

**BEFORE THE CANTERBURY REGIONAL COUNCIL**

**IN THE MATTER**

of the Resource Management Act 1991

**AND**

**IN THE MATTER**

of resource consent applications made by  
**VARIOUS PARTIES** to the **CANTERBURY  
REGIONAL COUNCIL** associated with the  
irrigation of properties within the Upper Waitaki  
Catchment.

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**EVIDENCE OF JOHN KYLE  
ON BEHALF OF PUKAKI IRRIGATION COMPANY LIMITED, SIMONS HILL STATION,  
SIMONS PASS STATION, HIGH COUNTRY ROSEHIP LIMITED AND ROSEHIP  
ORCHARDS LIMITED**

**19 NOVEMBER 2009**

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## 1. INTRODUCTION

### Qualifications and Experience

- 1.1 My name is John Kyle. I hold an honours degree in Regional Planning from Massey University, obtained in 1987. I am a Partner with the firm Mitchell Partnerships Limited, which practices as a planning and environmental consultancy throughout New Zealand, with offices in Auckland and Dunedin.
- 1.2 I have been engaged in the field of town and country planning and resource and environmental management for twenty two years. My experience includes a mix of local authority and consultancy resource management work. In recent years, this experience has retained a particular emphasis on providing consultancy advice with respect to Regional and District Plans, designations, resource consents and environmental management and environmental impact assessments. This includes extensive experience with large-scale projects involving inputs from a multidisciplinary team.
- 1.3 An outline of projects in which I have been called upon to provide resource management advice in recent times is included as **Appendix A**.
- 1.4 I have read and agree to comply with the Code of Conduct for Expert Witnesses in the Environment Court Practice Note for Expert Witnesses (31 March 2005).

### Scope of Evidence

- 1.5 I have been commissioned by Pukaki Irrigation Company Limited ("PIC"), Simons Hill Station Limited ("Simons Hill"), Simons Pass Station Limited ("Simons Pass"), High Country Rosehip Orchards Limited ("High Country") and Rosehip Orchards NZ Limited ("Rosehip Orchards") (collectively, "the Applicants") to present evidence at this hearing with respect to the following matters:
- (a) Summary of the applications and activity status;
  - (b) Assessment of the applications against the relevant planning framework;
  - (c) Overall conclusions and assessment;
  - (d) Conditions.

1.6 I have read the various section 42A Reporting Officer Reports as they relate to the consent applications made by the Applicants. Where relevant to do so, I make reference to the findings of those reports in my evidence. My own evidence also draws on the evidence of other experts that have presented at this hearing on behalf of the Applicants. I have visited the sites that relate to the applications at issue and I am generally familiar with the receiving environment.

## **2. SUMMARY OF THE APPLICATIONS AND ACTIVITY STATUS**

2.1 The description and the nature of the applications lodged by the applicants are set out in the evidence of Mr McIndoe. I do not intend to repeat that information in this evidence.

2.2 It is however necessary to provide an overall assessment of the relevant activity status of the applications against the relevant planning provisions. The members of the hearings panel will recall that I have already provided as part of my evidence on behalf of MWRL and other parties (Southdown Holdings, Five Rivers and Killermont Station (“Southdown et al”)) a comprehensive overview of the relevant planning framework. I do not intend to repeat that analysis here and can simply say that I adopt the earlier analysis for the purpose of this brief. The Transitional Regional Plan (TRP), the Proposed Natural Resources Regional Plan (NRRP) and the Waitaki Catchment Water Allocation Regional Plan (WRP) are applicable to these applications. I confirm that water abstraction activities are provided for by the WRP, whereas additional consents required by the applicants including discharges to water are provided for under the TRP and NRRP. I attach as **Appendix B** a set of flow charts which are very similar to the ones I produced for Southdown et al and which demonstrate the mechanics of the planning framework as it relates to these applications.

2.3 As outlined in the evidence of Mr McIndoe, the PIC proposes to install infrastructure for a new irrigation scheme. This irrigation scheme is proposed to be used by three properties to the south of Lake Pukaki. Simons Hill and Simons Pass have applied for resource consents to take water associated with the proposed Pukaki Irrigation Scheme. Simons Pass and Simons Hill are separated by the Mary Range into two

distinct areas. The main proposed irrigated area, is referred to as the Pukaki Flats on both Stations, and Mary Range Farm is owned by Simons Pass Station.

- 2.4 The Simons Hill and Simons Pass applications seek to abstract water from either Pukaki Canal, Lake Pukaki, or the Tekapo Canal. The applicant seeks to abstract a total of 14,400,000m<sup>3</sup> per year from either the Pukaki Canal or Lake Pukaki, or a total volume of 14,581,330m<sup>3</sup> per year from the Tekapo Canal (Stilling Basin). This is within the annual allocation limit for agricultural and horticultural activities established by the WRP. However the proposal to take water from the Lake Pukaki exceeds the allocation limit of 8 million m<sup>3</sup> for activities upstream of the Lake Pukaki outlet. This exceeds the limitations set out within Rule 6 of the WRP and requires consent for a non complying activity. The applications to abstract water from Pukaki Canal and Tekapo Canal (Stilling Basin) are a discretionary activity pursuant to Rule 18 of the WRP. The canals are considered to be downstream lake outlets as per footnote 23, page 52 of the WRP. Therefore the 8 million m<sup>3</sup> restriction is not applicable to applications to take water from canals. With respect to the take from Lake Pukaki and the Pukaki Canal, this is an either/or situation. The Reporting Officer has suggested that both options should be treated as a non complying activity because one option has that status. I accept that this is appropriate for that option to abstract water from Lake Pukaki. However the canal abstraction is discretionary and should be dealt with as such.
- 2.5 Simons Hill and Simons Pass also have applied to discharge excess water to water (Pukaki River), and to land (overrun water to be directed to non irrigated areas). The Pukaki River is ordinarily a dry river bed and it is very likely that in the unlikely event that a discharge will occur, the discharge will be made to a dry river bed.
- 2.6 The discharge of water to water is not provided for in the TRP and therefore consent is required as a discretionary activity. I note that the Reporting Officer has assessed the discharges to water as being a non complying activity in accordance with Rule WQL60 of the NRRP. It appears to have been assumed that because the water is being sourced from Lake Pukaki, the discharge will alter the existing natural water quality of the Pukaki River. This discharge is minor and will not be affected by stock access as is assumed by the Reporting Officer. It will not alter the existing quality of

the Pukaki River as it will simply entail the discharge of uncontaminated water. I therefore do not agree that consent is required for a non complying activity and in my opinion the discharge in question should be assessed as a discretionary activity pursuant to Rule WQL56. Rule WQL56 relates to the discharge of water or a contaminant into a river, lake or artificial water course, and requires that the discharge complies with the water quality standards set out in Schedule WQL1. I understand that the discharge will meet the water quality limitations set out within this rule.

2.7 The Reporting Officer is of the view that the discharge of water to land triggers a consenting obligation, pursuant to Rule WQL2 and WQL57 of the Proposed NRRP. Rule WQL2 and WQL57 relate to the discharge of a contaminant onto or into land. In my view the discharge of water to land in the manner proposed (that is without first changing its condition and therefore contaminating it) is not captured by the said rules. I therefore disagree that consent is required for this particular activity.

2.8 High Country Rosehip Orchards Limited has applied to take and use up to 208,656m<sup>3</sup> per week and 3,000,000m<sup>3</sup> per year of water from the Ohau B Canal. Rosehip Orchards NZ Limited has applied to take and use up to 338,688m<sup>3</sup> per week, and 4,860,000m<sup>3</sup> per year from the Ohau C Canal. Rule 3 of the WRP states that *“no person shall take, use, dam or divert water from the canals leading from the lakes in Table 4 unless the level in the relevant lake is above the minimum lake level in Table 4”*. I can confirm that both applicants can and will operate their takes to ensure that these levels will be adhered to at all times. Therefore these applications should be considered as a discretionary activity pursuant to Rule 17 of the WRP. I note that Rosehip Orchards also applied to take and use water from Twizel River. However this application has been withdrawn and will not be discussed further in my evidence.

2.9 High Country Rosehip Orchards Limited has applied to construct an intake structure in the Ohau B Canal. The pipeline is proposed to be buried under the canal and would extend out under the Ohau River bed, downstream of the DoC conservation area, where the pipe then crosses riverbed and farmland. Rosehip Orchards has also applied to construct an intake structure in the Ohau B – C Canal, which would

traverse under the canal and the bed of the Ohau River, downstream of the Twizel River. Activities in the bed of lakes and rivers, are not provided for under the TRP and therefore require consent as a discretionary activity (regardless of whether or not they comply with the rules in the NRRP). I note that intake structures within an artificial waterbody (canal) do not trigger a section 13 (RMA) consenting obligation.

2.10 A table summarising the applications and relevant consents is attached as **Appendix C** to this evidence.

2.11 As set out in my evidence on behalf of MWRL the WRP contains a number of objectives, policies and assessment matters that need to be considered when assessing these applications<sup>1</sup>.

### **3. ASSESSMENT OF APPLICATIONS**

3.1 As outlined in my evidence on behalf of MWRL the planning framework applying to the Upper Waitaki is specific to the allocation of the waters of the catchment and is tailored to the values and the issues that prevail.

3.2 The abstraction and use of water is primarily governed by the provisions contained in the WRP and by virtue of Policy 13 of the WRP, the objectives of the NRRP Water Quality Chapter are also relevant. Key issues raised by the NRRP objectives relate to farm management, nutrient loading, water quality and aquatic ecology.

3.3 I note that the environmental effects of the proposed abstractions, discharges and use of water have been dealt with in detail in the technical evidence already presented. My evidence relies on the findings and conclusions set out within this technical evidence in order to assess the applications in the context of the relevant assessment framework.

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<sup>1</sup> Paras 3.1 - 3.67 of JK MWRL Evidence 2 September 2009

### **Existing Environment**

- 3.4 All of the Applicant properties are currently farmed to varying degrees and these farming activities already have an impact on the environment which should be taken into account when assessing the irrigation proposals.
- 3.5 Dr Espie has undertaken an evaluative ecological assessment of Simons Pass and Simons Pass Stations. His approach has entailed a comparison of the existing land cover with previous land surveys and research assessments. This assessment indicates that a progressive general deterioration in former fescue tussock grassland communities has occurred. Both Simons Hill and Simons Pass Stations have areas of improved and unimproved pasture and forage crops. The land is currently used for low intensity sheep and cattle farming. Such sparse vegetation of large areas of land gives very little protection to shallow, friable soils which can be affected by wind and frost. The adverse effects generated by wind erosion within the Mackenzie Basin and on Simons Hill and Simons Pass in particular are outlined in the evidence of Dr Painter. These include loss of valuable soil and nutrients including phosphorous and unwanted nuisance and water quality effects where the soil is ultimately deposited.
- 3.6 Simons Hill and Simons Pass are also situated directly adjacent to protected conservation areas and these are identified by Dr Espie. These sites will not be affected by the applicants' proposals to irrigate land. A wetland exists on Simons Hill Station, east of the Mary Range, which is protected and managed by the Department of Conservation (DOC). This is already fenced and protected from stock access. This area will not be affected by the proposed land use activities and irrigation.
- 3.7 The current land use on the High Country property consists of cropping and the remainder of the land is undeveloped grassland that is lightly grazed.
- 3.8 Rosehip Orchards NZ Limited has an existing consent to take and use groundwater at a rate of 92.5l/s (CRC030175) for irrigation purposes. This consent does not form part of the present applications and the existing 200 ha pivot will continue to operate under its existing consent.

### **Permitted Baseline**

- 3.9 As outlined in my evidence on behalf of Southdown et al the permitted baseline is a relevant consideration in determining the merits of applications to abstract and use water from irrigation in the Upper Waitaki Catchment. In terms of the relevant Regional Plan rules the permitted baseline is limited to minor takes or diversions for activities such as stock water outside the water bodies identified as being of high natural character. As I have expressed in earlier briefs of evidence, it is my opinion that general farming activities such as pastoral grazing, fertiliser application and ancillary activities are permitted under the TRP and NRRP<sup>2</sup>.
- 3.10 In terms of the District Plan, all of the properties at issue here are within the Mackenzie District. Rule 15 of the Rural Zone sets out activities that are considered to be permitted activities throughout the District. In order to remain so, the various activities must comply with all of the standards listed in Rule 15.1.1. Simons Hill and Simons Pass have obtained certificates of compliances from the Mackenzie District Council to confirm that the proposed farming activities including the growth of pasture and crops for livestock farming, pastoral intensification and the spray irrigation of pasture and crops using centre pivots are a permitted activity in terms of the District Plan.
- 3.11 The certificates of compliance also confirm that intensive farming<sup>3</sup> is a permitted activity at Simons Hill and Simons Pass<sup>4</sup>. Rule 15.1.1a requires that pastoral intensification shall not exceed 5% of any site identified as being of “natural significance”. The subject properties are not identified as being sites of natural significance and therefore intensive farming is a permitted activity. I attach as **Appendix D** to this evidence the certificates of compliance for Simons Hill and Simons Pass.
- 3.12 I also note that the Mackenzie District Plan permits irrigation infrastructure as a utility, subject to certain conditions<sup>5</sup>.

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<sup>2</sup> Subject to compliance with various conditions attached to permitted activity rules in the TRP and the NRRP

<sup>3</sup> Pastoral intensification – “*Means subdivisional fencing and/or topdressing and oversowing*”.

<sup>4</sup> A permitted activity in terms of Rule 15.1.1a – Pastoral Intensification

<sup>5</sup> Rule 1.1f

### **Water Allocation and Efficiency**

- 3.13 The proposed abstraction by Simons Hill and Simons Pass from Lake Pukaki will result in only minor effects on the lake. This is because the abstraction is very small in the context of the overall lake capacity (the proposed abstraction from Lake Pukaki represents 0.8% of the annual inflow into the lake) and will not result in the minimum lake levels set out in the WRP being exceeded.
- 3.14 As outlined in the evidence of Mr McIndoe, any effect from abstracting water from the canals primarily falls on the interests of Meridian Energy Limited (Meridian) which operates the canal. I note here that Meridian has provided derogation approval for all of the applicants appearing at this part of the hearing. Conditions have been suggested during the consultation process with Meridian which control the way in which the various proposed intake structures will be constructed and managed in order to ensure that the operational interests of the company are not compromised.
- 3.15 Objectives and policies within the WRP seek to achieve a high level of technical efficiency in the use of water. This is to ensure that the water is not used wastefully and that allocation limits reflect the quantity of water that is actually required by a given user. This matter is dealt with in a comprehensive way in the evidence of Mr McIndoe. The applicants have used water balance modelling to determine the volume of water required to meet irrigation demand according to a series of reasonable and efficient use criteria. The criteria are drawn from the WRP<sup>6</sup>. Mr McIndoe's analysis confirms that the proposed abstractions represent a reasonable and efficient use of water on the individual properties and in this sense the abstractions are consistent with the WRP. Ongoing monitoring of the irrigation and soil on each property will ensure the proposed abstraction remains "efficient".

### **Construction of the Intakes and Irrigation Infrastructure**

- 3.16 The relevant experts have assessed the potential effects of the intake structures and associated infrastructure on all of the affected water bodies. Mr Smith (on behalf of

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<sup>6</sup> Policy 16

the Pukaki Irrigation Company) has outlined the design and construction aspects of the irrigation infrastructure proposed.

3.17 In terms of the effects that arise from the installation of this infrastructure, Dr Ryder has confirmed that these are likely to comprise the potential for greater sedimentation and contaminant losses to ground and surface waters arising from the disturbance of the bed and the margins of the affected waterway. If not properly managed, this sedimentation could result in adverse effects on aquatic communities. The sedimentation effects associated with the construction of the intake structures, pipelines and irrigation systems can be avoided via the adherence to best practice construction management and the minimisation of the extent of disturbance to the lake or river bed and their margins. The measures to mitigate sedimentation effects are outlined in the evidence of Mr Smith and include:

- (a) Adherence to ECan's Erosion and Sediment Control Guidelines 2007;
- (b) Specific clean water diversions and off stream decant structures designed to intercept silt generated by work within stream beds and margins;
- (c) Silt fences where works are adjacent to natural channels, or are likely to experience overland flows.

3.18 These matters will be addressed in a Construction Management Plan which can be secured via a condition of consent. It is therefore my opinion that the effects of the construction of the irrigation infrastructure will be appropriately and adequately mitigated. The result is that the extent and severity of these effects, where they do occur, will not be significant.

3.19 Similar mitigation will be employed for the construction of the intake structures with respect to High Country Rosehip Orchards Limited and Rosehip Orchards NZ Limited applications. The works required are outlined in detail in the evidence of Mr McIndoe.

3.20 During the construction of the Pukaki Irrigation Company infrastructure a site establishment and storage area will be required. Mr Smith confirms that these areas will be situated away from the State highway and will incorporate the appropriate

containment strategies for the storage of any hazardous substances. The use of hazardous substances will also be managed to ensure the effects are adequately avoided, remedied or mitigated. Many of these aspects will also be addressed in the Construction Management Plan, and it is envisaged that this can be managed via appropriate consent conditions.

3.21 As outlined in the evidence of Mr Smith, construction of the pipeline will potentially affect the State Highway. An authority to perform any works within a State Highway must be obtained from NZTA. Consultation with the NZTA has been undertaken to address this concern and preliminary designs of the pipeline have been approved by NZTA as set out in the evidence of Mr Glasson. The implementation of appropriate mitigation measures including traffic controls, and timing of the works, will reduce local disturbances on the operation of the roading network. The works are again temporary in nature. Overall I consider that the effects on the State Highway will be minor or less. NZTA has now withdrawn its submission to the applications.

3.22 Fish screens will be installed on all intakes in accordance with NIWA's best practice fish screening guidelines or a variation approved by the Fish & Game Council. This is confirmed in the evidence of Mr McIndoe and appropriate conditions can be formulated. Dr Ryder also confirms that the effects on river fisheries will be less than minor.

### **Terrestrial Ecological Effects**

3.23 Simons Hill and Simons Pass have commissioned an assessment of how the ecological values of the properties will be affected by applying water to the land for irrigation purposes.

3.24 As outlined in the evidence of Dr Espie, Simons Hill and Simon Pass Stations have been extensively modified by historic and current land uses including vegetation clearance, farming activities and the invasion of mouse-ear hawkweed (*Hieracium*). These changes which have left much of the mainly flat land with compromised ecological values. These are the areas where irrigation is proposed to occur. These areas have the lowest ecological value with a depauperate indigenous vegetative cover. The features with the greatest ecological value include areas located within

or on landform features such as terminal moraines, riparian terraces and risers. It is proposed that the irrigation layout will be designed to avoid direct interaction with these areas. These areas will continue to provide suitable habitat for all identified flora and fauna conservation values.

3.25 Overall Dr Espie concludes that the proposed irrigation development on the subject properties will not result in a significant loss of indigenous terrestrial biodiversity or conservation values.

3.26 Dr Painter has assessed the effects of wind erosion and soil quality within the Upper Waitaki. Dr Painter concludes that irrigation has the potential to encourage vegetation cover which will increase soil retention on the properties. As outlined in the evidence of Mr Valentine and Mr Fastier, farming practices will be directed at the eradication of hieracium and wilding pines on the irrigated land. Increased riparian protection and buffer zones will also provide a significant benefit to both terrestrial and aquatic ecosystems. This is discussed further below.

### **Instream Ecology**

3.27 The evidence of Dr Ryder has addressed the potential effects on instream ecology within key waterways affected by these applications. There are no permanent waterways within the irrigation areas on either High Country or Rosehip Orchards properties. Dr Ryder considers that because the Ohau and Twizel Rivers are located a sufficient distance from the proposed irrigation areas on these properties, riparian management is not required to protect these waterways. There is sufficient distance between the irrigation areas and these waterways to establish a significant buffer.

3.28 Dr Ryder states in his evidence that there is an opportunity to enhance existing habitat for aquatic species on both the High Country and Rosehip Orchards sites. Adjacent to High Country site is an area which is recognised for its galaxiid population. This area could be enhanced as part of the overall farm management and will provide significant benefits to this species. Discussions with relevant stakeholders including DOC is ongoing in this regard.

- 3.29 With respect to the Simons Hill and Simons Pass applications, Dr Ryder observes that the Pukaki River is approximately 1000 metres west of the proposed irrigation area on the Pukaki flats. It is proposed to create a buffer distance of 500-2000m between the proposed irrigation area and the Tekapo River.
- 3.30 There are a number of tributaries of the Mary Burn River within the Simons Hill and Simons Pass sites which may be affected by the proposed irrigation. Accordingly the waterways will be fenced off, approximately 5m from the bank to prevent stock access. Riparian vegetation will be planted to assist in removing sediments and contaminants.
- 3.31 Dr Ryder also notes that existing wetlands on Simons Hill Station contains habitat suitable for management and enhancement. Again this is something that may be developed further in consultation with DOC. This wetland will not be affected by the proposed irrigation and stock will not be permitted into this area.

#### **Individual and Cumulative Effects on Water Quality**

- 3.32 The evidence of Dr Ryder has considered the effects of the proposed activities on surface water quality for each of the applicants' properties. Dr Ryder concludes that potential adverse effects on water quality associated with the construction of structures and irrigation infrastructure are short term. Dr Ryder also notes that effects on water quality arising from construction activities can be mitigated by way of a comprehensive construction management plan, minimising the amount of disturbed river bed and land, particularly in areas likely to contain non-migratory galaxiids, and by timing construction activity to avoid spawning periods. Again these can be formulated into appropriate conditions of consent.
- 3.33 It is particularly notable that all of the applicants represented at this part of the hearing have contributed to the MWRL Water Quality Study (WQS) and they adopt the thresholds established in that study in order to address cumulative water quality effects. As outlined in the evidence of Dr Robson the most stringent mitigation requirements for these applicants are:

- Simons Hill Station and Mary Range Station (Simons Pass) – Nitrogen (N) mitigation requirements are the most stringent for Tekapo River and Phosphorous (P) mitigation requirements are most stringent for the Mary Burn River.
- Simons Hill Pukaki Flats and Simons Pass Pukaki Flats – N mitigation requirements are the most stringent for the Pukaki groundwater and there are no restrictions for P.

3.34 To address water quality issues arising from intensified land use on each of the subject properties a FEMP has been prepared for each property and is discussed in the evidence of Dr Robson. The maximum nutrient discharge allowance set for each property and each development scenario is outlined in the table below.

<b>Site</b>	<b>WQS Threshold Total N</b>	<b>WQS Threshold Total P</b>	<b>Total N Losses modelled by OVERSEER</b>	<b>Total P Losses modelled by OVERSEER</b>
Simons Hill Station	56,641 kg/year	3,278 kg/year	13,596 kg/year	620 kg/year
Simons Hill Pukaki Flats	47,312 kg/year	3,917 kg/year	Dairy off – 32,695 kg/year S & B – 22,285 kg/year	Dairy off – 1,065 kg/year S & B – 371 kg/year
Simons Pass Pukaki Flats	85,808 kg/year	7,077 kg/year	Dairy off – 50,580 kg/year S & B – 39,939 kg/year	Dairy off – 1,411 kg/year S & B – 1,435 kg/year
Mary Range Station	17,794 kg/year	1,013 kg/year	5,500 kg/year	100 kg/year
High Country Rosehip	7,973 kg/year	297 kg/year	<b>Developed setting:</b> Lucerne – 5,720kg/year Finishing – 5,720Kg/year	<b>Developed setting:</b> Lucerne – 307 kg/year Finishing – 107kg/year

			<b>Highly Developed:</b> Lucerne – 5720kg/year Finishing – 7720kg/year	
Rosehip Orchards	22,198 kg/year	487 kg/year	<b>Developed setting:</b> Lucerne – 16,492kg/year Cropping – 16,492kg/year Finishing – 7,582kg/year Bull Beef – 7,582kg/year <b>Highly Developed:</b> Lucerne – 16,492kg/year Cropping – 22,126kg/year Finishing – 10,822kg/year Bull Beef – 13,252kg/year	<b>Developed setting:</b> Lucerne – 487kg/year Cropping – 487kg/year Finishing – 163kg/year Bull Beef – 406kg/year

3.35 On farm nutrient management and mitigation approaches have been developed for each property to achieve the above thresholds. As outlined in the evidence of Dr Robson, the FEMP for the each property seeks to address issues of water quality and the cumulative effects of nutrient losses. A number of farm management practices and mitigation techniques have been specifically recommended for the subject properties. As a general requirement, mandatory good agricultural practices will be adopted which include the base assumptions of OVERSEER and therefore help to validate the use of the model on the farm. These mandatory good agricultural practices have also been outlined in Dr Robson’s evidence.

3.36 The applicants have agreed to implement the farm management, monitoring and mitigation recommended by Dr Robson. In summary this consists of:

- direct control of farming inputs based on a conservative application of OVERSEER;
- measurement of on farm nutrient loading;
- on site and sub catchment monitoring;
- setting of and adherence to measureable triggers for intervention.

3.37 The monitoring and auditing obligations referred to by Dr Robson allow the performance of the mitigation measures to be monitored and where they are performing sub-optimally, these can be addressed. These management options and mitigation techniques broadly focus on: soil protection, riparian management, silage storage, effluent management, fertiliser application, cultivation, and water run-off. Dr Robson has also described the nature and purpose of an audit plan which comprises part of the FEMP. The audit plan will examine both the compliance with the WQS thresholds and the management options implemented to address identified site specific environmental issues. The audit plan includes the action to be taken in the case of non-compliance.

### **Economic Effects**

3.38. Mr Copeland has been engaged by Simons Hill and Simons Pass Stations to assess the economic effects of the proposals to increase the area of irrigated land on the respective farms. Economic benefits will arise from the initial capital investment in irrigation infrastructure, and farm equipment. Intensified land use and irrigation will promote increased economic activity through revenue generation and employment. Consequential economic effects include increased land value and increased rates income.

3.39 Mr Copeland concludes that additional irrigation of land on Simons Hill and Simons Pass Station will increase the economic wellbeing of the local Mackenzie Basin community. This will arise from an increase in the amount of expenditure, incomes and employment within the local economy, resulting in a total capital expenditure of between \$66 million and \$73 million. An economic analysis has not been specifically

commissioned for the either of the Rosehip properties; however one could expect that similar economic outcomes, using the sheep and beef option, will arise from the betterment to the farming operation on these sites. This has not been quantified in dollar terms, but one could reasonably expect it to be similarly significant.

### **Cultural and Heritage Effects**

- 3.40 The applicants have been guided by the matters identified through consultation with iwi, the Cultural Impact Assessment (CIA) prepared for MWRL, and the statutory recognition of the tangata whenua values associated with the land and water resources. The CIA was commissioned by MWRL to inform the overall impact assessment of irrigating an additional 25,000ha of land.
- 3.41 This assessment was peer reviewed by Mr Mikaere as outlined in his evidence on behalf of MWRL. The peer review of the CIA found that all the cultural impact matters identified are capable of being addressed. Importantly, the efficacy of that response relies on the ability of the individual applicants and Te Runanga o Ngai Tahu (TRONT) to work together to address the issues of concern. The applicants I represent today have also accepted the recommendations offered by the CIA and by Mr Mikaere and have engaged with TRONT representatives over their proposals.
- 3.42 Specific consultation has occurred between the applicants and Ngai Tahu and this is outlined in the evidence of Mr Glasson.
- 3.43 The Reporting Officer notes that there is a rabbit fence built in 1888 which may be affected by the proposed activities on Simons Hill and Simons Pass Stations and the construction of the irrigation infrastructure on behalf of the Pukaki Irrigation Company. The fence is classified as an archaeological site by the New Zealand Historic Places Trust (NZHPT). The Bullock Trail, which is purported to be the first road through the Mackenzie Basin, runs from west to east through the southern area of Simons Pass Station. The Applicants are aware of these features and will ensure that they are preserved as far as can be achieved. The Applicants also recognise that if any disturbance of such features is to occur then an archaeological authority may be required. Consultation with NZHPT will be undertaken prior to implementing the construction of the infrastructure.

## **Landscape**

- 3.44 As set out in my evidence on behalf of MWRL and other parties, it is my view that landscape effects need only be assessed in terms of any potential landscape effects on the water bodies themselves. The landscape objectives and polices in both the WRP and NRRP relate only to the natural character and landscape values of water bodies. As outlined in my evidence of behalf of MWRL, there is nothing in the regional planning framework that requires an applicant to undertake a landscape assessment arising from the use of water for irrigation purposes. I attach as **Appendix B** a flow chart which outlines the relationship of the regional plans with respect to landscape considerations.
- 3.45 In terms of land use effects, farming activities are permitted in the Mackenzie District, as outlined above. Irrigation is also permitted.
- 3.46 Nevertheless, Dr Steven has undertaken an assessment of the landscape values within Simons Hill and Simons Pass sites. Dr Steven observes that the irrigation proposed will result in the establishment of improved pastures, and the intensification of stock production over a relatively small extent of the area of the Mackenzie Basin overall. Dr Steven notes that the principal indicator of this change will be through the “greening” of the flatter, irrigable lands of the Basin. Key features of the landscape including terminal moraines will not be irrigated. This is consistent with the applicant’s proposals. Dr Steven concludes in this regard that the dominant characteristics of the Basin, including the expansive views across open landscapes toward mountain ranges, will remain largely unchanged as a result of the proposed irrigation and the resultant land use intensification.
- 3.47 Dr Steven has also considered the effects of land use changes associated with irrigation including on site infrastructure. Dr Steven notes that the majority of the proposed irrigators in the Basin will not be visible from the state highway, and to a large extent they will be screened from the road by glacial landforms. Dr Steven is again of the view that the overall perception of the Basin as a natural landscape will remain largely unchanged.

### **Objectives and Policies**

- 3.48 There are a number of relevant regional planning documents which are of relevance to these proceedings. This includes the Canterbury Regional Policy Statement (RPS), the WRP, the TRP and the Proposed NRRP. I have outlined the relevant objectives and policies contained within the RPS, WRP and Proposed NRRP in my statement of evidence on behalf of MWRL. Within that evidence I assessed the provisions of the RPS on a catchment wide basis, and do not consider it necessary to repeat my conclusions here. I therefore limit the below assessment to the WRP and Proposed NRRP.
- 3.49 With respect to the NRRP, and as I explained at the Southdown et al hearing, the policies are not strictly relevant to this inquiry by virtue of the limiting way that Policy 13 of the WRP is written. However, the conventional view is that policies such as these give vent to their “parent” objectives and on this basis I think it is useful to portray the various matters in the way that the table does for assessment purposes. This is the approach below.

### **Waitaki Catchment Water Allocation Regional Plan**

- 3.50 The WRP seeks to ensure that water quality of the lakes and rivers within the Upper Waitaki Catchment are sustained in all its various elements, including ecological, cultural, aesthetic and recreational, while enabling efficient use of water for productive purposes.
- 3.51 The policies of the WRP relate to the following matters as discussed in detail in my evidence on behalf of MWRL and subsequently on behalf of Southdown et al:
- Recognition of the connectedness of the catchment and its water bodies (Policies 1 and 6);
  - Management and protection of river flows, lake levels and allocation regimes (Policies 3, 4, 12, 23 and 40);
  - Protection of Ngai Tahu values, and consideration of water allocation in terms of national and local effects (Policy 11);
  - Maintenance and enhancement of existing water quality (Policy 13) – objectives of the NRRP Chapter 4 – Water Quality;

- Catchment needs (Policy 14);
- Efficiency of abstraction and integrated use of water (Policies 15, 16, 20);
- Location specific policies including Lakes Pukaki, Tekapo, Benmore, Aviemore, and Waitaki.

3.52 In summary it is my view that the proposals are consistent with the objectives and policies of the WRP. I outline the reasons for this below:

- The WRP advocates a whole catchment approach when dealing with allocation issues and the effects that emanate from water allocation. The WQS prepared on behalf of MWRL provides farmers with appropriate methods for managing farming operations in order to successfully intensify productive activities, whilst at the same time ensuring that environmental bottom lines are maintained. The Applicants will adhere to the obligations inherent in the WQS, and this is achieved through the application of the conditions as I explain later in this evidence.
- The matters that have driven the setting of level and allocation regimes, including those matters in Policy 4 have been specifically assessed by the expert's assessment with the conclusion that key values will be maintained, or improved, and significant adverse effects avoided, or mitigated.
- Cultural values have been taken into account with sites of significance being avoided, and with on site farm management and mitigation directed to protecting such values. The possible agreement between the Simons Hill and Ngai Tahu, outlined in the evidence of Mr Glasson, further reinforces the consistency of the Simons Pass/ Simons Hill application with these cultural values.
- The proposed abstraction and use of water for irrigation purposes is consistent with the WRP in regard to allocation and will not derogate from existing uses (e.g. hydro electricity, drinking water).
- The opportunities that arise from the intensified land use proposed are significant in economic and social terms. The economic effects are outlined in the evidence of Mr Copeland. All other effects arising from the water allocation and use have been comprehensively assessed. In my opinion, any adverse effects have been identified and they can be appropriately mitigated.

- Mr McIndoe confirms that for all of the applicants the proposed abstraction and use of water is technically and environmentally efficient.
- The WQS represents a detailed scientific study which quantifies the extent to which irrigation can occur, and the way that farming systems need to be managed in order to avoid the creation of adverse water quality effects in the Upper Waitaki Catchment. The water quality study provides farmers with appropriate methods for managing farming operations in order to successfully intensify productive activities, whilst at the same time ensuring the environmental bottom lines are maintained.
- The measures outlined in the evidence of others, FEMP and the WQS will ensure that water quality is maintained and where possible enhanced. With respect to the objectives of the NRRP, while some aspects of the proposed farm systems may not meet the stringent technical standards expressed in those objectives, it is considered that the overall non compliance is minor in environment terms and the underlying values will be maintained or in fact improved.

### **Proposed Regional Natural Resources Regional Plan**

- 3.53 I have outlined in detail in my evidence on behalf of MWRL and other parties the relevant objectives and policies from the Proposed NRRP and my view about the weighting that should be given to these provisions.
- 3.54 Objective WQL1.1 (1)(a) seeks that where a river is in a natural state, the water quality and the characteristics of the substrate are to be maintained in that state. Objective WQL1.1(2) seeks that water quality is either maintained to meet the outcomes in Table WQL5 or if it does not currently meet these outcomes then it shall be improved to do so.
- 3.55 The Proposed NRRP also contains objectives and policies specific to groundwater quality. This was referred to in my evidence on behalf of MWRL and discussed in detail in my evidence on behalf of Southdown et al. Objective WQL2(2) states that in semi-confined, unconfined and other confined aquifers or parts of these aquifers, where the water quality is unaffected or largely unaffected by human activities as reported in 2004, the water quality is to be maintained in that state. Where the water

quality has been affected by human activities the objective seeks that the groundwater quality shall meet the following values:

- i. For nitrate-nitrogen, the maximum concentration shall not increase by more than two milligrams per litre above the maximum concentration measured between 1996 and 2001, and reported in 2002, and the maximum concentration shall not exceed 11.3 milligrams per litre;*
- ii. The water quality shall remain within the guideline value for any aesthetic determined listed in the Drinking Water Standards for New Zealand 2000, except for natural exceedances of the Guideline Value. If the water quality does not meet the Guideline Value, as a result of human activities, the water quality shall be improved so that the Guideline Value is achieved;*
- iii. The median concentration of Escherichia coli shall be less than one organism per 100 millilitres of water; and*
- iv. Any other inorganic or organic determined of health significance or pesticide (excluding nitrate nitrogen, or Escherichia coli) listed in the Drinking Water Standards for New Zealand 2000 shall not be detected at a concentration greater than one tenth of the Maximum Acceptable Value for that determined.*

3.56 Policy WQL9 relates to non point source discharges that may affect groundwater quality and is complementary to objective WQL2. Policy WQL9(1)(a) seeks that landowners use a combination of best management practices to minimise the rate of leaching of nutrients to groundwater from their property. Policy WQL9(1)(b) sets out the matters of consideration in regards to irrigation use. These matters are set out as follows; that the use of water for irrigation is in accordance with Policy WQN17 (efficient use of water); that the irrigation does not affect any drinking water quality; and maximum concentration of nitrate-nitrogen.

3.57 Specifically Policy WQL9(b)(iii)(1) states:

*“The use of irrigation...*

*(iii) does not result in the maximum concentrations of nitrate-nitrogen in any part of an unconfined or 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,...*

3.58 The explanation to Policy WQL9 states:

*“Irrigation is an essential requirement for agricultural intensification in inland areas. One of the consequences of land use intensification may be decline in groundwater in these areas, 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 significant decline in water quality and aquatic ecosystems of the groundwater fed rivers and downstream rivers and lakes”.*

3.59 As outlined in each property specific FEMP, discharges of effluent, fertiliser and irrigation use will be managed on a site specific basis to minimise nutrient runoff. This is consistent with the approach advocated in Policy WQL9(1)(a).

3.60 In terms of considering the proposals against the “standard” imposed by Policy WQL9 the WQS includes an assessment of existing groundwater conditions. The measured nitrate concentrations in 90 bores show that 98% of bores monitored had groundwater nitrate-N concentrations of below 1mg/l. As outlined in the WQS any level of nitrate-N below 1mg/l is considered to be “unaffected”. Therefore this has been used to represent the top end of the range naturally occurring under extensive grazing of unimproved pastures.

3.61 As outlined in the evidence of Dr Robson, groundwater monitoring will occur on the Simons Hill, Simons Pass and Rosehip sites. If comparative groundwater analysis indicates an exceedance of 1mg/l of nitrate-N due to on farm activities, mitigation will be required. Conditions will ensure that monitoring is undertaken and mitigation is applied if any of the triggers as identified in Dr Robson’s evidence are exceeded. This is discussed in further detail for the specific sites later in my evidence.

3.62 This being so, it is my view that the standards imposed by the said policy will in fact be achieved on all sites.

3.63 It is my overall view, when considering the evidence that the approval of the subject applications would not be contrary to key water quality objectives. I say this on the basis that:

- As outlined in the evidence of Dr Robson nutrient thresholds have been developed for each farm to ensure that inputs of nitrogen and phosphorus to waterways do not result in potentially significant adverse effects to local streams and receiving lakes;
- The mitigation to be implemented on each property will ensure that the water quality parameters and river substrates will not significantly alter from that which exists presently;
- Surface waters in lakes and rivers will remain suitable for other users and uses;
- Site specific on farm mitigation has been recommended in the form of restricting nitrogen and phosphorus losses for irrigation to prevent levels of contaminants in groundwater increasing from that which exists presently and would occur under an extensive grazing regime;
- Groundwater quality can and will be managed to meet the set thresholds for nitrate-N.

3.64 Notably, with respect to the projected effects on groundwater, objective WQL2 requires that groundwater quality is maintained accordingly to certain standards. These standards have been set without a full regional study having been completed. They are arbitrary as a result. The WQS has adopted a more sophisticated approach to the identification of existing groundwater conditions and the setting of objective thresholds for assessment.

#### **4. OVERALL CONCLUSIONS AND PART 2 ASSESSMENT**

##### **Section 5**

4.1 The purpose of the RMA is to promote the sustainable management of natural and physical resources. Section 5 defines sustainable management. The proposed abstraction and use of water for irrigation in the cases before the commission today are in my opinion consistent with the enabling purpose of the RMA<sup>7</sup>. Agricultural and

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<sup>7</sup> Section 5(2)

horticultural activities contribute significantly to the economic welfare of New Zealand and this has direct benefits on a national and local scale as the evidence of Mr Copeland confirms.

- 4.2 The evidence of Drs Ryder and Robson confirms that the localised and cumulative effects on water quality as a result of the proposed abstraction and use of water will not adversely affect the water resources in the Upper Waitaki catchment. The mitigation measures suggested to manage potential nutrient increases will also ensure that the life supporting capacity of the land and water resource will be maintained. The conditions of consent outlined later in my evidence are suggested according to a form which is intended to ensure that any adverse effect in terms of water quality can be appropriately avoided or mitigated.

### **Section 6**

- 4.3 A number of the matters of national importance identified in section 6 of the Act are potentially relevant.
- 4.4 Section 6(a) requires the preservation of the natural character of Lakes and their margins, and the protection of them from inappropriate use and development. Mr. McIndoe outlines that any effects on the lakes and canals from the abstraction itself will be difficult to discern. Mr Smith and Dr Ryder have considered the effects of the irrigation infrastructure and its construction. Both conclude that the effects will be not be adverse provided best practice techniques are employed during construction.
- 4.5 Section 6(b) provides for the protection of outstanding natural features and landscapes from inappropriate development. Significant features of the landscape including terminal moraines, wetland and conservation areas will not be affected by the proposed land use intensification and irrigation. I also note that irrigation and farming activities are permitted, and therefore appropriate in terms of land use effects. In any event, as Dr Steven observes, the effects on the landscape arising from the proposals will not be inappropriate and he concludes that the overall perception of the Mackenzie Basin as a natural landscape will remain unchanged.

4.6 Section 6(c) requires the protection of areas of indigenous vegetation and significant habitat. Drs Ryder and Espie conclude that the effects on terrestrial ecosystems will not be adverse. In some respects the ecological integrity of the environment will be improved by improving riparian management, reducing soil erosion and eradicating weeds and pest species including hieracium, wilding pines and rabbits.

### **Section 7**

4.7 Section 7 of the Act lists various matters to which particular regard shall be had in achieving the purpose of the Act. In my views sections 7(a) – (d), (f), (g) and (h) are the most relevant to these applications. I address issues relating to iwi below.

4.8 In respect of section 7(b), the evidence of Mr Copeland, Mr Valentine and Mr Fastier illustrates how the irrigation will provide significant economic benefits to farms and to the MacKenzie Country community. Moreover, as explained by Mr McIndoe the applicants propose only to take the volume of water required for the efficient irrigation of their properties based on individual analysis of soil type and climatic conditions.

4.9 Impacts on amenity values and the quality of the environment have been addressed in the evidence of Dr Steven, Dr Espie and Dr Ryder. As outlined in the evidence of Drs Espie and Ryder retaining features of ecological significance on the subject properties, protecting riparian margins, improving soil quality and eradicating weeds and pests will likely result in a net positive effect on ecology within the subject sites.

4.10 With the appropriate mitigation and farm practice management it is considered that the proposed abstraction and use of water will not result in adverse effects on water quality in the affected part of the catchment, or more widely. This in turn will ensure the ongoing protection of visual and amenity values of the waterbodies, and will maintain aquatic habitats and ecosystems including those of trout and salmon.

### **Section 8**

4.11 The consultation undertaken, and the commitments made to protect the environment through aspects such as land management and mitigation, demonstrates that the principles of the Treaty of Waitangi have been appropriately taken into account.

4.12 In his evidence Mr Mikaere (on behalf of MWRL) also concluded that through a combination of design features, avoidance, remedial and mitigation measures the applications for the subject properties will not have an adverse effect on the cultural values of the catchment.

## **5. CONDITIONS**

5.1 As I have outlined in my evidence on behalf of MWRL and other parties, the principal concern in the Upper Waitaki Catchment from the intensified land and irrigation use is nutrient enrichment of groundwater, streams and lakes. The two contaminants of primary concern are nitrogen and phosphorus. As identified by Dr Robson, numerous tools are available to assist with the mitigation of effects associated with nutrient transfer. Having considered the level of mitigation required to achieve the recommended thresholds, it is concluded that with the diligent and objective implementation of the tools available, the required thresholds can be achieved. As already referred to, it is recommended that each farm property be subject to a FEMP, which incorporates a range of mitigation measures tailored to the individual property based on advice from a number of different experts. Dr Robson has provided a detailed overview of the FEMP requirements that each property will adhere to.

5.2 In my evidence on behalf of MWRL I outlined a number of conditions that should apply to all MWRL participants in addition to any property specific conditions that will also need to be considered. The key conditions in this regard require the promulgation of FEMP's. In review of the conditions presented on behalf of MWRL, the Reporting Officers have suggested that the conditions require more specificity, rather than a heavier reliance on an adaptive management approach. The approach to conditions has been refined and a refined set of conditions was attached to my evidence on behalf of Southdown et al. A similar approach in regard to conditions will be adopted for the applicants I represent today.

5.3 The conditions require a FEMP to be prepared and require a monitoring regime to be developed for each farm property. The monitoring will determine the necessary mitigation response. Sole reliance on performance standards will not be sufficiently

reflexive and responsive to the farm management regime to be adopted, and therefore elements of adaptive management need to remain to allow this to occur.

- 5.4 Monitoring is a critical aspect of the overall mitigation and success of the FEMP in achieving its objectives. As mentioned above, on farm monitoring will be required and the extent of this for each property is outlined in the evidence of Dr Robson. As well as on farm monitoring an auditing plan will be required. The audit plan examines both the compliance with the WQS thresholds and the management options implemented to address identified site specific environmental issues and thresholds.
- 5.5 To address any cumulative effects on water quality the conditions require consent holders to prepare a sub-catchment monitoring plan. This plan will require monitoring of off farm groundwater and surface water quality in the sub catchment. The conditions anticipate that this plan is better to be prepared in collaboration with other consent holders in the sub catchment in order to achieve a more integrated approach. Prior to being submitted to the consent authority for certification, the plan will be reviewed by an appropriate qualified environmental scientist to ensure the monitoring and methodology proposed is sufficiently robust.
- 5.6 The conditions also require the consent holder to contribute towards the costs inherent in conducting water quality monitoring of the key lakes within the catchment. These conditions anticipate that this monitoring will be undertaken on a collective basis on behalf of all consent holders in the Upper Waitaki catchment by a suitable body. Alternatively the conditions allow for this monitoring to be undertaken by the consent authority.
- 5.7 If any of the above monitoring indicates that the nutrient values are reaching a set proportion of the maximum threshold limit as established for individual farms and sub catchments, then this will trigger an early warning response to be implemented by the consent holder. The conditions require that a report is prepared by an appropriately qualified person to assess the likely reasons for the increase in nutrient levels, and the likelihood of the maximum threshold being exceeded. The consent holder is then required to identify the best practicable measures for

ensuring that the threshold is not exceeded. If the monitoring shows that the maximum threshold is exceeded, the conditions require an immediate response. Monitoring is increased and if the results indicate that the threshold remains over the threshold limit for a number of weeks then the annual allocation of water shall be reduced for the subsequent irrigation season. The conditions also require the input from two appropriately qualified experts who will determine whether or not the exceedance is likely to have been caused by activities unrelated to irrigation and farm effluent disposal. If it is determined that the cause is unrelated to farm activities then monitoring can be reduced and the water take limitations can be lifted.

## **6. CONCLUDING REMARKS**

- 6.1 The Applicants I represent today seek to abstract water from Lake Pukaki, or the Pukaki, or the Tekapo; and the Ohau Canals. As outlined in the evidence, the abstractions are minor in the overall context of the impacted water body, and will not have any discernible effect on water quantity. The cumulative abstraction is also consistent with the agreement between Meridian and the Mackenzie Irrigation Company to make available a maximum quantity of 150 million cubic metres of water to be used for an additional irrigation of 25,000ha in the upper catchment. Mr McIndoe has also confirmed that the proposed abstraction rates represent a reasonable and efficient use of water.
- 6.2 The use of water for irrigation purposes and intensified agricultural use has been assessed by Dr Robson and Dr Ryder. Increases in nutrient levels in ground and surface waters will be mitigated through the preparation and implementation of a site specific FEMP as discussed in my evidence above. Site specific mitigation during the construction of intake structures and avoidance of significant ecological and landscape features will also assist in managing the effects of intensified land use on the subject properties. In my view any localised adverse effects arising from a result of these proposals can be adequately mitigated, to a point where they are no more than minor.
- 6.3 As outlined in my evidence on behalf of MWRL, the WRP advocates a whole catchment approach when dealing with allocation issues and the effects that emanate from water allocation. The WQS prepared on behalf of MWRL provides

farmers with appropriate methods for managing farming operations in order to successfully intensify productive activities, whilst at the same time ensuring that environmental bottom lines are maintained. The Applicants will adhere to the obligations inherent in the WQS, and this is achieved through the application of the conditions outlined in this evidence. In my opinion, the approach promoted in the conditions needs to be rigorously applied throughout the catchment. Subject to this occurring, it is my opinion that sustainable management of the Upper Waitaki Catchment will be achieved.

- 6.4 Based on the available evidence and having exercised a broad overall judgement, it is my view that the applications are generally not contrary to the objectives and policies of the RPS, the WRP and the proposed NRRP. The proposed abstractions will contribute significantly to the long term needs of the people and communities of the Upper Waitaki, and the use of water for irrigation and agricultural purposes will generate significant economic and social benefits for that community and the region (as outlined in the evidence of Mr Copeland).
- 6.5 In my opinion, all consents should be granted, subject to appropriate conditions of the nature described in the preceding section of my evidence.

**J KYLE**

**19 NOVEMBER 2009**

# APPENDIX A

## Summary of Recent Project Experience

- Meridian Energy Limited – Proposed Wind Farm, Lammermoor Range, Central Otago
- Meridian Energy Limited – Proposed Mokihinui Hydro Electric Power Scheme, Damming, water and land use related consents, Buller
- TrustPower Limited –Wairau Hydro Electric Power Scheme, water and land use related consents, Marlborough
- TrustPower Limited – Proposed Kaiwera Downs Wind Farm, Gore
- Genesis Power Limited – Awhitu Wind Farm, Franklin
- Genesis Power Limited – Tongariro Power Development, Water Related Consents, Central North Island
- Genesis Power Limited – Waikato District Plan review and provision for the Huntly Power Station, Waikato
- Queenstown Airport Corporation – Runway End Safety Area, designation and construction related consents, Queenstown
- Queenstown Airport Corporation – aircraft noise controls – Plan Change and Designation, Queenstown
- Queenstown Airport Corporation – aircraft flight fan controls – Designation, Queenstown
- Queenstown Airport Corporation - provision of resource management advice for the airport and its surrounds
- South Port New Zealand Limited – provision of various resource management advice, oil exploration issues, Bluff
- Willowridge Developments – 3 Parks Plan Change to create new commercial, large format retail, service, tourist and residential land use zones, Wanaka
- Gibbston Valley Station – Viticulture and Golf Resort, Gibbston
- Southdown Holdings Limited – providing advice with respect to a large scale irrigation proposal in the Upper Waitaki catchment, Upper Waitaki Basin

- Marlborough District Council – Business Park Plan Change, Blenheim
- Ravensdown Fertiliser Limited – Coastal and Air Discharge Consent Renewal, Dunedin
- Riverstone Holdings – Proposed Monorail Link – Lake Wakatipu to Fiordland
- Infinity Investment Group – Pegasus Town, North Canterbury
- Infinity Investment Group – Hillend Station, Wanaka
- Infinity Investment Group – Peninsula Bay Plan Change, Wanaka
- Kuku Mara Partnerships – Large Scale Marine Farms, Marlborough Sounds
- Marine Farming Industry – Plan Appeals, Tasman Aquaculture Inquiry, Tasman and Golden Bays
- Meadow 3 – Threepwood Development Lake Hayes, Queenstown
- Armada Holdings – Luggate Village, Central Otago
- Ryman Healthcare – Rest Home and Hospital Facility, Roslyn, Dunedin
- Minaret Resources Limited – Sugarloaf Project, Lowburn, Central Otago
- Otago Land Group Limited – Mitre 10 Mega , Andersons Bay, Dunedin
- Otago Land Group Limited – Smiths City Redevelopment, Andersons Bay Dunedin
- Matukituki Trust – Residential Development, Roys Peninsula, Wanaka
- Nicholls Property Group – Commercial Development, George Street, Dunedin
- Department of Corrections – New Corrections Facility, Milton, Otago
- Department of Child Youth and Family – Youth Justice Facility, Rolleston, Canterbury
- Telecom New Zealand Limited – Mobile Phone and Landline Infrastructure Developments, South Island
- Southland District Council – Hearing Commissioner
- Environment Southland – Hearing Commissioner
- Southern Health – Rezoning Southern Hospital Development, Invercargill

# **APPENDIX B**

Planning Overview – Flow Charts

# ABSTRACTION AND USE

## Resource Management (Waitaki Catchment) Amendment Act 2004

- Section 27 – Canterbury Regional Plan for allocation of water in Waitaki Catchment
- Section 14 and 15 prevent other regional plans from dealing with allocation of water in the Waitaki Catchment.

The Waitaki Catchment Water Allocation Regional Plan (WRP) provides for the allocation of water in the Waitaki catchment. The WRP identifies that water is essential in sustaining the natural and social values of the catchment. It identifies that water is required for a number of differing values and at times these values can compete with each other.



## Consents Required under the WRP

- Water take and use
  - Simons Hill Station and Simons Pass Station have applied to take water from either Lake Pukaki, or the Pukaki Canal;
  - Simons Hill Station and Simons Pass Station have applied to take water from the Tekapo Canal;
  - High Country Rosehips Orchards Ltd has applied to take water from the Ohau B Canal;
  - Rosehip Orchards Ltd has applied to take water from Ohau C Canal.



## Relevant objectives and policies – abstraction and use



## Canterbury Regional Policy Statement

- Overarching regional objectives and policies
- Objectives 1, 2 and 3 of Chapter 9 relate to the allocation of water for present and future generations while seeking to safeguard the values of the relevant water body, the use of land where it affects flows in a water body and water quality.



## Waitaki Catchment Allocation Regional Plan (WRP)

- Objectives 1 – 5
- Policies 2 – 8 - environmental flow and level regimes
- Policies 11 – 14 - allocation of water to horticultural and agricultural activities
- Policy 13 – water quality considerations and direct reference to objectives of NRRP
- Policies 15 – 19 – reasonable and efficient use
- Policies 23 – 27 – deal with restrictions of water during low flow
- Policies 29 – 46 – location specific conditions

## Water Quality Chapter of NRRP

- Relevant objectives
- Objectives WQL1.1, WQL1.2
- Objective WQL2



# OTHER CONSENTS BEFORE THE COMMITTEE

## Land use consent for structures Discharges to water (excess irrigation water, diverted water)

**RMA – Section 13 – Land use consent structures in bed of lake/river (intake structures and Pipelines)**  
**RMA – Section 15 – Discharges to water**

### Consents required

#### Transitional Regional Plan

- Silent on matters relating to works in the bed and banks of rivers and lakes in the Upper Waitaki Catchment. Activities therefore require consent as a discretionary activity pursuant to section 13 and 77C of the RMA.
  - Pukaki Irrigation Company is seeking consent to install an intake structure in Lake Pukaki, and associated works affecting Pukaki River and ephemeral streams.
  - Rosehips and High Country have applied for works under the bed of Ohau River.
  - Intake structures from artificial structures do not trigger section 13 of the RMA
- No provisions in the TRP which permit the discharge of water into water and therefore consent is required as a discretionary activity.

#### Proposed NRRP

- Intake structures and pipelines under the bed of a lake or river require consent under Rule BLR8
  - Intake structures from artificial structures do not trigger section 13 of the RMA
- Discharge permits require consent under Rule WQL56 (discharge of water or contaminants to water).

### Objectives and Policies

#### RPS Objectives and policies

- Chapter 6 - Provision for the relationship of Tangata Whenua with Resources;
- Chapter 7 - Soils and land use;
- Chapter 8 - Landscape, ecology and heritage;
- Chapter 9 - Water;
- Chapter 10 - Beds of rivers and lakes and their margins.

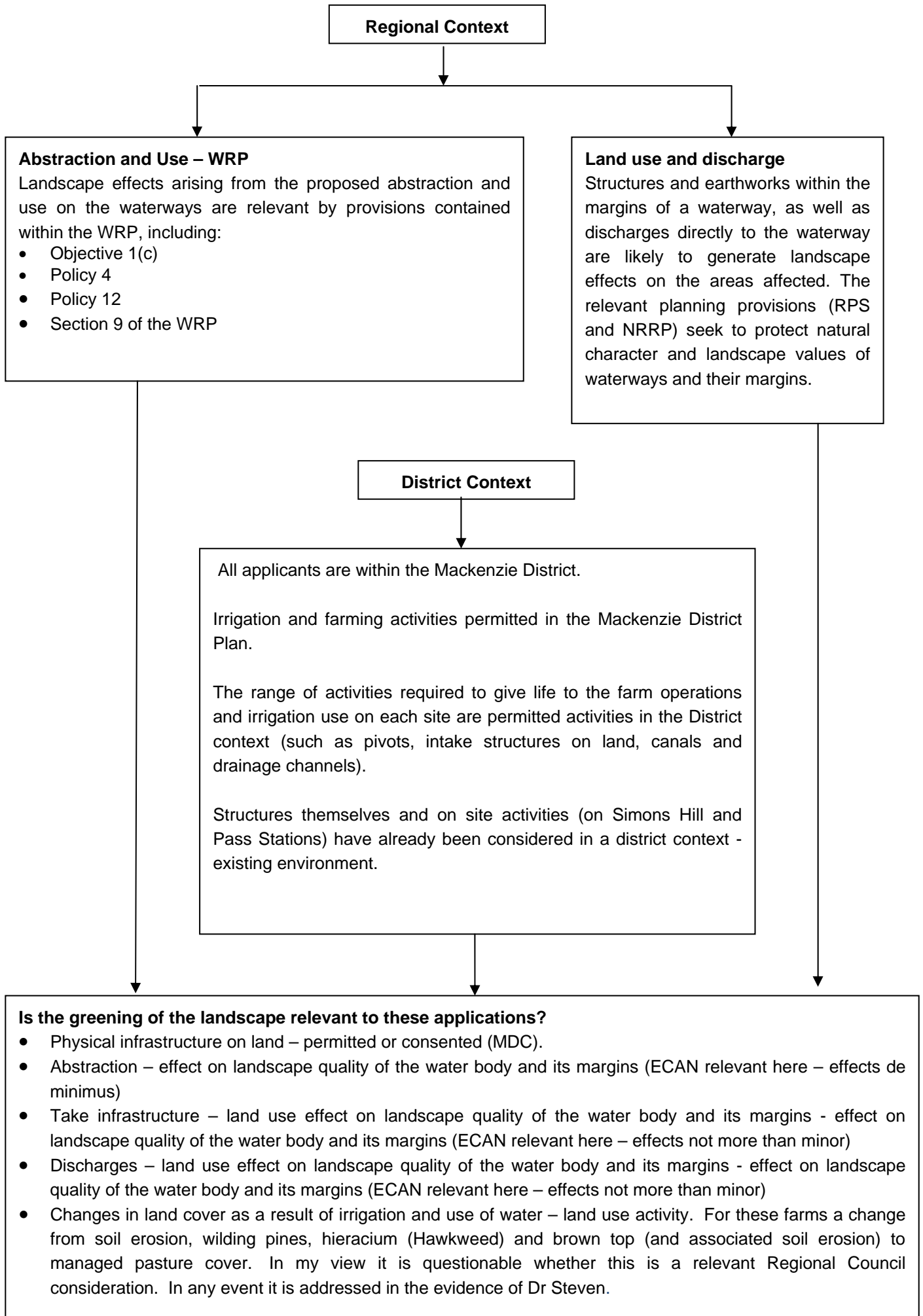
#### Transitional Regional Plan

- No objectives and policies

#### Proposed NRRP

- Objectives and policies within Chapters 4, 6, 7 and 8 (outlined in evidence paragraphs 7.48 – 7.79)

## LANDSCAPE – THE EXTENT TO WHICH THIS IS RELEVANT?



# **APPENDIX C**

## Summary of Consents

Applicant	Location	Consent No.	Section 42A Report No.	Replacement or New	Description
Simons Hill	Pukaki Canal	CRC062842	33A	New	To take and use surface water from Pukaki Canal at a rate not exceeding 1,531 litres per second, and a volume not exceeding 132,280 cubic metres per day and 14,400,000 cubic metres per year.
	Lake Pukaki	CRC062842	33A	New	To take and use surface water from Lake Pukai at a rate not exceeding 1,531 litres per second, and a volume not exceeding 132,280 cubic metres per day and 14,400,000 cubic metres per year.
	Pukaki River	CRC062843	33B	New	To discharge surplus irrigation water to Pukaki River at a maximum rate not exceeding 1,531 litres per second.
	Tekapo Canal	CRC082304	33C	New	To take and use surface water from Tekapo Canal at a rate not exceeding 1,328 litres per second, and a volume not exceeding 14,581,330 cubic metres per year.
Simons Pass	Pukaki Canal	CRC062867	34A	New	To take and use surface water from Pukaki Canal at a rate not exceeding 1,531 litres per second, and a volume not exceeding 132,280 cubic metres per day and 14,400,000 cubic metres per year.
	Lake Pukaki	CRC062867	34A	New	To take and use surface water from Lake Pukai at a rate not exceeding 1,531 litres per second, and a volume not exceeding 132,280 cubic metres per day and 14,400,000 cubic metres per year.
	Pukaki River	CRC062869	34B	New	To discharge surplus irrigation water to Pukaki River at a maximum rate not exceeding 1,531 litres per second.
	Tekapo Canal	CRC082311	34C	New	To take and use surface water from Tekapo Canal at a rate not exceeding 1,328 litres per second, and a volume not exceeding 14,581,330 cubic metres per year.
High Country Rosehips Orchards Ltd	Ohau B Canal	CRC072232	19A	New	To take and use surface water from Ohau B Canal at a rate not exceeding 345 litres per second, and a volume not exceeding 208,656 cubic metres per week, and 3,000,000 cubic metres per year.
	Ohau River	CRC072233	19B	New	To undertake works in the bed of a river to install a pipeline under the bed of Ohau River.

Rosehip Orchards NZ Ltd	Ohau C Canal	CRC072118	32A	New	To take and use surface water from Ohau C Canal at a rate not exceeding 560 litres per second, and a volume not exceeding 338,688 cubic metres per week, and 4,860,000 cubic metres per year.
	Ohau River	CRC072117	32B	New	To undertake works in the bed of a river to install a pipeline under the bed of Ohau River.
Pukaki Irrigation Company	Lake Pukaki, Pukaki River, Ephemeral streams	CRC062866, CRC062870 – 72	31A	New	To disturb the beds and banks of Lake Pukaki, Pukaki River and ephemeral streams to install an intake structure, siphons, and discharge structures.
	Ephemeral Streams	CRC082300	31B	New	To disturb the beds and banks of four ephemeral streams to install an irrigation supply pipeline.

# **APPENDIX D**

Mackenzie District Council – Certificates of Compliance Simons  
Hill and Simons Pass Stations





## MACKENZIE DISTRICT COUNCIL CERTIFICATE OF COMPLIANCE

### Section 139, Resource Management Act 1991

**Applicant** Simons Hill Station Limited

**Location** State Highway 8, Pukaki Ward  
Legal Description: SECS 3-4 SO 368536 LOT 3 DP 385120

**Activity** The applicant seeks to undertake farming activities that include the growth of pasture and crops for livestock farming, pastoral intensification and the spray of pasture and crops using centre pivots.

The Mackenzie District Council certifies that pursuant to section 139 of the Resource Management Act 1991, that the proposal as detailed in the application is a permitted activity in accordance with the rules in the District Plan and could be lawfully undertaken without Resource Consent, at the time this application was received by the Council on 27 January 2009.

**Signed:**

**Nathan Hole**  
**Planning & Regulations Manager**

**Dated:** 13/02/2009



## MACKENZIE DISTRICT COUNCIL CERTIFICATE OF COMPLIANCE

### Section 139, Resource Management Act 1991

**Applicant** Simons Pass Station Limited

**Location** State Highway 8, Pukaki Ward  
Legal Description: LOTS 1 2 4 DP 385120 LOT 1 DP 18756  
RS 3 31 18-9 33132 34241 PT 34179 BLKS XV XVI

**Activity** The applicant seeks to undertake farming activities that include the growth of pasture and crops for livestock farming, pastoral intensification and the spray of pasture and crops using centre pivots.

The Mackenzie District Council certifies that pursuant to section 139 of the Resource Management Act 1991, that the proposal as detailed in the application is a permitted activity in accordance with the rules in the District Plan and could be lawfully undertaken without Resource Consent, at the time this application was received by the Council on 27 January 2009.

**Signed:**

**Nathan Hole**  
Planning & Regulations Manager

**Dated:** 13/02/2009

## Mackenzie District Council Certificate of Compliance Report

**REPORT TO** Planning & Regulations Manager  
**SUBJECT** RM090006, RM090007- Application for Certificates of Compliance  
**DATE** 13 FEBRUARY 2009

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**APPLICANT** Simons Hill Station Limited & Simons Pass Station Limited  
**SITE** State Highway 8, Pukaki Ward  
Legal Description: SECS 3-4 SO 368536 LOT 3 DP 385120 & LOTS  
1 2 4 DP 385120 LOT 1 DP 18756 RS 3 3118-9 33132 34241 PT  
34179 BLKS XV XVI  
Valuation: 25300 19800 & 25300 20000  
**ZONING** Rural  
**RMA CRITERIA** Section 139

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### THE PROPOSAL

1. Simons Hill Station Limited & Simons Pass Station Limited have applied for certificates of compliance for the proposed farming activities that include the growth of pasture and crops for livestock farming, pastoral intensification and the spray irrigation of pasture and crops using centre pivots.
2. Certificate of compliance was issued to Simons Hill Station Limited & Simons Pass Station Limited 12 December 2008 to place up to twenty-four centre pivot irrigation systems on the above properties for the purpose of irrigating for stock grazing or crop farming.

### ASSESSMENT

3. The applicant has requested certificates of compliance for the proposal. An assessment of the activity in relation to the relevant rules of the District Plan is detailed below.

#### Simons Hill Station Limited (RM090006)

4. The Definitions section of the Plan provides the following definition of “farming activity”, “factory farming”, “commercial livestock” and “pastoral intensification”:

*Farming activity: means the use of land, buildings or water for the primary purpose of the production of vegetative matter and/or commercial livestock, and includes the on-site sale of produce grown*

*or reared on the site. Farming activity does not include residential activity, home occupations, factory farming, forestry activity or the disposal of effluent beyond the level normally required to sustain the productive use.*

**Factory farming:** means:

- a) *the use of land and/or buildings for the production of commercial livestock where the regular feed source for such livestock is substantially provided other than from grazing the site concerned;*  
*and*
- b) *boarding of animals;*
- c) *mushroom farming; and*
- d) *the production, collection and disposal of all effluent on the site.*

**Commercial livestock:** means *livestock bred, reared and/or kept on a property either primarily or partly for the purpose of commercial gain, but excludes domestic livestock.*

**Pastoral intensification:** means *subdivisional fencing and/or topdressing and oversowing.*

5. According to the definitions, the applicant proposes to undertake farming activities on the site, which do not fall under the factory farming category.
6. Rural Zone Rule 15 Other activities – including farming but not factory farming, sets out activities that are considered to be Permitted Activities throughout the District, provided they comply with all of the standards listed in Rural Zone Rule 15.1.1. The applicant states that the proposal complies with all of the standards in Rule 15.1.1. The applicant seeks to undertake an intensive farming activity. This is considered to be a permitted activity in accordance with Rules 15.1.1.a – Pastoral intensification.

*Rule 15.1.1.a Pastoral Intensification states:*

*Pastoral intensification shall not exceed 5% of any Site of Natural Significance identified on the Planning Maps other than on Geopreservation sites.*

The subject land is not identified as a site of natural significance or a geopreservation site, therefore the proposed activity complies with the above rule.

7. The site is situated within Mackenzie Basin Subzone and therefore is subject to the Proposed Plan Change 13, however it is noted that Plan Change 13 does not introduce new rules into the plan in relation to farming activities and/or productive use of land.

#### **Simons Pass Station Limited (RM090007)**

8. The Definitions section of the Plan provides the following definition of “farming activity”, “factory farming”, “commercial livestock” and “pastoral intensification”:

**Farming activity:** means *the use of land, buildings or water for the primary purpose of the production of vegetative matter and/or commercial livestock, and includes the on-site sale of produce grown or reared on the site. Farming activity does not include residential activity, home occupations, factory farming, forestry activity or the*

*disposal of effluent beyond the level normally required to sustain the productive us.*

**Factory farming:** means:

- e) *the use of land and/or buildings for the production of commercial livestock where the regular feed source for such livestock is substantially provided other than from grazing the site concerned;*
- and*
- f) *boarding of animals;*
- g) *mushroom farming; and*
- h) *the production, collection and disposal of all effluent on the site.*

**Commercial livestock:** means *livestock bred, reared and/or kept on a property either primarily or partly for the purpose of commercial gain, but excludes domestic livestock.*

**Pastoral intensification:** means *subdivisional fencing and/or topdressing and oversowing.*

9. According to the definitions, the applicant proposes to undertake farming activities on the site, which do not fall under the factory farming category.
10. Rural Zone Rule 15 Other activities – including farming but not factory farming, sets out activities that are considered to be Permitted Activities throughout the District, provided they comply with all of the standards listed in Rural Zone Rule 15.1.1. The applicant states that the proposal complies with all of the standards in Rule 15.1.1. The applicant seeks to undertake an intensive farming activity. This is considered to be a permitted activity in accordance with Rules 15.1.1.a – Pastoral intensification.

*Rule 15.1.1.a Pastoral Intensification states:*

*Pastoral intensification shall not exceed 5% of any Site of Natural Significance identified on the Planning Maps other than on Geopresetavation sites.*

The subject land is not identified as a site of natural significance or a geopreservation site. The applicant states that the site contains part of a scenic viewing area identified on the planning map as SV16, which places restrictions on land use; these aim to preserve views from the area and so limit structures such as buildings and tall vegetation; but do not restrict faming activity proposed in this application.

11. The site is situated within Mackenzie Basin Subzone and therefore is subject to the Proposed Plan Change 13, however it is noted that Plan Change 13 does not introduce new rules into the plan in relation to farming activities and/or productive use of land.

## **RECOMMENDATION**

12. Having considered the proposals in accordance with section 139 of the Act and the relevant rules of the District Plan it is concluded that proposals comply as a permitted activity under the Mackenzie District Plan.

Signed: Anastasia Pronina  
**Planner**




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**Date:** 13/02/2009

**DECISION**

13. The applications are granted to Simons Hill Station Limited & Simons Pass Station Limited and the Council issues certificates of compliance to be held on record as RM090006 & RM090007 respectively.

Signed: Nathan Hole  
**Planning & Regulations Manager**



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**Date:** 13/02/2009