BEFORE THE CANTERBURY REGIONAL COUNCIL

IN THE MATTER OF	The Resource Management Act 1991
AND	
IN THE MATTER OF	applications by **Killermont Station Limited** filed under: **CRC040180** to take and use surface water, from Frosty Gully, for spray irrigation of 28 hectares at Killermont Station, south of SH8, Omārama **CRC040181** to dam Frosty Gully, impounding 500 cubic metres of water for irrigation purposes

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REPORT AND DECISION OF HEARING COMMISSIONERS PAUL ROGERS,

MICHAEL BOWDEN, DR JAMES COOKE AND EDWARD ELLISON

PART B - SITE SPECIFIC DECISION

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1 INTRODUCTION

1.1 This is a decision on two applications by **Killermont Station** (the applicant). It is one of many decisions we have made on 104 applications by various applicants for water permits and associated consents in the Upper Waitaki Catchment.

1.2 The decision should be read in combination with our Part A decision, which sets out our findings and approach to various catchment wide issues that are common to multiple applications. References to our Part A decision are made throughout this decision as appropriate.

2 THE PROPOSAL

2.1 The applicant proposes to dam water at Frosty Gully to a height of 2.5 metres, impounding 500 cubic metres (m^3) of water, and to take and use that water for spray irrigation of 28 hectares of crops and pasture grazed by stock at Killermont Station.

2.2 This application, if granted, will replace existing consents for the same activities (WTK836261A – To dam water; and WTD836261B – To take and use surface water). The dam and infrastructure needed for irrigation are in place and currently operating. The applicant proposes some modifications to the existing infrastructure.

2.3 Water from Frosty Gully flows naturally into an existing dam (constructed in approximately 1981) within the creek bed. The dam has an approximate storage capacity of 500 m^3 with a maximum depth of 2.5 m. From the dam, water is conveyed to the irrigation area via a pipeline. The intake structure consists of a 4 inch PVC pipe that has been fitted with a fish screen.

2.4 Water will be taken from the dam at a maximum rate of 20 L/s, with a volume not exceeding 170,000 m^3/yr at or about map reference NZMS 260 H39:5532-249. The abstracted water will be used for spray irrigation of 28 ha of crops and pasture, grazed by stock, excluding dairy cows. The point of abstraction and the area to be irrigated are illustrated in Figure 1.

2.5 The applicant has not proposed to be subject to a minimum flow within Frosty Gully. However, a water meter will be installed to measure the amount of water being abstracted. The proposed annual volume does not include any provision for stock water for the property.

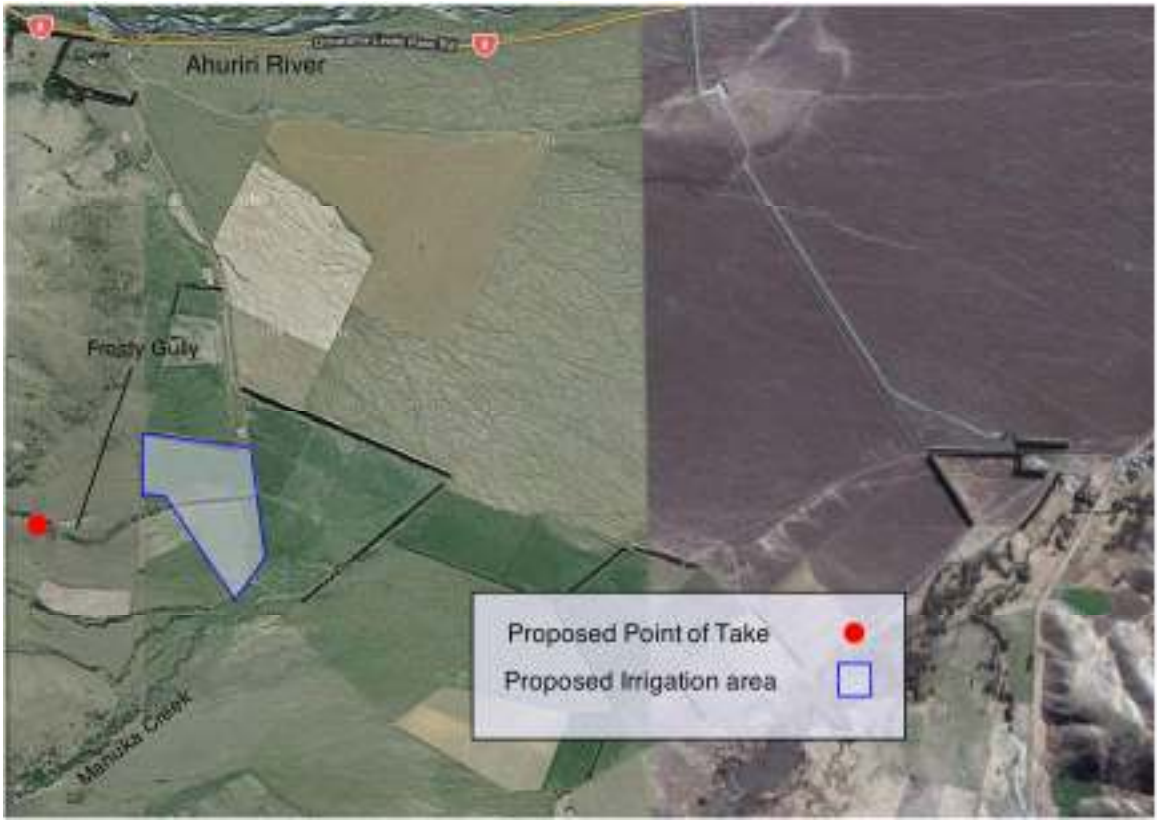


Figure 1. *Indicative location map of applicant's irrigation area and point of take*

The application

2.6 The applications are for water permits to dam, take and use surface water pursuant to section 14 of the RMA. Consent is required under the Waitaki Catchment Water Allocation Regional Plan (WCWARP), as discussed below.

2.7 The applications (CRC040180, CRC040181) were lodged with the Canterbury Regional Council (ECan) on 23 July 2003. The applications were publicly notified and there were a number of submissions that are referred to later in this decision.

Modifications after notification

2.8 In the original application to take water from Frosty Gully, the applicant proposed to take 40 L/s more than that authorised under the existing consent for irrigation of a larger area (54 ha) and for water storage (harvesting) purposes. The application was notified on this basis, however, the applicant subsequently advised the Council that they wished to amend their application and only apply for what was previously authorised by the existing consent.

2.9 The general principle for modifications after notification is that amendments are allowed provided they do not increase the scale or intensity of the activity or significantly alter the character or effects of the proposal. The key consideration is prejudice to other parties by allowing the change. In this case, we are satisfied that the change does not significant alter the intensity or effects of the proposal and that no party would be adversely affected by allowing the change.

Related consents and applications

2.10 As mentioned above, these applications are seeking to replace consents WTK836261A and WTD836261B, which expired on 30 June 2004. These consents authorised the same activity now being applied for, being the damming, take and use of water to irrigate an area of 28 ha. As these applications were lodged 6 months prior to the expiry of the above consents, the applicant is currently operating under s124 of the RMA.

2.11 In addition to applying for replacement consents associated with the abstraction from Frosty Gully, the applicant has also applied to take water from the Ahuriri River and additional allocation from Mānuka Creek. Decisions on these additional applications are contained in separate decisions.

3 DESCRIPTION OF THE ENVIRONMENT

3.1 Frosty Gully is an ephemeral tributary of Mānuka Creek. Instream values downstream of the dam are limited as surface flow within the waterway ceases a short distance from the dam. However, during flood events (which only occur rarely), water overtops the pond and floods onto the surrounding farmland. There are currently no other existing consent holders on Frosty Gully.

3.2 The proposed irrigation area (as shown in Figure 1) is on the southern side of SH8 and the Ahuriri River. This area is currently being irrigated under the existing consents, as discussed above.

3.3 The predominant vegetation at the site was scattered matagouri bushes with the only fauna noted being a pair of paradise ducks on the dam pond.

3.4 The Ahuriri River (at the northern boundary of the applicant's property) is a Wetland of Regional Importance, a Site of Special Wildlife Importance, a Recommended Area for Protection, a Land of National Significance and a Land of Regional Importance. It is also recognised as native bird habitat, a native vegetation area, and trout and salmon spawning habitat.

3.5 Further description of the environment is provided in our Part A decision and our summary of the evidence received from the applicant's and submitters below.

3.6 We detailed our site visits in Part A and we do not repeat this information here. We visited Killermont Station and viewed the Frosty Gully dam abstraction point and the irrigation area.

4 PRELIMINARY MATTERS

Ahuriri Conservation Order

4.1 Section 217 of the RMA states that where an operative conservation order exists, a consenting authority cannot grant a water right if the exercise of this permit would be contrary to any restriction or prohibition or any other provision of the order.

4.2 The Ahuriri National Water Conservation Order (AWCO) sets out various restrictions designed to protect the outstanding characteristics and features of the Ahuriri River and its tributaries. Clause 3 of the AWCO requires a catchment management approach and declares that "the Ahuriri River and its tributaries include and provide for outstanding wildlife habitat, outstanding fisheries, and outstanding angling features."

4.3 Frosty Gully is an ephemeral tributary of Mānuka Creek, which flows into the Omārama Stream and the Ahuriri River. While it is a tributary within the Ahuriri River drainage basin, flow ceases immediately below the dam, which has been in existence for 28 years and prior to the establishment of the AWCO. On this basis, we consider that the application could be granted without breaching any of the provisions of the AWCO.

5 PLANNING INSTRUMENTS

5.1 The planning instruments relevant to this application are:

(a) Transitional Regional Plan (TRP);

(b) Waitaki Catchment Water Allocation Plan (WCWARP);

(c) Proposed Natural Resources Regional Plan (PNRRP);

(d) Canterbury Regional Policy Statement (CRPS); and

(e) Waitaki District Plan (WDP)

5.2 The provisions of these planning instruments critically inform our overall assessment of the applications under s104(1)(b) of the RMA, as discussed in Section 14 of this decision. In addition, the rules within the relevant planning instruments determine the status of the activities, as set out below.

Status of the activity

5.3 In our Part A decision we provide a detailed discussion of our approach to determining the status of activities. We now apply that approach to the current applications.

5.4 Both applications are listed in Schedule 2 of the Resource Management (Waitaki Catchment) Amendment Act 2004. Section 88A of the RMA therefore does not apply and the relevant plan for determining the status of this activity is the operative NRRP.

5.5 The following rules from the WCWARP are applicable to both applications:

(a) Rule 2, clause (1a) – The applicant is not proposing a minimum flow. The take from Frosty Gully falls within row (xxii) of Table 3, which states that the minimum flow should be based on the 5-year, 7-day low flow as assessed by the Council.

(b) Rule 6 – The activity is within the allocation limit of 275 million cubic metres for agricultural activities upstream of Waitaki Dam.

(c) Rule 16 – Classifying activity, non-complying.

5.6 In summary, the proposal is a **non-complying** activity under Rule 16 of the WCWARP and requires consent pursuant to section 14 of the RMA.

6 NOTIFICATION AND SUBMISSIONS

6.1 CRC040181 was notified on 4 August 2007 with 200 other applications for similar activities in the Waitaki catchment. CRC040180 was not notified on the same date and was subsequently notified on 18 October 2008.

6.2 In total 8 submissions were received in relation to the application to take water from Frosty Gully (CRC040180). Of these:

(a) 3 submissions were in support; and

(b) 5 submissions opposed the application.

6.3 In total 22 submissions were received in relation to the application to dam water in Frosty Gully (CRC040181). Of these:

(a) 2 were in support,

(b) 18 were in opposition and

(c) 2 neither supported nor opposed the application.

6.4 Overall, the key effects of concern relating to these applications include those of water quality, existing and other allocations, and minimum flows.

6.5 Table 1 is based on the relevant s42A reports and summarises those submissions that directly referenced the applications. In addition to those listed, there were other submitters that presented evidence at the hearing that was relevant to these applications. The relevant evidence from submitters is discussed in more detail later in this decision. Please note that all submissions hold equal importance, even if not specifically listed below.

Table 1. *Summary of submissions on application CRC040180 and CRC040181*

Submitter	Reason for submission	Position
Canterbury Aoraki Conservation Board	Potential for elevated nutrient levels in wetlands.	Oppose
Gloag, AJ (Buscot Station)	Essential for ongoing viability of farm.	Support
Ruataniwha Farm Ltd	Essential for ongoing viability of farm.	Support
Meridian Energy Ltd	Water quality, duration, stockwater supply and metering	Oppose
J and M Harkerss	Essential for ongoing viability of farm.	Support
Land Information New Zealand	Impact on Crown Land / Pastoral Lease land	Oppose
Department of Conservation	Adverse effects on species / habitats / ecosystems. Natural character of waterways. Fish passage. Duration	Oppose
Fish and Game New Zealand	Metering. Fish screens. Duration. Adverse effects on water quality and quantity and resulting effects on fish habitat / survival / spawning. Timing of instream works. Intensified land use and gamebird impacts.	Oppose

7 THE SECTION 42A REPORTS

7.1 A section 42A report on the application and submissions was prepared by ECan's Consent Investigating Officer, Ms Yvette Rodrigo (Report 23B).

7.2 The primary report was supported by a number of specialist s42A reports prepared by Messrs Heller, Hanson, Glasson, McNae and Stewart, and Drs Clothier, Meredith, Schallenberg, and Freeman. The key issues addressed by these reports were cumulative water quality effects, landscape effects, and environmental flow and level regimes.

7.3 All reports were pre-circulated in advance of the hearing. We have read and considered the content of the reports and refer to them as relevant throughout this decision. Specific points noted from Ms Rodrigo's s42A report are summarised below.

Adverse effect on people, communities and amenity values

Landscape Values

7.4 Ms Rodrigo noted that the irrigation area is relatively small (28 ha) and is some distance from SH8. This area of land has also been irrigated for at least 20 years therefore the visual impacts of irrigation are already occurring and will not change or increase as a result of this replacement application.

7.5 However she added that this proposed irrigation area represents a portion of a much larger irrigation area applied for under the Killermont Station applications, and this larger area extends to SH8 and would be visible from the road.

7.6 Mr Chris Glasson (S42A Officer for Landscape) concluded that no measures would be required to mitigate the impacts of irrigation associated with this replacement application.

7.7 In regards to the dam Ms Rodrigo noted that it has existed on the property for 28 years, since it was constructed in 1981. It is inaccessible to the public and the closest neighbouring property to the dam is approximately 1.5km distance. She was, therefore, satisfied that the dam will not result in adverse effects on landscape values or the amenity of the surrounding area.

7.8 Ms Rodrigo added that while it is considered that the irrigation of this land solely is unlikely to result in adverse landscape effects, the site in combination with the new irrigation areas proposed under Mānuka Creek, CRC041798 (75 ha), Woolshed Block, CRC041777 (300 ha) and Peebly Block, CRC41330/CRC41331, CRC041332 (216 ha) may result in significant adverse effects, unless appropriate mitigation is provided. This mitigation however, would be required in relation to irrigation areas covered under other applications within this Landscape Unit and not for the area irrigated under this application, should it be granted.

Recreational and Amenity Values

7.9 Ms Rodrigo noted that the flow in Frosty Gully ceases a short distance from the dam, within the applicant's property. In addition, she noted that no recreational or amenity values [in the ECan database] have been recorded for Frosty Gully.

7.10 Given that it is unlikely that Frosty Gully, in the vicinity of the abstraction location and dam, would be accessible to the public or used for recreational or amenity purposes, Ms Rodrigo's view was that the adverse effects on amenity are unlikely to be no more than minor.

Positive Effects

7.11 Ms Rodrigo noted that the use of water for irrigation would maintain the productivity of the land and provide for the economic well-being of the wider community.

Summary of effects on people, communities and amenity values

7.12 Given the conclusions reached by Dr Freeman and Mr Glasson and the nature of the proposed activities, Ms Rodrigo was satisfied that the adverse effects on landscape and amenity values will be minor.

Adverse Effects on Other Users

7.13 The applicant is not proposing a minimum flow as they state that flow ceases downstream of the dam and within the applicant's property. Given that there are no existing or proposed takes from Frosty Gully, Ms Rodrigo did not consider a minimum flow to protect other users was necessary.

7.14 This application if it is granted will authorise activities that have occurred on this property for almost 30 years. Given the size of the take and the lack of other abstractions from Frosty Gully, Ms Rodrigo was satisfied that the proposal to continue taking water from this waterway is unlikely to have impacts on any other users including MEL.

Adverse Effects of Inefficient Use

7.15 Ms Rodrigo told us that the taking of water in excess of that required for the intended use may contribute to water levels being unnecessarily reduced and less water available for other users.

Annual Volume

7.16 The irrigation volume of 170,000 m^3 has been based on the volume currently authorised under the existing consent for this activity. Ms Rodrigo noted that the applicant has stated that this volume is consistent with an average annual application depth of 600 mm.

7.17 Ms Rodrigo used the method outlined in Policy 16(c)(ii) of the WCWARP (WQN9v2) to provide guidance on reasonable annual volumes that would be required to meet the seasonal irrigation demand for soils within the proposed irrigation area. Taking into account the PAW and annual rainfall as determined from the ECan database, Ms Rodrigo calculated that the annual volume required to irrigate the 28 ha block would equate to 176,400 m^3, which is higher than the volume applied for by the applicant. On this basis, the annual volume requested by the applicant would represent, according to Ms Rodrigo, a reasonable volume to meet the irrigation demand of the soils at the site.

Technical Efficiency

7.18 Given the method of irrigation (spray irrigation) and application rates proposed, Ms Rodrigo was satisfied that irrigation proposed should be able to achieve the 80% technical efficiency in the WCWARP. Ms Rodrigo noted that in addition, the applicant has proposed to install a water meter and monitor the actual amount of water taken and used.

Adverse effect of use on water quality

7.19 The proposed activity can have an impact on water quality in the immediate vicinity of the site or in combination with other activities in the catchment result in cumulative adverse effects.

7.20 An assessment of cumulative effects on water quality was requested to address the above concerns, in relation to Policy 13 of the WCWARP. Ms Rodrigo noted that the applicant has contributed to the study by Mackenzie Water Research Ltd (MWRL) on cumulative effects within the catchment.

7.21 The conclusion of Dr Mike Freeman and other experts who had audited the MWRL report was that it would be premature to make robust conclusions about the potential adverse cumulative effects given a number of uncertainties which Ms Rodrigo noted in her report.

Adverse effects on ecosystems

Minimum flows

7.22 At the time of writing her S42A Report Ms Rodrigo noted that the applicant has not provided a clear assessment of effects of the abstraction and damming of water from Frosty Gully on ecosystem values within the waterway. She noted that all the flow in Frosty Gully is currently collected in the dam within the creek bed and piped to the irrigation area. This situation has occurred since 1981 and it is likely that any ecological values within the waterway reflect the current situation and are unlikely to change as a result of granting these applications.

7.23 On this basis, the applicant is not proposing a minimum flow for the abstraction and both applications are non-complying activities according to the WCWARP. Given that these activities have occurred for a relatively long time and the ecosystem of the creek has already been modified, it was Ms Rodrigo's opinion that continuation of both the damming and abstraction of water from Frosty Gully are unlikely to result in further adverse effects on the environment.

Fish Screen and Intake Structure

7.24 The applicant states that water is taken via a pipeline installed within the dam wall and a fish screen with a 1 mm mesh is installed at the intake. Ms Rodrigo noted that the intake pipe within the wall of the dam is unlikely to impede fish passage and the mesh size is consistent with the NIWA fish screen guidelines, which recommend a mesh size of no greater than 2 mm.

7.25 Ms Rodrigo noted the existence of the dam may impede the passage of fish within Frosty Gully. Furthermore, the applicant has not provided information on the fishery values of this watercourse, confirmed whether fish passage within the flowing reaches of the gully (both upstream and downstream of the dam) has been provided for, or assessed the impacts of damming water within this watercourse to determine the significance and extent of the impacts associated with this activity.

7.26 Ms Rodrigo noted that it is stated that flow in Frosty Gully ceases immediately downstream of the dam. She noted that it is unclear whether fish can move freely between the upper and lower reaches of Frosty Gully via the pond.

Adverse effects of dam failure

7.27 Ms Rodrigo noted that the nearest built infrastructure to the existing dam belongs to the applicant, and is located approximately three kilometres north of the dam. During the site visit, ECan officers noted that due to the topography it would be impossible for flows to reach the property if dam failure occurred. Ms Rodrigo noted that two properties, not owned by the applicant are located at a distance of 5 kilometres from the dam.

7.28 There are no other structures or public roads within the vicinity of the dam. Therefore, according to Ms Rodrigo if dam failure was to occur it is unlikely that any existing structures would be affected.

7.29 Ms Rodrigo noted that the dam has been created by excavating the bed of Frosty Gully waterway and located in a natural basin on the property. She added that in times of very heavy rain, there is the potential for water to overtop the banks of the dam and flow onto the surrounding farmland. However, given the size of the dam and the amount of water impounded, it is unlikely that flooding will be extensive or result in adverse effects on other properties.

7.30 In conclusion Ms Rodrigo considered that the effects of dam failure are likely to be minor.

Adverse effects on Tangata Whenua values

7.31 The applicant did not include an assessment of the proposed activity on cultural values. The sites of the proposed activities are within the rohe of Te Runanga O Moeraki. Both Moeraki Runanga and Te Runanga O Ngāi Tahu were served notice of the applications in August 2007.

7.32 In their submission Te Runanga O Ngāi Tahu have raised concerns relating to mixing of waters between catchments, deterioration of water quality, dewatering and residual flows, changes to sediment flow and deposition and impacts on sites of cultural significance.

7.33 Given that there are a number of submissions which identify cultural values, Ms Rodrigo was unable to conclude that the actual and potential effects on cultural values of the area will be minor.

Statutory Assessment

7.34 With regard to s104(1)(b), the relevant provisions of the RPS and WCWARP have been considered above. In Ms Rodrigo's view, the applicant's proposal may not be consistent with Policy 13 due to there being likely effects on water quality.

7.35 In regards to Part II Section 5 of the RMA Ms Rodrigo noted that the proposal will allow the development of land to occur, which may provide for the economic and social well-being of the community. The applicant however has not proposed measures to "avoid, remedy or mitigate" the potential impacts on surface water quality. She added it is also uncertain whether the proposal adequately protects any ecological or fishery values that exist within the watercourse, as required under Section 5(2)(b).

Conclusions and Recommendations

7.36 In order to grant consent, Ms Rodrigo advised that the Panel must be satisfied that the impacts of the activities will not result in more than minor impacts on the environment or that the applications are not contrary to the objectives and policies of the relevant plans (section 104D).

7.37 For these applications, Ms Rodrigo was unable to confirm that under s104(1)(a), the actual and potential effects of the proposed activity are acceptable when taking account the proposed mitigation. In particular, there is uncertainty regarding the localised and cumulative impacts on surface water quality, cultural values and ecological values as a result of the damming and use of water.

7.38 In relation to application CRC040180 to take and use water, Ms Rodrigo considered that the applicant had not proposed any measures to mitigate impacts on water quality or demonstrated that the impacts on water quality are likely to be no more than minor or that the proposal is consistent with the policies of the WCWARP, in particular Policy 13. On this basis, Ms Rodrigo could not recommend that this application be granted.

7.39 In relation to application CRC040181 to dam water, Ms Rodrigo considered that the applicant had not provided sufficient information to confirm that the impacts of the damming of water in Frosty Gully on the ecological and fishery values within the watercourse were unlikely to be more than minor. Therefore, Ms Rodrigo could not recommend that this consent be granted.

8 THE APPLICANT'S CASE

8.1 Legal counsel for the applicant, Christian Whata, presented opening submissions and called eleven witnesses as follows:

(a) Mr & Mrs Thomas (The Applicants)

(b) Mr McIndoe (Aqualinc Research Ltd) - water allocations, irrigation efficiency and drainage calculations

(c) Dr Bright (Aqualinc Research Ltd) - WQS thresholds and how compliance will be achieved

(d) Dr Robson (Ryder Consulting) – Farm Environmental Management Plans

(e) Mr Engelbrecht (Farm Management Consultant) – peer review of the practicality and feasibility of the FEMPs

(f) Dr Ryder (Ryder Consultants) – freshwater ecology

(g) Dr Goldsmith (Ryder Consultants) – effects of developments on freshwater ecosystems

(h) Dr Bartlett (Mitchell Partnerships) – botanist

(i) Mr Brown (Stephen Brown Environments) – landscape effects

(j) Mr Mikaere (Buddy Mikaere & Associates) – cultural issues

(k) Mr Kyle (Partner Mitchell Partnerships) – planning instruments relevant to the application

Christian Whata - Legal Submissions

8.2 The applicant, together with Southdown Holdings Ltd, Williamson Holdings Ltd and Ōhau Downs, was represented by Mr Christian Whata of Russell McVeagh. Mr Whata also represented McKenzie Water Research Ltd, who presented the cumulative effects assessment on behalf of all applicants seeking consents at this hearing.

8.3 Mr Whata opened his evidence by stating that the applicant is committed to best practice and that their farm management proposals are cutting edge. He added that the applicant fully appreciates the need to avoid adverse effects. Importantly, he stressed, best practice combines with high productivity to make the farms viable.

8.4 Mr Whata acknowledged that the application covers relatively large irrigable areas (though small within the context of the Basin as a whole). He added that they should not be penalised for this and should be judged on their merits, which in his view include:

(a) More efficient and productive use of land and water resources;

(b) Comprehensive management of resources to agreed standards on an integrated basis so as to avoid effects of significance;

(c) Better enablement of both people and communities through long term sustainable and viable use of resources;

(d) Enhancement of stream and terrestrial environments, and protection of valued areas, through uniform farm management practices across large land holdings; and

(e) Greater ability to respond to and mitigate unanticipated adverse effects through the application of entire farm management systems over large irrigable areas.

8.5 Mr Whata noted that some applicants have expressed concerns about the level of mitigation required to meet the WQS thresholds. He added that the starting point is that all applicants need to engage in farm management practices that minimise the effects of their activities irrespective of the allocation methodology. In his view this is exactly what this applicant is doing, with the result that the nutrient loading associated with their farms is well below the WQS thresholds for nitrogen and have bettered them for phosphorus.

8.6 Mr Whata gave us his opinion on Section104D (non complying) matters which was that the applicant's non complying take meets the S104D test, and using case law discussed what we may consider under S104D(a) of the RMA.

8.7 Mr Whata detailed the existing environment and noted that it is not pristine and reflects the reality of dryland farming in a tough environment. He noted that the applicant's property is currently farmed and these activities have an impact on the environment including generating nutrients, waterways not fenced, minimal riparian planting and significant soil erosion.

8.8 Mr Whata advised us that Killermont is reconsenting their take from Frosty Gully, and that the upper reaches of Frosty Gully are generally flowing however downstream of the dam the stream flows underground.

8.9 The activity of damming, water take and irrigation of the land below Frosty Gully has been occurring since approximately 1981.

Daniel and Kerryn Thomas - Applicants

8.10 Daniel and Kerryn Thomas (applicants) advised us that they were the directors of Killermont Station Limited and had been farming the property since 2003; prior to this Daniel Thomas had been in a partnership with his parents for 22 years. The principal income earners from the property comes from sale of lambs and merino wool, the wool is highly regarded and is sold as spinners wool to Italy to be made into fine suits, a lot of effort is put into selecting sires that give genetic gains to improve wool production and stock constitution.

8.11 We were told that the family were progressing through farm succession, Daniel's parents still live on the property. However, there is insufficient "fat" in the system to enable the parents to move off the property.

8.12 As a result of tenure review in 2006 the farm lost summer grazing country and riverbed frontage which caused a reduction in the stocking rate, as a result a change in the farming practice has been made to invest in the existing irrigation area and enhancing grass growth. The hill country had not been fertilised for 9 years which had resulted in regeneration of native grasses and less scrub in the gullies, while organic fertilisers were applied to the lucerne paddocks of the existing irrigation area with great results.

8.13 Mrs Thomas told us that they have changed from gun to centre pivot irrigators and utilised gravity feed to all of their existing irrigation. The property runs 3200 merino ewes, 2600 merino hoggets and 150 wapiti/red hinds, and fatten 60-80 cattle each year depending on the market. Weaners are sold in the autumn as there is normally insufficient feed reserves to winter them, 700 ewe hoggets go into the flock as two tooths ewes and the balance are sold in the spring.

8.14 Mrs Thomas told us that irrigation is seen as the last option they have to make the property a sustainable, viable and progressive farming unit. However we were told they are overwhelmed with the process.

8.15 The objective is to utilise irrigation to enable stock numbers to be sustained throughout the year, take advantage of the market by selling stock at the optimum time and when prices are at their highest. Other benefits include releasing pressure on the fragile country and high country during weather extremes, and top soil will benefit on the blocks that have been sown in annual crops because of the wasting organic matter being left on the land. Young stock can be shifted regularly thus avoiding unwanted worm burden and providing superior feed supply and nutrients.

8.16 The Thomases are confident they will be able to progress and implement a FEMP, recognising that monitoring nutrient application, discharge and water application are all part of maintaining a healthy irrigated farming unit.

8.17 The Thomases said that securing water is their only option, they are have spent a considerable amount on a lengthy consenting process and an expert team who have advised them that irrigation is possible through the state of the art farm management plans and ongoing auditing and monitoring.

Reasonable Use

8.18 Mr McIndoe noted that the takes on Killermont that were for new areas of irrigation required MIC shares, which provide for 6,000 m^3 per ha per year or water, and that the Frosty Gully Block is a replacement and did not require MIC shares. The 20 L/s for irrigation will be applied by k-line and equates to an average system capacity of 6.2 mm/day over the 28 ha. The annual volume applied for was based on the existing consent WTK836261B, an average application of 6,070 m^3/ha/year. No flow gauging had been undertaken in Frosty Gully.

8.19 Mr McIndoe told us that irrigation demand modelling has indicated that the seasonal irrigation requirement 80% of the time, assuming 80% application efficiency, ranges between 787 mm and 804 mm over the various soils. The results of the modelling are summarised in Table 2.

Table 2: *Modelling results*

Average soil PAW (mm)	Irrigation demand (mm/year)	Area (ha)	Irrigation demand (m^3/year)
70	804	25	201,000
120	787	3	23,610
Total		28	224,610

8.20 Mr McIndoe told us the results of the modelling show that an annual allocation of 224,610 m^3/y for the 28 ha (or 802 mm/year on average) is required to meet the full irrigation demand every four out of five years. This exceeds what has been applied for (170,000 m^3/y) and indicates that the applicant may have insufficient water to fully meet demand more frequently than 20% of the time. This will require the applicant to achieve an application efficiency greater than 80% that has been modelled to ensure significant yield losses do not occur in extreme years.

8.21 Mr McIndoe provided an Appendix D in which Table D1 provided a summary of the irrigation demand model inputs. Appendix D states that the modelling was consistent with the WCWARP and NRRP, including meeting the requirements of Policy 16 of the WCWARP. This specifies that annual volumes are to be based on soil moisture measurements, local rainfall and evapotranspiration modelling for eight-in-ten year reliability and achievement of irrigation application efficiency of at least 80% and the NRRP which specifies an irrigation system capacity of a maximum of 0.8 L/s/ha (or 6.9 mm/day).

8.22 Mr McIndoe's Appendix A indicated that the nearest climate station with long term rainfall records is located at Omārama and Tara Hills. Tara Hills is located immediately south of the proposed irrigated area and has an average annual rainfall of 500 mm, the area can experience very dry conditions with only 331 mm of rain in 2001 and 378 mm of rain in 2003.

8.23 The Tara Hills site has an average (PET) of 808 mm, which is typical of PET in Canterbury. Soil moisture monitoring is proposed to be carried out to ensure over-watering does not occur and maximum possible water use efficiency is achieved.

Efficient Use

8.24 Mr McIndoe noted that from a productive perspective that the allocations will be insufficient to keep up with peak crop water demand in dry seasons unless water is applied very efficiently.

8.25 Mr McIndoe (Appendix E) states that two methods had been used to check application rates are as follows;

a) The Code of Practice provides guidance on maximum application rates for different soil types, and different land slopes and allows the proposed application rates to be compared to the estimated soil infiltration rate.

b) The SPRINK model was used to assess the amount of irrigation redistribution when varying the rate. In general, applying less water more frequently improved application efficiency and reduced the potential for surface redistribution.

The analysis examines application rates compared to soil infiltration rates and suggests a return period and applied depth to minimise deep drainage, macropore flow and runoff, and to maximise irrigation application efficiency.

Effects of Surface Takes on Other Water Abstractors

8.26 Mr McIndoe stated that the Killermont proposed abstractions comply with the 275 m^3 allocation limit described in Table 5 of the WCWARP.

8.27 Mr McIndoe advised us that the Omārama Township water supply from Old Man Creek, a tributary of Omārama Station will not be affected as Old Man Creek is not connected to or influenced by Frosty Creek. Equally no abstractions for stockwater are proposed to occur downstream of Frosty Creek.

Effects of the Use of Water on Waterways

8.28 Mr McIndoe advised us that the 28ha irrigated area is located down gradient of the point where Frosty Creek goes dry, and separates the new proposed irrigation areas under consent applications relating to Mānuka Creek (CRC041798) and the Ahuriri River take (CRC041777).

8.29 Mr McIndoe advised us that the potential for runoff into Frosty Gully Creek was low given the relatively gentle north-east gradient of the land and infiltration characteristics of the soil. A minimum distance of 5m is proposed between the creek bank and all areas to be irrigated (existing and new), while the dry creek bed is not proposed to be fenced given the status and low value of the creek along this reach.

8.30 Mr McIndoe told us that the Omārama Stream wetland/swamp area is located approximately 2 km south east of the applicant's property. The impact of the proposed irrigation on the swamp is considered minor because contributions to Omārama Stream are limited to occurring during significant flood events, effects on these creeks from irrigation is minor.

WQS Thresholds

8.31 Dr Bright in his evidence traversed the groundwater environment potentially affected by the Killermont irrigation operations. Dr Bright commented that the Frosty Gully scheme is located entirely in the Omārama Stream sub catchment any reference beyond that is of a general nature. For more detail Dr Bright referred to McIndoe's "irrigation development" evidence and Dr Robson's "farm management practices" evidence.

Farm Environmental Management Plans

8.32 Dr Robson told us that the FERA highlighted potential water and runoff risks arising from beef stock having access to watercourses (Mānuka Creek and Frosty Gully), and the access into a top paddock above Frosty Gully dam is through the waterway and vehicular access through Mānuka Creek. A number of mitigation measures were proposed such as temporary fencing and gates to prevent stock encroachment of Frosty Gully (and Mānuka Creek) and no run-off for deer wallows

or fence-lines permitted to reach a watercourse. In addition a range of monitoring and auditing measures as part of the FEMP are proposed.

8.33 The above approach was also supported by Mr Engelbrecht, but more specifically for new development in regards fertiliser use and ensuring all nutrients are accounted for and stock access to waterways is prevented.

8.34 Dr Robson told us that the local receiving environments not captured by the WQS are the Mānuka Creek, Frosty Gully, Tara Hills and a small section of the Ahuriri River.

8.35 The proposed take and use is a replacement and the effects that occur principally arise from the irrigation activity and nutrient losses to groundwater or surface water. The reductions required in nutrient losses are discussed in the farm management plans of Dr Robson.

Description of Environment and Soils

8.36 The property slopes evenly from west to east, with an average gradient of between 6m/km and 10 m/km, topographical features relevant to irrigation are the Mānuka Creek and Frosty Gully Creek to the south of the irrigation area. The soil types in the proposed irrigation area are Dalgety and Edwards type soils, which are sandy loam and silt loams. Plant available water varies, but is primarily represented by two main groups: 70 mm PAW and 120 mm PAW. The dam and intake has been described previously at #2.2.

Fisheries and Birdlife Values

8.37 Mr McIndoe told us the dam sits in the creek bed, from which water is proposed to be abstracted, and has been in place for 30 years. Currently most of the water is collected in the dam however during periods when irrigation is not required (during higher flows), the water overtops the dam and flows down the existing dry creek bed, generally disappearing 250m downstream. During significant flood events water may continue down to the creeks confluence with Mānuka Creek, which may then reach Omārama Stream in extreme events. (See Goldsmith)

8.38 Dr Robson stated that small brown trout had been found upstream of the dam (Ryder Consulting). Dr Ryder did not add specific evidence on Frosty Creek; the proposed activity does not affect the creek above the dam or the dam.

Minimum Flow

8.39 The applicant is not proposing a minimum flow as the proposed continuation of the existing abstraction and irrigation will not result in any further changes to the environment, given the system has been in place for 30 years.

8.40 Dr Goldsmith assessed the potential effects of the proposed take and use on Frosty Gully, a small stream sourced from springs and snow melt, the channel is largely unmodified. Downstream of the dam the stream bed runs approximately 1km through modified farmland to its confluence with Mānuka Creek.

8.41 Dr Goldsmith reported that excellent biota health immediately upstream and downstream of the take have excellent biotic health. Small brown trout were found above the dam, no fish were caught below the dam. Bellbirds, grey warblers and silvereyes were found on the upper slopes of Frosty Gully upstream of the intake site, and a range of birds were found in the vicinity of the proposed irrigation.

8.42 Dr Goldsmith stated that as no irrigation will pass over Frosty Gully Creek, a riparian buffer will be maintained between flowing sections of the creek and areas of irrigation and/or increased stock density. She told us that as Frosty Gully flows only intermittently in the area adjacent to the irrigation area such that temporary fencing would be adequate. Dr Goldsmith submitted that the establishment of a 5m riparian buffer will be sufficient to protect and possibly improve existing aquatic ecosystem values.

8.43 Dr Goldsmith told us that the irrigation and subsequent pasture and crop production will likely be beneficial to the main bird species that are currently found in the area.

Fish Screen and Intake Structure

8.44 Dr Goldsmith stated that as the irrigation scheme will use an existing intake and pipeline that there would be no potential construction effects.

Effects on Vegetation

8.45 Dr Ruth Bartlett gave evidence on terrestrial ecological values, potential effects and intensification of farming on several farms including Killermont Station. A thorough assessment of terrestrial values and the effects of proposed works were undertaken; no specific issues were identified with the Frosty Gully proposal given its developed state and as a result it retains little natural value.

Effects on Landscape

8.46 Mr Kenneth Brown gave a detailed explanation of the elements of landscape values for the stations he was representing before providing evidence on the parcels of existing and proposed irrigation blocks. Mr Brown in his general comments on Killermont Station noted that it is in the area of;

> *"The interconnection with the hill ranges in its immediate backdrop that the actual farm area displays limited naturalness and endemic character, with its limited appeal mainly related to the interplay……."*

8.47 Mr Brown observed that the Frosty Gully intake at the foothills of the Wether and Dunstan Ranges of Killermont Station is isolated from the public domain by intervening blocks of private land.

8.48 Irrigation of the 28 ha block with Frosty Gully water has been occurring since 1981 and any visual or greening effects and relatively minor.

Effects on Tangata Whenua Values

8.49 Mr Buddy Mikaere, cultural advisor, was engaged by several properties including Killermont to assist the applicants identify appropriate responses to the cultural issues raised in the submissions of Te Runanga o Ngāi Tahu and Ngāti Mamoe Fisher People.

8.50 The principal objections from Ngāi Tahu were directed at the large scale and intensive farming applications involving dairying that have the potential to impact on key areas of mahinga kai or waterways identified for mahinga kai restoration, such as the Ahuriri Arm of Lake Benmore.

8.51 Mr Mikaere responded to the issue of fish passage, a point that was raised in the S42A Report, that there was uncertainty as to whether fish can move freely between the upper and lower reaches of Frosty Gully via the present pond and dam. This issue relates to the Ngāi Tahu concern about fish passage.

8.52 Mr Mikaere told us that Frosty Gully in his understanding was an ephemeral waterway for the majority of the year and only flows in flood conditions and that the dam had been in place for 25 years. Mr Mikaere told us that the trout population above the dam is a captured one, and concluded that the existence of trout above the dam must mean there is movement between the two parts of the creek at times of flood.

Planning Instruments

8.53 Mr John Kyle, told us the activity status of the Frosty Gully application is discretionary pursuant to rule 15 of the WCWARP, that the proposed abstraction from Frosty Gully is via an existing water race and therefore there is no minimum flow to be applied. However Mr Kyle noted that Rule 2 of the WCWARP requires all takes to comply with a minimum flow regime and therefore consent is required for a non complying activity pursuant to Rule 16 of the Plan.

8.54 Mr Kyle concludes that the presence of juvenile brown trout upstream of the dam indicates that fish are able to move upstream from the Omārama Stream, through Mānuka Creek to Frosty Gully.

9 SUBMITTERS

9.1 Set out below is the summary of the issues raised by submitters who appeared before us. We emphasise that we have read and considered all submissions made, both in support and in opposition to the application, as well as reviewing and carefully considering evidence advanced before us.

Department of Conservation

9.2 The Director General's, (DoC) submission was principally concerned about the possible effects on threatened indigenous fish populations in the lower Ahuriri River (bignose galaxiids in particular) and the cumulative effect on the habitat of threatened fish and birds in the catchment. Several witnesses provided evidence for the Department of Conservation which while not specific to Frosty Gully were relevant in respect of providing information about species, habitat and ecosystems in the Upper Waitaki. The witnesses were;

(a) Dr Richard Allibone, senior ecological consultant, who gave evidence on the native fishery of the Upper Waitaki and their threat status and critiqued the assessment of effects that the applicants provided.

(b) Mr Peter Ravenscroft, DoC ranger, focused on the populations of the lowland longjaw galaxiids and bignose galaxiids in the Upper Waitaki.

(c) Mr Jonathon Bray, Technical Support Office, DoC, gave evidence on the current state of the environment and monitoring undertaken to date.

(d) Mr David Murray, DoC ranger, gave evidence on riverbed and wetland birds in the Upper Waitaki

Canterbury Aoraki Conservation Board

9.3 Ms Ines Stager, member of the Canterbury Aoraki Conservation Board submission raised no specific site issues relating to the Frosty Gully proposal. The submission referred out attention to Part II of the RMA, particularly matters of national importance in 6(a), 6(b) and 6(c) and also cited the "Waitaki Place Unit" of the Canterbury Conservation Management Strategy (CMS).

Central South Island Fish & Game Council

9.4 Ms Devon Christensen, Resource Officer for F&G, submission covered statutory planning matters and provisions within the statutory planning documents covering the protection of trout and salmon fishery. Ms Christensen also raised general concerns relating to water quality impacts, fish exclusion and consent duration.

Meridian Energy

9.5 Mr Richard Turner provided evidence on behalf of Meridian Energy, which incorporated a comprehensive review of evidence from all the applicant groups in the catchment above the Ahuriri Branch of Lake Benmore. Mr Turner's evidence identifies those individual applications that remain a concern to Meridian following a comprehensive review of the applications in the Upper Waitaki catchment. The Frosty Gully applications are among those consents that remain a concern to Meridian in respect of cumulative water quality issues. Mr Turner summarised the Meridian position on replacement consent duration being influenced by the potential for cumulative water quality effects associated with the current applications arising and the need to re-evaluate the water quality effects in the future to determine whether the predictions were accurate. Meridian seek that consent duration is aligned to the term of the Meridian water right which expires in 2025.

Land & Information NZ (LINZ)

9.6 The submission (2007) from Land Information New Zealand (LINZ) sought to ensure that proposals involving land administered by LINZ, including works in the bed of the Waitaki River, are received by LINZ with clearly detailed plans.

Mackenzie Guardians

9.7 Dr Susan Walker, plant ecologist, presented comprehensive evidence (Mackenzie Guardians) on plant ecology in the Mackenzie Basin that identified that the application overlapped significant inherent ecological values on Killermont Station, and referenced Frosty Gully among those sites.

Ngāi Tahu

9.8 The Ngāi Tahu submissions identified concerns with the sheer scale of the Killermont Station proposals with an emphasis on the new (rather than the replacement) consents and those that would result in large scale intensification. Ngāi Tahu are concerned that the cumulative effect of the new and large scale applications do not impact negatively on areas proposed for mahinga kai enhancement in the Lower Ahuriri catchment. Frosty Gully contributes to cumulative levels of nutrients in the sub-catchment nutrient levels of the Ahuriri, but is a replacement application for a 28ha spray irrigation activity.

Submitters in support

9.9 Submissions in positive support of the application by Killermont were received from Buscot Station, Ruataniwha Farm Ltd and J & M Harkness, noting that it was essential for ongoing farm viability

10 UPDATES TO THE S42A REPORTS

10.1 Ms Rodrigo in her S42A addendum told us that the remaining outstanding issues were as follows;

Water Quality Effects

10.2 Dr Freeman in his S42A addendum reported on his audit of the draft FEMPs and Water Quality assessments of Dr Robson and MWRL experts. Dr Freeman considered that a high level of uncertainty about potential consequences of the adverse effects on surface water in the Ahuriri Arm and Omārama Stream of the catchment and as a result recommended a decline for CRC040180.

10.3 Mr McNae in his S42A addendum expressed uncertainties over the OVERSEER inputs for the 'property' such that the local and cumulative water quality effects remain outstanding.

Ecological Effects

10.4 Ms Rodrigo considered that given water flows downstream of the dam for up to 1km and linking at times with Mānuka Creek and Omārama Stream that the unimpeded fish passage from above to below the dam should be a requirement should we decide to grant the consent.

11 APPLICANT'S RIGHT OF REPLY

11.1 Mr Christian Whata presented legal submissions on behalf of the applicants in which he referred to the reply evidence of Dr Goldsmith that the need for a condition requiring a condition that fish passage is not required as there is no surfaced water connection between Frosty Gully and Omārama Stream. Uncertainties over the inputs to OVERSEER were reported as being resolved in Mr McNae's S42A addendum report (page 14 & 15).

Ecological

11.2 Dr Ruth Bartlett responded to Dr Susan Walker's Mackenzie Guardians inclusion of Frosty Gully in a zone of significant inherent ecological values by telling us that the Hall's totara in Frosty Gully are part of a reserve located upstream of the Frosty Gully Intake. Dr Bartlett said there are no works proposed to occur in the Frosty Gully area above the dam as the intake and pipeline are already in existence. The pipeline conveying dam water to the irrigation site will traverse pasture and follow the margin of the native scrubland but will not pass through the scrubland.

11.3 Dr Bartlett also told us in response to a commissioner's question, that since her original evidence that she had visited the site of Frosty Gully and could confirm that the DoC Reserve is well upstream of the Frosty Gully intake and will not be disturbed by the pipeline which is already in existence.

11.4 Dr Bartlett in her supplementary evidence responded to Ms Rodrigo's recommendation that as Frosty Gully can at times be connected with Mānuka Creek and Omārama Stream that a condition should be included that requires fish passage not be impeded. Dr Bartlett referred to Mr Stewarts (S42A addendum evidence) that indicates that Mānuka Creek does not resurface and that the lower reaches of the creek have not flowed for many years, which has consequences for fish passage requirements in Mānuka Creek and Frosty Gully. Mr Stewart's evidence indicates that the trout population in Mānuka Creek and Frosty Gully must be self-sustaining. We accept this to be the case given the principally ephemeral nature of Frosty Gully other than during times of non irrigation periods involving high flows or flood events.

Landscape

11.5 Mr Stephen Brown in further evidence on landscape told us that although the Dunstan and Wether Ranges comprise the immediate backdrop to Killermont Station and are part of a wider chain of outstanding mountains, the irrigators that are distant from SH8, which includes Frosty Gully, would be intermittently visible and all but imperceptible.

Water Quality

11.6 Dr Melissa Robson provided a comprehensive response to issues raised by S42A reports and submitters on the applicants Water Quality, Farm Environmental Plans and the OVERSEER modelling aspects of their applications. There was no specific evidence in relation to Frosty Gully as the response to issues was at a generic / modelling level, however impacts on water quality in the Ahuriri sub catchment are relevant as Frosty Gully contributes to a cumulative impact.

12 STATUTORY CONTEXT

12.1 The relevant statutory context for a **non-complying** activity is set out in detail in our Part A decision. In accordance with those requirements, we have structured this evaluation section of our report as follows:

(a) Evaluation of effects

(b) Evaluation of relevant planning instruments

(c) Evaluation of other relevant s104 matters

(d) Section 104D jurisdictional hurdles

(e) Part 2 RMA

(f) Overall evaluation

13 EVALUATION OF EFFECTS

13.1 Drawing on our review of the application documents, the submissions, the Officers' Reports, the evidence presented at the hearing and our site inspection, we have concluded that the effects we should have regard to are:

(a) Visual and landscape effects

(b) Effects on other water users

(c) Water quality

(d) Effects on ecological values

(e) Cultural effects

(f) Cumulative effects

(g) Positive effects

Visual and Landscape effects

13.2 This is an application for a replacement activity that has been occurring for 20 years, the irrigation area is small in a large expansive landscape, located at the foothills of a large range and screened from public roads in part by shelter belts. There is some confusion in the evidence about the irrigation infrastructure to be utilised. Mrs Thomas referred to centre pivot irrigators. Mr McIndoe was particular in telling us that the irrigation would be applied on the Frosty Gully Block by K-line. Mr Brown when he assessed visual impacts referred to irrigators, noting that they would be some considerable distance from State Highway 8. Given the volumes of water being utilised we think that it is more likely that K-line will be used on the site. That being the case there will be very little impact from irrigation structure. Even in the instance we are wrong and pivots are to be used on the site, we do agree that given the distance from public viewing areas (such as the State Highway) visual effects will be less than minor. In regard the dam it is inaccessible to the public and neighbouring properties are over 2km distant. We consider that the effects on landscape values are existing and will be less than minor.

Effects of Inefficient Use

13.3 The annual volume applied for of 170,000 m^3 is based on the volume currently authorised under the existing consent, this volume is consistent with an average annual application depth of 600mm and compliant with Policy 16(c)(ii) of the WCWARP (WQN9v2). Mr McIndoe for the applicant told us that modelling shows an annual allocation of 224,610 m^3/yr for the 28ha (802mm/year on average) is required to meet full irrigation demand. The application for 170,000 m^3 applied for means that the applicant will need to achieve high levels of efficiency to ensure significant yield losses do not occur in extreme years. Soil moisture monitoring is proposed to be carried out to ensure over-watering does not occur and maximum possible water efficiency is achieved.

13.4 We are satisfied that the spray method of irrigation and application rates proposed will meet the technical efficiency requirements of the WCWARP.

Effects on other water users

13.5 The dam activity of has occurred for almost 30 years and given the size of the take and the lack of other abstractions from Frosty Gully we consider that the take is unlikely to have any more than minor impacts on other users, including Meridian.

Effects on Water Quality

13.6 In Part A of this decision we rejected the MWRL proposition that all consents sought in this hearing could be granted (with conditions) and without causing cumulative water quality effects. It is incumbent upon us, therefore, to consider (as far as is possible) whether granting this application, in combination with other water permits we grant, will lead to unacceptable water quality effects. In this case it means considering the potential effects of granting this application (in combination with others we grant) on:

(a) the trophic state of the Ahuriri Arm of Lake Benmore;

(b) Groundwater chemistry and in particular the proposed threshold of 1 mg/L nitrate-nitrogen; and

(c) Periphyton growths and other ecological effects in the Ahuriri River

13.7 A starting point for the consideration of effects is the FEMP. We are satisfied with the evidence given on the FEMP on Frosty Gully by Dr Robson. We also consider that the mitigations proposed (preventing stock access to Frosty Gully Stream and the dam) are appropriate for this replacement consent. We note that that the soils on the irrigated area, while could not be considered deep by any means, are certainly not as shallow as those on the proposed Pebbly Block and Woolshed sites.

13.8 For Killermont Station, the WQS identified the Ahuriri Arm's mitigation requirements as being the most stringent. MWRL through the WQS set Killermont Stations NDA (amended FEMP) for nitrogen at 14,045 kg/y. However this included 6,105 kg reallocated from WHL Killermont. The actual OVERSEER load modelled for Killermont Station was 9229 kg nitrogen/y and 172 kg phosphorus/y using the developed setting.

13.9 We are aware that one of the benefits of OVERSEER is that it models whole farm management and that nutrient losses cannot be attributed to the irrigation site alone, but includes the extra stock that it supports. Nevertheless in the case of Killermont Station we are faced with the situation of having 4 separate applications, with, in our view different environmental settings and consequences. We note that Dr Bright made the assumption that the majority (if not all) new nutrient load arising from Killermont would come from irrigated areas and that seems a reasonable assumption to make for the purposes of separating out the likely effects of the different applications.

13.10 The modelled loads arising from Frosty Gully alone are difficult to determine. Dr Freeman (addendum evidence Table 7) apportioned Frosty Gully a nitrogen load of 416 kg nitrogen/y. This estimate appears a reasonable reflection of the small area (28 ha) irrigated.

13.11 Moreover this is an application for an activity that has been ongoing for ~20 years. The effects of any nutrient leached from the irrigation area will be reflected in the current state of Omārama Stream, Ahuriri River and the Ahuriri Arm of Lake Benmore.

Effects on waterbodies

Ahuriri Arm of Lake Benmore

13.12 In Part A we determined that the Ahuriri Arm of Lake Benmore was already close to the oligotrophic-mesotrophic boundary. MWRL agreed with this assessment, but submitted that through improvements to replacement consents and significant nutrient mitigation of new consents, all consents could be granted without causing the oligotrophic-mesotrophic boundary to be breached. We disagreed with the MWRL submission for the reasons given in Part A. Therefore we need to assess each application on its own merits, but taking into account other applications before us together with priority issues.

13.13 This is a replacement consent for an activity that has been occurring for more than 20 years and any effects on the trophic state of the Ahuriri Arm would now be manifest. Moreover the maximum nutrient load generated by this activity as discussed above will not increase and should, if anything, decrease as a consequence of the mitigation measures proposed by the applicant.

Groundwater

13.14 We agree with Dr Bright that groundwater is largely a matter for policy considerations and that in any case the nitrogen load arising from this application is small and unlikely to cause any significant elevation in regional groundwater concentrations.

Ahuriri River

13.15 We accept Dr Goldsmith's evidence that the ecological effects (fish, invertebrates, birds) of the proposed irrigation on the Ahuriri River will be minor.

13.16 We note that the Frosty Gully irrigation area does not encompass any streams or drains that provide a direct hydraulic connection to the Ahuriri River. Any irrigation leachate will drain to regional groundwater which, according to Dr Bright, should discharge to the Ahuriri River somewhere in the region of Omārama.

13.17 We note that Dr Coffey's evidence (from MWRL) in Part A stated that for all three of the Ahuriri sites he surveyed average periphyton cover and biomass were below a threshold of concern. Any effects from the Frosty Gully irrigation would be manifest in the state of the existing environment. While Dr Coffey's evidence is based on only 2 surveys, they were undertaken during summer low flow periods. On this basis we are satisfied that granting consent to this proposal would not result in nuisance periphyton growth in the Ahuriri River.

Summary of water quality effects

13.18 As this is a replacement consent for an activity that has been occurring for at least 20 years, and the applicant is proposing mitigation measures to stop stock encroaching into Frosty Gully and ensuring there are no run-off wallows for deer or fence lines permitted to reach watercourses, we consider that the proposal will have a less than minor impact on the watercourse in the immediate location and only a minor cumulative effect on the sub catchment nutrient levels.

Effects on Ecological values

13.19 The Frosty Gully dam overtops when water for irrigation is not required and flows down the existing dry creek bed, generally disappearing 250m downstream. In significant flood events the water may continue down the creeks confluence with Mānuka Creek, and may then reach Omārama Stream in extreme events. The intake pipe in the dam wall is screened to prevent fish entering the pipe, so that the only way for fish to access the stream bed below the dam is through over topping. The overtopping is intermittent such that the when it does occur it flows generally for 250m before going to ground. The evidence we heard indicates the fishery (including trout) is confined to the catchment above the Frosty Gully Dam and are self sustaining. We agree.

13.20 The site of the dam and the line of the pipeline will traverse pasture and follow the margin of shrubland but not pass through the shrubland. The area of irrigation is modified pasture and contains no significant botanical values. Given that the areas above the dam containing significant ecological values are within existing reserves and the fact that no works will occur above the intake site, we find that the effects are less than minor.

Dam Failure

13.21 Given the relatively small size of the dam and the amount of water it can impound and the distance of the dam from any structures or neighbouring property we are of the view that the potential effects will be less than minor.

Effects on Tangata Whenua

13.22 Ngāi Tahu opposed Killermont Station consents as they were part of the large scale intensification in the Ahuriri catchment and the potential for those proposals to significantly degrade the Ahuriri Delta. Opposition was particularly focused on the new and large scale activities that also included conversion to dairy. Viewed separately from the balance of the Killermont Station applications the cumulative effects of the Frosty Gully activity on the catchment will be less than minor.

Positive Effects

13.23 We recognise that there will be positive effects arising from the existing activity that if granted as a replacement consent, will benefit the local economy and infrastructure.

Key conclusions on effects

13.24 In relation to the actual and potential effects of the proposal, our key conclusions are as follows.

13.25 CRC040180 – The take and use of water from Frosty Gully has been occurring for 30 years and the likely effects on the local environment will be less than minor. The contribution from Frosty Gully to the cumulative water quality impacts in the Ahuriri catchment will be minor.

13.26 CRC040181 – The Frosty Gully dam has been in existence for 30 years, located in the stream bed 250m upstream from the start of the ephemeral section of the Frosty Gully waterway. There are no fishery values reported below the dam due to the principally ephemeral nature of the water course. The dam overtops at times of flood or high flows and flows at such times reach the confluence with Mānuka Creek, fish passage at such times is unimpeded. We conclude that the effect of the dam on the environment is less than minor.

14 EVALUATION OF RELEVANT PLANNING INSTRUMENTS

14.1 Under s 104(1)(b) of the Act, we are required to have regard to the relevant provisions of a range of different planning instruments. Our Part A decision provides a broad assessment of those planning instruments and sets out the approach we have applied to identification and consideration of the relevant provisions. The following part of our decision should be read in combination with that Part A discussion.

14.2 In relation to the current applications, we consider that the most relevant and helpful provisions are found in the regional plans, including in particular the WCWARP and the NRRP. The following sections of this decision provide our evaluation of the key objectives and policies from these planning instruments. We have organised our discussion in accordance with the key issues arising for this application.

Water quality and ecosystems

14.3 In relation to water quality, the key documents we have considered are the WCWARP (incorporating the objectives of the PNRRP and the operative NRRP provisions).

14.4 In relation to the WCWARP, we consider that Objective 1 is the critical objective. In particular, Objective 1(b) seeks to safeguard life-supporting capacity of rivers, lakes, and Objective 1(d) seeks to safeguard the integrity, form, functioning and resilience of a braided river system.

14.5 In terms of potential periphyton growths in the Ahuriri River, we received limited data from Dr Coffey. Based on this information and given that this is a replacement consent for existing activities, we consider that the change in irrigation system and proposed mitigation measures should decrease the incidents of nuisance periphyton growths in these water bodies.

14.6 Overall, we can conclude that given the nature of the existing activities and the mitigation measures proposed, granting consent to the proposal will not increase the nutrient load on Lake Benmore and the Ahuriri River. Thus we are able to conclude that a grant of consent would be consistent with Objective 1(b) and 1(d) WCWARP.

14.7 Objective 1(c) requires us to manage waterbodies in a way that maintains natural landscape and amenity characteristics and qualities that people appreciate and enjoy. Given our findings in terms of effects on water quality, then our view is that granting consent would be consistent with Objective 1(c).

14.8 We note that Objectives 2, 3, 4, and 5 are "in the round" deal with and provide for the allocation of water. The critical qualification is that water can be allocated provided that to do so is consistent with Objective 1. Given the findings we have made about Objective 1 we conclude that allocating water in terms of the balance objectives would be consistent with the overall scheme of the WCWARP. We reach this view taking into account the national and local costs and benefits (environmental, social, cultural and economic) of the proposal, as required by Objective 3.

14.9 Policy 13 links the WCWARP to the PNRRP (as it existed at the time) by requiring us to have regard to how the exercise of the consent could result in water quality objectives of the PNRRP not being achieved. As we explained in our Part A decision, we have considered the objectives of the PNRRP and the now operative NRRP in relation to the current proposal. However we have generally given greater weight to the NNRP provisions on the basis that they represent the current approach for achieving the common goal of protecting water quality.

14.10 Under the NRRP the Ahuriri River (along with Frosty Gully and Mānuka Creek) is classified as "Alpine Upland" Objective WQL1.1 of the NRRP seeks to ensure that the water quality of such rivers is managed to at least achieve the outcomes specified in Table 5. A key indicator for these applications is that maximum chlorophyll-a should be less than 50 mg /m^2 (periphyton guideline for safeguarding aquatic biodiversity and also recreation). As mentioned above, we received very little evidence on this issue. However we are nonetheless satisfied that with appropriate periphyton monitoring conditions, granting this consent (in combination with others we grant) will not result in breaching of the periphyton guidelines and would remain consistent with this objective.

14.11 Lake Benmore (including the Ahuriri Arm) is classified as an "Artificial On-River Lake" under the NRRP. Objective WQL1.2 of the NRRP seeks to ensure that the water quality of the lake is managed to at least achieve the outcomes specified in Table 6, including a maximum Trophic Level Index ("TLI") of 3 (i.e. oligotrophic-mesotrophic boundary). For the reasons discussed above, we consider that granting consent to the proposal would be consistent with this objective and would not (in combination with others we grant) cause the TLI maximum to be breached.

14.12 Overall then having regard to the scheme of the WCWARP and the NRRP we reach a conclusion that granting consent in this case is consistent with the key objectives and policies of both of these plans relating to water quality.

Tangata whenua

14.13 Objective 1(a) of the WCWARP relates to the integrity of mauri and is closely linked to Objective 1(b). Mr Mikaere (for MWRL) submitted that there are two aspects of mauri; the tangible and the intangible and that we could only properly deal with tangible. His view was that the tangibles are able to be addressed if mauri is considered as representing the health of the particular water

body in question. Given that we consider that by granting these consents with conditions and with the mitigation measures proposed by the applicant that sustainable water quality outcomes can be achieved, it follows that the integrity of the mauri will be attained.

14.14 Objective WQN1 from Chapter 5 NRRP seeks to enable present and future generations to access the region's surface-water and groundwater resources to gain cultural, social, recreational, economic, and other benefits while (c) safe-guarding their value for providing mahinga kai for Ngāi Tahu and (d) protecting wāhi tapu and other wāhi taonga of value to Ngāi Tahu. This Objective aligns with one of the principal aspirations expressed by Ngāi Tahu during the hearing of enhancing mahinga kai resources and supporting ecosystems. Our finding is that there is unlikely to be deterioration in water quality of the Ahuriri Delta as a consequence of this proposal and that this application is consistent with this Objective.

14.15 Objective WTL1(d) from Chapter 7 NRRP seeks to achieve no overall reduction in the contribution wetlands make to the relationship of Ngāi Tahu and their culture and traditions with their ancestral lands, water, mahinga kai sites, wāhi tapu, and wāhi taonga. The traditional relationship that Ngāi Tahu are seeking to maintain through restoration of mahinga kai and kaitiakitanga practices relate in this case to the Ahuriri Delta, wetlands in the Lower Ahuriri and the Omārama Stream. We find that this proposal is within the acceptable thresholds for water quality and would be consistent with this Objective.

Environmental flows and levels

14.16 Policies 3 and 4 of the WCWARP outline the values that must be maintained in the water bodies, and a number of matters that must be considered when setting an environmental flow and level regimes which are particularly relevant to this application. The existing dam collects all the flow in Frosty Gully within the creek bed, as a result there is no minimum flow proposed and both applications are non-complying.

14.17 If the dam was removed and a reduced take provided for from Frosty Gully the evidence tells us that the water would still disappear to groundwater about 250m downstream of the dam's current site. This is an unusual situation that in order to achieve the purposes of the plan to achieve a flow sharing regime there would be no significant improvement for the fishery movement downstream and connection to other surface waters would still require flood or extreme events.

14.18 Based on the above, we consider that the proposal is consistent with the purpose of the objectives and policies relating to environmental flows and levels as the adverse effects of the activity on the existing environment will be insignificant.

Efficient use

14.19 Objective 4 of the WCWARP is "*to promote the achievement of a high level of technical efficiency in the use of allocated water*"

14.20 We consider that the technical efficiency of the application is consistent with the provisions of the WCWARP. The annual volume applied for of 170,000 m^3 is slightly below the volume that the S42A reporter calculated using the Policy 16(c)(ii) method of the WCWARP and therefore it is policy consistent. The volume applied using spray application will require the applicant to achieve high levels of efficiency to ensure significant yield losses do not occur in dry years.

14.21 Policies 15 – 20 deal with efficient and effective use of water and are applicable to this application. The Policies provide for an efficient use of water so that net benefits are derived from its use are maximised and waste minimised, reasonable use tests and encouragement for enhancing technical efficiencies in the use of and distribution systems are achieved. We are satisfied that the rates and annual volumes sought by the applicant reflect an efficient and effective use of water and that the reasonable use test can be met. The proposal is compliant with Policy 16(c)(ii) which the applicants used to calculate the annual volume.

14.22 Policy 28 outlines matters which should be considered when deciding to grant or refuse applications for replacement of existing consents. The proposed activity meets the efficiency expectations of the plan, it is an existing activity, the irrigation has been occurring for at least 20 years and the value of investment is reflected in the nature and extent of the farming operation of which it is part. The applicant proposes to install a meter, monitor water take, implement a FEMP and associated mitigation measures to limit effects and ensure efficiency of use.

Landscape

14.23 We discussed the relevant objectives and policies for landscape in our Part A Decision. In summary these are primarily found in the Proposed and Operative CRPS and the NRRP. In broad terms these provisions seek the protection of outstanding natural landscapes from inappropriate use and development. In considering these provisions we are informed by the provisions of the Waitaki District Plan.

14.24 In this case we note that the proposed activity is existing and that the effects on the environment are already established. Given the relatively small area of irrigation and obscured location of the dam couple with tree screening, we consider that granting consent to this proposal will be consistent with the relevant objectives and policies relating to landscape

Key conclusions on planning instruments

14.25 For all of the above reasons we consider that, with the imposition of appropriate conditions granting consent would be consistent with the objectives and policies of the relevant plans. We have reached this conclusion taking into account the relevant planning provisions in respect of water quality, efficiency, environmental flows, landscape, and tangata whenua values.

15 EVALUATION OF OTHER RELEVANT S104 MATTERS

15.1 Under s104(2A), when considering an application affected by section 124 (such as the current applications), we must have regard to the value of the investment of the existing consent holder.

15.2 The proposed activity is an existing activity and as such there is an inbuilt investment made by the applicant to complement the farming operation. The applicant in their evidence told us that tenure review in 2006 resulted in a loss of summer grazing and, as a consequence, an emphasis has been placed on investing in irrigation. We do not have specific figures for investment on the Frosty Gully irrigation scheme but accept the overall driver for the farm is to invest in existing and new irrigation to maintain and increase farm production.

15.3 As a non-complying activity, an issue that often arises is whether granting consent would create a precedent or threaten the integrity of the plan. In this case, the application is an existing small scale efficient activity that complies with the objectives and policies of the relevant plans and granting of this consent will not create a precedent or plan integrity issue.

16 SECTION 104D JURISDICTIONAL HURDLES

16.1 Based our evaluation under section 104, we now move to consider whether either of the jurisdictional hurdles under section 104D of the RMA can be met.

Would the adverse effects be minor?

16.2 The key conclusions arising from the proposal are confined to;

(a) The adverse effects on water quality in the immediate location and contribution to the cumulative impact at a catchment level.

(b) The absence of a fish pass to allow trout, salmon and other fish to access the lower reaches of Frosty Gully below the dam.

(c) The absence of a minimum flow of flow sharing threshold that would have a water flow continue past the Frosty Gully dam.

16.3 The applicant contributed to a WQS on cumulative impacts at a catchment level and subsequent measures to mitigate the effects on water quality of proposed activities in the catchment. The applicant proposes to exclude stock access to waterways above or adjacent to the irrigation area. The applicant proposes to establish a buffer zone between the irrigated area and water courses (ephemeral) and to monitor soil moisture content to ensure over watering does not occur. The contribution from the proposed activities to the cumulative impacts of current activities in the Omārama sub-catchment is mitigated by the lack of surface water connection with both Mānuka Creek and Omārama Stream and the small scale of the 28ha irrigation activity. The exercise of best management practices through the application of a FEMP and nutrient management tools will assist mitigation of the effects of the activity.

16.4 The dam straddles Frosty Gully water course at a point 250m upstream from where it disappears to ground, the fishery are confined to the catchment above the dam. Only in extreme or flood conditions does the Frosty Gully Creek flow to connect with Mānuka Creek. Mānuka Creek is a tributary of Omārama Stream but rarely has flows that reach Omārama Stream, and is predominantly in an ephemeral state above its confluence with Omārama Stream. The ephemeral nature of the Frosty Gully water course downstream of the dam provides little life supporting capacity for fish and does not justify a fish pass. Fish can bypass the dam when overtopping occurs during flood or high flows, at such times a fish pass is not needed, in the absence of over topping flows downstream passage of fish is hazardous due to the ephemeral nature of the watercourse 250m beyond the dam. We believe the effects of not having a fish by-pass to be less than minor.

16.5 Overall, we are satisfied that the adverse effects of the proposal will be minor and the first jurisdictional hurdle has been met.

Would the activity be contrary to the objectives and policies?

16.6 The relevant plan under which consent is required is the WCWARP. We have provided an evaluation of the relevant objectives and policies of that plan (including the relevant provisions of the PNRRP incorporated by reference) earlier in this decision.

16.7 For the reasons discussed above, we are satisfied that the proposed activity will not be contrary to any of the objectives and policies in the relevant plans.

Conclusion

16.8 We have determined that both of the jurisdictional hurdles are satisfied in this instance. We now move to consider relevant Part 2 matters, following which we complete our overall evaluation as to whether consent should be granted.

17 PART 2 RMA

17.1 Section 104(1) RMA states that the matters which we have discussed above are subject to Part 2, which covers section 5 through section 8 inclusive. These sections are set out in full in our Part A decision and are discussed below in the context of the current applications.

17.2 We refer to all of the matters we consider relevant from sections 6 to 8 below, acknowledging that the three sections represent factors contributing to our evaluation under section 5 RMA.

Section 6 – Matters of National Importance

17.3 Sections 6 RMA identifies matters of national importance that we must "recognise and provide for" when making our decision, including, relevantly in this application: preserving the natural character of lakes and rivers (s6(a)); protecting outstanding natural features and landscapes (s6(b)); the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna (section 6(c)); and the relationship of Māori with the environment (s6(e)).

17.4 In respect of s6(a) we recognise that preservation of the natural character of lakes and rivers is the imperative. We think that because of our finding in terms of the water quality issues, which takes into account mitigation measures, the grant of consent recognises and provides for the preservation of the natural character of lakes and rivers.

17.5 In terms of s6(b), we have evaluated the natural features and landscape, primarily by reference to the relevant planning instruments. We reach the view that the grant of consent in this case is not inappropriate because it will not, in our view, diminish the natural features and landscapes such as they are in any significant way.

17.6 In terms of section 6(c), it is our view, taking into account the evidence received, that there are not areas of significant indigenous vegetation and significant habitats of indigenous fauna that are at risk thus requiring protection as a consequence of the grant of consent.

17.7 Section 6(e) is relevant in this case given the significance that Ngāi Tahu attaches to the catchment. The custom of mahinga kai and places where this activity can occur is of particular cultural importance and susceptible to degradation from excessive nutrient charges. The Ahuriri Delta and tributaries to it link strongly with both traditional mahinga kai activity and the potential for restoration. With the mitigation measures outlined by the applicant and conversion to spray

irrigation we believe that granting this application would be consistent with s6(e) RMA requirements.

17.8 For the above reasons, we consider that granting consent to the proposal would recognise and provide for s6 maters, as we are required to do under the RMA.

Section 7 – Other Matters

17.9 Section 7 lists "other" matters that we shall "have particular regard to". We make the following observations in relation to each of those matters as they are relevant to this application, referring to the sub paragraph numbers of s7.

17.10 Sub-section (a) refers to kaitiakitanga. We consider that the proposed activity with mitigation sits within the acceptable environmental parameters outlined by Ngāi Tahu such that that it will not cause distress to the function of kaitiakitanga.

17.11 Sub-sections (b), (c), and (f) are specifically relevant to this application. Sub-section (b) relates to the efficient use and development of natural and physical resources. Relevantly in this case is water. We have determined that the volumes of water we are prepared to grant and the methodology of its conveyance and distribution, results in the efficient use and development of the water resource.

17.12 Sub-section (c) refers to the maintenance and enhancement of amenity values. Maintenance and enhancement of amenity values will be achieved in this instance through utilising mitigation measures, such as those provided in the FEMP. These steps will ensure the maintenance and enhancement of amenity values.

17.13 In terms of sub-section (d), because of the assessments we have made in relation to ecosystems, we have had particular regard to the intrinsic values of ecosystems and we consider that through the grant of consent with the conditions imposed such values will be safeguarded.

17.14 Sub-section (f) refers to the maintenance and enhancement of the quality of the environment. The applicant has proposed mitigation measures to ensure that this objective is achieved.

17.15 Having particular regard to the above matters in the context of section 7, we conclude that the grant of consent could be supported.

Section 8 – Treaty of Waitangi

17.16 Finally, section 8 requires that we shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

17.17 The cultural values of tangata whenua are appropriately recognised in the relevant planning documents applicable to the Mackenzie Basin sufficient to alert applicants to the need to address such values. We are satisfied that the notification of the appropriate Runanga and tribal authority has been followed and that the applicant was a contributor to the general assessment of the impact of irrigation activities on cultural values.

17.18 We are satisfied that the consultation procedures provided Ngāi Tahu with the opportunity to understand and respond to the proposed activity, albeit in conjunction with a large number of applications in the Mackenzie Basin.

Section 5 – Purpose of the RMA

17.19 Turning now to the overall purpose of the RMA, that is, "to promote the sustainable management of natural and physical resources".

17.20 The proposed activity is a continuation of existing activity to dam and take water from Frosty Gully for spray irrigation of 28 hectares of crop and pasture, grazed by stock, excluding dairy cows. The activity is a small but integral part of the farming operation, the annual volume and rate of use of water meets the reasonable use test and efficient use provisions of the WCWARP. The impact on surface water quality is minimal as leakage or run off goes to ground water, the effect on groundwater is mitigated by the efficient use of spray irrigation to reduce leakage. The proposal to create buffer zones and fencing off waterways, soil moisture monitoring to ensure over watering does not occur and implementation of a FEMP will ensure that the activity has a less than minor effect.

18 OVERALL EVALUATION

18.1 If an application for a non-complying activity passes through either of the jurisdictional hurdles in s104D, then there is a discretion as to whether consent should be granted. This requires an overall judgment to achieve the purpose of the Act and is arrived at by:

(a) Taking into account all the relevant matters identified under s 104;

(b) Avoiding consideration of any irrelevant matters;

(c) Giving different weight to the matters identified under s 104 — depending on our opinion as to how they are affected by the application of s 5(2)(a), (b), and (c) and ss 6-8 — to the particular facts of the case; and then in light of the above; and

(d) Allowing for comparison of conflicting considerations, the scale or degree of conflict, and their relative significance or proportion in the final outcome.

18.2 The principal issues that required consideration was the local and cumulative effect on water quality, whether there was a fish habitat to sustain downstream of the dam and whether there justification for not creating a flow sharing or minimum flow in Frosty Gully.

18.3 The existing nature of the irrigation activity is efficient and small scale draining to an ephemeral water course where any discharges go to dry gravels. Mitigation is proposed to protect water flows in Frosty Gully from stock access. The ephemeral nature of the Frosty Gully stream bed downstream of the dam created an ecosystem that was negligible and often stressed due to its ephemeral nature such that a fish pass would be ineffective. Equally the implementation of a flow sharing regime would be unlikely to alter the existing ephemeral nature of the watercourse 250m beyond the dam and require significant earthworks to alter an existing activity. Metering of water take and measuring volume will provide important information and assist management of water.

18.4 The key factors that were potentially against the grant included the contribution to cumulative effects on water quality, as discussed previously we consider that this to be less than minor. The absence of a minimum flow, the mitigating factors have been discussed including the existing nature of the activity and the ephemeral nature on the downstream side of the dam negating any environmental advantage that would be achieved by instigating a minimum flow. The ephemeral nature of the watercourse below the dam mitigates against the need for a fish pass.

18.5 Having reviewed the application documents, all the submissions, taking into account the evidence to the hearing and taking into account all relevant provisions of the RMA and other relevant statutory instruments, we conclude that the outcome which best achieves the purpose of the Act is to grant consent.

19 CONDITIONS

19.1 Given our decision to grant consent, we have given careful consideration to the conditions that are necessary to avoid, remedy and mitigate the potential adverse effects of the proposal. The starting point we have used for this exercise is the final condition set provided by the applicant. This was the result of a collaborative process that occurred after the conclusion of the hearing, as described in our Part A decision.

19.2 The condition set provided to us includes comments on discrete issues from Council officers and several submitters. Where any such comments have been made, we have taken this into account when arriving at the final condition set. We are proceeding on the basis that the condition set provided to us incorporates all relevant conditions required by Meridian Energy as part of its derogation approval. This has been confirmed by Council investigating officers and legal counsel for Meridian.

19.3 We have made some modifications and additions to the condition set provided to us. However all modifications respect the conditions attaching to derogation approvals provided by Meridian. Several of these changes relate to matters discussed in the preceding sections of this decision to ensure that any concerns we have about potential effects are adequately addressed.

19.4 Unlike other consents we have granted, we have decided not to impose any conditions on stream or lake monitoring in this case. The key reasons for this are that the effects on water quality are less than minor, there are no suitable streams from which to monitor, and the irrigation site so

small that not really possible to reduce area in event of lake TLI breach. We have therefore decided that nutrient monitoring conditions are not appropriate in the circumstances. We also note that the condition set provided by the applicant (and which other parties have reviewed) did not include any such conditions.

20 DECISIONS AND REASONS

20.1 Pursuant to the powers delegated to us by the Canterbury Regional Council; and

20.2 For all of the above reasons and pursuant to sections 104, 104B and 104D of the Resource Management Act 1991, we **GRANT** the following applications by **Killermont Station Limited**:

> **CRC040180** to take and use surface water from Frosty Gully for irrigation of up to 28 hectares of pasture for grazing stock at Killermont Station, south of State Highway 8, Omārama; and
>
> **CRC040181** to dam Frosty Gully to a height of 2.5 metres, impounding 500 cubic metres of water for irrigation purposes on Killermont Station, State Highway 8, Omārama.

20.3 Pursuant to section 108 RMA, the grant of consent is subject to the conditions specified at **Appendices A and B**, which conditions form part of this decision and consent.

20.4 The duration of these consents shall be until the 30th April 2025, in accordance with the final conditions set provided by the applicant.

DECISION DATED AT CHRISTCHURCH THIS 21ST DAY OF DECEMBER 2011

Signed by:

Paul Rogers 

Dr James Cooke 

Michael Bowden 

Edward Ellison 

APPENDIX A

Conditions of Consent (CRC040180) – Take and Use of Water

1. Water shall only be taken from Frosty Gully at or about map reference NZMS 260 H39:5532-2497.

2. Water shall be taken at a maximum rate not exceeding 20 litres per second, and volume not exceeding 170,000m^3 per year to be used as spray irrigation of up to 28 hectares of land per irrigation season within the irrigation area shown on attached map labeled "Plan CRC040180 and CRC040181".

3.

   (a) Prior to the taking of water associated with the exercise of this consent the consent holder shall:

      (i) install a water meter(s) that has an international accreditation or an equivalent New Zealand calibration endorsement suitable for use with an electronic recording device, from which the rate and the volume of water taken can be determined within an accuracy of plus or minus five percent at a location(s) that will ensure the total take of water from Frosty Gully is measured; and

      (ii) install a tamper-proof electronic recording device such as a data logger that shall record (or log) the flow totals every 15 minutes and have the capacity to hold at least one season's (as specified in conditions 3 and 4) data of water taken as specified in clause (b) (i), or which is telemetered, as specified in clause (b)(ii).

   (b) The water meter and recording device(s) shall be set to wrap the data from the measuring device(s) such that the oldest data will be automatically overwritten by the newest data (i.e. cyclic recording); and shall:

      (i) store the entire season's data in each 12 month period from 1 July to 30 June in the following year, which shall be downloaded and stored in a commonly used format and provided to the Canterbury Regional Council upon request in a form and to a standard specified in writing by the Canterbury Regional Council; or

      (ii) be connected to a telemetry system which collects and stores all of the data continuously with an independent network provider who will make that data available in a commonly used format at all times to the Canterbury Regional Council and the consent holder. No data in the recording device(s) shall be deliberately changed or deleted.

   (c) The measuring device shall be installed at a site that retains a stable rating (i.e. a man-made channel, concrete, steel or fibreglass pipe). Installation shall be in accordance with ISO 1100/1-1981 or equivalent and be undertaken by a suitably qualified person.

   (d) The water meter and recording device(s) shall be accessible to the Canterbury Regional Council at all times for inspection and/or data retrieval.

   (e) The water meter and recording device(s) shall be installed and maintained throughout the duration of the consent in accordance with the manufacturer's instructions.

   (f) All practicable measures shall be taken to ensure that the water meter and recording device(s) are at all times fully functional and have an accuracy standard of ±5%.

   (g) The consent holder shall, within one month of any water meter and recording device(s) being installed, or within one month of any water meter and/or recording device(s) being replaced, and at five-yearly intervals thereafter, and at any time when requested by the Canterbury Regional Council, provide a certificate to the

Canterbury Regional Council (Attention: RMA Compliance and Enforcement Manager) signed by a suitably qualified person certifying, and demonstrating by means of a clear diagram, that:

(i) the water meter and recording device(s) has been installed in accordance with the manufacturer's specifications; and

(ii) data from the recording device can be readily accessed and/or retrieved in accordance with conditions 6 and 7.

4.

(a) A fish exclusion device shall be installed, operated and maintained on the intake to ensure that fish are prevented from passing into the intake.

(b) The fish exclusion device shall be positioned to avoid the entrapment of fish at the point of abstraction, and to minimise the risk of fish being damaged by contact with the fish screening device.

(c) The fish exclusion device shall be designed or supplied by a person with experience in freshwater ecology and fish screening techniques, who shall ensure that the performance criteria specified in clauses (a) and (b) of this condition are achieved, and that the device is designed in accordance with best practice, as outlined in the document Fish Screening: Good Practice Guidelines for Canterbury, NIWA Client Report 2007-092, October 2007.

(d) Prior to the installation of the fish screen, a report containing final design plans that demonstrate that the fish screen will meet the performance criteria specified in clauses (a) and (b) of this condition, and an operation and maintenance plan for the fish screen, shall be provided to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager.

(e) Before the taking of any water in terms of this permit, a certificate shall be provided to Canterbury Regional Council, by a person with experience in freshwater ecology and fish screening techniques, to certify that the design plans and operation and maintenance plan for the fish screen will meet performance criteria as outlined in this condition, and that the fish screen has been installed in accordance with the details provided to Canterbury Regional Council in accordance with clause (d) of this condition.

(f) The fish screen shall be maintained in good working order. Records shall be kept of all inspections and maintenance, and those records shall be provided to Canterbury Regional Council upon request.

5. The consent holder shall at all times comply with the mitigation measures set out in section 6 of the Farm Environmental Management Plans (FEMP) for Killermont Station dated December 2009, insofar as it is relevant to this consent. In particular, the consent holder shall at all times prevent stock from accessing Frosty Gully and the dam using temporary riparian fencing and water gates on access tracks when streams are flowing.

6. The Canterbury Regional Council (Attention: RMA Compliance and Enforcement Manager) shall be informed immediately on first exercise of this consent by the consent holder.

7. The Canterbury Regional Council may, once per year, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent, pursuant to Section 128 of the RMA, for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.

8. The lapsing date for the purposes of section 125 RMA shall be 5 years.

APPENDIX B

Conditions of Consent (CRC040181) – Damming of Water

1. Water shall only be dammed at Frosty Gully, at or about map reference NZMS 260 H39:559-248 as shown on map labeled "Plan CRC040180 and CRC040181".

2. The volume of water dammed shall not exceed 500 cubic metres.

3. The depth of water in the dam shall not exceed 2.5 metres.

4. The consent holder shall undertake routine inspections and maintenance works on the dam. The details and findings of any inspections and maintenance works shall be recorded in a logbook kept for that purpose. A copy of the logbook shall be forwarded to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 30 June each year.

5. The consent holder shall ensure that any maintenance work on the dam does not inhibit fish passage.

6. In the event of any evidence of erosion, seepage, cracking, settlement, slipping or other embankment deformation the consent holder shall immediately:

    a. Report the event to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager; and

    b. Engage a chartered professional engineer who shall:

        i. inspect the dam;

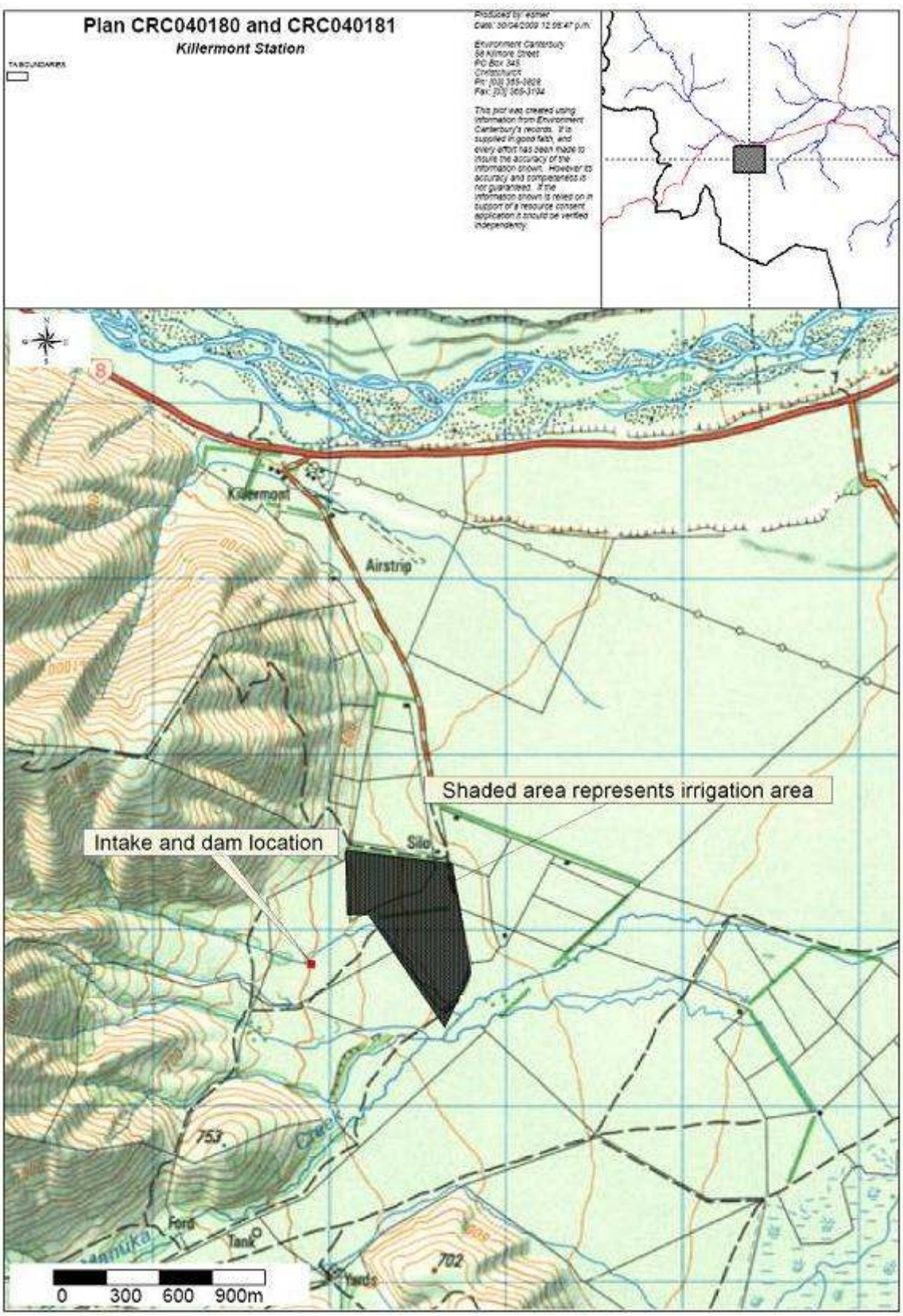
        ii. identify remedial action required;

        iii. record the details of the inspection, reasons for the fault and remedial action required, in a report, a copy of which shall be forwarded to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within one month of the inspection being completed.

    c. Undertake any remedial works or corrective action recommended by the engineer, and notify the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within one week of completion.

7. In the event of dam failure, the consent holder shall immediately contact a chartered professional engineer who shall complete a report detailing the cause of failure and the action taken. A copy of this report shall be forwarded to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within one month of the event.

8. The Canterbury Regional Council may, once per year, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.


Plan CRC040180 and CRC040181
Killermont Station
Shaded area represents irrigation area
Intake and dam location
Airstrip
Killermont
Silo
Ford
Tank
Yards
753
702
0 300 600 900m