

BEFORE THE CANTERBURY REGIONAL COUNCIL

TABLED AT HEARING
Date 23/11/2009

IN THE MATTER OF The Resource Management Act 1991

AND

IN THE MATTER OF resource consent applications by Simons Hill Station Limited, Simons Pass Station Limited, Pukaki Irrigation Company Limited, Rosehip Orchards New Zealand Limited and High Country Rosehip Orchards Limited to take and use water in the Upper Waitaki Catchment

**OPENING SUBMISSIONS ON BEHALF OF SIMONS HILL STATION LIMITED,
SIMONS PASS STATION LIMITED, PUKAKI IRRIGATION COMPANY LIMITED,
ROSEHIP ORCHARDS NEW ZEALAND LIMITED, AND HIGH COUNTRY ROSEHIP
ORCHARDS LIMITED**

DATED THIS 23RD DAY OF NOVEMBER 2009

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MAY IT PLEASE THE COMMISSIONERS:

- 1 I represent five applicants for resource consents in the Upper Waitaki Basin. The applicants are divided into two groups.
- 2 The first group ("Simons Hill/Simons Pass") are;
 - (a) Simons Hill Station Limited;
 - (b) Simons Pass Station Limited; and
 - (c) Pukaki Irrigation Company Limited.
- 3 This group of applicants propose an irrigation scheme that involves a delivery system from either the Tekapo Canal (piped), or Lake Pukaki (pipe and race), or the Pukaki Canal (pipe and race). The applicant for the land use consents associated with this infrastructure is Pukaki Irrigation Company Limited ("PIC"). PIC is not an applicant for consents to take or use water.
- 4 The PIC infrastructure will deliver water both to Simons Hill and Simons Pass Stations. The two properties occupy land on the east and west sides of the Mary Range. A significant area of irrigation is proposed on the west side of the Mary Range (Pukaki Flats) and smaller areas on the east side of both properties are also to be irrigated.
- 5 The farming propositions proposed for the eastern portions of both properties differ significantly for the Pukaki Flats' options due to topography and scale.
- 6 The PIC infrastructure can also be utilised by two further applicants, Classic Properties Limited, the owner of Maryburn Station and Glentanner Station Limited, the owner of Catherine Field, land north west of Simons Pass Station and south west of Lake Pukaki. These two applicants have made separate applications to take water via the PIC infrastructure and are part of the UWAG Group.
- 7 The second group (together referred to as the "Rosehip applications") are:
 - (a) Rosehip Orchards New Zealand Limited; and
 - (b) High Country Rosehip Orchards Limited.
- 8 Rosehip Orchards and High Country Rosehip Orchards are located across the dry Pukaki River from Pukaki Flats. The separate proposals are to irrigate areas of land between the Pukaki and Ohau Rivers. Two separate takes are proposed

from the Ohau Canal. Water is conveyed via pipelines under the Ohau River to irrigate areas of barren land on both properties via pivot irrigators.

Background

Simons Hill Station, Simons Pass Station and Pukaki Flats

- 9 Simons Hill Station is approximately 6,432 hectares. Simons Pass Station is approximately 6,282 hectares. The Pukaki Flats occupy a large portion, more than half, of both properties. The Flats are completely unused in the case of Simons Hill Station, where the land has not been grazed for nearly two decades. On Simons Pass Station the Flats are grazed at an extremely low stocking rate.
- 10 The productive portions of each farm must support the unproductive portions. Not only are the Pukaki Flats unproductive, they are a massive drain on the resources of each Station. Constant inputs are required in order to control rabbits, wilding pines, and other pests and weeds – in addition to the fixed costs of land ownership whether in freehold or subject to pastoral lease.
- 11 Even with the required inputs of resources, the Pukaki Flats are rapidly deteriorating. Dr Peter Espie will give evidence of the ecology of the Pukaki Flats tussock grassland. Surveys have been undertaken in 1960, 1983, and 2000. These show a marked and continuing deterioration in tussock cover, and a rapid increase in the exposure of bare soil and *Hieracium*. Much of the Flats are now bare ground.
- 12 Site specific soil erosion surveys undertaken on the Pukaki Flats show that between 22,000 and 44,000 tons of topsoil is being lost per year from the potentially irrigatable areas of the Pukaki Flats on Simons Hill and Simons Pass Stations. The current ecological situation on the Pukaki Flats is not static, it is rapidly deteriorating. It presents a significant land management issue and the land is not currently being managed in a sustainable way.
- 13 Denis Fastier will explain how the owners of Simons Hill and Simons Pass Stations have been driven to find a solution to the land management issues on their properties for many years. Denis Fastier, in particular, has led the campaign which led to the reinstatement of the irrigation rights afforded to Mackenzie farmers in 1969 when large parts of the Upper Waitaki power infrastructure were established.
- 14 The work undertaken by Denis Fastier (from Simons Hill) and Murray Valentine (the owner of Simons Pass) has involved an extensive campaign (including a petition on behalf of the Upper Waitaki community presented to Parliament),

extensive litigation, extensive negotiations with Meridian, submissions before the Select Committee on the content of the Resource Management (Waitaki Catchment) Act 2004 and extensive involvement in the Water Allocation Board process. These parties, together with the owners of Godley Peaks Station, formed the Mackenzie Irrigation Company Limited ("MIC") which concluded an agreement providing for the allocation of 150,000,000 m³ of water for irrigation from Meridian and the provision of access to Meridian infrastructure (such as canals) in order to access this water.

- 15 As part of the negotiated position reached with Meridian on the allocation of water for irrigation within the Upper Waitaki, MIC and Meridian put forward a joint position to the Water Allocation Board on the appropriate quantity of water to be allocated for agricultural and horticultural activities, and the mechanism by which it should be allocated.
- 16 Ultimately the joint position put forward to the Water Allocation Board was adopted as to the volume of the allocation but not as to the proposed mechanism. The Board said that it was making an allocation of water to agricultural and horticultural activities in the Plan that would allow effect to be given to the substance of the agreement between MIC and Meridian.¹ That is what the allocation of 275,000,000 m² of water to agricultural and horticultural activities in Table 5 of the Water Allocation Plan represents.²
- 17 Following the Water Allocation Board decision there was a joint appeal by MIC and Meridian seeking to address the mechanism by which allocation could occur. There was an agreed resolution.
- 18 As a condition precedent to the MIC-MEL agreement, MIC was required to issue "property shares" to each farm in the Upper Waitaki (aside from lifestyle properties) and to achieve a greater than 90% uptake of these property shares. This mechanism represented the process by which farmers (whether applicants or not) agreed to the negotiated arrangements with Meridian. The 90% threshold was achieved and the agreement became unconditional.
- 19 The allocation of water to irrigation above the Waitaki Dam in the Water Allocation Plan and the derogation approvals that you have in front of you from each applicant seeking consent in this process of these hearings, is the result of this process. Without the derogation approvals – as already noted by this Panel

¹ Waitaki Catchment Water Allocation Regional Plan, annex 1, decision and principle reasons for adopting Plan provisions, para 206.

² The 275,000,000 m³ was calculated by adding the negotiated 150,000,000 m³ to an assessment of the existing allocation (123,000,000 m³).

on several occasions in its directions – there would be no jurisdiction to consider any of the applications.

- 20 MIC has issued “water shares” representing an entitlement to derogation approval for Meridian pursuant to the agreement and this has been done on a cost recovery basis.
- 21 Following the MIC-MEL agreement becoming unconditional, the Simons Hill and Simons Pass Stations interests (with others) sought to find a common way forward in order to address the potential water quality effects associated with irrigation development by way of the MWRL science.
- 22 None of the process has been easy. Denis Fastier and Murray Valentine and their families have invested huge personal resources in terms of time and dedication as well as money on this project over many years.
- 23 It is noteworthy, in my submission, that the issue of the availability of water for irrigation (subject to the terms of the Water Allocation Plan), is not a significant issue before you. In many other contexts, such as groundwater on the Canterbury Plains and surface water allocation in many catchments, the availability of water is the principal concern. That this is not the case in the present hearing is in many ways the result of the desire on the part of the Simons Hill and Simons Pass Stations’ applicants I represent to find a solution to the land management issues facing the Pukaki Flats.

Rosehip Orchards New Zealand Limited and High Country Rosehip Orchards Limited

- 24 These two applicants are the owners of parts of the Omahau Orchard Estate property. John Lyons is a director of both companies and has been the driving force behind a project to develop a sweet briar plantation and production facility for the production of rose hip products. Rose-hip oil is used in the cosmetic industry.
- 25 Rosehip Orchards NZ Limited is a joint venture involving John Lyons’ other investors and Crop & Food Research (now “Plant & Food Research”). Crop & Food have been carrying out research into the antioxidant activity and health benefits of the rose-hip berry. Rose-hips grow wild within the Mackenzie Basin and high country generally. The ability to productively utilise the Omahau Orchard Estate land without irrigation is extremely limited indeed. This is well demonstrated by the difficulties there have been in establishing the Rosehip

Orchards without irrigation. The project has been put to one side while the focus is on returning the land to a productive state.

Consultation with submitters

- 26 Consistent with the approach that the Simons Hill/Simons Pass applicants have always adopted, they have sought to engage stakeholders with an interest in the irrigation project, and to constructively seek to find solutions to concerns. The Rosehip consent applicants have done likewise. There has been a process of extensive engagement, negotiation and consultation with submitters and with Ecan. Mr Glasson will outline this in his evidence. The applications you have before you today are the result of a consultative process and these discussions are ongoing.
- 27 In the case of Ngāi Tahu, the discussions were given particular emphasis in the context of the Cultural Impact Assessment ("CIA") completed by Tipa & Associates. One of the issues identified as a priority for Ngāi Tahu in the Tekapo/Pukaki River area and Maryburn Stream Catchments (which is the area covered by Simons Hill and Simons Pass Stations as well as Rosehips) is the rehabilitation of lands and waters.
- 28 The CIA states that Ngāi Tahu is particularly concerned about the degraded state of those lands. There has been an extensive process of engagement as a result. One outcome of the process has been that the applicants have modified the land use proposals for Pukaki Flats in a major way. Whereas it was formerly proposed to promote a dairying (year round) land use option, this is no longer being pursued. This is so despite the fact that it could have been accommodated within the thresholds proposed in the WQS. A much more conservative position is now taken and the only dairying option being pursued is a "winter off" system.
- 29 Consultations with other submitters and parties have also resulted in a number of very significant changes. An example is the agreement to surrender the consents for the existing Maryburn water permits held by Simons Pass and Simons Hill Stations. These permits take water from the Maryburn Stream to irrigate parts of the eastern portions of Simons Hill and Simons Pass Stations as well as parts of Maryburn Station.³ This assumes that the conditions of the proposed water permits when granted are acceptable.
- 30 The surrendering of these consents will be significant in moving the Maryburn Stream back towards an unmodified flow regime. Extensive consultation has

³ It is understood that Maryburn Station Limited (which is part of UWAG is not intending to surrender its Maryburn Irrigation Scheme Consents).

also been undertaken with Fish & Game resulting in the drafting of a formal side agreement addressing issues of intake structures, Canada Goose control, Alder control, and the relinquishing of the Maryburn water permits.

- 31 There have also been significant changes as a result of discussions with the Department of Conservation ("DoC") and Ecan as Mr Glasson will describe.

Land use options

- 32 The intention is to present a comprehensive range of farm use options for which consent is sought. The applicants are not committed to any particular course but wish to maintain flexibility in order to develop a farm system that best suits the land and works from an economic and capital perspective. The nutrient discharges vary depending on the land use option, and consent is sought for the entire suite of options.
- 33 The OVERSEER outputs provided to Ecan and other parties for audit and review are the outputs for the proposed land use with the highest nutrient losses. For Simons Hill/Simons Pass this is dairying (wintering off). For Rosehips Orchards it is a lucerne/cropping/forage crop option, and for High Country Rosehips it is an intensive sheep and beef option.
- 34 One of the consequences of this approach is that these applications are not presented on a take it or leave it basis. The applicants' case is, however, that the land use options put forward can all be easily accommodated within the nutrient thresholds relevant to each property.
- 35 The applicants have engaged Graeme Ogle to develop a detailed model of each of the proposed farming system options. The land use options are:
- (a) A dairy system – with cows wintered off. This is only proposed for the Pukaki Flats portion of both Simons Pass and Simons Hill Stations.
 - (b) An integrated high country system – proposed for the remainder of the Simons Hill Station farming operation (excluding Pukaki Flats). There is only one option presented for this party of the Simons Hill Station.
 - (c) Lamb finishing, bull finishing and grazing option – as an alternative for the Pukaki Flats portion of both Simons Pass and Simons Hill Stations, and the remainder of the proposed irrigation on Simons Pass Station.
 - (d) Intensive lamb finishing, bull finishing and grazing option – as an alternative for the Pukaki Flats portion of both Simons Pass and Simons

Hill Stations, and the remainder of the proposed irrigation on Simons Pass Station.

- (e) A lamb finishing, bull finishing and dairy grazing option – for High Country Rosehip Orchards and Rosehip Orchards.
- (f) An intensive lamb finishing, bull finishing and dairy grazing option for High Country Rosehip Orchards and Rosehip Orchards.
- (g) A bull finishing option for Rosehip Orchards.

36 These are described in detail in the evidence of Graeme Ogle and Val Snow.

The Applicants' approach to thresholds

37 The applicants have attempted to adopt a very conservative approach wherever possible to the development of their farm use options and the assessment of them as against the relevant thresholds. This is consistent with the applicants' overall approach to the proposal.

38 This conservative approach is exemplified as follows:

- (a) The applicants have adopted the Highly Developed Scenario from the WQS and carried out the modelling on this basis. None of the applicants have relied on the Developed Scenario as a comparison to the WQS thresholds. No farm proposition is put forward which does not comply with the WQS thresholds. It is understood that the caucusing discussions between the experts have resulted in an agreement that the HD scenario is most unlikely ever to occur and is overly conservative with respect to the level of nutrient discharges.⁴
- (b) The Pukaki Flats portion of both the Simons Hill and Simons Pass Stations were originally modelled by GHD on the basis of a full dairying option (wintering on). As indicated, after discussions with other parties, in particular Ngāi Tahu, this option has been deleted. The applicants now wish to gain consent for an option involving leaving the land clear of animals in the winter time. This has created a significant surplus between the total threshold for the Pukaki groundwater and the modelled nutrient outputs. On Simons Hill and Simons Pass Stations there is a significant excess of modelled outputs against the proposed allocations in the WQS. The changes on Simons Hill and Simons Pass Stations

⁴ It is understood there has been wide agreement between the experts involved in the OVERSEER caucusing.

have resulted in a further significant reduction of the proposed discharges.

- (c) The relevant thresholds to Simons Hill and Simons Pass Stations (Pukaki Flats), and Rosehip Orchards relate to the Pukaki groundwater zone. This is a very large zone extending from Lake Benmore up the side of Lake Pukaki. The threshold is based on a groundwater concentration threshold of 1 mg/l of nitrate-N obtained from Policy WQL9(b)(iii). As discussed below this threshold is a policy based threshold set in order to protect environmental values but set at a time when there was no extensive region-wide survey available. The threshold is extraordinarily conservative by comparison with the drinking water standard (11.3 mg/l of nitrate N). In other parts of the catchment this policy threshold of 1 mg/l is already not being complied with.
- (d) The WQS proceeds on the basis that the irrigation proposed on Simons Hill and Simons Pass Stations does not enter the Tekapo River in the reach above the Tekapo River node. Simons Hill and Simons Pass Stations have constructed onsite piezometers and carried out extensive groundwater monitoring and river gauging in order to, independently of the WQS work, determine the extent of the contribution from the Pukaki Flats to the Lower Tekapo River and the overall groundwater and surface water regime. There is significantly more data available on the groundwater situation than for any other property in the basin. Ian McIndoe's conclusion from this material is the effect on irrigation on the Pukaki Flats on the surface water quality of the Lower Tekapo, whether at the Tekapo node or the Tekapo at Benmore node, is less than minor.⁵
- (e) If the groundwater threshold is put to one side, the next most restrictive threshold in the WQS for the Pukaki Flats and Rosehip Orchards is the Tekapo at Benmore node. This is based on the groundwater work undertaken by GHD. Subsequent work undertaken by Simons Hill and Simons Pass Stations has shown that there is no significant contribution of groundwater to this node⁶ either. The only remaining receiving environment relevant to the Pukaki Flats and Rosehip Orchards is the Haldon Arm. As Dr Robson points out, if the Haldon Arm of Lake Benmore was taken as the limiting threshold for the Pukaki Flats and Rosehip Orchards, the applicants per hectare allocations would increase by in the order of 50 kgs of nitrate per hectare.⁷

⁵ Ian McIndoe at para 148.

⁶ Evidence of Ian McIndoe at Appendix D.

⁷ Evidence of Melissa Robson at para 70.

- (f) For High Country Rosehip Orchards the situation is slightly different. While the property also falls within the Pukaki groundwater zone, its land use options are limited by the property's connection to the Twizel River. For this reason the land use options for the property are limited and the proposed land uses recognise this. The advice arising out of the WQS regarding the connection with the Twizel River has been provided quite recently and has meant that the potential land use options for this property are very limited. This may require further investigation in the future.

Onsite investigations

- 39 Simons Hill and Simons Pass Stations have commissioned extensive onsite investigations in order to clearly understand the effects of the applications. Mr Glasson outlines these. In addition to the groundwater and surface water work, a topographical survey of the northern areas of Simons Pass on the Pukaki Flats has been undertaken to assist with identifying the visual effects of the proposed irrigation and accurately identify ecologically sensitive areas.
- 40 A comprehensive terrestrial ecology survey has been undertaken. Concept designs are completed for all water take structures and for the State Highway crossing and a comprehensive farm environmental management plan prepared.

Assimilative capacity

- 41 The WQS contains a suggested allocation mechanism whereby allocations are calculated on a per hectare basis, given the proposed farming activity.
- 42 As I understand Mr Chapman's argument presented for UWAG, his clients consider an allocation mechanism which requires all farmers to mitigate to a similar level as unfair. This position is connected with an argument that larger applicants are the "cause" of the requirement for smaller applicants to adopt farm practices aimed at minimising nutrient losses.
- 43 The concept of fairness is never one that has featured significantly in the Resource Management Act. There are cases⁸, where the unfairness created by a change in planning approach has been taken into account in the context of section 104(1)(c)⁹ and been relevant in the decision making process.

⁸ *Chen v Christchurch City Council*, 26/9/97, ENC Christchurch, Decision C102/97, at pg 18.

⁹ **104 Consideration of applications**
 (1) When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to -
 (a) any actual and potential effects on the environment of allowing the activity; and
 (b) any relevant provisions of -
 (i) a national environmental standard:

44 Allocation decisions, however, have never been made on this basis. Under the current case law, the allocation of a scarce resource takes place on a first in/first served basis¹⁰.

45 It is easy to see why a Consent Authority cannot engage in a process of picking between applicants based on notions of “fairness”. Fairness is a subjective notion. As previously remarked, very significant work has been carried out by Denis Fastier, Murray Valentine and others on a without charge basis to put in place the MIC arrangements with Meridian and the MWRL water quality work. The opportunity afforded by that effort to have applications considered by this Hearing Committee is something for which all applicants in the Basin have potentially benefited.

46 As a further observation, the current state of production for each of the applicants that I represent is low by comparison with other dry land farming operations in the Upper Waitaki. While each of the applicants proposes to irrigate a larger percentage area of their farms by comparison with other smaller (UWAG) applicants, the irrigation and associated discharges will fall within the range of Upper Waitaki farming enterprises modelled in the WQS, on a *whole farm basis*.

47 The total proposed and modelled *whole farm discharges* for the *HD scenario* are:¹¹

	Nitrate-N	P
Simons Pass Station	62,638 kgs	1,679 kgs
Simons Hill Station	48,625 kgs	1,948 kgs

48 Some of the higher whole farm losses for the UWAG Group on a *developed scenario* are of similar magnitude.¹²

49 These figures are not strictly comparable, the Simons Hill/Simons Pass figures adopt the highly developed scenario whereas the other applicant examples are only for the developed scenario. The comparison is taken from the modelled OVERSEER losses undertaken as part of this hearing process. In addition, there are also other farms with significant old-style irrigation and large dry land farming operations which have not been modelled.

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- (ii) other regulations;
 - (iii) a national policy statement;
 - (iv) a New Zealand coastal policy statement;
 - (v) a regional policy statement or proposed regional policy statement;
 - (vi) a plan or proposed plan; and
 - (c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.

¹⁰ *Aoraki Water Trust v Meridian Energy Ltd* [2005] 2 NZLR 268.

¹¹ Figures taken from the evidence of Dr Robson.

¹² Table of UWAG OVERSEER outputs presented by Mr Chapman in opening submissions.

- 50 In any event, the issue in the current context is moot. The principal receiving environment for Simons Hill and Simons Pass Stations on the Pukaki Flats and Rosehip Orchards and High Country Rosehip Orchards is the Pukaki groundwater resource. On the very conservative basis adopted, there are significant surpluses of assimilative capacity for the proposed farming systems.
- 51 The sub-catchment is also the subject of a partial sub-catchment agreement between the parties I represent within the Pukaki groundwater zone. The agreement provides for changes to the proposed allocations from the WQS to accommodate the farming systems proposed by Rosehip Orchards, High Country Rosehip Orchards and still provides a very significant excessive assimilative capacity. There is only one other small applicant within this sub-catchment, Glentanner Station Limited.
- 52 For Mary Range farming and Simons Hill Station (east of Mary Range), the receiving environment is the Maryburn Stream. This catchment has not been the subject of a sub-catchment agreement but all applicants can be accommodated within the proposed thresholds provided in the WQS. Discussions are continuing with the applicants involved in this sub-catchment with a view to also reaching agreement.

The evidence

- 53 The case of the applicants will proceed as follows:
- (a) **Peter Glasson**, Project Manager for all five applicants, will outline the projects in general terms and detail the consultation undertaken with submitters and stakeholders.
 - (b) **Denis Fastier** will present evidence on the history of his ownership and farming of Simons Hill Station and the management issues on the property that he faces. He is a neighbour of Simons Pass Station and will also address issues at Simons Pass. He addresses existing and proposed farming systems.
 - (c) **Murray Valentine's** evidence covers involvement with the projects, some of the history of the MIC, the Pukaki Irrigation proposal and Mackenzie Water Research.
 - (d) **John Lyons** will present evidence relating to High Country Rosehip Orchards and Rosehip Orchards, relating particularly to the Rosehip project and alternatives now being pursued.

- (e) **Dr Peter Espie**, Research Scientist, specialising in the terrestrial ecology and the management of the South Island high country, addresses the terrestrial ecology issues related to Simons Hill and Simons Pass Stations, and the current state of the Pukaki Flats.
- (f) **David Painter**, Water Resources Engineer, will address wind erosion effects on the Pukaki Flats and the potential to reduce these impacts through irrigation.
- (g) **Titus Smith** will address the geotechnical onsite investigations for Pukaki Irrigation Company Limited undertaken to date, the design features of the intake structures, proposed pipelines and canals, and construction management and mitigation of construction effects.
- (h) **Graeme Ogle**, Farm Management Consultant, will cover the farming system models developed for each management unit within the properties and the FARMAX model used.
- (i) **Ian McIndoe**, Water Engineer, will cover the irrigation aspects of the proposal, and reasonable and efficient use. The significant onsite investigations that have been undertaken; the relevant surface water and groundwater regime; and the nutrient discharge pathway.
- (j) **Val Snow** will cover OVERSEER modelling, and the OVERSEER nutrient discharge outputs (and ASPIM modelling results in so far as Lucerne is concerned).
- (k) **Melissa Robson**, Senior Environmental Consultant, Ryder Consulting Limited, will present evidence on the FEMPs for each property and provide an overview of monitoring.
- (l) **Dr Michael Steven** will cover landscape effects.
- (m) **Greg Ryder** will cover surface water ecology and the effects of nutrient discharges on the receiving environments.
- (n) **Michael Copeland**, Economist and Managing Director of Brown Copeland & Co Limited, deals with the economic aspects of the proposal of the Simons Pass/Simons Hill proposal.
- (o) **John Kyle**, Partner, Mitchell Partnership Limited, provides an assessment of the planning instruments relevant to the applications and will present a proposed suite of resource consent conditions.

54 The applicants have not engaged a witness to address the cultural aspects of the applications. Rather than presenting evidence on cultural issues, the applicants have sought to engage directly with Ngāi Tahu and local rūnanga, and explore proposals to mitigate effects of proposed activities of concern to them, including their role as Kaiitiaki. These discussions are dealt with by Mr Glasson and will no doubt be addressed by Ngāi Tahu directly in their submissions.

Statutory of framework

55 Under section 104 the following matters, it is submitted, are particularly relevant.

- (a) Actual and potential effects of the activity on the environment.
- (b) The Water Allocation Plan.
- (c) The PNRRP.

56 The classification of the activities is dealt with in the evidence of John Kyle. The Rosehip Orchards and High Country Rosehip Orchards applications are discretionary. For Simons Hill and Simons Pass Stations the PIC applications propose three alternative take points: Tekapo Canal; Pukaki Canal; or Lake Pukaki. The preferred option is to take water from the Tekapo Canal and pipe it underground to the Pukaki Flats. The less preferred option is to abstract water from the Pukaki Canal. The least preferred option is to take water directly from Lake Pukaki. The Tekapo Canal Option is discretionary in terms of Table 5 of the Waitaki Catchment Water Allocation Plan. However, the Lake Pukaki option is non-complying because it exceeds the maximum volumetric allowance for Lake Pukaki contained in Table 5.

57 The section 42A report indicates the Council Officer's view that the non-complying status of the Pukaki take infects all of the other proposed activities so all of the applications should be considered as non-complying.¹³

58 However, the three alternative proposals are alternatives and they will not all proceed, and it is submitted each needs to be considered separately from a classification point of view.

59 As such, in addition to the section 104 matters for the Lake Pukaki take, you are required to consider the application is non-complying and to be satisfied that either:

¹³ Para 23 of the section 42A report for Simons Pass Station presumably on the basis that if several related activities are sufficiently connected they should be assessed as a whole and the most stringent category of activities applied as: *Locke v Avon Motor Lodge* [1973] 3 NZTPA and *North Canterbury Gas Ltd v Waimakariri DC*, A417/202.

- (a) The effects of the activity are minor, or
- (b) The activity is not contrary to the objectives and policies of the Plan.¹⁴

60 In my submission, both of these threshold tests are met.

Actual and potential effects

61 The definition of "effect" under section 3 of the Act is as follows:

"3 Meaning of "effect"

*In this Act, unless the context otherwise requires, the term **effect** includes -*

- (a) *Any positive or adverse effect; and*
- (b) *Any temporary or permanent effect; and*
- (c) *Any past, present, or future effect; and*
- (d) *Any cumulative effect which arises over time or in combination with other effects -*

regardless of the scale, intensity, duration, or frequency of the effect, and also includes -

- (e) *Any potential effect of high probability; and*
- (f) *Any potential effect of low probability which has a high potential impact."*

62 Both positive and adverse effects are relevant. For these applications:

- (a) There are very significant positive effects which will be identified.
- (b) All potential adverse effects have been carefully identified, investigated, and mitigated if necessary. As a result, the effects of these proposals on the environment are, it is submitted, less than minor.

63 In considering the potential adverse effects of the activity on the environment, it is important to have regard to any mitigation of effects that may be achieved through conditions. Here an extensive array of monitoring is proposed, including

¹⁴ Section 104D(1) of the Act.

a network of lysimeters of a design that would ensure that the monitoring system achieves its purpose in ensuring compliance with consent conditions.¹⁵

- 64 Your enquiry is directed by section 104 towards effects on the *environment*. The RMA defines “*environment*” as follows.

“Environment includes –

- (a) *Ecosystems and their constituent parts, including people and communities; and*
- (b) *All natural and physical resources; and*
- (c) *Amenity values; and*
- (d) *The social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) of this definition or which are affected by those matters.”*

- 65 The meaning “*environment*” has been the subject of numerous decisions. The case law indicates that the concept of environment is dynamic. It includes the potential future environment as modified by the implementation of resource consents which have been granted and by non-fanciful (permitted activities), and by *changes that will inevitably occur*.¹⁶
- 66 For these properties, the current environment is not static. It is in significant decline as a result of pest and weed invasion, particularly *Hieracium*, wilding pines and rabbits, and significant soil erosion.
- 67 More than 50% of Pukaki Flats is bare ground and the majority of the balance *Hieracium*. Unless there is a significant change in management, there is no reason to suppose that this process will not inevitably continue.

Ecological effects

Terrestrial ecology

- 68 There is a long and detailed biological record for the Pukaki Flats obtained in regular surveys conducted since the 1960s. Dr Espie will give evidence of his involvement in these surveys.

¹⁵

Bethwaite v Christchurch City Council, C085/93 at p4 to 5.

¹⁶

Lower Waitaki Management Society v Canterbury Regional Council, C80/2009.

- 69 Despite the compromised state of Pukaki Flat, there are other areas of Simons Hill and Simons Pass Stations that are of ecological significance and these have been identified, and any disturbance of them avoided.
- 70 There have been ongoing discussions with the DoC and the areas identified by them as of significance have been excluded from the proposal. The following areas have been provided for by removal from the proposed irrigation command area:
- (a) The proposed area of irrigation on the northern side of State Highway 8 on Simons Pass Station has been entirely removed from the irrigation command area.
 - (b) All of the terminal moraine area at the northern end of Simons Pass Station has been excluded.
 - (c) Two further areas on the south side of State Highway 8 with botanical features are to be fenced and excluded from irrigation development.
 - (d) The Pukaki low terraces and scarps are to be excluded.
- 71 For the Rosehip Orchards' properties a terrestrial ecological survey has not been carried out. Both properties occupy very barren locations. The proposed irrigated areas are freehold and disturbance of them by cultivation could occur as a right under the Mackenzie District Plan.

Surface water ecology

- 72 Simons Hill and Simons Pass Stations – Pukaki Flat:
- (a) There are no surface water bodies on or running through Pukaki Flat. The nearest surface water bodies are the (dry) Pukaki River and the Tekapo River, very significant setbacks from both of these have been adopted as part of the proposal.
- 73 Simons Hill and Simons Pass Stations – East of Mary Range:
- (a) On the east side of the Mary Range the limiting receiving environment is the Maryburn Stream. As part of the development of the irrigation proposal, the Simons Hill/Simons Pass applicants intend to surrender their Maryburn water permits but subject to acceptable consent conditions. This, coupled with the proposed fencing to prevent cattle access to the Maryburn, will mitigate potential adverse effects on water quality in the Maryburn.

- (b) Mr Ryder's view is that the establishment of riparian ecosystems would be a considerable improvement over existing conditions in some of the Maryburn Catchment.

74 Construction effects are assessed to be minor of the scheme.

75 Rosehip Orchards New Zealand Limited and High Country Rosehip Orchards Limited:

- (a) Mr Ryder's assessment is that the effects of the takes from the Ohau B Canal would be minor.
- (b) The construction effects of the two canal pipelines have been assessed and can be appropriately mitigated.
- (c) The potential impact of irrigation on water quality can also be mitigated by compliance with the water quality standards in the WQS. For High Country Rosehip Orchards, Mr Ryder has consulted with DoC and as a result has suggested a potential habitat enhancement programme focusing on the removal of aquatic weeds. Discussions with the applicant and DoC concerning these issues are ongoing.

Landscape

76 Dr Michael Steven has made a detailed assessment of the landscape implications of the proposals. He does this in two briefs of evidence; the first of a general nature, the second specific to each site. Key aspects of the assessment are:

- (a) Landscape is not a static phenomenon, it is dynamic and evolutionary. The present day landscape of Mackenzie Basin is a product of profound changes that have occurred over the past 150 years. The dominant contributing landscape elements of the Mackenzie Basin is the lakes and mountains, rather than the flat basin floors where irrigation will occur.
- (b) The overall perception of the Mackenzie Basin as a natural landscape will remain unchanged.
- (c) At a site specific level, Dr Steven does not consider that the change in landscape character occasioned by irrigation will be significant and he does not consider that any of the proposals diminish the naturalness or landscape, significance of the adjacent landscapes.

77 The applicants' proposals have been carefully developed and adjusted in order to address landscape concerns. There has been a detailed process of engagement with the Ecan appointed landscape architect, Mr Chris Glasson. Mr Peter Glasson outlines the consultation and changes that have occurred, but in summary:

- (a) For Simons Hill and Simons Pass Stations:
 - (i) Large setbacks from State Highway 8 have been introduced (except for areas of existing established pasture). The setbacks are a minimum of 600 metres.
 - (ii) A large view corridor at the southern side of State Highway 8 has been excluded from irrigation.
 - (iii) The remainder of Pukaki Flat is either obscured from view from any public vantage point or only viewable at a distance of a number of kilometres.
- (b) For the Rosehip Orchards' properties:
 - (i) The location of irrigation is very remote. A large expanse of irrigation command area previously proposed adjacent to State Highway 8 for High Country Rosehip Orchards Limited has been excluded.

Water quality individual and cumulative

78 The applicants adopt the thresholds outlined in the MWRL Water Quality Study (with internal adjustments pursuant to the partial sub-catchment agreement for the Pukaki groundwater zone). FEMPs for each property have been developed and are discussed in the evidence of Dr Robson. The FEMPs seek to address the issues of water quality and the cumulative effects of nutrient losses. The farm management, monitoring and mitigation recommendations of Dr Robson are all being adopted. These are in particular:

- (a) A direct control of farming inputs via OVERSEER (and in the case of Lucerne APSIM).
- (b) The measurement of on farm nutrient loading.
- (c) Onsite and sub-catchment monitoring.
- (d) Setting of and adherence to measurable triggers for intervention.

Economic effects

- 79 Mr Copeland was engaged by Simons Hill and Simons Pass Stations to assess the economic effects of the proposal. There are very substantial economic effects for the local Mackenzie Basin community. A total capital expenditure is projected to be between \$66 million and \$73 million.

Land management

- 80 The current environment for the applicants' properties is not static. The evidence of Dr Espie and Mr Painter outlines how biological systems are in decline and there is very significant soil loss. The productive portions of the farms are required to bear the burden of the large unproductive portions such as Pukaki Flats. It is submitted, that the current overall position is not sustainable from a land management perspective.
- 81 The introduction of irrigation will address these issues as outlined in the evidence of Dr Espie and Mr Painter.

Plan provisions

- 82 Mr Kyle address the relevant planning provisions in his evidence. He carries out an analysis of the relevant planning provisions in the Water Allocation Plan and in the NRRP. His view is that the proposals meet all of the relevant objects and policies.
- 83 Mr Kyle comments specifically on the significance of the groundwater threshold in the NRRP.¹⁷ The objectives in policies dealing with non-point source discharges deal with the Upper Waitaki (and other inland catchments) in a different manner to other areas of Canterbury.
- 84 As Mr Kyle will outline, of principal importance is Policy WQL 9 which relates to non-point source discharges to land that may affect groundwater quality. The policy provides:

“(1) Minimise the leaching of nutrients, chemical and microbiological contaminants to groundwater by requiring:

(b) that the use of water for irrigation:

(iii) does not result in the maximum concentration of nitrate-nitrogen in any part of an unconfined or

¹⁷ Paras 363 and 364 of his evidence.

semi-confined aquifer at the down-gradient boundary of a property:

1. *increasing beyond the range that occurs or would have occurred in the groundwater under extensive grazing of unimproved pasture in the catchment up-gradient of the property. This applies to properties located in the Waitaki basin above Lake Benmore, the Ashburton lakes area, upper Orari catchment, or the upper catchment of a braided river."*

85 The 1 mg/l groundwater threshold is derived from this policy and from objective WQL2. The policy is significantly more restrictive than the drinking water standard. The explanation and Principle Reasons for the policy are instructive. The Plan explains:

"Groundwater in unconfined and semi-confined aquifers is particularly vulnerable to contamination from land use activities. It is difficult to establish the exact relationship between a given intensity of land use and related non-point source discharges, and the resulting changes in groundwater quality. At this stage, there is insufficient knowledge to establish firmly the links between the intensity and mix of land uses over an entire aquifer, the type of contaminants, the relative importance of different contaminant pathways, and the severity and extent of effects on groundwater quality in an aquifer. The relationship between land use and groundwater quality may be further complicated by the effects of irrigation or if there is a long delay between the time of the land use and the appearance of the effects on groundwater quality. However, it is clear that intensification of land use generally results in higher leaching of nutrients to groundwater, and there is sufficient knowledge of measures or land management practices which can be effectively applied to reduce nutrient leaching. For other types of contaminants, such as pesticides and pathogenic micro-organisms, there is insufficient knowledge at this stage of the relationship between land uses and groundwater contamination to apply effective measures to manage these contaminants.

...

Irrigation is an essential requirement for agricultural land use intensification in inland areas. One of the consequences of land use

intensification may be decline in groundwater in these area, as a result of higher stocking rates, fertiliser use and cultivation resulting in an increase in contaminants leaching to groundwater. Inland basins are generally situated high in the catchment, and drained by a large number of small groundwater fed streams that flow into larger rivers or lakes. A decline in water quality in groundwater may result in a significant decline in water quality and aquatic ecosystems of the groundwater fed rivers and downstream rivers or lakes.”

- 86 It is submitted that it is clear from the explanation to the policy that the policy is not directed at the protection of groundwater itself but rather ensuring that land use intensification does not give rise to adverse effects in biological systems such as streams or lakes where groundwater may ultimately end up.
- 87 It is also clear from the explanation that the proposed NRRP thresholds were set without the benefit of the detailed enquiry that this Panel is undertaking on the basis of the detailed scientific evidence presented to you. The WQS represents a region wide study of the scale and significance that was simply not available at the time the proposed NRRP was notified.
- 88 It is submitted that the groundwater threshold is not set at a level above which adverse effects on biological systems will occur, it is set at a level that is highly precautionary, and potentially to an extreme degree. In essence, a proper effects based assessment of the potential adverse effects on relevant biological systems ought to be preferred to the standard if such an assessment is available. Having said that, these applicants have chosen to adopt farm practices that ensure that they will comply with this very precautionary threshold.

Part 2 of the Resource Management Act

Section 5

- 89 The purpose of the RMA as set out in Section 5 of the Act is as follows:

“5 Purpose

- (1) *The purpose of this Act is to promote the sustainable management of natural and physical resources.*
- (2) *In this Act, **sustainable management** means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety*

while -

- (a) *Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- (b) *Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
- (c) *Avoiding, remedying, or mitigating any adverse effects of activities on the environment.”*

90 Section 5 is not the starting point for your evaluation under the Resource Management Act, but rather the finishing point to be considered in the exercise of your overall judgment.¹⁸

91 Applying section 5 involves a broad overall judgment of whether the proposal would promote the sustainable management of natural and physical resources. Section 5 allows for the balancing of conflicting considerations in terms of their relative significance or proportion in the final outcome.¹⁹

92 The elements of sustainable management are achieved by these applications as follows:

- (a) These applications with the conditions suggested will provide for a significant enabling of people and communities to provide for their social and economic wellbeing. This is so for the applicants concerned as well as the wider Mackenzie community and the region as a whole.
- (b) The granting of the applications will sustain the potential of the natural and physical resources of the Mackenzie to meet the reasonably foreseeable needs of future generations. The resources of the Mackenzie will not be impacted.
- (c) The life supporting capacity of air and water will be safeguarded.
- (d) Section 5(2)(b) draws attention to the need to safeguard the life supporting capacity of the soil. By virtue of the current deteriorating state of the environment these values are currently being significantly compromised.

¹⁸ *Hahei Development Ltd v Thames-Coromandel DC*, Environment Court C176/03.

¹⁹ *Trio Holdings Ltd v Marlborough DC* [1997] NZRMA 97.

(e) These applications have been carefully conceived and developed. They represent best practice from a farm management and environment perspective. Best practice is achieved via the adoption of the FEMPs what have been carefully developed to avoid, remedy or mitigate potential adverse effects.

93 Overall Mr Kyle concludes the following detailed assessment of the applications then exercising a broad overall judgment. The applications should be granted on the terms proposed.

94 Mr Kyle has regard to, and gives evidence of, his assessment in sections 6, 7 and 8 of the RMA.

Summary

95 For these applicants, this hearing represents the culmination of a process that has taken many years and the commitment of very significant resources both personally and financially.

96 For the Simons Hill/Simons Pass applicants the process has been driven by a desire to find a solution to the land management issues facing the Pukaki Flats.


97 For the owners of the Rosehip properties, these applications represent the only remaining option in the attempt to return the properties to productive potential.

98 In addition to addressing the availability of water (via MIC) and the cumulative water quality effects (via MWRL) these applicants have undertaken detailed site specific investigations in order to support the current applications.

99 The applications before you today represent a conservative approach to the farm proposals that are put before you.

100 In my submission, these applications represent the essence of sustainable management and they should be granted on the conditions as sought.

DATED at Christchurch this 23rd day of November 2009.



KG Reid / HG Marks
Counsel for the following Applicants:

Simons Hill Station Limited, Simons Pass Station Limited,
Pukaki Irrigation Company Limited, Rosehip Orchards New Zealand Limited, and
High Country Rosehip Orchards Limited