in *Affco* is not a formal requirement of the RMA. In short, there is no provision in the RMA which would preclude an applicant from making applications for resource consent at separate times – something that the Act explicitly recognises in section 91(1).

- 125 The fact that applicants have the option of applying for consents at separate times has meant that consent authorities have been afforded a discretion under section 91 to defer notification or

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<sup>12</sup> *Affco New Zealand Ltd v Far North District Council (No 2)* (1994) NZRMA 224 (Planning Tribunal decision)

hearing of applications where other resource consents are required. However:

125.1 By necessary implication it appears that an application under section 91 can only be made prior to the "*the notification or hearing of an application*" – with there being no provision in the Act that accommodates the retrospective application of section 91; and

125.2 the ability to exercise the discretion in section 91(1) is limited to those situations where the consent authority first determines that applications for other consents are required for enabling the relevant consent authorities to "*better understand*" the "*nature of the proposal*".<sup>13</sup>

126 The critical test, assuming an application for staging is made prior to notification and hearing, is therefore what is intended by the inclusion of the words "*nature of the proposal*" in section 91(1)(b). This phrase has been analysed by the Court in *Waitakere Forestry Park Ltd v Waitakere City Council*.<sup>14</sup> The Court pointed to the Concise Oxford Dictionary's definition (9th Edition) of "*nature*" as "*(relevantly) meaning 'a thing's innate or essential qualities or character'*". The comment was then offered that "*(t)he insertion of the word 'nature' only serves to emphasise the concentration in s.91(1)(b) on the essential qualities of the proposal*". In the light of that perceived "*concentration*", the Court proceeded to observe (237):

"So at first sight s 91(1)(b) supplies a restricted test on which a council may base a deferral. Bearing in mind that most applications to which s 91 will apply must be accompanied by an assessment of environmental effects under the Fourth Schedule [s 89(4)(b) and s 89(6)], it is relatively infrequently that applications for other resource consents will be necessary to understand the essential qualities of any proposal."

127 That passage was followed by a rider:

"On reflection, and considering the scheme of Part VI as set out in para 3.1, and the "effects-based" nature of the Act as a whole, we consider that the words in s 91(1)(b) have not been used with quite the care that is necessary for clarity, and the prima facie restricted interpretation of s 91 is not correct. Section 91(1)(b) refers to "the nature of the proposal" rather than "the nature of the activity". By

<sup>13</sup> *Waitakere Forestry Park Ltd v Waitakere City Council* (Environment Court, A 134/97, Judge Jackson)

<sup>14</sup> [1997] NZRMA 231

contrast s 92 which deals with postponements when further information is required, contains a stipulation that:

- (4) Further information may be required...only if the information is necessary to enable the consent authority to better understand the nature of the activity in respect of which the application for a resource consent is made, and the effect it will have on the environment... (our emphasis)

We find that the word "proposal" is a global term and means; "the activity which is intended by the applicants, and the effects of the activity". The important word in s 91(1)(b) is "proposal" rather than "nature".

In summary, while there are indications in s 91(1)(b) that the test is to be a narrow one, there are contra-indications being:

- the use of the word "proposal";
- the scheme of Part VI; and
- the "control of effects" thrust of the legislation.

All these suggest that the second limb of s 91(1) is designed to allow a consent authority to defer a hearing of application if a further consent will give a better understanding of **the proposed activity and its effects, these together comprising, the "proposal".**

128 *Waitakere Forestry Park* was endorsed by Randerson J in *Waitakere City Council v Kitewaho Bush Reserve Company Ltd and others*.<sup>15</sup> At [26] to [28] His Honour had this to say:

"I have been assisted by the thorough examination of the approach to s 91 by the Environment Court (presided over by Judge Jackson) in *Waitakere Forest Park Ltd v Waitakere City Council* [1997] NZRMA 231. The position may be summarised as follows:

- a) A consent authority may determine not to proceed with the notification or hearing of an application for a resource consent only if it considers on reasonable grounds that both limbs of s91 (1) are made out;
- b) It is for the consent authority to satisfy itself on the balance of probabilities about both those matters;
- c) Reasonable grounds are required which imports an objective standard. Nevertheless, a consent authority is entitled to bring its own judgment and experience to bear on the issue and it is proper that some weight be given to those factors;

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<sup>15</sup> HC, Auckland, AP23/02, 3 March 2004

d) In respect of s 91(1)(a), the consent authority must be satisfied that other resource consents will (not may) be required in respect of the proposal. But, it is sufficient if the consent authority is satisfied on the balance of probabilities.

e) In relation to s 91(1)(b), the consent authority is concerned with understanding the essential features of the proposed activity to the extent that those features bear upon the effects of the proposed activity on the environment. A consent authority must be of the view that it is appropriate for the purpose of better understanding the nature of the proposal that applications be made for any one or more of the other resource consents required before it proceeds further.  
**If the nature of the proposal can be sufficiently understood without requiring the other applications to be made at that stage, then the consent authority is not entitled to make a s 91 determination."**

129 On this basis, whether or not additional applications are actually required for the proper understanding of the proposal must logically involve an analysis of whether the nature of the proposal can be sufficiently understood without reference to the other applications.

130 The reasons why it was necessary to hear the applications set out in **Mr Kyle's** supplementary evidence has already been canvassed by the Commissioners in their 6 November minute. However in my submission, should there be a requirement for land use consent under Rule WQL62 or any other provision of the PNRRP then that should also form part of the current hearing process:

130.1 although it might be dependent on the application of section 88A, it is likely that previously discretionary activities would, through the requirement to bundle applications, become non-complying. It is important that the Commissioners and parties know whether the threshold test applies;

130.2 contrary to the suggestion of **Ms Penman**, this is not in my submission a case where the land use consent requirements found in proposed Chapter 4 are irrelevant to a better understanding of the nature of the proposals before this hearing. Noting that the same considerations could have also applied to the applications and matters already set out in the Commissioner's 6 November minute, in the present instance we also have the requirement to undertake an assessment according to the relevant and quite specific landuse-related policies of the PNRRP.

131 Meridian resists the argument that the present situation is analogous with the staging decision in either NBTC or HDI:

131.1 the critical issue for determination for both the NBTC and HDI was the availability of water from the lower Waitaki River. The need to have certainly over the ability to take water and the apparent difficulties involved with seeking abstractive rights date right back to Project Aqua. In this context the decision to stage the consent applications has generally been supported by submitters who see the grant or decline of the water consents as the critical matter for determination. This is different in the Upper Waitaki Catchment where, as acknowledged by the PNRRP inland basin provisions, there are very real concerns around the effects of the use of water in its inland basin environment;

131.2 at the time of making both the NBTC and HDI applications Meridian<sup>16</sup> made it clear that the applications were the first step in a two stage application process **prior** to notification and hearing. The second stage will involve applications for other consents from Environment Canterbury (and the District Council) necessary to construct the tunnel and powerhouse (NBTC), and the final intake, primary canal structures, culverts and the like (HDI).

131.3 both the NBTC and HDI were already non-complying by virtue of their takes and sought flow regimes. The omission of further consent applications or requirements did not result in any change in activity status of the main, and most contentious part of each proposal;

131.4 some reliance or preference for staging can be expressed for larger proposals. In *Kett v Auckland RC*<sup>17</sup> Judge Sheppard accepted that it is not always practicable to apply for all resource consent applications at once, especially for major projects on a large scale. He found that in respect of section 91 despite the fact that other resource consents would be required for the proposal it was not necessary for better understanding the nature of the proposal that future applications be made before proceeding. This approach has been adopted in subsequent cases,<sup>18</sup> but in my submission it is unlikely that the 'major project argument' can be successfully made out. None of the applicants are reliant on extensive further design processes that carry further and equally extensive requirements for resource consents; and

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<sup>16</sup> In the context of the HDI application, Meridian and the South Canterbury Irrigation Trust as joint applicant

<sup>17</sup> ENV C A 86/2000, Environment Court

<sup>18</sup> For example *Roman Catholic Diocese of Auckland v Franklin DC* (Environment Court W 28/2004)

131.5 on a practical level there is also a clear disconnect between the take, use and discharge of water, and the construction of the tunnel and powerhouse (NBTC). For HDI there are also no concerns around the potential application of Rule WQL62 (as the use area is not an inland basin) with all use issues being determined within a much clearer planning and logistical framework. The inherent nature of a scheme based irrigation application with numerous, but future as yet-unknown farmer-irrigators is also different than the current and very specific individual irrigation proposals; and

131.6 in the lower Waitaki where one applicant was found (through the more detailed evidence presented at the hearing) to have omitted a necessary and interrelated discharge application, it was required to apply for the consent so that all the relevant applications could be determined together (Clarkefield Holdings (1996) Limited, emergency discharge application for hydro-scheme).

132 Overall, it is therefore my submission that it is necessary for the Panel to receive and hear **all** relevant consent applications for each proposal including the land use provisions of the PNRRP.

**NOT SIGNIFICANT/NO MORE THAN MINOR**

133 On the basis of the above, the possibility of a suite non-complying activities is an important matter for the Panel. However, it also appears that even without the application of Rule WQL62, there will be a number of applicants who already accept that their wider proposals will need to be assessed on a non-complying basis.

134 Understanding the extent of effects of each individual proposal in a cumulative sense is therefore very important. We also note that although there is an existing baseline (in the loose sense) for some renewals (i.e. the extent of existing effects can already be ascertained from the activity being undertaken), all applicants have determined that priority is not an issue between them. By this we assume that each and every applicant will jointly accept responsibility for the full extent of any cumulative effects.

135 However, from the evidence and submissions that have been presented to the Panel, it is very unclear (at least to Meridian), the extent to which the proposed activities will be able to meet the first 'gateway' of section 104D (effects no more than minor).

136 By way of example, on the one hand it has been suggested by Mr Whata that:

- 4.12 ... the WQS established the nutrient loadings that will result from the existing and additional irrigation and the thresholds that need to be met on a sub-catchment and catchment wide basis to ensure that the overall effects of the intensification of land uses associated with irrigation **are no more than minor.**" [Emphasis added]

whereas Ms Robson has suggested that:

- 12 The mitigations toolkit was developed as the final chapter to the WQS. As a part of the WQS, nutrient loads under current and predicted land use were derived, as were the nutrient loads that the receiving environments at specified monitoring points **could tolerate without suffering significant adverse effects.** As the predicted nutrient loads may cause adverse environmental effects in some receiving environments, on-farm mitigation will be required [Emphasis added]

137 Ms Robson's use of the phrase "*No significant decrease in water quality*" in the example FEMP table given in her Table 4 is a further example of differences between what has been said by Mr Whata and what has been expressed by witnesses.

138 And to confuse matters even more, Dr Coffey appears to even use both phrases in his evidence (ignoring Meridian's other concerns with **Dr Coffey's** and the wider MWRL approach to cumulative effects set out in his para 7.13):

- 7.12 I consider that a change in trophic status in the Northern or Haldon Arm of the lake from an ultra-microtrophic to a micro-trophic state **would not be significant and undesirable** for aquatic habitat quality within and downstream of Lake Benmore (Coffey 2008)..."

- 7.13 In terms of a not to be exceeded threshold for increased periphyton growth, I considered that a 25% increase in the annual average maximum periphyton biomass at any nominated stream / river node in the catchment of Lake Benmore **could be considered a minor effect** relative to current conditions (Coffey, 2008) [Emphasis added]

139 I also note with scepticism the statement made by Mr Reid in opening for Simons Pass and Simons Hill Station that the effects of their applications were "*less than minor*".<sup>19</sup> This statement is unsupported in light of MWRL's assessment of cumulative effect.

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<sup>19</sup> Legal submissions by Kelvin Reid para 62

- 140 In this respect it is accepted that the term “*minor*” is not defined in the Act. In *Bethwaite v Christchurch City Council*,<sup>20</sup> the Tribunal took the view that in its primary sense, as suggested by dictionary definitions, it is a comparative word. On this basis it appears that Parliament did not intend that there should be no adverse effects or only minimal adverse effects for an application that can comply with section 104D. The Tribunal also stated that “*minor*” suggested adverse effects that are less than major, and could include those effects that are more than simply minute or slight. Whether effects are minor is to be determined after having regard to any mitigation of effects that might be achieved by imposing conditions.
- 141 It is submitted that this is a matter that will need to be clarified prior to the determination of the applications.

### **CONDITIONS**

- 142 It should be clear from my submissions that Meridian is not recommending or suggesting that the Panel consider the grant of consent based on the information and assessments provided. The theme of the Meridian witnesses is that more work is required.
- 143 Accordingly, it is Meridian’s view that any real discussion on the possibility of a grant and on conditions at this stage of the hearing process is premature and inappropriate - however, the reality of the situation is that the various proposals are, should the relevant baseline and effect assessments occur, heavily reliant on the formation of appropriate conditions to mitigate what would otherwise be adverse environmental effects.
- 144 As much as anything Meridian therefore envisages that the preparation and discussion of revised conditions that will be presented by **Mr Gimblett** and **Mr Potts** will assist both the Panel and applicants in framing what is required in terms of inputs and assessments to accommodate the potential grant of consent (if that indeed proves possible once the information/assessments are provided).
- 145 I have also taken this opportunity to address the panel on 6 other issues, namely:
- 145.1 the requirement for encumbrances for applicants who are relying on MIC shares as a part of the current hearing process;
- 145.2 tranching;

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<sup>20</sup> C085/93 (PT)

145.3 the ability and requirement for 'the tap to be turned off' should there be issues with Environmental compliance;

145.4 the extent to which adaptive management can be relied upon in the absence of satisfactory baseline data and assessments; and

145.5 future subdivision (in circumstances where applicants are relying on land use and farming practices in an area greater than their irrigation area to mitigate effects).

146 Prior to doing this I will also explain to the Panel a further source of difficulty in preparing conditions for this hearing – that being the apparent inconsistencies between applicants as to how they propose to adopt the compliance and conditions framework proposed by MWRL.

#### **Preliminary issue – node compliance**

147 Meridian has become increasingly concerned throughout the current hearing process around successive applicants' approach to the adoption of the node and nutrient threshold proposals originally put forward by MWRL.

148 MWRL started with the proposition that given the difficulties in determining who is breaching node thresholds (i.e. whether it be existing irrigators or the current applicants or permitted activities) that the current applicants will carry the burden of complying with the thresholds. We took this to be a reference to all applicants.

149 This was then followed by **Dr Bright** who commented for MWRL that these applicants carry the burden and that if node thresholds are continually exceeded then the thresholds will need to be reviewed (the implication being that thresholds would be reviewed upwards if applicants couldn't meet them).

150 **Dr Robson** then included reference to natural permutations being a factor that might mitigate any exceedances of the node thresholds in her evidence for Southdown Holdings and Five Rivers, but she didn't offer any insight as to what natural conditions could cause a breach of these thresholds, the frequency of such natural conditions to potentially breach the thresholds, the effects of these permutations in the context of a cumulative assessment and how easy it is to distinguish between natural permutations or effects from irrigation.

- 151 The most recent position put out by the UWAG group of applicants is that although they support the monitoring of nodes, they do not support compliance at the nodes.
- 152 MWRL is clearly not an applicant in its own right, and it is also not clear the extent to which comments made by MWRL witnesses when presenting evidence on behalf of individual applicants are also giving that evidence on behalf of MWRL. It therefore appears that unless individual applicants explicitly and without limitation adopt the evidence and submissions put forward by MWRL, the Panel will be faced with reconciling what appears to a divergent approach to nutrient management among applicants.
- 153 This obviously adds a degree of complexity to the hearing process and a great deal of discomfort and uncertainty for submitters.

**Specific conditions**

- 154 The specific conditions (or issues) that will be discussed under this heading have already been described above.
- 155 However, prior to embarking a discussion of the specifics, it is appropriate to briefly recap on the function and jurisdiction to impose conditions under the Act. In this respect the Panel is likely to be familiar with the *Newbury* case which provides that the power to impose conditions on a resource consent is not unlimited. To be valid at law, a condition must:<sup>21</sup>
- 155.1 be for a resource management purpose, not for an ulterior one;
- 155.2 fairly and reasonably relate to the development authorised by the consent to which the condition is attached; and
- 155.3 Not be so unreasonable that a reasonable planning authority, duly appreciating its statutory duties, could not have approved it.

**Requirement for encumbrances**

- 156 I understand that Commissioner Rogers has queried the validity of proffered common conditions 5 and 6 which, as set out in **Mr Kyle's** evidence currently provide that:
5. Water for irrigation shall only be used on or applied to land that is subject to a memorandum of encumbrance that

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<sup>21</sup> *Newbury DC v Secretary of State for the Environment; Newbury DC v International Synthetic Rubber Co Ltd* [1981] AC 578; [1980] 1 All ER 731 (HL). The above summary was approved and applied in *Coote v Marlborough District Council* (W096/94 (PT)).

complies with the requirements of the agreement entitled "Agreement in Relation to the Allocation of Water for Irrigation" between Meridian Energy Limited and the Mackenzie Irrigation Company Limited dated the 31st of October 2006. *Clause 14.3*

6. The consent holder shall, six months prior to this consent being exercised, provide to the Canterbury Regional Council a certificate from the Consent Holder's solicitor certifying that the memorandum of encumbrance provided for in Condition (5) is registered on the computer registers for the land shown on Plan x, and any other evidence of registration as the Canterbury Regional Council may require (if any). *Clause 14.3*
- 157 This is a condition that has been developed via the MIC/Meridian agreement and which is being proffered by the MIC applicants and is precondition of Meridian's derogation approval.
- 158 In considering effects of an activity on the existing environment the consent authority is at liberty to including conditions designed to protect existing users. An example of this is in the NBTC interim decision where there are a number of conditions to ensure the protection of the allocation of water to existing users. It is appropriate for the mechanism of conditions to be used as well as contractual agreement.
- 159 In the special case of the Upper Waitaki the consent authority has to go further and ensure that the consent holders who farm part of the exiting environment agree with the conditions to protect them.
- 160 The MIC agreement is just a more sophisticated articulation of the terms on which the existing consent holder has protected its rights as part of the existing environment. The condition is a short hand way of ensuring that the consent authority is satisfied that Meridian's derogation approval remains on foot and that an aspect of the existing environment is adequately protected by conditions of consent.
- Tranching***
- 161 As will be set out in the evidence of **Ms Moss**, the MIC/Meridian agreement provides that the volume to be made available for use in the catchment is also to be tranced over time to minimise the impact on Meridian.
- 162 This has again been reflected in the common conditions of consent, (as per the *Augier*<sup>22</sup> principle) and is a function of the derogation approvals provided by Meridian. In short, the applicant group has

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<sup>22</sup> *Augier v Secretary of State for the Environment* (1978) 38 P & CR 219 (QBD)

only been given approval from Meridian for 'incremental access to the resource'. Full access will only be available after 30 April 2014 when the tranching arrangements expire and the full 150 million m<sup>3</sup> is potentially available for allocation.

***Turning the tap off***

163 The issue of whether the Panel has jurisdiction to both 'turn the tap off' and to 'turn the tap down' is an important one for this hearing.

164 The Panel will hear from both **Mr Gimblett** and **Mr Potts** who are recommending conditions that carry a volumetric penalty should the relevant nutrient thresholds be exceeded (a concept proposed by Mr Kyle for Southdown Holdings and Five Rivers). The need for such an approach is in my submission mandated given that:

164.1 the planning regime for the Upper Waitaki Catchment recognises that the Mackenzie Basin is particularly vulnerable to irrigation and other land use activities;

164.2 the lag times may potentially be long, meaning that the total effect at any one node may not actually be experienced for some time;

164.3 there is a clear resource management purpose served in reducing abstraction to protect the environment should it appear thresholds be exceeded indicating that problems might occur; and

164.4 even if the individual farmer (in the case of node compliance) appears to be complying with their own FEMP, as has been discussed the simple fact of the matter is that they will be taking up much of the existing 'buffer' in the system through their own farming activities, meaning the response times and potential for adverse effects is likely to be relatively short; and

164.5 without any demarcation between applicants under a 'joint-priority' approach, the only option is to similarly make all applicants share any required mitigation response or "penalty" on similar joint basis. It also appears (although this is unclear in the UWAG case), that all applicants are proposing to mitigate the full extent of any breach even if it has been contributed to by existing users.

165 It is however acknowledged on the basis of *Sampson v Waikato Regional Council*<sup>23</sup> that in some circumstances to impose a condition

<sup>23</sup> A178/02, (EC). The case is authority for the proposition that an applicant for planning permission who gives an undertaking to a planning authority which is relied upon in granting the permission, is estopped from later asserting that

requiring an applicant to take measures beyond what is required to mitigate effects caused by an activity would be unreasonable in terms of *Newbury* (above).

- 166 This does require further consideration in the situation where applicants are proposing to share the burden of managing cumulative effects and, at least in the case of MWRL, share the burden of causing any breaches which have been contributed to by existing users. However, with the existing buffer being 'consumed' by the current applicants and a clear environmental link between the operation of all individual consents and wider cumulative effects, it is my submission that there should accordingly be no difficulty in recognising this as an exception to *Sampson* or otherwise one whereby the imposition of conditions potentially subject to the behaviour of other users (both existing and new) is appropriate.

***Adaptive management***

- 167 Although I have elected to discuss this under the wider heading of '*Specific conditions*', the reality is that adaptive management is inherent not only in a number of conditions being proposed by MWRL, but also the wider MWRL approach to the assessment of effects.
- 168 In this context the key issue under any 'adaptive management approach' is the extent to which an applicant can forego fully comprehensive assessments on the basis of leaving any matters of uncertainty to the adaptive management approach – or to put this another way, how certain does the Panel need to be prior to the grant of consent and how much reliance can be placed on the provision of adaptive controls in the consent itself?.
- 169 As the Panel will be aware, adaptive management is an extension of the precautionary approach inherent in the RMA. It is a policy response to possible adverse changes in the future environment and a means of managing environmental risk. And it is accepted that adaptive management is increasingly being used as a resource management tool in appropriate situations where there is the possibility of unanticipated adverse effects.
- 170 It is also accepted that when dealing with a complex ecological system like the Upper Waitaki Catchment, it is difficult to predict all outcomes with absolute certainty. But importantly in my submission this does not allow applicants to fail to adequately undertake the baseline assessments that would ordinarily be required to accommodate the grant of consent.

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there was no power to grant the permission subject to a condition based on the undertaking.

- 171 By way of example, a useful definition of “adaptive management” is found in *Golden Bay Marine Farmers v Tasman District Council* where the Environment Court noted:<sup>24</sup>

Adaptive Management: an experimental approach to management, or “structured by doing”. It is based on developing dynamic models at an attempt to make predictions or hypothesis about the impacts of alternative management policies. Management learning then proceeds by systematic testing of these models, rather than by random trial and error. **Adaptive management is most useful when large complex ecological systems are being managed and management decisions cannot wait for final research results.** [emphasis added]

- 172 Similarly, in *Golden Bay Marine Farmers v Tasman District Council*<sup>25</sup> the mussel industry had put forward an aquaculture plan chapter embodying the precautionary approach through the use of adaptive management techniques that:

172.1 addressed the risk of future significant adverse effects from aquaculture which were not predictable or expected; and

172.2 that were applied because of uncertainty and absence of information at the time the plan was prepared.

- 173 The Court favoured this approach because it embodied “*the elements of adaptive management through management plans, monitoring, reviews, financial contributions, environmental audits, environmental standards and community participation*”.<sup>26</sup> It went on to note the following important benchmarks of adaptive management:<sup>27</sup>

173.1 the need for disclosure of any discoveries about the ecosystem or changing information in a transparent way, so that the relevant consent authority can ensure steps are taken before significant adverse effects eventuate; and

173.2 a co-regulatory approach between the industry and consent authorities. The Court anticipated that the management plans, condition review provisions, monitoring programmes

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<sup>24</sup> *Golden Bay Marine Farmers v Tasman District Council* (EnvC, W019/03, 3 December 2004) at para [405].

<sup>25</sup> *Golden Bay Marine Farmers v Tasman District Council* (EnvC, W019/03, 3 December 2004) at para [396].

<sup>26</sup> *Golden Bay Marine Farmers v Tasman District Council* (EnvC, W019/03, 3 December 2004) at para [397].

<sup>27</sup> *Golden Bay Marine Farmers v Tasman District Council* (EnvC, W019/03, 3 December 2004) at paras [407]-[408].

and staged development would all be controlled by enforceable resource consent conditions.

- 174 Accordingly, adaptive management requires monitoring, research and review through consent conditions. Once monitoring has occurred, the assessment of monitoring results will lead to "adapted" development and operation to ensure any effects of the existing activity are reduced to acceptable levels. Review conditions or "flexibility" in the management plans are then a mechanism for providing expansion, or the cut-back required should the research suggest it necessary.<sup>28</sup>
- 175 However, it is my submission that MWRL and the wider applicant case has failed to complete the necessary background research and assessments. This is not a case where there has been an inability to provide "for final research results". There has clearly been a significant delay in bringing these matters and ample time has therefore been available within which proper monitoring, research and analysis could have occurred.
- 176 In my submission that Panel can also not be confident, were adaptive management regime being imposed, that it would only be in place to address 'unanticipated' or 'unlikely' effects of the proposals. At present there is simply too much uncertainty to accommodate the initial grant.
- 177 On a slightly different level, **Mr Gimblett** has also raised issue with the uncertainties around the ability to take a successful enforcement action (or even review) against continued breach of conditions when those conditions embody an adaptive management and cyclical remedial action approach. This is another matter that needs to be considered by the Panel.

***Future subdivision***

- 178 As set out in the evidence of **Mr Kyle**, the agreed conditions currently provide that:
21. The FEMP shall apply to [farm property] and to any subsequent landholdings resulting from the subdivision of that property.
- 179 **Ms Robson** has also confirmed that in many instances (especially where irrigation will not be occurring on all of the property), it will be necessary to manage nutrients and effects on an 'all of property basis'. It is therefore apparent that you could end up in the situation where a subdivided dry-land block was still being relied

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<sup>28</sup> *Clifford Bay Marine Farms Limited v Marlborough District Council* (EnvC, C131/03, 24 September 2003) at para [158].

upon for the mitigation of effects on neighbouring property. This does not seem to be realistic and raises issues of enforceability.

### **MERIDIAN WITNESSES**

- 180 Meridian will be calling evidence from:
- 180.1 **Ms Raewyn Moss**, Meridian Energy Limited on the company itself, historical water rights and third party issues;
  - 180.2 **Mr Richard Turner**, Meridian Energy Limited on Meridian's position on water quality;
  - 180.3 **Mr Rob Greenaway**, Rob Greenaway and Associates on recreation and amenity;
  - 180.4 **Mr Rob Potts**, CPG New Zealand Limited (2 briefs) on:
    - (i) water allocation; and
    - (ii) nutrients and farm management
  - 180.5 **Dr George Griffiths**, NIWA, on hydrology;
  - 180.6 **Mr Peter Callander**, Pattle Delamore Partners Limited on groundwater;
  - 180.7 **Dr Ton Snelder**, NIWA on river ecology;
  - 180.8 **Ms Donna Sutherland**, NIWA on lake and canal ecology;
  - 180.9 **Mr Simon Harris**, Harris Consulting on economics; and
  - 180.10 **Dr Matt Ryan**, Environmental Management Group Limited, on nutrients and OVERSEER; and
  - 180.11 **Mr Ken Gimblett**, Boffa Miskell on planning
- 181 It is also noted that **Ms Sutherland** was a contributing author to the NIWA Report. Meridian has previously advised the Panel of the importance of the Panel being given both the opportunity to receive and consider the content of the Report, and on this basis the Panel will hear from **Dr Spigel** on the modelling and analyses undertaken by NIWA.
- 182 Although Panel is naturally free to inquire of **Ms Sutherland's** wider work in Waitaki, we advise that for present purposes **Ms**

**Sutherland** has been engaged by Meridian for the purposes set out in her evidence. I have not requested that she revise or refresh herself as to the content of the NIWA Report. **Dr Spiegel** is of course separately available to the Panel.

### **CONCLUSION**

183 In summary despite the evidence it has heard, and taking into account the advice it has received from its own experts. Meridian remains at a a level of discomfort that it is not satisfied as to the level of assessment carried out by MWRL and the applicants and considers that more work is required to deal with the concerns raised in these submissions and the evidence.

Dated: 30 November 2009

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JM Appleyard/BG Williams  
Counsel for Meridian Energy Limited