

BEFORE THE CANTERBURY REGIONAL COUNCIL

IN THE MATTER OF the Resource Management Act 1991

AND

IN THE MATTER OF five resource consent applications filed by MainPower New Zealand Limited, Rooney Holdings Limited, Kakapo Brook Joint Venture Limited and Rooney Farms Limited in relation to:

CRC142964 – Water Permit to take, divert and use up to 1600 litres per second of water from Kakapo Brook, at or about map reference Topo50 BU23: 5006-7867, for the purpose of hydropower generation.

CRC142965 – Water Permit to take, divert and use up to 1600 litres per second of water from Kakapo Brook, at or about map reference Topo50 BU23: 5006-7867, for the purposes of irrigation.

CRC142966 – Land Use Consent for the use of land that may result in the discharge of nutrients. The land use is associated with the irrigation of up to 500 hectares of existing pasture and crops.

CRC142967 – Water Permit for the damming and impoundment of surface water associated with electricity generation and irrigation activities. The intake structure will facilitate diversion of water from Kakapo Brook. The intake will be located at or about at or about map reference Topo50 BU23: 5006-7867. Diverted water will be impounded in two ponds located off-line of Kakapo Brook, approximately 700,000 cubic metres and 300,000 cubic metres in size. These ponds will provide storage for electricity generation and irrigation water. The storage ponds will be located in the Dismal Valley, at or about map references Topo50 BU23: 5309-8182.

CRC142968 – Discharge Permit for the discharge of water to water (the Hope River), at or about map reference Topo50 BU23: 5221-8296, at a rate not exceeding 1600 litres per second, for the purpose of hydropower generation.

REPORT AND DECISION OF HEARING COMMISSIONERS

PAUL ROGERS (Chair), MIKE FREEMAN and CRAIG WELSH

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Appendices:

- Appendix 1 A list of acronyms and abbreviations used in this decision.
- Appendix 2 A list of submitters present during the hearing.

1 INTRODUCTION

- 1.1 We have been delegated and appointed as independent hearing Commissioners by the Canterbury Regional Council (CRC or ECan) under Section 34A (1) of the Resource Management Act 1991 (RMA) to decide on five applications by MainPower New Zealand Limited, Rooney Holdings Limited, Kakapo Brook Joint Venture Limited and Rooney Farms Limited (the Applicants). This decision sets out our findings on the applications, focusing on the principal issues in contention and the reasons for our decision.
- 1.2 In addition to the evidence and submissions provided by the Applicants and submitters at the hearing, we record that we have all read and taken full account of the application documents, including the Assessments of Environmental Effects and all of the written submissions. Although not every witness and submission is referred to in our decision, this does not mean that they have not been considered, simply that we have endeavoured to focus on key issues and, where possible, avoid repetition in our decision.
- 1.3 In accordance with Section 113(3) RMA, we have also cross-referenced and adopted parts of the Assessment of Environmental Effects, the Section 42A Officer Reports, and written evidence throughout this decision as appropriate.
- 1.4 To assist the reader, we have attached Appendix 1, which lists the acronyms and abbreviations used throughout this decision.

2 DESCRIPTION OF THE PROPOSAL

- 2.1 The Applicants propose to develop a hydropower generation and irrigation scheme situated at Glynn Wye Station (the Station). This proposal seeks to utilise water from the Kakapo Brook for the purposes of hydroelectricity and irrigation.
- 2.2 The Applicants propose to take and divert water out of Kakapo Brook into two storage ponds located in Dismal Valley. The smaller storage pond would be 300,000m³ and would be used for hydro-electricity generation. The larger 700,000m³ storage pond would be used for the storage of water for irrigation. It is proposed to provide for some water to be transferred between these two ponds under a number of scenarios as outlined in the final condition set presented in closing.
- 2.3 The proposed scheme would discharge the water taken and used for hydro generation into the Hope River, upstream of the confluence of Kakapo Brook and the Hope River.
- 2.4 Resource consents for this proposal are to be applied for in two stages. Stage 1 involves these five Resource Consent applications that were lodged with the Canterbury Regional Council on November 6th 2013.
- 2.5 Stage 2 would not be undertaken by the Applicants until the outcome of these Stage 1 Resource Consent applications is known. We understand that Stage 2 consent applications may include; earthworks, land use activities on land, works in the bed of a river, establishing structures, storage ponds dam structures, construction activities and other ancillary activities.
- 2.6 We will return to a possible impact of the staging approach to this proposal later in this decision. We have both assessed the applications for resource consent and made our determination on the basis of having a single proposal before us.

3 PROCEDURAL AND PRELIMINARY ISSUES

Alteration to the Application

- 3.1 At the commencement of the Applicants' case Legal Counsel Ms Steven QC informed us that resource consent application CRC 142966 was being withdrawn. She explained the Applicants now considered the activity proposed to be undertaken under that resource consent was a permitted activity under the Hurunui and Waiau River Regional Plan (HWRRP).
- 3.2 Withdrawal of a resource consent application is a matter for the applicant. Withdrawal of a discrete application being part of a larger proposal may or may not have consequences. However in this case as matters transpired, we were advised at the hearing by the ECan Reporting Officer Ms Natalie van Looy when presenting her S42A report to us that she concurred with the applicants' assessment that the proposed use of the land on the Station was permitted under Rule 10.1 of the HWRRP.
- 3.3 The reasoning to support those opinions was that the Applicant will be able to meet and satisfy all of the sub paragraphs (a) to (d) of Rule 10.1. So the Applicants withdrew consent application CRC 142966 and we were asked to assess and determine the remaining applications.
- 3.4 Continuing with alterations to the application, Ms Jane Whyte, the Applicants' planner, informed us that the proposal no longer seeks to utilise unused A permit water for irrigation at times it is not being abstracted by existing A permit consent holders.

Staging or Phase 1 and Phase 2 Consents

- 3.5 We were told by the Applicants the resource consent applications before us were described as Phase 1 consents. These are the resource consent applications associated with the take, storage, use, damming and discharge of water. It was explained for the proposal to be implemented it is necessary to obtain additional resource consents. Those consents would be sought from both Environment Canterbury and the Hurunui District Council.
- 3.6 We agree and accept that it is not unusual for a proposal of this scale and nature to seek consent in a number of stages. Critically in this case the infrastructure which would be necessary to build and operate following on from the water take would be sized relative to the quantity of water made available by the grant of any relevant consent. Thus it makes sense to proceed and gain certainty about the volumes of water authorised and thereafter move to design and consent the infrastructure such as the conveyance system, penstocks power station facilities and the like.
- 3.7 The issue with a staging approach is to ensure that there is sufficient information including expert evaluation available to assist decision-makers to properly understand the nature of the proposal independent from other resource consents which may also be required in respect of that proposal. Expressed another way we need to be sure that we do not need to have before us the Phase 2 resource consents for the purpose of better understanding the nature of the proposal before us before proceeding further (Section 91 of the RMA).
- 3.8 For reasons that will become evident later within this decision we were well satisfied we did not require other resource consent applications that will also be required in respect of this proposal for the purpose of better understanding the nature of the proposal before us.
- 3.9 For the sake of completeness we record that the conditions proffered by the Applicants

addressed matters of relevance to both the proposed phases. Nevertheless the Applicants contended the intention was for the conditions to be comprehensive and address the actual or potential effects of the Phase I consents which were before us.

A Single Proposal

- 3.10 Our approach is to consider the proposal and determine if the proposal made up of the individual resource consent applications before us should be granted or not. We have not considered each separate resource consent application to determine whether each could be granted in isolation of the other consents which grouped together make up the proposal before us.
- 3.11 We gained further support for this approach from the form of the proposed condition set promoted by the Applicants. It seemed evident to us in considering those conditions they are directed at a single proposal as distinct from separate resource consent applications.
- 3.12 At no point during the hearing process did the Applicants suggest that a water take and storage of water only for irrigation or only for hydroelectricity generation purposes was being sought for consent. It was clear to us that resource consents are being sought for one combined proposal.

4 NOTIFICATION, SUBMISSIONS AND HEARING

- 4.1 The application for resource consents for the proposal was publicly notified on Saturday the 28th of March in 'The Press' and the 'Northern Outlook' (and posted on the ECan website) with the following wording:
- 4.2 CRC142964 – Water Permit to take, divert and use up to 1600 litres per second of water from Kakapo Brook, at or about map reference Topo50 BU23: 5006-7867, for the purpose of hydropower generation.
- 4.3 CRC142965 – Water Permit to take, divert and use up to 1600 litres per second of water from Kakapo Brook, at or about map reference Topo50 BU23: 5006-7867, for the purposes of irrigation.
- 4.4 CRC142966 – Land Use Consent for the use of land that may result in the discharge of nutrients. The land use is associated with the irrigation of up to 500 hectares of existing pasture and crops.
- 4.5 CRC142967 – Water Permit for the damming and impoundment of surface water associated with electricity generation and irrigation activities. The intake structure will facilitate diversion of water from Kakapo Brook. The intake will be located at or about at or about map reference Topo50 BU23: 5006-7867. Diverted water will be impounded in two ponds located off-line of Kakapo Brook, approximately 700,000 cubic metres and 300,000 cubic metres in size. These ponds will provide storage for electricity generation and irrigation water. The storage ponds will be located in the Dismal Valley, at or about map references Topo50 BU23: 5309-8182.
- 4.6 CRC142968 – Discharge Permit for the discharge of water to water (the Hope River), at or about map reference Topo50 BU23: 5221-8296, at a rate not exceeding 1600 litres per second, for the purpose of hydropower generation.
- 4.7 A consent duration of 35 years is sought for all activities associated with the proposal.

- 4.8 In addition to this public notification, copies were sent to all current surface water and hydraulically connected groundwater permit holders for the Waiau River. Notices were also sent to other interested party groups.
- 4.9 A total of 42 submissions were received in respect of all five applications. Of these submissions, five were in support, 32 were in opposition and five submissions in neither support nor opposition. Five of the submissions in opposition were submitted internationally.
- 4.10 Of the total submissions, there were 15 who requested to be heard, and 27 requests not to be heard. In addition to the 42 submissions received, one of the submitters Mr Serge Bonnafox started a petition that he presented at the hearing.
- 4.11 The hearing on all applications began on 6 October 2015 at 9.30 am and ran until 8 October 2015 in the Oak Room, The Atrium, at the Hagley Netball Courts. The hearing resumed at the same location in the week beginning 13 October 2015 through to 14 October 2015. A site visit was carried out on 12 October 2015.
- 4.12 We attach as Appendix 2 a list of persons, and their relevant organisations, who appeared before us at this hearing.

5 THE EXISTING ENVIRONMENT AND SITE VISIT

The existing environment

- 5.1 The environment that is affected by this proposal consists of Glynn Wye Station, the Waiau River, Kakapo Brook and the Hope River. These are part of the Canterbury high country landscape, located in the Lewis Pass.
- 5.2 A notable feature of this area is the contrast between the highly modified farmland and the expansive natural landscape.

Glynn Wye Station

- 5.3 The Station is a mixed operation cattle, sheep and deer farm. The Station comprises a number of dwellings including the main homestead, manager's house, shepherds' quarters, gatehouse, stock manager's house and various out buildings.
- 5.4 The Station comprises a total of 25,600ha and is a mixture of cultivated flats, downs, tussock hill and high country. The arable farmland is predominantly "flat, post glacial river terraces, broken up by a sporadic chain of peaks which run through the centre of the station."¹
- 5.5 In his evidence, Mr Chris Glasson, Landscape Architect, describes the characteristics of Glynn Wye as including "openness, braided rivers, shrubland, large panoramic vistas, and areas of pastoral farming."²
- 5.6 Mr Glasson further notes although the landscape has been modified in order to sustain the farming operation, this area is still dominated by these areas of natural character. The

¹ Van Looy, N. (2015) Section 42A Officer's Report, p20.

² Glasson C. (2015) Appendix G: Chris Glasson Landscape Architects Ltd - Kakapo Brook Hydro Project and Kakapo Brook Irrigation Scheme – Landscape Assessment, p9.

landscape of Glynn Wye ranges from moderate naturalness in the river terraces, to a high degree of naturalness in the river gorge, hillsides and upper valley.

- 5.7 Although not fully visible from State Highway 7, the Station does form an integral part of the Hope Valley landscape, and this can be appreciated when driving through the Lewis Pass.
- 5.8 The Station is bounded by the Glynn Wye mountain range to the south of Kakapo Brook and the Hope River to the north. North west of the Station is the Lewis Pass and to the west and south west is the Lake Sumner Forest Park.
- 5.9 There are two known active fault lines in close proximity to Glynn Wye. The Hope Fault which runs along the south bank of the Hope River, through the Station and the Kakapo fault running along Kakapo Brook from near its confluence with the Hope River.

Waiiau Catchment

- 5.10 The Waiiau Catchment area is approximately 3,310km². The source of the Waiiau River is in the Southern Alps and from source to its mouth is approximately 168 km. The south-western section of the catchment within the Main Divide is drained by the Hope River and its tributaries. The Hope and Waiiau Rivers combine downstream of the Station. Kakapo Brook is a tributary of the Hope River and combines with the Hope River approximately 3.5 kilometres upstream of the confluence between the Hope and Waiiau Rivers.

The Waiiau River

- 5.11 The Waiiau River is a large braided river that is a significant source of freshwater for the Hurunui Waiiau region. In addition to providing freshwater, the Waiiau has a high level of water quality, ecological values and recreational opportunities, including game fishing and jet boating.

Kakapo Brook

- 5.12 Kakapo Brook is a braided river that has contrasting reaches of broad, flat, rivers beds interspersed with steep gorges where it descends to the Hope River. It is approximately 20 km in length. The Brook is a tributary of the Hope River, running in a west-southwesterly to east-northeasterly direction, almost parallel to the Hope River before combining upstream of the confluence between the Hope and Waiiau Rivers.
- 5.13 Kakapo Brook begins in Lake Sumner Forest Park, bisecting the Station, with the Glynn Wye Range to the south and Hope Valley to the north. The Brook receives surface flow contributions from several small tributaries running off the surrounding hillsides.
- 5.14 The area is described by Mr Glasson as "typical Canterbury high country landscape" made up of components such as "improved pasture and scrubland on part of the valley floor and terraces, isolated and large areas of beech forest on the lower to mid slopes, scrubland on the valley slopes and where the pasture is unimproved, and alpine scree slopes and perennial vegetation on the upper slopes."³

³ Glasson, C. (2015) p7.

- 5.15 The gravel river flats and grassy river terrace have been grazed with stock resulting in limited vegetation on the gravel flats. Despite this grazing, the lower river terrace is regenerating with vegetation. The damp areas have clumps of matagouri, coprosma and short tussock with rush, sedge, manuka and flax. There are isolated stands of mountain beech on the drier terrace slopes.
- 5.16 Behind these river terraces are steep hillsides that have been modified by grazing stock, and are now reverting to be bracken, matagouri and manuka. There are remnants of beech forest located at the headwaters of Kakapo Brook and to a lesser extent, in the hill side tributary catchments.
- 5.17 There are areas of wetland in this area that retain a diverse range of plants. In his Section 42A Officer's Report, Dr Philip Grove notes that the upper Kakapo wetlands are located on terraces above the active riverbed and are not influenced by river flows. These upper wetlands have not been greatly impacted by farming activities.⁴
- 5.18 Dismal Valley Swamp sits in a natural depression north of the Kakapo fault. This has been heavily modified with a culvert at the southern end and a small pine plantation to the north.

Hope River

- 5.19 The Hope River is an alpine braided river system that has several conservation values, including multiple fish species, namely salmon and trout, spawning sites, archaeological sites and recreational values.
- 5.20 The Hope River runs to the north of the Station and is a major tributary of the Waiau River. There are a number of wetlands along the river banks and "a wide range of native vegetation."⁵
- 5.21 The steep slopes above the Hope River is a highly visible escarpment with some erosion. Above the escarpment, on the terrace is a small wetland.
- 5.22 The Kakapo Brook Hydro-Irrigation Scheme Assessment of Environmental Effects describes the Hope River Swamp located on the river terrace, as significant:

*"This swamp is relatively unmodified with no hydrological alterations to the inflow or outflow. Although the hillslopes are grazed by cattle, the stocking rate is modest so that extensive shrublands remain. Occasional pasture grasses and a few gorse plants occur on the margins. There is a protective buffer of more than 50 m surrounding the swamp. Minor impacts from cattle and pugging were observed but overall this area is extensive, sustainable and retains a high degree of naturalness."*⁶

Site visit

- 5.23 We undertook a site visit travelling by car from Christchurch to the Station and then on the station by four wheel drive vehicle. Before undertaking the site visit we asked all participants to indicate to us areas or issues we should consider on our site visit, which they did.

⁴ Grove, P. (2015) Section 42A Officer's Report, p111.

⁵ Van Looy (2015), p22.

⁶ NZ Environmental (2013). Appendix E: Kakapo Brook Hydro Scheme Assessment of Ecological Effects, p5-34.

- 5.24 To assist on a site visit we took with us some site maps and plans and in particular the graphic supplement which was part of Mr Glasson's landscape evidence produced for the Applicants.
- 5.25 While in proximity to the Station we noted the nature of the landscape to help us understand the characteristics of Zone A as a "High Value Areas" as identified by Map 3 of the HWRRP. We also viewed Kakapo Brook from the state highway bridge that crosses it. We walked along Kakapo Brook a short distance toward its confluence with the Hope River.
- 5.26 On the Station once in the four wheel drive vehicle we travelled from the state highway end of the station over a formed farm vehicle track to the take point from Kakapo Brook. We walked on foot over that stretch of Kakapo Brook from the take point to the location of the fish screen. We paid particular attention to the flow in Kakapo Brook the width of the river bed or river plain, the presence of vegetation and birds in particular on that river bed.
- 5.27 We identified tributaries running into Kakapo Brook from both sides of the brook. We identified the wetlands and swamps that are referred to in the evidence we received. We identified the location of flow recorder sites on Kakapo Brook.
- 5.28 We paid particular attention to the route the canal will utilise to convey water from Kakapo Brook to the two storage ponds. We identified the areas of vegetation which would be required to be cleared to provide for construction of the canal. We also identified those parts of the station which would be irrigated. We stopped alongside the storage or impoundment ponds and examined the site paying close reference to relevant maps and plans. We then followed the route of the canal through to the power station. We located the proposed power station site and then navigated our way down to the bank of the Hope River where the discharge from the power station would occur. This was the last point on our site visit.
- 5.29 We considered that the site inspection was very valuable because it enabled us to better understand the context in which the application would if granted be given effect to.

6 PLANNING FRAMEWORK

- 6.1 In respect of identifying the relevant planning framework there was general agreement between the applicant and the principal Section 42A Reporting Officer, Ms Natalie van Looy. There were however, some differences in interpretation of some key provisions and the weighting we should place on the various planning documents relevant to this application.
- 6.2 In this section so as to provide context for a later evaluations, we identify what we consider to be the relevant policy statements regulations standards and plans.
- 6.3 One other issue we address in this part of the decision is the issue of status of the activities.

National Policy Statement Freshwater Management 2014 (NPSFM)

- 6.4 The NPSFM sets out objectives and policies to manage water in an integrated and sustainable way while providing for economic growth within set limits relating to quantity and quality.
- 6.5 The relevant objectives and policies relating to water quality are objectives A1 and A2 and policy A4. Water quantity is dealt with in Objectives B1, B2, B3, B4, integrated management is provided for in Objective C1 and Policy C1 and Tangata Whenua roles and interests at Objective D1 and Policy D1.

- 6.6 Objective A1 seeks to “safeguard the life supporting capacity, ecosystem processes and indigenous species including their social and ecosystems, of freshwater..... in sustainable in managing the use and development of land and of discharge of contaminants”
- 6.7 Objective A2 focuses on the need to maintain or improve the overall quality of fresh water in a region while protecting the significant values of outstanding freshwater bodies, values of wetlands and improving water quality in degraded water bodies.
- 6.8 The policies related to these objectives require that fresh water quality limits are established for regions and also methods are established to avoid over allocation.
- 6.9 Policy A4 applies to discharges. Paragraph 2 of this Policy does not apply because the relevant resource consent application was lodged before the 2014 version of this NPS took effect. However paragraphs 1 and 3 of Policy A4 are relevant. This Policy among other things requires a consent authority when considering an application for a discharge consent to have regard to a range of matters including the extent to which the discharge would avoid contamination that will have an adverse effects on the life supporting capacity of freshwater including on any ecosystem associative with freshwater and the extent to which it is feasible and dependable that any more than minor adverse effects on freshwater and on any ecosystem associated with freshwater resulting from the discharge would be avoided.
- 6.10 Turning to the water quantity issues objective B1 seeks to safeguard the life supporting capacity, ecosystem processes and indigenous species including the associative ecosystems of freshwater, in sustainably managing the taking, using, damming or diverging of freshwater.
- 6.11 Objective B2 seeks to avoid any further over allocation of freshwater and phase-out existing over allocation. Objective B3 seeks to improve and maximise the efficient allocation and efficient use of water, while Objective B4 seeks to protect significant values of wetlands and of outstanding freshwater bodies.
- 6.12 Policy B5 directs regional councils to ensure that “no decision will likely result in future over-allocation- including managing freshwater so that the aggregate of all amounts of freshwater in a freshwater management unit that are authorised to be taken, used, dammed or diverted does not over allocate the freshwater in the freshwater management unit”
- 6.13 Objective D1 and Policy D1 seek to provide for the involvement of iwi and hapū and to ensure that tangata whenua values and interests are identified and reflected in the management of freshwater including associative ecosystems and decision making.
- 6.14 Finally in terms of the NPSFM it is we think important to make reference to appendix 1 of the NPS. Appendix 1 is the compulsory national value on ecosystem health. This states that “the freshwater management unit supports a healthy ecosystem appropriate to that freshwater body type. In a healthy freshwater ecosystem ecological processes are maintained, there is a range and adversity of indigenous flora and fauna, and there is a resilience to change.”

National policy statement for renewable electricity generation (NPS – REG)

- 6.15 The NPS-REG came into effect on 14 July 2011, and provides objectives and policies to enable the sustainable management of renewable electricity generation under the RMA. The matters of national significance that the policy statement applies to the need to develop, operate, maintain and upgrade renewable electricity generation activities throughout New

Zealand and to the benefits of renewable electricity generation.

- 6.16 Essentially the single objective of the NPS – REG is to recognise the national significance of renewable electricity generation activities by providing for the development, operation and maintenance and upgrading of new and existing renewable electricity generation activities, such that the proportion of New Zealand’s electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand government’s national target for renewable electricity generation.
- 6.17 Policy A directs decision-makers to recognise and provide for the national significance of renewable electricity generation activities including the national, regional and local benefits. Sub paragraph b) particularises those benefits as including maintaining or increasing security of electricity supply at local, regional and national levels by diversifying the type and/or location of electricity generation.
- 6.18 Policy C1 provides further detail that decision-makers shall have particular regard to, including the availability of the renewable resource, existing infrastructure, technical and logistical practicalities, operational requirements.
- 6.19 Policy C1 places a requirement on decision-makers that they shall have particular regard to some of the key constraints that exist with the development of renewable generation activities.
- 6.20 Policy C2 provides that where residual environmental effects cannot be avoided, remedied or mitigated, decision-makers shall have regard to offsetting measures or environmental compensation which will benefit the local environment and the community affected.
- 6.21 Policy E2 states that regional and district plans shall include objectives and policies and methods to provide or improve existing hydroelectric sources to the extent applicable.

The Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007 (NES Drinking Water)

- 6.22 The purpose of this NES is to set minimum standards for sources of human drinking water to protect human health.

Canterbury Regional Policy Statement (CRPS)

- 6.23 Chapter 7 of the CRPS outlines a number of overarching objectives and policies regarding the management of Canterbury’s freshwater resources.
- 6.24 Objective 7.2.1 provides clear guidance on what should be considered and what is to be achieved for the region. This objective provides

"the region’s freshwater resources are sustainably managed to enable people and communities to provide for the economic and social well-being through abstracting and/or using water for irrigation, hydroelectricity generation and other economic and social activities associated with these values, providing;

- 1) the life supporting capacity ecosystem processes, and indigenous species and their associated freshwater ecosystems and mauri of the freshwater is safeguarded;*

- 2) *the natural character values of wetlands, lakes and rivers and their margins are preserved and these areas are protected from inappropriate subdivision, use and development and where appropriate restored or enhanced; and*
- 3) *any actual or reasonably foreseeable requirements for community and stock water supplies and customary uses, are provided for."*

- 6.25 Objective 7.2.2 provides for parallel processes of managing freshwater such that abstraction of water and the development of water infrastructure occurs in parallel with improvements in efficiency and maintenance, restored and enhanced in order for water abstraction and the development of water infrastructure to occur.
- 6.26 Objective 7.2.3 provides for the protection of intrinsic value of water bodies in the region is maintained or improved requiring that the overall quality of freshwater in the region is maintained or improved, and the life supporting capacity, ecosystem processes and indigenous species and their associated fresh water ecosystems are safeguarded.
- 6.27 Policy 7.3.1 considers the adverse effects of activities on the natural character of fresh water. This policy seeks *to identify the natural character values of fresh water bodies and their margins in the region and to preserve natural character values where there is a high state of natural character.*
- 6.28 Policy 7.3.3 promotes enhancing fresh water environments and biodiversity. It seeks to *promote, and where appropriate require the protection, restoration and improvement of lakes, rivers, wetlands and their riparian zones and associated Ngāi Tahu values, and to: (1) identify and protect areas of significant indigenous vegetation and significant habitats, sites of significant cultural value, wetlands, lakes and lagoons/hapua, and other outstanding water bodies.*
- 6.29 Policy 7.3.4 outlines the need to *manage the abstraction of surface water and groundwater by establishing environmental flow regimes and water allocation regimes.* There are a number of subparagraphs to consider, as set out in full in Appendix 2 of Ms Whyte's evidence.
- 6.30 Policy 7.3.6 outlines the need for regional plans to *establish and implement minimum water quality standards for surface water and groundwater resources in the region, which are appropriate for each water body considering: (a) the values associated with maintaining life supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, and natural character of the water body.*
- 6.31 Policy 7.3.8 aims to improve the efficiency and use of water resources by *ensuring the infrastructure used to reticulate and apply water is highly efficient relative to the nature of the activity, for any new take or use of water* as well as ensuring that the quantity of water supplied is no more than that which is required to undertake all of the proposed activities. There are additional considerations that are set out in in full in Appendix 2 of Ms Whyte's evidence.
- 6.32 Policy 7.3.10 recognises the potential benefits of harvesting and storing water for:
- (1) *improving the reliability of irrigation water and therefore efficiency of use;*
 - (2) *improving the storage potential and generation output of hydro-electricity generation activities;*

(3) increasing the irrigated land area in Canterbury;

(4) providing resilience to the impacts of climate change on the productivity and economy of Canterbury;

(5) reducing pressure on surface water bodies, especially foothill and lowland streams, during periods of low flow;

and facilitate the conversion of resource consents to abstract water under 'run of river' conditions to takes to storage, where this can be done under conditions which maintain or enhance the surface water body.

- 6.33 Objectives 9.2.1 and 9.2.2 relate respectively to halting the decline of Canterbury's ecosystems and indigenous biodiversity and the restoration or enhancement of ecosystem systems and indigenous biodiversity.
- 6.34 Policy 9.3.5 states that in relation to Canterbury wetlands all of Canterbury's remaining wetlands should be protected and enhanced or restored. This is outlined in a number of subparagraphs that are set out in full in Appendix 2 of Ms Whyte's evidence.
- 6.35 Objective 11.2.1 seeks to avoid new subdivision, use and development of land that increases risks associated with natural hazards to people, property and infrastructure or, where avoidance is not possible, mitigation measures minimise such risks.
- 6.36 Policy 11.3.1 outlines the need to *avoid new subdivision, use and development (except as provided for in Policy 11.3.4) of land in high hazard areas*. The policy then provides a list of appropriate new developments which are listed in full in Appendix 2 of Ms Whyte's evidence.
- 6.37 Policy 11.3.3 outlines the need to avoid or mitigate the effects of earthquake hazards in new developments. This policy requires that *New subdivision, use and development of land on or close to an active earthquake fault trace, or in areas susceptible to liquefaction and lateral spreading, shall be managed in order to avoid or mitigate the adverse effects of fault rupture, liquefaction and lateral spreading*.
- 6.38 Objective 12.2.1 provides that *outstanding natural features and landscapes within the Canterbury region are identified and their values are specifically recognised and protected from inappropriate subdivision, use, and development*.
- 6.39 Policy 12.3.1 relates to the *identification of outstanding natural features and landscapes in the Canterbury region* so that they may be provided for in plans. In particular the Lewis Pass area has been identified as an outstanding natural features and landscape in the CRPS.

Hurunui and Waiau River Regional Plan (HWRRP)

- 6.40 The HWRRP incorporates the values and objectives of the relevant NPS, CRPS and the Canterbury Water Management Strategy.
- 6.41 Within Part 1 paragraph 1.1 the scope of the plan and the area to which it applies is set out. The HWRRP applies to the taking and using damming and diverting of surface water... in accordance with section 14 of the RMA within the Waiau Catchments, as shown on Map 1; the discharge of water in accordance with section 15(1) of the RMA which has been used for non-consumptive activities. Where an activity is expressly provided for in the HWRRP the

provisions of that plan apply. For all other activities the provisions of the Natural Resources Regional Plan (NRRP) and or the Land and Water Regional Plan (LWRP) apply. However, all relevant provisions of the NRRP have been incorporated into schedules 4 and 5 of the HWRRP.

6.42 Objective 2 focuses on environmental flows. Flows provide important habitat for fish and birds. Rivers can have high landscape and amenity and cultural values. These values including habitat can be degraded if the flow in the river is insufficient, or if changes occur to the natural frequency of floods and freshes. Also water quality can deteriorate as a consequence of altering flow. Objective 2 and its subsequent policies address two key matters. The first relates to avoiding significant effects and managing other effects of abstraction. The second matter establishes the allocation regime and provides the policy guidance relating to that regime. How this proposal fits with the allocation limits in Table 1 is a key matter in relation to this objective and policy framework.

6.43 Objective 2 paraphrased seeks to sustainably manage water levels in flows on the Waiau River and their tributaries to avoid significant adverse effects on and avoid, remedy or mitigate other adverse effects of abstraction activities on;

(a) the mauri of the waterbodies;

(b) instream aquatic life;

(c) upstream and downstream passage of native fish, and salmon and trout;

(d) existing landscape and amenity values;

(e) breeding success of riverbed nesting birds;

(f) river mouth opening... and maintaining an open river in the Waiau River, to provide for the migration of native fish and salmonid species and the collection of kai by tangata whenua;

(g) the extent of periphyton and cyanobacteria accumulations and the impact of those accumulations on recreational values and activities;

(h) existing recreational values in the mainstem of the... Waiau rivers for activities including salmon and trout fishing, kayaking, jetboating and swimming.

6.44 In summary then, significant adverse effects of abstraction are to be avoided and other adverse effects are to be avoided, remedied or mitigated. The matters identified in subparagraphs (a)-(h) are dealt with within the implementing policies.

6.45 An important such policy is Policy 2.1 which provides that no resource consent to take, dam or use water should be granted if the proposed activity will cause the minimum flow specified in the Environmental Flow and Allocation Regime in Table 1 to be breached. This is an important policy within the plan and a policy of real significance in the context of this proposal.

6.46 Policy 2.2 deals with the circumstances where a minimum flow is not been set for a tributary within Table 1. That policy provides the minimum flow can be utilised following either option set out within subparagraphs (a) or (b) of that policy. Kakapo Brook has no minimum flow set for it in Table 1 so this policy is of significance.

- 6.47 Policy 2.5 seeks to ensure that any take, dam or division of water provides for flow variability above the minimum flow, including flows that are between 1.5 and three times the median flow to scour and flush periphyton and cyanobacteria accumulations, mobilise and transport bed material, trigger flow dependent aquatic life-cycle processes such as fish migration, and provide for recreational values and activities in the mainstem of the Hurunui and Waiau Rivers.
- 6.48 Policy 2.6 seeks to ensure that any new take, dam diversion or discharge of water protects the mauri of the Hurunui and Waiau Rivers and their tributaries.
- 6.49 Policy 2.9 seeks to provide for the minimum flow at marble point in the Waiau River to be 20m³/s all year round to give effect to Objective 2.
- 6.50 Objective 3 relates to the allocation of water. Objective 3 has a similar structure to Objective 2 in that it allocates water to enable further economic development while a range of outcomes specified in subparagraph (a) to (h) are provided for. The matters in the subparagraph range from broader outcomes such as protecting the mauri of the waterbody through to ensuring that water temperature is not unnaturally increased to levels which are unsuitable for native fish, salmon and trout. Objective three is an important objective in the plan and particularly within the context of this application. So are the relevant policies outlined below that assist in achieving this Objective.
- 6.51 Just as with Objective 2, Objective 3 has a range of related policies. Policy 3.1 sets the size of the catchment wide A permit allocation limit in the Waiau River catchment. Policy 3.2 is similar to Policy 2.1 by providing that no resource consent to take, dam, divert or use water shall be granted if the proposed activity will cause the permit allocation limits specified in the Environmental Flow and Allocation Regime shown in Table 1 to be exceeded at any point on the river and at any given time.
- 6.52 Policy 3.4 seeks to enable water to be taken from the B permit allocation limits set for the mainstem of the Hurunui and Waiau Rivers as specified in Table 1 and used for out of stream uses.
- 6.53 Policy 3.6 seeks to enable water to be discharged for non-consumptive activities to the Waiau and Hurunui Rivers and their tributaries provided that a range of outcomes are maintained downstream of the point of take. Those outcomes relate to sufficient invertebrate production to support fish and river bird communities, habitat and fish passage for native fish, salmon and trout and maintaining the health and safety of people and communities using the river, and the water is returned to the river in the same or better state and quality.
- 6.54 Objective 6 relates to the way in which infrastructure for out of stream uses is to be developed. This Objective requires this development to occur in a manner which protects areas with high intrinsic, cultural and recreational values, avoids areas with significant natural hazards, considers demand for community and/or stock drinking water supplies, and gives effect to Objectives 2 and 3.
- 6.55 Policy 6.1 is a strongly worded policy. It seeks to prohibit the damming or impoundment of water within the parts of the Hurunui and Waiau river catchments shown as Zone A' High Value Areas `or on Map 3 or on the mainstem of the Hurunui and Waiau Rivers. The word "or" is important. We will return to discuss its significance when we discuss objectives and policies of the HWRRP.
- 6.56 Policy 6.2 seeks to enable development of storage facilities for A,B or C permit water in the

parts of the Hurunui and Waiau river catchment shown as Zone C "Infrastructure Development Areas", on Map 3 provided a range of matters specified within subparagraphs (a) to (g) are satisfied.

- 6.57 Policy 6.3 seeks to enable proposals to dam or impound water within the parts of the Hurunui, Waiau and Jed river catchments shown as Zone B "areas not identified as high value or infrastructure development" on Map 3 again provided a range of matters set out in subparagraphs (a) to (i) are provided for or satisfied.
- 6.58 Policy 6.5 requires any proposal utilising water from the Hurunui, Waiau and Jed River catchments to demonstrate how it will allow for a larger area of land to be irrigated. Where the proposal involves the provision of water storage for irrigation purposes, demonstrate how it recognises and provides for the following priority order of storage locations: for proposals using water from the Waiau River, the middle reaches of the Waiau River in the Emu or Amuri plains.
- 6.59 Policy 6.5 also requires the proposal to assist in achieving the objectives of the HWRRP and to maximise the economic and social benefits of water abstraction including utilising water for multiple out of stream uses.
- 6.60 Policy 6.8 seeks to enable the development of on-farm storage of water for irrigation where it will improve the existing abstractors' reliability of supply or allow for greater efficiency of the application or allow for a larger land area to be irrigated.
- 6.61 Objective 8 specifies that water taken for out of stream purposes is to be used efficiently. The supporting policies seek to ensure leakage in the design and operation of infrastructure used to take or convey water is minimised. These policies also specify various requirements related to encouraging the surrender of unused water takes, the application efficiency of water, water metering and the reasonableness of the rate and volume of abstractions.
- 6.62 Objective 9 seeks to ensure that water in the Hurunui, Waiau and Jed catchments is managed in an integrated manner, with any changes in water management being undertaken in a consistent way which is fair and equitable for all resource consent holders.
- 6.63 Policy 9.2 seeks to provide a resource consent duration of up to 35 years for large-scale hydroelectric generation and irrigation infrastructure projects with a capital cost of more than \$10,000,000.
- 6.64 Schedule WQN12: provides for fish screen standards and guidelines. The schedule is relevant to the proposal because various HWRRP rule conditions refer to compliance with Schedule WQN12.

The Activity Status

- 6.65 At the time the resource consent applications were lodged the Proposed Hurunui Waiau River Regional Plan was not operative. Because of impending change and a complicated statutory planning environment we were told that the applicant adopted a conservative approach in lodging resource consent applications for activities, particularly given some activities may have been considered prohibited activities after the HWRRP became operative.
- 6.66 Ms Jane Whyte the Applicants' consultant planner considered because the HWRRP became operative on 20 December 2013 that the relevant planning provisions were those contained within the HWRRP and not those contained within the proposed HWRRP, the NRRP or the

LWRP. She went on to say while the status of an activity is a legal matter she considered that Rule 4.2 was the relevant rule for this proposal, with the result its status was non-complying.

- 6.67 In her opening Ms Steven QC, legal counsel for the applicants, took the view the application was noncomplying because she considered it caught by Rule 4.2. She discussed that Rule 5.2 makes the taking of water from the Hurunui or Waiau catchments that does not comply with Table 1 a prohibited activity unless it is provided for under Rule 2.3 (c). Rule 2.3 provides that the taking, diverting, discharge and use of surface water in accordance with Table 1 is a restricted discretionary activity provided it complies with a range of standards and terms specified in sub-paragraphs (a) through to (j) of the Rule. Sub paragraph (c) requires the take to comply with the minimum flow for the relevant permit allocation limit for the surface water body set out in Table 1. She was of the view that Rule 5.2 did not apply and as we understood it, she considered that if Rule 5.2 did not apply the proposal satisfied Rule 2.3 (c).
- 6.68 She went on to say that if we disagreed with this approach the overall activity status would not change given that any prohibited activity take is deemed to be a discretionary activity by virtue of section 87B of the RMA. Section 87B provides that certain activities are to be treated as an application for a resource consent for a discretionary activity if a rule in a proposed plan describes the activity as a prohibited activity and the rule has not become operative at the time of application. Ms Steven QC then referred to section 88A noting that this section in referring to section 87B has the effect that if the activity status alters as result of the plan becoming operative, the application continues to be processed as it was in terms of status when the application was first lodged.
- 6.69 She did note however that under section 88A notwithstanding the status point of any plan or proposed plan which exists when the application is considered, it must be had regard to in accordance with section 104(1)(b). We certainly agree with that.
- 6.70 Given the importance of these matters we have carefully considered recent relevant Environment Court decisions on both section 87B and 88A. The first decision of the Environment Court we considered was the Calder Stewart decision dated January 2006.⁷ The decision concerned as it then was section 77 of the RMA. Section 87B is now the relevant section. In this case the relevant application was filed before the plan was made operative and the status of that activity was discretionary. Once the plan became operative the activity would be prohibited. The Court was concerned with the effect of section 19 because the entire plan had not become operative when the Calder Stewart application was being considered.
- 6.71 After recording the outcome was finely balanced the Environment Court in Calder Stewart took a conservative view and determined that the application should continue to be processed as a discretionary application subject to the consent authority having regard to the prohibited activity status of the activity under the operative plan when considering the application under section 104.
- 6.72 The next decision we considered was the Appleby decision.⁸ In this case when the application was lodged the status of the activity was discretionary. However, when the plan was altered

⁷ *Calder Stewart Industries Ltd v Christchurch City Council* [2007] NZRMA 163.

⁸ *Appleby (t/a Affinity Cruises) v Southland Regional Council* ENC Christchurch C081/07, 25 June 2007

the status became noncomplying. The Court in Appleby referred to other Environment Court decisions (which the Court accepted), that section 19 applied and if the rule as distinct from the entire plan were operative then section 88A no longer applied and its protections were lost. However, the Court in Appleby ultimately preferred the approach taken by another division of the Court in the Calder Stewart case.

- 6.73 The final case we referred to was the Royal Forest and Bird Protection Society case.⁹ In this case when the application was lodged the status of the activity was discretionary. However, while the application was being processed the plan became operative and under that plan the status of the application was noncomplying. At paragraph 7 (b) of that decision the Court, after recording a reference to recent case law, records that section 88A does not protect the status of activities when a plan is operative.
- 6.74 Section 87B, in particular subsection (c) has two parts. First a rule in a proposed plan describes the activity as a prohibited activity and the second part being the rule has not become operative. At the time we are considering and making a decision on this proposal the rule has, of course, become operative.
- 6.75 Initially it is fair to say we were somewhat troubled by these decisions because at least as we understood them the result for us would be this proposal would be caught by a number of rules in the HWRRP which made the proposal a prohibited activity. If we were correct then we should progress no further.
- 6.76 However, we have decided to take what we consider is an available and reasonable course and it is that provided under section 88A in that while we recognise the status of the activity at the time the application was first lodged when we are making a decision on the application, we must also consider the operative plan as it now appears and we must have regard to it in accordance with section 104(1)(b).
- 6.77 In reaching this outcome we were influenced by Ms Natalie van Looy's approach to this issue. Her approach was to determine that the taking and using of surface water for hydro electricity generation and irrigation was caught by Rule 5.2 of the proposed HWRRP decisions version. She considered the proposed take did not comply with the Environmental Flow and Allocation Regime outlined in Table 1 of the then proposed plan. However, in accordance with section 87B(1)(c) the prohibited status became, or is to be treated as, discretionary.
- 6.78 In assessing the damming of water for hydro electricity generation she considered rule 4.2 was the relevant rule and that the status of the activity was non-complying. Her reasons for this was because the activity could not be classified under any of the preceding rules as the dams were not in Zone C of Map 3 and does not fit the prohibited activity status as the dams are she said out of stream. Rule 5.1 refers to the damming or impoundment of water in the mainstem of the Waiau or Hurunui River or their tributaries. So overall she was of the view the status of the activity was noncomplying.
- 6.79 So while having some reservations, particularly based on our understanding of Environment Court decisions made on section 88A, we have determined to proceed on the basis that the appropriate activity status is noncomplying. However, notwithstanding this activity status, we must consider the now operative HWRRP and have regard to it in accordance with section

⁹ *Royal Forest and Bird Protection Society Incorporated v Whakatane District Council* [2012] NZEnvC 38

104(1)(b). So as Ms Steven QC has pointed out in her opening submissions, "this would mean that you are required to have regard to the fact that the application would now be considered a prohibited activity."¹⁰

Bundling of consents

6.80 The position in relation to bundling is made more complicated than usual because of the involvement of section 87B and section 88A of the RMA. However the Applicants' representatives and the principal reporting officer were agreed that the appropriate status of the proposed activity was noncomplying.

7 STATUTORY CONSIDERATIONS

Sections 9, 13, 14 and 15 RMA – duties and restrictions

- 7.1 Part 3 RMA sets out duties and restrictions on activities, including the following sections that are particularly relevant to these applications:
- 7.2 Section 9 - restrictions on the use of land. This includes activities such as land use that results in a discharge of nutrients that may enter water.
- 7.3 Section 14 – restrictions on the damming, diverting, taking and using of water. This includes activities such as taking water from rivers for use in irrigation or for hydro electricity production.
- 7.4 Section 15 – restrictions on the discharge of water or contaminants into the environment. This includes activities such as discharging water which may contain contaminants (to generate electricity) into rivers.
- 7.5 The general principle under sections 14 and 15 is that consent is required for these activities unless the activity is expressly permitted by a relevant regional plan or valid resource consent.¹¹ The activities that are the subject of these current applications do not meet these exceptions, and resource consent is therefore required pursuant to Sections 14 and 15 RMA.

Sections 104, 104B and 104D RMA – consideration of applications

7.6 Section 104(1) RMA sets out the matters we must have regard to in our consideration of the applications. The relevant matters are as follows:

- "(a) any actual and potential effects on the environment of allowing the activity; and*
- (b) any relevant provisions of –*
 - (i) a national environmental standard:*
 - (ii) other regulations:*
 - (iii) a national policy statement:*

¹⁰ Steven QC, P. (2015) Opening Legal Submission at [67].

¹¹ There are some exceptions to this, such as taking water for stock water and domestic use under s 14(3)(b). The issue of stock water is discussed later in this decision .

- (iv) *a New Zealand coastal policy statement:*
 - (v) *a regional policy statement or proposed regional policy statement:*
 - (vi) *a plan or proposed plan; and*
 - (c) *any other matter the consent authority considers relevant and reasonably necessary to determine the application.*
- 7.7 The balance of s 104 RMA contains a range of other matters that may also be relevant to our consideration, including the following (among others):
- (a) Section 104(2) – Provides us with the discretion to disregard an adverse effect on the environment if the plan permits an activity with that effect (the permitted baseline).
 - (b) Sections 104(6) and (7) – Provides that we may decline a consent on the grounds of inadequate information, taking into account any requests for further information that have been made.
- 7.8 We note Section 104(1) RMA provides that the matters therein listed are subject to Part 2 RMA, which includes Sections 5 through to 8, inclusive. We consider Part 2 RMA matters subsequently.
- 7.9 For non-complying activities, the same requirements of s104(1) apply. In addition, s104D RMA contains particular restrictions for non-complying activities and provides:
- "(1) *Despite any decision made for the purpose of [section 95A(2)(a) in relation to adverse effects], a consent authority may grant a resource consent for a Non-Complying Activity only if it is satisfied that either –*
- (a) *the adverse effects of the activity on the environment (other than any effect to which [section 104(3)(a)(ii)] applies) will be **minor** [emphasis added]; or*
 - (b) *the application is for an activity that will not be **contrary** [emphasis added] to the objectives and policies of –*
 - (i) *the relevant plan, if there is a plan but no proposed plan in respect of the activity; or*
 - (ii) *the relevant proposed plan, if there is a proposed plan but no relevant plan in respect of the activity; or*
 - (iii) *both the relevant plan and the relevant proposed plan, if there is both a plan and proposed plan in respect of the activity.*
- (2) *To avoid doubt, section 104(2) applies to the determination of an application for a Non-Complying Activity."*
- 7.10 In considering whether an effect on the environment is "*minor*", minor means lesser or comparatively small in size or importance, and the judgement is to be made considering the adverse effects as a whole. In relation to the second jurisdictional hurdle, the word "*contrary*" is given a meaning of more than just non-complying, but opposed to in nature, different to, or opposite. We are required to consider whether the proposed activity would

be contrary (in that sense) to the objectives and policies of the HWRRP in an overall consideration of the purpose and scheme of the plan.

7.11 Based on the above, the process we will follow when considering a non-complying activity is to:

- (a) identify the relevant s104 matters;
- (b) consider whether one or both of the jurisdictional hurdles in s104D are met having regard to the relevant, and rejecting irrelevant, matters under s104; and
- (c) if either one of the jurisdictional hurdles is passed, weigh the relevant matters under s104 and Part 2 as part of the overall discretion whether or not to grant consent under s104B.

Section 105 RMA – discharges

7.12 Section 105 requires us to have regard to:

- (a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and*
- (b) the applicant's reasons for the proposed choice; and*
- (c) any possible alternative methods of discharge, including discharge into any other receiving environment*

7.13 While it will become apparent later in this decision, we record now that we do think having regard to the nature of the discharge and the sensitivity of the receiving environment, namely the Hope River the discharge will not cause adverse effects. We also understand the Applicants' reasons for the proposed choice and consider them to be appropriate. We do not think there are possible alternative methods of discharge which are appropriate having regard to what is proposed.

Section 107 RMA

7.14 Section 107 of the RMA is relevant to the discharge consent. The section sets out a number of restrictions on the granting of certain discharge permits. In summary form the effects of the discharge should not give rise to a range of effects in the receiving waters.¹²

7.15 In this case the discharge of water occurs after water taken from the Kakapo Brook has been held in a storage pond and is then conveyed by a canal to the generating station and then discharged into the Hope River by a combination of pipework leading to a rock armoured discharge point. In our view none of the circumstances listed in subsections (c) to (g) will arise in relation to the discharge into the Hope River.

¹² including such matters as: the production of conspicuous oil or grease films, changes in colour or visual clarity, omissions of objectionable odour, rendering freshwater unsuitable for farm animal consumption, and any significant adverse effects on aquatic life.

8 PART 2 MATTERS RMA

- 8.1 Section 104(1) RMA states that our consideration of the applications is subject to Part 2 RMA, which covers ss 5 – 8, inclusive. We record that our approach is that ss 6, 7 and 8 contribute to, and will inform, our evaluation under s5 RMA.
- 8.2 The overall purpose RMA is “*to promote the sustainable management of natural and physical resources*”. In turn, “*sustainable management*” means:
- “... managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while –*
- (a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
 - (b) Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and*
 - (c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment”.*
- 8.3 Sections 6 identifies the following matters of national importance that we must “*recognise and provide for*” when making our decision:
- (a) The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use and development.*
 - (b) The protection of outstanding natural features and landscapes from inappropriate subdivision, use and development;*
 - (c) The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna;*
 - (d) The maintenance and enhancement of public access to and along the coastal marine area, lakes and rivers;*
 - (e) The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga;*
 - (f) The protection of historic heritage from inappropriate subdivision, use and development.*
- 8.4 Section 7 lists the following other matters that we shall “*have particular regard to*”:
- (a) Kaitiakitanga:*
 - (aa) The ethic of stewardship:*
 - (b) The efficient use and development of natural and physical resources:*
 - (ba) The efficiency of the end use of energy:*

- (c) *The maintenance and enhancement of amenity values:*
- (d) *Intrinsic values of ecosystems:*
- (e) *Repealed.*
- (f) *Maintenance and enhancement of the quality of the environment:*
- (g) *Any finite characteristics of natural and physical resources:*
- (h) *The protection of the habitat of trout and salmon:*
- (i) *The effects of climate change:*
- (j) *The benefits to be derived from the use and development of renewable energy.*

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

9 PRINCIPLE ISSUES IN CONTENTION INCLUDING ASSESSMENT OF EFFECTS AND PLAN PROVISIONS

- 9.1 In this section of our decision, we consider the effects of the proposal on the environment, precedent effects, and relevant objectives and policies of the relevant plans. We adopt this approach because there is such a strong linkage between effects and the relevant objectives and policies within primarily the HWRRP and the CRPS.
- 9.2 When undertaking our assessment of effects, we have paid careful and close regard to the proposed conditions proffered by the Applicants in closing.
- 9.3 We have also divided this section of our decision into the principle issues in contention and other issues, which are of less significance.

Principle Issues in Contention

Table 1 – Environmental Flow and Allocation Regime - HWRRP

- 9.4 The Applicants’ interpretation of Table 1 within the HWRRP in the context of this proposal is a critical issue in contention. In our view Table 1 is the linchpin of the HWRRP sitting alongside Objective 2 and its related policies which deals with environmental flow and Objective 3 and its related policies which deals with allocation of water.
- 9.5 In broad picture the plan seeks to allocate water for out of river uses such as irrigation and hydroelectricity while at the same time protecting the reliability of supply of existing abstractors and ensuring that the river ecosystems that provide habitat for macroinvertebrates native and other fish and braided river birds are appropriately sustained by way of controls on allocation and flow. There are other relevant matters too as discussed below.
- 9.6 In its approach to allocation of water the HWRRP recognises that reaches of the rivers and tributaries within the geographic area covered by the HWRRP are not all the same, they have different characteristics. So allocations are made within reaches of the river so that water is allocated to be taken within those reaches. These reaches are defined on the Maps within the

HWRRP (Map 1: Surface Water Allocation Zones MAP SERIES).

- 9.7 In a similar way the HWRRP seeks to ensure that if water is allocated it is used within certain parts of the catchment as shown on the Surface Water Allocation Zones Map Series Map 1 and subsequent Maps. Also the location of water storage and other infrastructure is, under the HWRRP, appropriate in some parts of the catchment but not in others. There are some parts of the catchment where the natural, cultural and social values are considered to be so high that construction of water storage and other infrastructure is deemed inappropriate. The HWRRP notes that construction of water storage may be inappropriate because it is too costly and difficult in some areas due to geotechnical issues.
- 9.8 Table 1 provides an allocation limit for A permits of 0.59 m³/s for the Upper Waiau River mainstem and tributaries upstream of Marble Point. In the evidence we were told nearly all of the A permit water had been allocated by way of resource consent. There are applications lodged in priority to this application for what remains of A permit water. The Applicants told us that with respect to irrigation water they are not seeking to take A permit water but that they are seeking to transfer, from the lower Waiau River mainstem downstream of Marble Point, the B permit water that as per Table 1 was available for allocation in that reach. We were told that there is B permit water available for allocation.
- 9.9 So notwithstanding the plan divides the Waiau River into differing reaches or zones and provides different allocations for each reach or zone the Applicants, based on the submissions of Ms Steven QC, submitted that the plan correctly interpreted allows a "transfer" of water between these locations. This would a "transfer" of B permit water taken for irrigation from the lower Waiau River mainstem to the Applicants' take point at Kakapo Brook being a tributary of the Waiau River located in the upper Waiau River reach.
- 9.10 To support this interpretation among the many points made by Ms Steven QC she said because Table 1 expressly provides "no B or C allocation limit is specified for the upper Waiau" this did not mean there was no allocation it simply means there was no limit.
- 9.11 To further support her interpretation she referred to that part of Table 1 which provides allocation limits and flow rates for the Hurunui catchment. She submitted that because that part of the table as it relates to the lower Hurunui mainstem allows abstractors in the lower Hurunui to apply to take B or C permit water from the middle Hurunui allocation then this same approach should apply on the Waiau.
- 9.12 The first problem we see with this interpretation is that she is reading words into this critical Table 1 where they do not appear. She is also trying to explain away those words that do appear in Table 1 that expressly provide that there is no B or C allocation limit specified for the upper Waiau. In our view those words in Table 1 should be given their plain ordinary meaning which we take to mean there is no B or C allocation limit specified for the upper Waiau. Therefore, there is no B or C permit water to allocate and take in the upper Waiau.
- 9.13 When using the Hurunui catchment as an example, in our view she overlooks the significance of the location of those abstractors seeking to take water from the Hurunui River. First those abstractors must be located in the lower Hurunui river and secondly those abstractors can only apply to take water from the middle Hurunui river provided there is spare capacity within the river because those upstream in the middle reaches of the Hurunui river did not utilise all of the allocation the plan provides within that middle reach. We note that this regime fits within the mainstem of the Hurunui River (refer Table 1 first column) not the tributaries.
- 9.14 In contrast to the position faced by the Applicants in this case, the water in the lower Hurunui

reach is actually physically available to be taken. The available water flows from the middle reach to the lower reach and can be taken. But in this case in reality only a very small portion of A permit water is possibly available. There is no other available water in terms of a plan allocation to allocate. Ms Steven QC is suggesting a theoretical transfer of water from the lower Waiau river reach to the upper Waiau reach.

- 9.15 We think it follows that if we were to allow the Applicants' take the result would be we would be allocating water to the Applicants that the HWRRP did not allow resulting in an over allocation of the water resource.
- 9.16 We acknowledge the plan does provide for inter-catchment transfer of water. However this is only where such a transfer accords with cultural values and submitted with a full infrastructure development plan as required on Policy 6.6 and importantly seeks to transfer water from one catchment to another in accordance with the A or B permit allocations as set out in Table 1. There is no B permit allocation for the location of this take. We note also that this policy refers to transfer of physical water – not to transferring allocations.
- 9.17 Ms Steven QC and Ms Whyte for the Applicants seek to address this by advancing an interpretation of the plan that seeks to account for the allocation of water on a catchment wide basis as distinct from a river reach or zone basis. This interpretation to us seems directly at odds with the words in Table 1 and the structure of the plan given that it is structured on a reach by reach basis.
- 9.18 We noted that Ms van Looy also disagreed with this approach. She said as the split of the B block water in the Lower Waiau is not reflected in Table 1 it suggests that to have the allocation deducted from the total allocation available below Stanton the take would have to be situated in this locality. Simply put, we consider that the water take should be from the zone within which the allocation has been provided for.
- 9.19 Also in our view this B allocation provided for in Table 1 was clearly allocated for future development that has not yet occurred within the zone specified. That future development is anticipated to occur in the lower Waiau catchment. If the Applicants' proposal was consented that would prevent that development from occurring within that zone.
- 9.20 We also consider the Applicants' approach is not supported by the objectives and policies of the HWRRP. The policies of the HWRRP clearly state that any resource consent that is inconsistent with Table 1 in respect of both flow and allocation namely Policies 2.1 and 3.2 should be declined. We will return to this point later.
- 9.21 Our approach is to read the words in the plan particularly in Table 1 giving them their plain ordinary meaning. We do not support the approach of reading words into the HWRRP where those words do not exist.
- 9.22 In our view alongside what we have said above we think there is very clear support for our views to be found at paragraph 116 on page 35 of the Commissioners recommendations on the HWRRP. Among other things paragraph 116 provides that the words "no B or C allocation block is specified in this tributary is understood to mean that other than for the A allocation block there is no other water available for abstraction from those particular rivers consequently any additional takes will be prohibited under rule 5.2."
- 9.23 We note that "allocation" as used in Table 1 is not defined in the HWRRP. However, we consider it implicit that it means consumptive use of water as specifically, and we think deliberately, defined in the HWRRP.

- 9.24 We do appreciate Ms Steven QC did refer to other matters in support of her submission relating to her interpretation of the plan. We have written a response to what we understood to be the key arguments put forward but for the sake of completeness we record that the other matters raised in opening and more particularly in her closing we disagree with.
- 9.25 Finally on this point we do record that Ms van Looy took precisely the same view we have in relation to Table 1 and its application and interpretation.

Precedent Effects

- 9.26 Because precedent effects are not the effects on the environment they should be considered under section 104 (1) (b) (vi) or section 104(1)(c). To be clear the precedent effect we are concerned with here is the effect of granting a resource consent in the sense of like cases being treated like. Precedent is, we consider, a relevant factor for us to take into account when considering an application for a consent for this noncomplying activity.
- 9.27 We accept that the significance or otherwise of precedent is driven by the context in which we are making our decision. We accept that we need to be careful in thinking that future applications could act in reliance of the decision we make in relation to this particular application. In the words of the Environment Court we have to be careful not

*"make a totally untenable assumption that the consent authority will allow the dike to be breached without evincing any further interest and control, merely because it has granted one consent."*¹³

- 9.28 Our thoughts on the precedent effect are outlined in the following discussion on plan integrity as the two are related in this case.

Integrity of the Plan

- 9.29 The relevance of the integrity of the plan is also driven by the context in which the decision is being made. It follows that the weight to be given to any adverse effect on that integrity is a matter of judgement for us.
- 9.30 The Environment Court and higher court decisions¹⁴ note integrity of the plan is a potentially relevant issue to be considered under section 104 (1) (b) (vi).
- 9.31 We are well aware of the point that each proposal has to be considered on its own merits and if it can pass one of the section 104D thresholds then those advancing the application should be able to have it considered against the section 104 range of factors.
- 9.32 Also we acknowledge that only in the clearest of cases involving an irreconcilable clash with important provisions of the plan when read overall, and a clear perception that there will be materially indistinguishable and equally clashing further applications to follow, will plan integrity be imperilled to the point that the application should be declined.¹⁵
- 9.33 Ms Jane Whyte for the Applicants was of the view that precedent and plan integrity

¹³ *Wellington RC (Bulk Water) v Wellington RC* EnvC W003/98

¹⁴ *Elderslie Park Ltd v Timaru* DC 1955 NZRMA 433 (HC)

¹⁵ *Beacham v Hastings* DC Env W075/09

implications or issues arise if consent is granted for a noncomplying activity where it is contrary to the objectives and policies unless there are unique circumstances. Her first point was based on her evaluation of the proposal that it was not contrary to the HWRRP objectives and policies.

- 9.34 However, we note that her expert opinion that granting consent to this proposal would not be contrary to the objectives and policies primarily of the HWRRP was based on Ms Steven's QC interpretation of and submissions surrounding the application of Table 1 of that plan.
- 9.35 Ms Whyte told us she considered this application has unique characteristics which will mean a precedent effect would not result.
- 9.36 We will return to our findings on whether or not granting consent to this proposal would be contrary to the objectives and policies of the HWRRP. For now we want to discuss and decide whether or not we agree with Ms Whyte and Mr Hurley that this proposal has unique characteristics. Ms Whyte contended it was the combination of the hydro-generation activity improving the security of supply for Hanmer and the irrigation ensuring Glynn Wye can be self-sufficient is the unique characteristic of this proposal. She contended the situation was not easily replicated for other projects using water from different allocation locations that might be advanced in the future.
- 9.37 Mr Hurley particularly in his reply evidence provided much more information to support his contention this proposal was unique. As we understood it, he relied upon Kakapo Brook as having the right combination of 'head', environmental and land access issues to make a viable project as a key unique characteristic. The second circumstance he relied on was that security of supply for Hanmer was a concern only to MainPower. Finally the proposed location for the power station was preferred because this location would ensure power could be conveyed to the correct portion of the vulnerable feeder powerline from Culverden into Hanmer.
- 9.38 However, within his evidence he identified a range of other sites for this proposal which had been considered but had been discarded for a range of reasons. While he provided some detail on those reasons they were very limited in detail. He went on to tell us that where the HWRRP explicitly provides for further water takes from the Waiau River below Marble Point those sites would have the disadvantage that any connection for a power station in these areas would be at the wrong end of the vulnerable feeder from Culverden into Hanmer. We took this to mean that this outcome would not be optimal but he did not mean that the proposal could not take place at these alternate sites.
- 9.39 He did detail a combination of circumstances that in his view meant that the Kakapo Brook proposal was unique. These included the height difference from Kakapo to the Hope River, readily available access through Dismal Valley, the flow of water available, the ability to include out of river storage; and the hydro-scheme being of sufficient scale and flexibility to be economic and to make a meaningful contribution to Hanmer's power supply.
- 9.40 Overall we did not think that these characteristics amounted to truly unique characteristics to the extent that they set this proposal completely apart from the generality of other proposals that may follow and to which the relevant rule applies.
- 9.41 Ms Steven QC in her closing identified the relevant HWRRP rule is Rule 2.1 but we think she meant rule 4.2. Rule 4.2 is a broad Rule providing for activity status. So many future applications may very well trigger that rule. Even if we are wrong in this conclusion for reasons that will follow we do not think this issue of the existence or lack of unique

characteristics of this particular proposal is determinative.

- 9.42 Our concern relates to the precedent effect and impact on the plan's integrity which would result if we accept Ms Steven's QC interpretation and application of the Environmental Flow and Allocation Regime within Table 1 to this proposal. Of particular relevance to us is the issue of setting a precedent to transfer water allocations between zones or reaches in a manner that is not provided for in Table 1. In this regard the proposal we are considering is not unique, as any number of future applications could be considered as non complying activities to transfer water which is not provided for in Table 1.

Hydro-generation: Consumptive or Not?

- 9.43 The Applicants opened contending that the take for Hydro generation was non-consumptive. This approach for the water proposed to be taken for Hydro purposes supported the Applicants' contention that provided this take would returned to the Hope River there would be no impact on allocations under the plan and also downstream abstractors. They did not consider instream values in their discussion.
- 9.44 However as the hearing progressed it became apparent that there would be losses between the take point and the discharge point.
- 9.45 The HWRRP defines a consumptive water take as a take which uses water taken from the surface body returns the water to the same water body at the same or similar rate and in the same or better quality. This seems logical as returning the water to the same water body within 250 metres of the take (Rule 2.1 (b) would provide for instream values and other activities downstream of the take. We consider that considered thought has been given to this definition and we have had careful regard to it.
- 9.46 Applying that definition to the proposal before us given the take is from the Kakapo Brook and the return is to the Hope River, clearly the return is not to the same water body. Finally, as to whether the water is the same or better water quality this is dependent upon whether or not there are any water quality effects arising from retention of the water in the storage ponds. However, we largely accept the evidence that we were provided with, that it is likely that the quality of the discharge would be similar to the take.
- 9.47 Therefore, we are well satisfied that the Applicants' take for Hydro generation purposes is a consumptive take as defined under the HWRRP. However, we note that the Amuri Irrigation Company does not consider that the proposed hydro take would adversely affect their current water allocation provided that the proposed take would be matched as proposed in the final suite of conditions $\pm 10\%$ within a 24 hour period. We note that while the relevant objectives and policies in the HWRRP do not specifically mention non-consumptive use of water. However, we consider that this is implicit in the interpretation of allocation in Table 1 and footnote 6 to that table notes that for the Hurunui River there are some minimum flows that apply to specifically to non-consumptive takes.
- 9.48 We acknowledge that we are taking a literal view of the definition of "consumptive" and it is possible that the term "water body" could have a broader meaning than we consider is the intention. However, we are bound to interpret the words used in the HWRRP at their face value. We also consider that this interpretation is consistent with other policies that make it very clear that the overall intent of the HWRRP is to discourage impoundment of water and consumptive uses of water in this part of the Waiau River catchment.

Mauri of the Waterbodies (HWRRP objective 2(a), Objective 3(a), Policy 2.6)

- 9.49 The Cultural Impact Assessment (CIA) prepared for the proposal was carried out by the relevant Papatipu Rūnanga (Te Rūnanga o Kaikōura) as per the Te Rūnanga o Ngāi Tahu Act 1996. This CIA should be considered as the primary document assessing the effects of the activity on Tangata Whenua for the purposes of these applications¹⁶.
- 9.50 All the resource consent applications are relevant to this matter.
- 9.51 According to Ms van Looy¹⁷, in summary, the report states that Te Rūnanga o Kaikōura have a good level of comfort with the application and its ability to avoid, and mitigate adverse effects on cultural values. They are also supportive of local power generation. They have highlighted concerns with the use of water for irrigation.
- 9.52 Having heard the evidence for and against the application Ms van Looy stated in her Supplementary S42A Report¹⁸:
- "As previously stated, I consider the most relevant policy within the CRPS to be 7.2.1. This policy recognises the key benefits resources may have for development opportunities but specifies that use of these resources must not be at the expense of other important values including the life supporting capacity of ecosystems including mauri; the natural character of wetlands, rivers and their margins must be preserved, restored or enhanced; any actual foreseeable requirements for community and stockwater supplies as well as customary use. As this application will result in over-allocation and may have adverse effects on the ecological values of Kakapo Brook, I do not consider that the proposal can satisfy the criteria of this key policy".*
- 9.53 In section 467 of her primary S42A Report Ms van Looy considered that the magnitude of the effects on the mauri of Kakapo Brook cannot be adequately determined due to the lack of sufficient information. This view was not altered in her Supplementary S42A Report.
- 9.54 Ms Whyte offers an alternative perspective in section 7.22 to 7.25 of her primary evidence. Ms Whyte acknowledges that Mauri is specifically addressed in recommendations 2, 3, and 4 of the CIA. In summary, these recommendations are that:
- The proposed scheme will need to maintain water quality;
 - The first flush from a storm event should stay in the river;
 - Native fish passage with Kakapo Brook cannot be compromised as a result of the scheme. Fish must be prevented from entering the intake (this includes juvenile fish).
- 9.55 Ms Whyte considers that based on the evidence of the Applicants' experts that the three matters identified in the CIA necessary to protect the Mauri of the Waiau River and its tributary of the Kakapo Brook have been addressed.
- 9.56 One submission from a member of the Waitaha Iwi, Mr Ken McAnergy highlighted concerns about archaeological site disturbance and wāhi taonga sites.

¹⁶ Para 4, Ms van Looy Supplementary evidence 30 September 2015

¹⁷ Para 361 Ms van Looy Section 42A Officers report 6 October 2015

¹⁸ Para 104 Ms van Looy Supplementary Section 42A Officer's Report 15 October 2015

- 9.57 Subsequent to this submission the Applicants supplied a letter from Te Rūnanga o Ngāi Tahu dated 30 June which states in paragraph 9 that “as a result of the Cultural Impact Assessment, all iwi (including Ngāi Tahu and the hapū of Waitaha) concerns in relation to the proposal have been satisfactorily addressed to the extent that no iwi submission was or is considered necessary” .
- 9.58 The HWRRP defines Mauri. It is the essential life force inherent in all things and includes:
- a) Aesthetic qualities e.g. water clarity, natural character, and indigenous flora and fauna;
 - b) Life supporting capacity and ecosystem robustness;
 - c) Depth and velocity of flow;
 - d) Continuity of flow from the mountains to the sea;
 - e) Fitness for cultural usage; and
 - f) Productive capacity
- 9.59 We note that this definition extends beyond the matters addressed in the CIA and by Ms Whyte. It encompasses matters where we consider that there is significant uncertainty about whether the adverse effects of the proposal would be minor, particularly adverse effects on aquatic life, including native fish species, and native birds.
- 9.60 Whilst we recognise that the letter from Te Rūnanga o Ngāi Tahu has considerable status with respect to this matter, we are not satisfied that the adverse effects on Mauri as defined in the plan within Kakapo Brook will be minor. In addition, we are in general agreement with the conclusion of Ms van Looy that the proposal would result in an allocation of water above the level that the HWRRP specifically prescribes.
- 9.61 Having regard to the proposed conditions presented in closing and the discussion above, we therefore conclude that the proposal could have more than minor adverse effects on Mauri within the Waiau River (given the allocation system has been set to protect this value amongst other matters). So it follows we are not satisfied on this issue that the adverse effects of the activity on the environment will be minor.

Hydrology of the Kakapo Brook and effects of the proposed abstraction

- 9.62 The hydrological analysis of the Kakapo Brook and the effects of the proposed abstraction on the Kakapo Brook flows are fundamental and critical parts of the assessment of effects of the proposed activity. Allocation matters are not considered here. We consider those matters to be more appropriately considered as part of our assessment of consistency of the proposal with the objectives and policy of the HWRRP. This section focusses instead on the more underlying effects. In addition, because the HWRRP includes a number of very specific narrative and numerical policies in relation to targets and/or limits where appropriate we will refer to these where it assists in determining the extent of an adverse effect.
- 9.63 All of the resource consent applications are relevant to this matter.
- 9.64 Many assessments of effects of the proposed abstraction e.g., on macroinvertebrates, fish, bird life, periphyton, etc. and effectiveness of proposed conditions, are based to some extent on hydrological analyses/modelling of the Kakapo Brook. Therefore, the robustness of the hydrological information and modelling is critically important. Our consideration of effects that are related to river flows starts with a consideration of the hydrological evidence that was presented to us.

9.65 Mr Veendrick, for the Applicants, has undertaken a thorough analysis of the available hydrological data and we note that Ms Dobson, Senior Hydrological Scientist and S42A reporting officer agreed that the best available data has been used. We will not repeat or summarise the hydrological evidence. However, we do highlight some key steps and assumptions in the hydrological analyses and modelling, the use of that information together with the complementary biophysical evidence provided by Dr Jellyman and the Applicants' proposed allocation system, and subsequent assessments of effects. Key steps and assumptions are:

1. Development of a 'synthetic' long-term flow record for the Kakapo Brook based largely on relationships developed from paired flow records for the Waiau River and the Kakapo Brook.
2. Use of the synthetic flows to develop key flow statistics such as the mean, median, 7DMALF (seven day mean annual low flow which is the average for the period of flow record of the lowest flow that occurs for seven consecutive days in a year) and FRE3 (the mean annual frequency at which the mean daily flow exceeds three times the median flow).
3. Use of the biophysical evidence provided by Dr Jellyman to support a proposed minimum flow for the proposed hydro abstraction of 320l/s, on the basis that the abstraction would be considered under the 'A' block regime.
4. Comparison of Waiau River flow data and Kakapo Brook flow data for Waiau River flows less than 72,000 l/s to derive a regression equation that can be used to estimate a Kakapo Brook flow that is equivalent to the Lower Waiau River Marble Point "B" permit minimum flow of 37,830 l/s. The Applicants have concluded that a Kakapo Brook flow of 456 l/s is equivalent to a flow of 37,830 l/s. It is implicit from Mr Veendrick's evidence that this was derived from a regression plot. However, Mr Veendrick did not appear to spell out exactly which regression equation was used to calculate the figure of 456 l/s.

9.66 We note and largely accept Ms Dodson's perspective on this modelling "...there is a large amount of uncertainty¹⁹ associated with the modelled flows."²⁰ We accept that this is frequently the reality of situations like this where there is limited site specific measured river flow information. However, we are concerned that the implications of this uncertainty were not more clearly highlighted and taken into account by the Applicants' representatives. For example, while Dr Jellyman's evidence on the effects on periphyton, macroinvertebrates and fish was thorough and robust, it relied significantly on the hydrological assessment.

9.67 Dr Jellyman did note "... that not all effects from abstraction on aquatic ecology can be predicted prior to any project being implemented..."²¹ However, he did not explicitly acknowledge the implications of "a large amount of" uncertainty in the hydrological analyses/modelling for his assessment of potential effects on aquatic life.

¹⁹ We will apply a generally accepted definition of uncertainty as the potential limitation in some part of the modelling process that is a result of incomplete knowledge.

²⁰ Ms Dobson's Supplementary S42A report Conclusion.

²¹ Dr Jellyman's primary evidence paragraph 103.

- 9.68 There were no robust Applicants' proposals to re-evaluate hydrological information after obtaining a significant amount of additional actual Kakapo Brook flow monitoring data. Similarly, while there are many proposed monitoring conditions, there are no robust proposals to respond to any identified hydrological issues.
- 9.69 We consider that it is important to have regard to the hydrological modelling uncertainty, we will endeavour to do that as we discuss specific effects.
- 9.70 An example of the importance of uncertainty is in estimating the frequency, extent and implications of 'flat-lining' a length of the Kakapo Brook downstream of the proposed intake. We consider that Ms Dobson has correctly highlighted the implications of this when considering the contribution of tributaries downstream of the proposed intake point. We accept her point that there is significant uncertainty in the estimates of the additional flows from these tributaries and therefore the length and duration of the Kakapo Brook that would experience a lesser degree of 'flat-lining' compared to the initial 750m immediately downstream of the proposed intake.
- 9.71 We will concentrate on actual and potential effects of the proposed abstractions. We note that the S42A reporting officers often referred to concerns about disparities between the proposal and the Draft Guidelines for the Selection of Methods to Determine Ecological Flows and Water Levels²² and subsequently referred to concerns about effects of the proposal. While we accept that this approach, if done carefully and accurately is valid, we also consider that there is a danger of 'double counting'. We consider that with the evidence that we have been provided with, we are able to focus on actual and potential effects rather than a comparison with draft guidelines.
- 9.72 We also note that the Applicants' have proposed specific minimum flows for the proposed 'irrigation take' and the proposed 'hydro take'. However, there is one proposed intake structure and canal system and a proposal that allows for the use of the hydro pond water for irrigation and vice versa. This creates challenges to implement the full range of proposed operations with the proposed conditions. For example, at a Kakapo Brook flow between 320 l/s and 456 l/s if water is taken for hydro purposes and routed to the hydro pond, we understand the intent is to rely on the proposed conditions, specifically proposed condition 44(c) to ensure that in the irrigated season any water stored for hydro purposes would only be water taken from the Kakapo Brook when flows were greater than 456 l/s. We are satisfied that the proposed condition does require this. However, we are not satisfied that this is complemented by proposed conditions requiring appropriate control systems, monitoring and reporting conditions that would ensure compliance and ensure that the relevant information is maintained at a sufficient level of detail to demonstrate that this requirement was complied with at all times, taking account of the hydrological characteristics of the proposed canal and hydro storage pond.
- 9.73 We conclude that in terms of the hydrological information and modelling that the Applicants have endeavoured to maximise the available information and have diligently obtained as much relevant data as feasible, However, we have concerns

²² MfE (2008) Draft Guidelines for the Selection of Methods to Determine Ecological Flows and Water Levels. Report prepared by Beca Infrastructure Ltd for MfE. Wellington: Ministry for the Environment.

that the uncertainties involved in these analyses have not been sufficiently highlighted to ensure that subsequent analyses can explicitly take these uncertainties into account.

- 9.74 Accordingly we were not satisfied that the adverse effects on the amount will be minor. We are also concerned that some critical assurance and reporting conditions relating to Kakapo Brook flows have not been proposed.

Instream aquatic life, including macroinvertebrates, fish and variables that can affect aquatic life (HWRRP Policies 2.5, 3.6, and 5.3A)

- 9.75 The Applicants' expert witnesses, particularly Mr Lees, Dr Jellyman, and Mr Bonnett have provided comprehensive information on the likely effects of the proposed abstractions on water quality and instream aquatic life, and they generally concluded that the adverse effects would be acceptable. However, we note that these witnesses were also generally cautious in their statements, using terms such as "...it is unlikely that ...", "...not expected to have ...", "...not a significant adverse effect on...". These statements highlight to us that these expert witnesses recognise that the level of certainty about the scale of actual or potential adverse effects that would arise as a consequence of the proposed activities is not always high. In addition, we consider that Dr Meredith, in his primary and supplementary S32A reports raised a number of concerns, specifically the potential adverse effects of raised water temperature and the long-term effectiveness of the proposed fish screen. The Applicants have responded to the temperature issue with an additional proposed condition in the final set of proposed resource consent conditions (dated 19 October 2015) but no significant fish exclusion system performance standards/associated condition changes have been proposed in response to the issues raised by Dr Meredith.
- 9.76 All the resource consent applications are relevant to this matter.
- 9.77 Mr Lees provided a detailed analysis of the available water quality information from Kakapo Brook and Lake Lorraine obtained since approximately February 2014. This data generally showed that the Kakapo Brook has very high water quality, far below the thresholds identified in Policy 5.3A of the HWRRP and Lake Lorraine was generally eutrophic (TLI = 4 - 5) or super trophic (TLI > 5.0).
- 9.78 Mr Lees also summarised the potential effects of the proposal on surface water quality and associated ecology of Kakapo Brook. The key potential issues highlighted were effects of low flow on periphyton build up, potential increase in water temperature and potential decrease in dissolved oxygen concentrations in the water column.
- 9.79 Mr Lees, relying on the advice and modelling undertaken by Mr Brough with assistance from Mr Draper, considered that since this advice was that there would be no additional or a "...very minimal change in ..." ²³ nutrient loading to Lake Lorraine as a consequence of the intensification of land use, the existing eutrophic/supertrophic status of Lake Lorraine would not change. Mr Fietje's supplementary S42A Report confirmed that the Applicants' Overseer[®] Nutrient Budgets modelling had been undertaken appropriately. Therefore we have confidence in the conclusions about nutrient loss estimates.

²³ Primary evidence of Mr Lees, paragraph 14.2.

- 9.80 Mr Lees concluded that the proposed cessation rules would address the relevant adverse effects and he considered "...the sustainability of the proposed alteration to the hydrological regime to be adequate."²⁴ Mr Lees' evidence was an essential component of understanding the Kakapo Brook and Lake Lorraine, and it served to provide information for Dr Jellyman to assess the ecological implications and identify potential measures to mitigate adverse effects.
- 9.81 The issue of the effects of 'flat-lining' a 750 m length of Kakapo Brook was a focus for a number of expert witnesses, S42A reporting officers and submitters. We generally accept the conclusions of Dr Jellyman that if the hydrological modelling is accurate and in the context of the final proposed conditions, the adverse effects that would be caused by this 'flat-lining' on aquatic life for the Kakapo Brook overall are likely to be minor, or in Dr Jellyman's words: "...the ecological values present in Kakapo Brook will be maintained."²⁵ However, as noted earlier, the evidence highlights that this modelling involves frequently unquantified uncertainty and there is therefore an uncertain risk that the effects at times could potentially be greater than minor.
- 9.82 Ms Dodson highlighted the uncertainty regarding the quantitative contributions from the tributaries downstream from the proposed intake point²⁶. We consider that this is an issue and the extent of 'flat-lining' would not be solely restricted to a 750 m stretch of the Kakapo Brook. We accept that with very limited flow information for these two tributaries, it is not possible to make definitive conclusions about flows in this section of Kakapo Brook.
- 9.83 Dr Jellyman outlined five critical components of river flow that control ecological processes: "...the magnitude, frequency, duration, timing and rate of change of hydrologic conditions (Poff & Ward 1989)". Dr Jellyman acknowledges that the flat-lining could have significant adverse effects unless adequate mitigation measures are applied. He focused in detail on the flows needed to reduce periphyton proliferations and deposition of silt. He clarified the background to the proposed 'flushing flows' that the Applicants propose to provide to address this issue. During the course of the hearing process the Applicants refined and modified the proposed 'flushing flow'/flow cessation regime to provide what appears to us to be a robust system that is consistent with the intent of Policy 2.5 in the HWRRP.
- 9.84 Dr Jellyman's use of the Instream Flow Incremental Methodology (IFIM) to derive a proposed minimum flow was criticised by Dr Meredith, Principal Water Quality Scientist and S42A Reporting Officer, primarily because "The IFIM methodologies assess fisheries habitat based solely on water velocity, water depth, and substrate type, but otherwise considers that all other habitat features will remain optimal."²⁷
- 9.85 Mr Pearson, witness for North Canterbury Fish and Game Council, raised a number of concerns with the proposal but did not raise any specific concerns with the methodology used to derive the proposed minimum flow.

²⁴ Primary evidence of Mr Lees, paragraph 14.6.

²⁵ Primary evidence of Dr Jellyman, paragraph 102.

²⁶ Supplementary S42A report of Ms Dobson, paragraphs 10 & 11.

²⁷ Dr Meredith primary S42A report, paragraph 35.

- 9.86 We consider that Dr Meredith's criticism has merit but does not fully take account of the Applicants' proposed suite of conditions that endeavour to address the wider issues resulting from the significant proposed hydrological alteration. We will consider these issues in more detail in the following pages.
- 9.87 Dr Jellyman's weighted useable area modelling indicated that at the proposed minimum flow of 320 l/s all four observed native fish species would have at least 90% of their maximum WUA available. Mr Pearson highlighted in his evidence that Dr Jellyman's analysis also showed a reduction of about 40% in the WUA for important macroinvertebrates. While this is potentially a significant adverse effect for those specific macroinvertebrates, and the HWRRP Objective 2 specifies the need to avoid remedy or mitigate adverse effects on aquatic life, we consider that the focus of the HWRRP appears to be particularly on the ecosystem supporting roles of macroinvertebrates and therefore we will place the most weight in a policy context on effects on fish and birdlife. We consider that this weighting is supported by for example, the wording of HWRRP Policy 3.6 where the focus is on maintaining "...sufficient invertebrate production to support fish and river bird communities...".
- 9.88 Dr Meredith has noted that the proposed minimum flow is "...roughly in line with..." the proposed NES on ecological flows. However, he also highlighted that the proposed allocation of greater than 400% of MALF exceeded the proposed NES suggested guideline of an allocation no greater than 30% of MALF. We appreciate that such proposed guidelines may be useful but given the level of technical information available we place greater weight on analyses of the specific hydrological and ecological characteristics of Kakapo Brook.
- 9.89 Dr Meredith was critical of the Applicants' initial flow cessation proposals. The Applicants' final proposed suite of conditions may have addressed some of Dr Meredith's concerns. However, Dr Meredith was most particularly critical of the proposed monitoring regime, specifically the proposed three year monitoring programme post commencement of the take. We agree with Dr Meredith's concern, given the hydrological and climate variability information presented to us and the fact that the proposed system might take some time to get to full operation after initial commencement of a take.
- 9.90 Three years information on periphyton and macroinvertebrates would appear to be too short to be able to draw meaningful conclusions about effects. In addition, apart from a periphyton coverage trigger condition that Dr Meredith considered "...could be easily defeated by natural patch dynamics of periphyton growth..." and the temperature condition trigger proposed in the final suite of conditions, other monitoring conditions were not complemented by any specific action requirements. Given the acknowledged uncertainties about the adverse effects, we consider that a more proactive response system for responding to specific threshold effects would have been appropriate. We are not satisfied that a significant issue such as water quality should effectively be left to the professional opinion of a "suitably qualified and experienced water quality specialist to determine whether an adverse effect on water quality has occurred and what "Action Plan" would be appropriate to "remediate the identified adverse effect(s)".
- 9.91 We note that there a number of specific policies that relate directly to maintaining, or avoiding, remedying or mitigating adverse effects, on aquatic life. For example, Policies 2.5, 3.6, and 5.3A.

- 9.92 We conclude that on the basis of the evidence that we have been provided with, in the context of the final suite of proposed conditions, and in particular the specifics of Policy 3.6, that on balance, the direct effects on the physical and chemical aspects of water quality are likely to be less than minor.
- 9.93 However, most importantly in terms of the wider effects on macroinvertebrates, periphyton and fish life, we cannot conclude with adequate certainty so as to be satisfied that the overall adverse effects of the proposed abstractions on instream aquatic life will be minor. In the context of all effects of the proposed activity this finding is of relatively major significance.
- 9.94 We consider that matters relating to the Instream aquatic life, including macroinvertebrates, fish and variables that can affect aquatic life are principal issues in contention.

Upstream passage of native fish, salmon and trout and intake fish screening (HWRRP Policy 1.4(c), Objective 2(c), Policy 3.6(b))

- 9.95 Dr Jellyman concluded that the "...longitudinal connectivity should not be impeded for aquatic species at this minimum flow"²⁸. Dr Meredith did not raise specific concerns about fish passage issues, other than in relation to the proposed intake fish exclusion system. Mr Pearson did not fundamentally disagree with Dr Jellyman's WUA modelling evidence in relation to native fish species, but highlighted that the modelling also indicated a significant drop in macroinvertebrate habitat²⁹. Mr Pearson also expressed his concerns that the proposed reduction in flows would have potential adverse effects on habitats for adult brown trout³⁰.
- 9.96 The resource consent applications that are most relevant to these matters are CRC142964 and CRC142965.
- 9.97 Mr Martin Bonnett provided evidence on behalf of the applicant on the suitability and likely effectiveness of the proposed permeable bund for excluding fish from the proposed intake on Kakapo Brook. He provided a simplified outline and interpretation of the HWRRP Schedule WQN12 Fish screen standards and guidelines³¹ which is referenced from a number of the rules in the HWRRP. He considered that the proposed permeable rock bund satisfied all but one of the criteria, i.e., the specific provision to "...have openings small enough to exclude fish...". Mr Bonnett considered that the proposed bund "...should be reasonably effective as a fish screen because it will be wide and comprise many layers of river stones...".³² Consequently, Mr Bonnett suggested a methodology to test the effectiveness of the proposed fish screen system after installation.
- 9.98 Dr Meredith was critical of the proposed fish exclusion system design and highlighted that it did not satisfy the sweep velocity criteria, i.e., a sufficient water flow across the

²⁸ Dr Jellyman's primary evidence, paragraph 28.

²⁹ Mr Pearson's evidence, paragraph 34.

³⁰ Mr Pearson's evidence, paragraph 38.

³¹ Evidence of Mr Bonnett, paragraph 21.

³² Evidence of Mr Bonnett, paragraph 21.

screen to sweep fish past the intake system³³. Dr Meredith also expressed concerns about the ability of fish to move into the permeable bund, and concluded that he considered the design to be "...deficient in many respects..."³⁴.

- 9.99 In the context of all of the above information, we conclude that the proposed reduced flow regime would not cause significant fish passage adverse effects. However, on the basis of the technical information provided to us, we do have concerns about the adequacy of the proposed fish exclusion system. We are concerned about the proposed approach to address the acknowledged uncertainty about the effectiveness of the proposed fish exclusion design. In addition, the proposed condition to assess the effectiveness of the proposed fish exclusion system does not give us confidence that useful information would be obtained to properly assess the suitability and effectiveness of the system. Overall this means that the information provided to us is not sufficient for us to be satisfied that the adverse effects of the proposed fish exclusion system on fish will be minor.
- 9.100 We consider that matters relating to the upstream passage of native fish, salmon and trout and intake fish screening are principal issues in contention.

Effects on riverbed nesting birds (HWRRP Objective 2(e), Policy 3.6(a) & Section 6(c) of the RMA)

- 9.101 Dr Sanders, Ecologist, on behalf of the Applicants outlined the results from a site survey and his professional opinion on the various ways in which changes in river flows can affect river birds. He concluded that the predicted reduction in instream habitat availability and instream food supplies for birds is "...unlikely to have significant adverse effects on river birds..."³⁵. He cited three reasons for this: the river mainstem being a very small proportion of total habitat within the wider river bed, the "number of birds potentially affected is low", and offsetting by increased foraging habitat provided by irrigated pasture and the storage pond and canal⁹.
- 9.102 The resource consent applications that are most relevant to these matters are CRC142964 and CRC142965.
- 9.103 Dr Grove, ECan Ecologist, highlighted a number of potential limitations in Dr Sanders' analysis, for example, the timing of his site visit may have resulted in an underestimate of bird numbers that can be present in the area³⁶. Dr Grove also highlighted the potential for some bird species to be reliant on the Kakapo Brook main stem for food supply. Dr Sanders acknowledged that his evidence was based on limited site specific information but did not consider that more survey information would alter his overall conclusions³⁷.
- 9.104 Ms Dementer, for BRaid, while not an expert witness, provided a useful slideshow and commentary that highlighted the range of riverbed nesting birds and their different habitats and food gathering habits.

³³ Dr Meredith's Second Supplementary S42A report, paragraphs 16 – 20.

³⁴ Dr Meredith's Second Supplementary S42A report, paragraph 23.

³⁵ Evidence of Mr Sander, paragraph 52.

³⁶ Supplementary S42A report of Dr Grove, paragraphs 19 – 22.

³⁷ Evidence of Mr Sanders, paragraph 63.

9.105 We note that Dr Sanders identified a significant number of native birds during his site visit in September 2015 and therefore under Section 6(c) of the RMA we have specific responsibilities.

9.106 We have concerns about Dr Sanders' suggestion that we should rely, albeit in part, on a relatively low number of observed birds as a basis for concluding that a reduction in those numbers would therefore not be a significant adverse effect. In addition, given the evidence of Mr Sanders on the specific habitat preferences of different bird species³⁸ we expected a more detailed analysis from Mr Sanders on whether offsetting by the provision of habitat associated with a canal and storage ponds and irrigated pasture habitat would equate with the habitat reduction in river main stem. For example, we would have expected a more detailed assessment of which species could be adversely affected by a loss of main stem riverbed habitat and which species could potentially benefit from the proposed canal and pond habitat. Mr Sanders does acknowledge that, for the storage ponds "...it is not possible to precisely evaluate the overall value of these as habitat for birds."³⁹

9.107 These issues are particularly important given our responsibilities in terms of native fauna, under Section 6(c) of the RMA. Overall we cannot be satisfied that the adverse effects on riverbed birds, particularly native birds, will be minor.

9.108 We consider that matters relating to the effects on riverbed nesting birds are principal issues in contention.

The extent of periphyton and cyanobacteria accumulations and the impact of those accumulations (HWRRP Objective 2(g), Policy 2.5, Policy 5)

9.109 Mr Lees' evidence summarised the results of qualitative and quantitative monitoring of periphyton in Kakapo Brook over part of 2014 and 2015. The results were generally in accord with what would be expected for an alpine upland river, albeit with summer periphyton chlorophyll concentration maximum exceeding the numerical 95th percentile specified as a "water quality limit" in Policy 5.3A. Mr Lees also observed that periphyton cover was reduced after significant flow events i.e., 2,300 l/s⁴⁰.

9.110 The resource consent applications that are most relevant to these matters are CRC142964 and CRC142965.

9.111 Dr Jellyman provided detailed background on the derivation of FRE3 and proposed the framework for the suite of proposed conditions that would require cessation of abstractions at certain flows to reduce the potential for periphyton development and silt deposition that would otherwise occur under 'flatlining' conditions⁴¹. Specifically, this focussed on providing for flow events of equal to or greater than three times the estimated median flow. This is consistent with the generally recommended approach based on extensive research undertaken by NIWA scientists and this was not contested by Dr Meredith. However, Dr Jellyman notes that these flows would occur relatively infrequently and as a consequence proposed an additional approach to provide for

³⁸ Evidence of Mr Sanders, paragraphs 17 – 20.

³⁹ Evidence of Mr Sanders, paragraph 45.

⁴⁰ Mr Lees' primary evidence, paragraph 5.6.

⁴¹ Dr Jellyman's primary evidence, paragraphs 35 – 49.

flushing flows at or greater than 1.5 times the estimated median flow.

9.112 Dr Jellyman also proposed that provision be made to provide for 'deep flushing flows' that can disturb the river bed armour lay and remove sediments that deposit within the gravel matrix. Similarly, Dr Jellyman's recommendation is consistent with the generally recommended approach and was not contested by Dr Meredith.

9.113 Dr Meredith did raise concerns⁴² that the proposed take cessation period for the higher flows is six hours and not 12 hours and that periphyton proliferations can occur at any time of year⁴³. However, Dr Jellyman's evidence provided significant additional information on the rationale for proposing the specific high flow cessation regime and duration of take cessation periods. We consider that Dr Jellyman's final proposals which have been incorporated into the final suite of proposed conditions have addressed the most critical points raised by Dr Meredith. Consequently, while we are concerned about some of the underlying uncertainty in the hydrological modelling, we are satisfied that the proposed high flow cessation regime would provide an adequate system that would provide for natural high flows to pass through and reduce excess periphyton accumulations and mobilise deposited silt.

9.114 We consider that matters relating to the extent of periphyton and cyanobacteria accumulations and the impact of those accumulations are principal issues in contention.

Wetlands affected by Kakapo Brook flows (CRPS Objective 7.2.1, CRPS Policies 7.3.1 & 7.3.3)

9.115 Mr Peter Callander, Environmental Scientist specialising in groundwater and surface water resources, on behalf of the Applicants, provided results of monitoring groundwater levels in wetlands that border the Kakapo River. He complemented this data with hydrogeological information to develop a conceptual understanding of the relationship between these wetlands, run-off from hillsides, infiltrating rainfall, groundwater movement and the Kakapo River flows.

9.116 The resource consent applications that are most relevant to these matters are CRC142964 and CRC142965.

9.117 Mr Callander undertook groundwater level monitoring in the Main Kakapo Brook Swamp and compared groundwater levels. He concluded that this monitoring showed a "...lack of response in wetland water levels in the Main Kakapo Brook Swamp to flow changes in Kakapo Brook over the monitoring period means that no adverse water level effects, or associated ecological effects, are expected due to the proposed abstraction of water from Kakapo Brook upstream of the wetland."⁴⁴

9.118 Mr Callander stated that he considered that the Main Kakapo Brook Swamp to be representative of other stream margin wetlands which "are also hill-fed and elevated above Kakapo Brook..."⁴⁵. However, Mr Callander does not provide a detailed analysis to demonstrate the basis for such a definitive conclusion about the source of recharge for these wetlands. We accept that his comparison of wetland groundwater levels and

⁴² Paragraph 43 of Dr Meredith's primary S42A report

⁴³ Dr Meredith's S42A report, paragraphs 41 & 43.

⁴⁴ Primary evidence of Peter Callander, paragraph 7.4.

⁴⁵ Primary evidence of Peter Callander, paragraph 7.5.

the Kakapo Brook flows did not show any relationship between river flows and wetland groundwater levels. However, we are conscious that the monitoring period was relatively short and the wetlands may have taken a considerable period of time to develop. While we accept that based on these investigations, it is likely that the contribution to the Main Kakapo Brook Swamp levels from the Kakapo Brook is likely to be very small, we cannot discount the possibility that small contributions over a long period of time to this wetland or other wetlands in the river bed area may be important.

- 9.119 Dr Grove, Ecologist and S42A Reporting Officer, noted that he considered that the Main Kakapo Brook Swamp and the Upper Dismal Valley Swamp are elevated above the normal water level of Kakapo Brook and therefore not influenced by river flows. However, he also considered the Lower Dismal Valley Swamp wetland to be a 'riverine wetland' and therefore more likely to be potentially affected by Kakapo Brook flows.⁴⁶ Dr Grove also noted that there are a number of smaller 'riverine' wetlands downstream of the proposed intake location.
- 9.120 The Applicants have proposed a condition that requires an Environmental Management Plan to be prepared which would among other matters require a monitoring programme for "wetland health in Lower Dismal Valley Swamp and the Upper Main kakapo Brook Swamp"⁴⁷. However, while the intent of the proposal is relatively clear, we are not satisfied that the condition requires a robust monitoring programme and is lacking any mechanism for either a monitoring programme or results to be scrutinised by the consent authority. In the absence of this we are not confident that the proposed condition would provide useful information or a mechanism to address any observed adverse effects.
- 9.121 We conclude that while the balance of evidence indicates that many river bed wetlands are unlikely to be adversely affected by the proposed changes to the Kakapo Brook flows, the proposed condition does not provide the necessary reassurance that an appropriate monitoring programme for the Lower Dismal Valley Swamp would be developed, reported and actioned as necessary. As a consequence we are not satisfied that the overall adverse effects on the Lower Dismal Valley Swamp will be minor.
- 9.122 We consider that matters relating to wetlands affected by Kakapo Brook flows are principal issues in contention.

Reliability of supply for existing abstractors (HWRRP objective 3(f))

- 9.123 The reliability of supply for existing abstractors is provided for in the HWRRP through the establishment of the "A permit allocation limit". The A Block allocation limit for the upper Waiau River is 0.59m³/s. Of this, 0.562 m³/s has been allocated to existing takes, and only 0.028 m³/s or 28 l/s remain available for allocation. According to Ms van Looy, another applicant is "ahead" in the 'resource consent application queue', seeking to take the remaining water plus an additional 0.191 m³/s.⁴⁸
- 9.124 All the resource consent applications are relevant to this matter.

⁴⁶ Supplementary S42A report of Dr Grove, paragraphs 7 & 8.

⁴⁷ Proposed condition 55 & 56 in final set of proposed conditions provided 19 October 2015.

⁴⁸ Para 144. Natalie van Looy. Section 42A Officer's Report. 6 October 2015.

- 9.125 Ms van Looy states "Should the Applicants' proposal be granted, the total allocation for the Upper Waiau including those applications already granted, but not those in process, will increase to 2.162m³/s, which is 3.6 times the allocation block limit of 590 l/s. This will result in a significant over-allocation of the Upper Waiau River allocation block."
- 9.126 As noted elsewhere in this decision, we consider that the allocation sought cannot be made for this purpose in this location. We are in general agreement with the conclusion of Ms van Looy that the proposal would result in a significant allocation of water above the level that the HWRRP specifically prescribes in Table 1.
- 9.127 We acknowledge that there is a difference between the strict definition of a consumptive water take under the NWRRP and the effect of the proposed take for hydro-electricity purposes on existing water users downstream of the confluence of the Kakapo Brook and the Hope River. We heard from Mr Barton, General Manager of the Amuri Irrigation Company (AIC). He clarified verbally at the hearing that from his company's perspective if the take for hydro-electricity purposes was matched within a 24 hour period $\pm 10\%$, AIC would not consider themselves adversely affected.
- 9.128 The Applicants' may have intended to meet this requirement by included condition 7 in consent number CRC142968 of the proposed conditions presented in closing, but the condition does not say that. The condition states that "the discharge shall return the total daily volume of water taken between 320 l/s and 456 l/s under CRC142964 Condition 5 (being A – Block water) to the Hope River with plus or minus 10 percent in the 24 hour return period."
- 9.129 Water taken between 320 l/s and 456 l/s equates to 136 l/s. However, the take sought is 1,600 l/s. Therefore, over a 24 hour period, there will be a considerable shortfall in water returned to the Hope River in accordance with this condition. We consider this condition is void for uncertainty. It provided us with no assurance that the return to the Hope River would be as outlined by AIC.
- 9.130 This then leaves the issue of the 'transferability' of B block allocation water from the lower Waiau River to the upper Waiau for consumptive irrigation water use. As indicated elsewhere in this decision we do not consider that the plan allows for such 'transferability' of allocation. However, even if we are incorrect we consider that such allocation would result in an unanticipated reduction in the reliability of supply for downstream A and B block users because the frequency with which those minimum flows occur would increase.
- 9.131 Having given considerable thought to the framework of the Plan, and the evidence provided, and in light of the conditions presented in closing we consider that granting this consent would cause significant adverse effects on the reliability of supply of existing A Block abstractors.
- 9.132 We consider that matters relating to the reliability of supply for existing abstractors are principal issues in contention.

Natural character of braided rivers (Kakapo Brook) (RMA 1991 section 6(a), objective 3(h))

- 9.133 Kakapo Brook is a small alpine braided river.

9.134 Recognising and providing for the natural character of the Kakapo Brook and its riparian margins is a matter of national importance (S6(a)).

9.135 The CRPS states that:

"Natural character includes a range of qualities, and features created and sustained by nature, such as the quality and quantity of water, the character of the bed substrate, the natural processes which move sediment, water and biota, and the values and characteristics these processes give rise to.

Natural character includes the aquatic ecosystems which the water body supports including the diversity and abundance of indigenous species, the presence of healthy and resilient riparian margins, and its surroundings including landforms and vegetation.

The natural character of a fresh water body often gives rise to associated values and uses, for example recreational and amenity values, and social and economic activities which are based on these values.

Natural character can help provide a sense of place for people and communities, and when it is degraded this sense of place can be affected."

9.136 The resource consent applications that are most relevant to these matters are CRC142964 and CRC142965.

9.137 We refer to each of the aspects of natural character outlined in the Canterbury RPS to provide a framework for our assessment on natural character.

9.138 There were several submitters that considered the project would have adverse effects on the natural character of the Kakapo Brook. The Department of Conservation submission stated that the proposed take of water from the Kakapo Brook catchment will significantly change the habitat characteristics in and out of stream. The Department further submitted that the prohibition on damming in this part of the catchment works hand in hand with the allocation limits to protect flows and natural processes in the upper catchment including flood and fresh flows.⁴⁹

9.139 With respect to water quality, we conclude that on the basis of the evidence that we have been provided with, in the context of the final suite of proposed conditions, and in particular the specifics of Policy 3.6, that on balance, the direct effects on the physical and chemical aspects of water quality are likely to be less than minor.

9.140 We consider that there would be a significant adverse effect on the flow characteristics of Kakapo Brook. Table 1 of Ms Dodson's Supplementary 42A Report shows significant changes in the mean and median flows in the Kakapo Brook at the intake, downstream of the tributaries, at the recorder site and at SH7. According to Ms Dodson, the modified residual flows at the intake would be the most affected flows but the flows downstream of the tributaries (that flow in below the take point) would also be

⁴⁹ Rosalie Snoyink, Nick Moody, Director General of Conservation

significantly affected as the median and mean flows would be halved⁵⁰.

- 9.141 We received some evidence with regard to the natural processes that move water, sediment and biota, for example, flood flow effects on periphyton but nothing on sediment movement. We note that these Kakapo Brook natural processes appear to be in a natural state currently, and the processes would likely be significantly modified under the regime outlined in the proposal. In this regard we note from paragraph 17 of Ms Dodson's supplementary evidence "that by taking up to 1,600L/s (over 400% of MALF), the Kakapo Brook will be flat-lined for over 85% of the time on average (1972-2014) i.e. it will be flat-lined for a longer duration in a dry year. That is, the residual flow would be reduced to the minimum flow (320L/s, 89% of MALF) for 85% of the time.
- 9.142 Furthermore, there are significant changes in the flushing flow frequencies when comparing natural flows to the modified flows.⁵¹ For example, in Ms Dobson's original S42A report she refers to a 47% reduction in flushing flow frequency at the intake site. However, it appears that this analysis was based on the original assessment of environmental effects provided with the application and the Applicants' final suite of proposed conditions (provided on 19 October 2015) included a range of additional abstraction cessation conditions that were not included in the original proposal. While we conclude elsewhere that the final suite of abstraction cessation conditions would provide an adequate system to reduce excess periphyton accumulations and mobilise deposited silt, we also recognise that in the context of the wider Kakapo Brook flow characteristics the proposal would result in a significant change.
- 9.143 With respect to the characteristics of river bed substrate aspect of natural character, we received no evidence with respect to possible changes in the character of bed substrate. Because we have no specific direct evidence on this, we are not able to make any firm conclusions on the scale and significance of such changes from a natural character perspective or otherwise. Therefore we cannot be satisfied these effects will be minor.
- 9.144 We have concluded elsewhere in our findings that on the basis of the evidence that we have been provided with, and in the context of the final suite of proposed conditions, there is significant uncertainty about whether the effects of the proposed abstraction on instream aquatic life including the diversity and abundance of indigenous species, so we cannot be satisfied the adverse effects of the activity on the environment will be minor.
- 9.145 As described elsewhere, we are unable to draw any firm conclusions about the potential adverse effects of the proposal on riparian margin ecosystems (excluding wetlands affected by Kakapo Brook flows), so it follows that we cannot be satisfied the effects will be minor.
- 9.146 Mr Glasson discussed the landscape effects of water loss from the Kakapo Brook in Section 7.2 of his primary evidence. He states that the landscape effect "may not be substantive". He notes that "the landscape and visual effect will be at its greatest immediately downstream of the intake, and this will diminish for the rivers downstream

⁵⁰ Para 21 Ms Dodson Supplementary 42A Report presented at the hearing

⁵¹ Table 2 Ms Dodson Supplementary 42A Report presented at the hearing

passage". In paragraph 7.2.5 Mr Glasson states that "Any adverse effect will be of a minor value. We consider that this statement is in reference to landscape effects. He concludes that "Due to the lack of public visibility of the intake structure and Kakapo Brook there will be limited adverse landscape and visual effects created". On the basis of Mr Glasson's evidence, we agree that the landscape effects of reduced flow in Kakapo Brook appear to be minor.

- 9.147 Mr Glasson also provides some general statements on natural character. We recognise that Mr Glasson is a landscape expert. However, we consider that he has not considered the full range of matters that contribute to natural character and on that basis we do not place much weight on his evidence in relation to natural character.
- 9.148 Overall, (having regard to the components of natural character described above, the significance of some of the changes and uncertainty with respect to outcomes on aquatic life, bed substrate and riparian margins), and taking into account the proposed conditions presented in closing, we consider that the adverse effects on natural character will be more than minor.
- 9.149 We consider that the matters relating to the natural character of braided rivers are principal issues in contention.

Other Issues

High quality and reliable supplies of human and stock drinking water (HWRRP Objective 1)

- 9.150 Objective 1 of the HWRRP requires "people and communities of North Canterbury [to] have ready access to high quality and reliable supplies of human and stock drinking water." Ms Whyte considered that Objective 1 is not relevant to this proposal⁵² stating that it is only relevant to takes for community and/or stock drinking water. However, we consider this is a narrow view of Objective 1. Whilst the supporting policies tend to support Ms Whyte's view, the objective itself is broader and does not preclude us from considering activities that might affect human and stock drinking water quality and reliability of supply.
- 9.151 The resource consent applications that are most relevant to these matters are CRC142964, CRC142965 and CRC142968.
- 9.152 There were no concerns raised by any party with respect to effects of the proposal on stock drinking water. Setting aside the Applicants' requirements, no other farms were identified as taking water for stock drinking supplies from Kakapo Brook. This seems logical as Kakapo Brook is located within a single large farming station and hence there are unlikely to be any other demands for stock drinking water. The proposal is highly unlikely to affect any stock drinking water supplies in the Hope River. Mr Lees considers that the water that would be discharged into the Hope River would have nil to negligible effect on the temperature regime in the Hope River⁵³. Mr McCahon concluded that the water discharged from the power station will almost certainly be cleaner in terms of suspended solids, than the receiving water in the Hope River at all

⁵² Para 7.7 Statement Ms Whyte dated 6 October 2015.

⁵³ Para 7.1 Supplementary Evidence of Patrick Lees 13 October 2015.

times⁵⁴. We agree with these conclusions.

- 9.153 As the Waiau River is located a considerable distance downstream from the proposed take site in Kakapo Brook, adverse effects on possible stock water takes are considered highly unlikely.
- 9.154 Overall, we consider that there will be less than minor to negligible adverse effects of the proposal on stock drinking water.
- 9.155 A similar argument applies to human drinking water supplies. Whilst there was considerable water quality evidence presented, most of this evidence related to the Kakapo Brook water quality and ecosystems associated with that river, rather than the suitability of water quality for human drinking water supplies.
- 9.156 The Council's primary S42A Report produced by Ms van Looy states that there are four registered drinking water supplies from hydraulically connected groundwater takes along the Waiau River. Ms van Looy's primary S42A Report, with respect to human drinking water quality, focused on effects that proposed irrigation will have on groundwater quality. Ms van Looy concluded that based on the results of the Applicant's modelling it is unlikely that the Applicants' proposal will result in adverse effects on the registered drinking water supplies⁵⁵. We note that the Applicants withdrew the land use consent application CRC142966 for the use of land that may result in the discharge of nutrients associated with the irrigation of up to 500 hectares of existing pasture and crops. In light of this Ms van Looy amended her evidence to state that the effects of land use on water quality cannot be considered⁵⁶.
- 9.157 In the context of this and the wider evidence on potential water quality effects we conclude that any potential effects on human drinking water quality and reliability of supply are less than minor to negligible.

Existing recreational values in the Kakapo Brook and Waiau River for activities including salmon and trout fishing, kayaking, jetboating and swimming (HWRRP Objective 2(g) & (h), Policy 2.5, Objective 6(a))

- 9.158 The evidence we heard clearly indicates to us that there would be no adverse effects from the proposal on recreational values in the Waiau River. We are satisfied that no ecological or hydrological adverse effects that could occur in the Kakapo Brook would be of sufficient magnitude to result in an adverse effect that would be more than minor in the Waiau River.
- 9.159 All the resource consent applications are relevant to this matter.
- 9.160 Therefore we will focus on the recreational values of the Kakapo Brook. We heard evidence from Mr Pearson⁵⁷ for North Canterbury Fish and Game Council on recreational fishing values in the area, and we heard a submission from Mr Serge Bonnafoux on the recreational fishing values of the Kakapo Brook. We accept the

⁵⁴ Section 9 Conclusion Supplementary Evidence Ian McCahon 11 October 2015.

⁵⁵ Para 204 Section 42A 6 October 2015.

⁵⁶ Para 47 Supplementary Section 42A Report 15 October 2015.

⁵⁷ Evidence of Mr Pearson, paragraphs 21 – 31.

evidence that the river has probably been fished for many years.

- 9.161 Both the evidence from Mr Pearson and the submission from Mr Bonnafoux support the conclusion that while the Kakapo Brook is not classed as an outstanding trout or salmon fishery, it is fished and provides some recreational fishing values in the lower reaches. We did not receive detailed evidence or legal advice on the legal status of the river bed or the river margins in the lower Kakapo Brook. We do not consider it necessary for us to clarify the legal status of this land. However, we accept that likelihood that access along the banks of the Kakapo Brook for fishing appears to be at the discretion of the land owner.
- 9.162 We did not receive any specific evidence on the direct effects of reduced flows on recreational fishing so we are not able to make any conclusions on such direct effects. We have considered the evidence on the indirect effects e.g., via effects on flows, macroinvertebrates, periphyton and fish, and therefore essentially reiterate our earlier conclusions that we did not have sufficient information to conclude that all of those effects would be less than minor.
- 9.163 Therefore on the assumption that access to the lower Kakapo Brook is available for recreational fishing, we conclude that we cannot be satisfied that the adverse effects on recreational fishing in the lower reaches of the Kakapo Brook will be minor.
- 9.164 We consider that matters relating to existing recreational values in Kakapo Brook flows are principal issues in contention.

Landscape and Amenity values (HWRRP Objective 2(d), Objective 6a and Policy 6.1)

- 9.165 The Lake Sumner and Lewis Pass area has been identified as an outstanding natural feature and landscape (ONFL) in the CRPS. According to Ms van Looy in paragraph 295 and 296 of the s42A report, the Station, is considered to be part of an outstanding natural landscape largely due to its location on the boundary of the Lake Sumner Forest Park, The Lewis Pass National Reserve.
- 9.166 All resource consent applications are relevant to this matter.
- 9.167 Mr Glasson has refined this assessment in his evidence. He considers the "landscape of the project area could not be classified as outstanding as, for example, the upper Hurunui River Valley, Lake Sumner and Lewis Pass National Reserve. This is because the land has been greatly modified. The valley of Kakapo Brook could be considered to have moderate rarity because it is repeated elsewhere in the North Canterbury landscape. He considered that while the landforms do have high legibility, it has been burned and farmed, and lacks vegetation coherency due to the scattered pattern of indigenous vegetation. He considers that this landscape is definitely of a tier below that of the Hurunui-Valley Lake Sumner & Lewis Pass landscapes of the locality."⁵⁸
- 9.168 We note that evaluation seems to be focused on the lower parts of the farm itself, and to an extent may conflict with other evidence that the Kakapo Brook is considered to be a natural state water body with no existing modification⁵⁹. The natural state of the

⁵⁸ Para 6.2.4. Statement of Evidence by Christopher Glasson 6 Oct 2015.

⁵⁹ Para 306. Natalie van Looy. Section 42A Officers Report.

Brook was apparent from our site visit. Mr Glasson acknowledges in paragraph 6.2.5 that "When assessing a landscape, much depends on the scale one is assessing it at, and to what level of modification has occurred."

- 9.169 Mr Glasson considers that the "amenity values for this location relate to remoteness, tranquillity, wilderness, high natural character, openness, a rugged quality and a transition to the forested mountain landscape. These values can be influenced by such factors as viewing position (State Highway) or walking tracks), who is viewing it (recreationalists or travellers), the degree of change in the landscape a viewer can accommodate, and the value inhabitants place on a location."
- 9.170 In our decision we have adopted the definition of amenity value as defined by the RMA 1991, as meaning those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes. We have considered cultural and recreational attribute in other sections of our decision. We consider that people appreciation of the site is limited by lack of public access through the property, and that this has some bearing on effects on amenity values.
- 9.171 Ms van Looy notes "that the most significant visual effects of the proposal may arise from the building of penstocks and power lines used to transmit power generated. However, these consents have not been applied for and no further details have been provided as part of this application. As such, I have not considered the potential effects of these structures further⁶⁰."
- 9.172 We concur with this statement. Hence, a number of the matters outlined in Mr Glasson's evidence are not relevant to the proposal before us. This includes the proposed: intake structure, race between intake and beech forest, penstock from storage pond to power station, and the power station.
- 9.173 We consider the landscape and amenity effects of irrigation, the storage ponds and reduction in Kakapo Brook flows.

Irrigation

- 9.174 Some submitters raised concerns about the potential change of visual amenity as a result of irrigation and consider it would be inconsistent with the surrounding natural environment.
- 9.175 Mr Glasson concludes in paragraph 8.6 of his evidence, that there should be no overall detrimental effect to the character and quality of the landscape context of Glynn Wye station due to the advent of irrigation. We note that the areas to be irrigated are already pastoral landscapes.
- 9.176 Ms van Looy considers "With regard to the visual effects of irrigation and the greening of pasture, I agree with the Applicants' assessment that it is unlikely these change will be visible from SH7. As it is unlikely there will be any subsequent effects of irrigation on water quality (pending revised Overseer® modelling), I consider that any

⁶⁰ Para 303. Natalie van Looy. Section 42A Officers Report

potentially adverse effects of irrigation are likely to be limited to the presence of centre pivots⁶¹.” We accept Mr Glasson’s findings and consider that the landscape effects from irrigation on the existing pastures, including any landscape effects caused by irrigation infrastructure, will be minor.

9.177 We consider on the basis of the evidence provided and our understanding of the site, that adverse effects on landscape and amenity values from irrigation aspects of the proposal will be minor.

Kakapo Brook

9.178 Mr Glasson states that the” landscape effect of water loss from Kakapo Brook may not be substantive. However, there will be a lessening of the river flow volumes and riverbed rocks could protrude, along with a widening of stony river banks during dry spells. These changes could occur naturally in high-country rivers and streams throughout the seasons, and therefore the change would not appear adverse or visually unnatural.”⁶²

9.179 Mr Glasson recognises that changes to the visual appearance of the river will diminish downstream due to inflow from tributary streams. He notes that these tributaries downstream will not be altered as a result of the proposed scheme.

9.180 He concludes in paragraph 7.2.5 that “Any adverse effect will be of a minor value. Due to the lack of public visibility of the intake site and Kakapo Brook there will be limited adverse landscape and visual effects created.”

9.181 We did not receive any evidence that refuted this finding and find it persuasive, therefore, we accept Mr Glasson’s evidence that the adverse effects on landscape values from changes in flow within Kakapo Brook will be minor. With regard to amenity values we defer to our findings on recreational and cultural values (mauri).

Storage Ponds

9.182 The proposed ponds will be contained by a large hill to the east and mature shelterbelts on all other sides. There are no public views into this site due to its contained location on the elevated location on the river terrace.⁶³

9.183 Mr Glasson considers that the ponds will cause a localised change from being a pastoral landscape to two large water bodies. Because it is very localised and contained, he considered that this change would only cause a small reduction in amenity value, but a more diverse landscape will be created. Mr Glasson notes that drawdown of the ponds could lead to a localised loss of amenity value when it persists for lengthy periods.

9.184 Ms van Looy states in paragraph 320 of her evidence in chief “Due to the presence of this shelter belt, it is unlikely that the storage dams will be seen from SH7. In addition to this, the dams are set quite far back into the landscape and I consider it unlikely that they will be seen from SH7 regardless of the presence of the shelter belt”.

⁶¹ Para 314. Natalie van Looy. Section 42A Officers Report

⁶² Para 7.2.1. Statement of Evidence by Christopher Glasson 6 Oct 2015.

⁶³ Section 7.4. Statement of Evidence by Christopher Glasson 6 Oct 2015.

9.185 Mr Glasson did not draw any conclusions with respect to landscape effects of the ponds specifically. We appreciate that these would be large water bodies in a remote location with no public access and that they would not be readily visible from SH7. However, they will be visible from the air and potentially from some high vantage points they are located within or close to an ONFL albeit in a pastoral environment. Given this, and in light of the evidence provided we are uncertain whether the effect on landscape values from the ponds will be minor or not. We consider that adverse effects on amenity values will be localised and minor having regard to the mitigation measures outlined in evidence.

9.186 In conclusion we consider that the adverse effects of the proposed irrigation on landscape and amenity values will be minor. The landscape effects from changes in Kakapo Brook flows will be minor. We are uncertain whether the effect on landscape values from the ponds will be minor or not. This issue was of moderate significance in our consideration of the proposal.

Discussion around Policy 6.1

9.187 Policy 6.1 seeks to prohibit damming or impoundment of water within part of the Hurunui and Waiau River Catchments shown as Zone A "High Value Areas" on Map 3, or on the mainstem of the Hurunui and Waiau Rivers. The proposal is located within this area. When questioned with respect to where this Policy applies, Ms Whyte told us that in her mind the policy applies to the river and does not extent onto land such as is the case with the proposal. Ms van Looy offered a different interpretation "As previously stated, Policy 6.1 relates to the damming and taking of additional water in Zone A, which encompasses the applicant's property, stating that damming in this area is to be prohibited."⁶⁴ We acknowledge that the associated rule, Rule 5.1 brings us back into the rivers, but having regard to the discussion in the issues section 1.4.6 of the HWRRP, we agree with Ms van Looy's interpretation. Another compelling reason is the fact that Policy 6.1 itself states "or on the mainstem of the Hurunui or Waiau Rivers". It seems to us that the policy recognises the difference between in river and out of river. Also it refers to "Catchments" which includes the land drainage system.

9.188 In our view, Mr Glasson did not take into account this important policy when he was undertaking his assessments. This Policy is very directive and under the Plan as we understand it, infrastructure for out of stream uses, in terms of Policy 6.1, is prohibited in this area.

Open river mouth in the Waiau River (HWRRP objective 2 (f))

9.189 Objective 2 (f) of the HWRRP refers to maintaining an open river mouth in the Waiau River, to provide for the migration of native fish and salmonid species and the collection of kai by tangata whenua.

9.190 All the resource consent applications are relevant to this matter.

9.191 This matter was not specifically addressed in the Applicants' AEE, any of the evidence at the hearing or submissions. However, given the evidence in relation to Waiau river

⁶⁴ Para 328. Natalie van Looy. Section 42A Officers Report.

flows and the proposed conditions presented in closing, it appears unlikely that the proposal would have an adverse effect on opening of the Waiau river mouth.

People and Communities

Electricity Generation

- 9.192 Hydropower does have the potential to provide economic social and possibly Cultural benefits to people and communities, particularly for Hanmer . Both the CRPS and the HWRRP contain objectives and policies relevant to electricity generation. Those benefits largely appeared to revolve around increasing reliability of supply to Hanmer.
- 9.193 However as we read the objective and policy base of both plans, while social and economic benefits of hydroelectricity are recognised we are unclear on the evidence before us that those positive effects are sufficient to outweigh negative effects such as adverse effects on significant natural and physical resources cultural values and the like.
- 9.194 As will be clear by now we have concluded the most significant effects of the proposal will fall on Kakapo Brook. We think even paying proper regard to the Applicants' proposed conditions in closing the Applicants have been unable to reduce the overall ecological effects of the take to an acceptable level.

9.195 All the resource consent applications are relevant to this matter.

Potential effects of uncontrolled reservoir release and earthquake hazards.

- 9.196 There are two relevant fault lines in proximity to this proposal. They are the Kakapo and Hope faults. Both the CRPS and the HWRRP have a range of relevant objectives and policies that are primarily focused on seeking to avoid development that increases risks of natural hazards to people property and infrastructure.
- 9.197 Some submitters notably Ms Leslie Shand were concerned about earthquake hazards and risks to infrastructure and persons utilising State Highway 7.
- 9.198 The Applicants provided their evidence through Mr McCahon which was peer-reviewed on behalf of CRC by Ms Sioban Hartwell, AECOM, who agreed with the Applicants' assessment but noted that there was a paucity of information to support those views. She recommended that some of the assumptions made by the Applicants required further validation.
- 9.199 Overall, we were satisfied the Applicants had to the extent required for the application before us had reasonably addressed earthquake risk matters. However, as Ms Hartwell noted a fuller assessment in validation will be required if this proposal were to proceed.

Terrestrial ecology including wetlands not affected by Kakapo Brook Flows (CRPS policy 7.3.3, objective 9.2.1, policy 9.3.1, policy 9.3.5)

- 9.200 Several submitters were concerned about the adverse effects of the proposal on wetlands, including Colleen Philip, the Department of Conservation, and the North Canterbury branch of the Royal Forest and Bird Protection Society of New Zealand. This included wetlands not affected by Kakapo Brook flows.

- 9.201 All the resource consent applications are relevant to this matter.
- 9.202 This section of our assessment focuses on the actual and potential effects of the proposal on terrestrial ecosystems excluding wetlands that are affected by Kakapo Brook flows. Wetlands that are affected by Kakapo Brook flows and terrestrial ecology in the riverbed (such as riverbed bird species) are discussed elsewhere in the decision.
- 9.203 The evidence we heard strongly indicates that the wetlands discussed in this section are primarily fed by complex flow paths originating in the surrounding hill sides and farm paddocks.
- 9.204 The land use consent applications required to construct, operate and maintain the infrastructure required to complete the project have been deferred pending the outcome of resource consent applications for Phase 1 of the proposal. This includes earthworks associated with construction. We have received evidence and submissions relating to the effects of the proposed project on the wetlands not affected by Kakapo Brook flows. Such effects happen either directly through land use occurring within the wetland or indirectly by cutting off water feeding into the wetland or by changing the quality of that water. However, such effects are not within the scope of the proposal we are considering.
- 9.205 The one land use application that was lodged for the use of land that may result in the discharge of nutrients has been withdrawn. We are considering only the water permit take, use, damming, and diversion and discharge permit aspects of the overall project. As outlined below, Dr Grove considers that there will be only minor direct impacts on indigenous terrestrial vegetation from irrigation. The water permit take, diversion, damming and the discharge permit aspects of the proposal have no linkages as far as we are aware to wetlands that are not affected by Kakapo Brook flows.
- 9.206 Having regard to the evidence we have been presented with, and given the discussion above, we are satisfied that the proposal will have minor adverse effects on the wetlands not affected by Kakapo Brook flows.
- 9.207 With respect to other aspects of terrestrial ecology, we need to consider:
- The effects of water use (excluding those aspects covered by Rule 10.1) on terrestrial ecology in the command area;
 - Effects on riparian margin ecosystems from altering Kakapo Brook flows;
 - Possible adverse effects on off-riverbed birdlife.

Water use on terrestrial ecosystems in the command area

- 9.208 We agree with the findings of Dr Grove⁶⁵, that there will be only minor direct impacts on indigenous terrestrial vegetation and fauna as a result of proposed water use, as the irrigation area is largely already developed farmland.
- 9.209 Because we consider that the effects of water use on terrestrial ecology in the command area and the effects of the proposal on wetlands that are not affected by Kakapo Brook flows are minor, then consequently we consider that there would be

⁶⁵ Para 26. Dr Philip Grove. Section 42A Officer's Report.

less than minor effects on birdlife that utilise these areas.

Riparian margin ecosystems (excluding wetlands influenced by Kakapo Brook flows) and off-river birdlife

- 9.210 Apart from hydraulically connected wetlands, we received little information relating to effects of the proposal on riparian margins. According to Dr Sanders the proposed reduction in flow in Kakapo Brook will not affect the terrestrial habitats and food supplies found on the adjacent terraces because these consist of extensive areas of dry habitats that are some distance from, and not directly affected by the mainstem flow⁶⁶.
- 9.211 Also, Dr Sanders mentions that the immediate margins of the Kakapo Brook provide aquatic or semi-aquatic foraging habitat in the form of tributaries and seeps. However, there is no assessment of effects of the proposal with respect to these environs.
- 9.212 The possible adverse effects from altering Kakapo Brook flows on off-riverbed birdlife are discussed by Dr Sanders. These effects mainly relate to potential reduction in foraging opportunities as a result of changes to Kakapo Brook. However, we note that the ecosystems in the Kakapo Brook are complex and it is possible that there may be other effects that have not been identified.
- 9.213 Overall, there is limited information regarding the effects of the proposal on riparian margin ecosystems and off-river birdlife. We were looking for an assessment of effects with respect to individual species present and how the proposal might affect each of these species.
- 9.214 This level of detail should be provided with a project of this scale in our opinion. This view is supported by Dr Meredith in his Section 42A Officers Report where he considers the assessment of effects is an "oversimplification of the environment by applicant experts", resulting in a "simplified assessment of effects in the application"⁶⁷. He also notes that there is a "disagreement over the ecological values present and required to be managed"⁶⁸.
- 9.215 The conditions presented in closing did not address these issues covered above.
- 9.216 In summary, we are unable to draw any firm conclusions and therefore be satisfied the potential adverse effects of the proposal on riparian margin ecosystems (excluding wetlands affected by Kakapo Brook flows) and off-riverbed birdlife will be minor.
- 9.217 We do not consider these matters to be principal issues in contention.

Effects of the Proposed discharge into the Hope River

- 9.218 Dr Meredith identified a number of potential adverse effects that could result from the proposed discharge of water to the Hope River. However, we agree with Dr Meredith that the issues are "not insurmountable" and the proposed final suite of conditions

⁶⁶ Para 41. Mark Sanders. Primary statement of evidence.

⁶⁷ Para 9. Dr Adrian Meredith. Supplementary Section 42A Officer's Report.

⁶⁸ Para 36. Dr Adrian Meredith. Supplementary Section 42A Officer's Report.

adequately address those matters that are relevant to this specific resource consent application.

9.219 Therefore, we are satisfied that the adverse effects of this specific proposed discharge would be minor.

Efficiency of water conveyance systems and dams.

9.220 We considered that was a paucity of information from the Applicants about possible losses from the canal conveyance systems and the storage dams themselves. We were aware that evaporation losses in summer periods could be quite substantial due to the large surface area of the water exposed in the storage dams. We are also aware that particularly in the early stages of an operation such as those where water is transferred by way of canal losses to ground could be as high as 20% during peak periods. We agree that over time those losses will reduce but in the initial stages they could be quite significant. However overall, we do not think these effects will be significant.

Positive effects

9.221 Mr Sanders noted some possible positive effects on terrestrial ecosystems from the proposal.

9.222 He states in paragraph 45 of his evidence that the "proposed storage pond and canal will result in the availability of an additional 19ha and 1 ha of surface water respectively. It is likely that these, especially the pond, will be used as foraging habitat for birds, but it is not possible to precisely evaluate the overall value of these as habitat for birds."

9.223 Also, Mr Sanders considers "Overall, increased off-river foraging opportunities on irrigated pasture may be beneficial for river birds – of both Kakapo Brook and the nearby Hope River – especially at times when food supplies may be in short supply, such as during and immediately after floods."

9.224 There seems to be a reasonable amount of speculation in these statements such as use of the words "likely" "not possible" and "may be". Hence, we note that these positive effects could occur but are not convinced they will occur.

Conclusions on the adverse effects on the environment

9.225 The preceding analyses have assessed specific effects and endeavoured to determine the level of adverse effects that the proposal would have. The purpose of this section is to consider the overall adverse effects of the activity on the environment, particularly with reference to the threshold identified in S104D(1)(a) of the RMA.

9.226 There are a number of significant adverse effects, such as those on natural character and reliability of supply for existing abstractors, where we have concluded that the adverse effects will be more than minor. In addition, there are a number of fundamentally important effects, specifically those on instream aquatic life including macroinvertebrates, periphyton and fish where we are not satisfied that the adverse effects will be minor. Therefore, overall we are not satisfied that the adverse effects of the activity will be minor.

10 SECTION 104D JURISDICTIONAL HURDLES

- 10.1 The preceding sections of this decision set out our key findings in respect of effects on the environment and the principal issues in contention. However, before we can proceed any further we must consider whether the Applicants' proposal as a non-complying activity is able to meet one of the threshold tests specified in s104D of the RMA.

First gateway test: adverse effects

- 10.2 To pass this gateway, we must be satisfied that the effects of the proposal on the environment will be minor.
- 10.3 We acknowledge there have been a number of conflicting decisions of the Environment Court as to whether decision-makers should consider the positive effects of a proposal when deciding whether the threshold tests have been met. We are adopting the approach set out in *Stokes v Christchurch City Council*⁶⁹ where the Court said:

"The Court of Appeal's decision in Bayley must cast doubts on transferring the Elderslie Park approach to Section 105(2A) (now Section 104D) as this division of the Court did in Baker Boys. Especially since we have to consider the adverse effects we consider that while it is still appropriate to consider each adverse effect as mitigated there is no statutory authority for us to consider the positive effects of a proposal when considering the threshold tests in Section 105(2A)(a) is met. To that extent we consider that in the light of Bayley we were wrong in Baker Boys in adopting a (qualified) net adverse effects approach to the first threshold test. The test is whether the adverse effect as proposed to be remedied and/or mitigated and taken as a whole are minor."

- 10.4 Thus we propose to consider the effects of the proposal as mitigated by the Applicants' proposed conditions of consent as offered at the adjournment of hearing, but not the positive effects of this proposal.
- 10.5 From our discussion of, and findings on, the adverse effects as we described earlier with this decision it will be obvious that a number of the adverse effects of the proposal are more than minor. These include:
- The grant of all of the water permits applied for, due to the state of full allocation will result in the over allocation of water in this reach.
 - The proposal could have more than minor adverse effects on the Mauri of the waterbody particularly the Kakapo Brook.
 - We cannot conclude with adequate certainty that the overall adverse effects of the proposed abstraction on instream aquatic life particularly the macroinvertebrates, periphyton and fish life in the Kakapo Brook will be minor.
 - The information provided to us is not sufficient for us to conclude that the adverse effects on fish as a consequence of the fish exclusion system will be minor.

⁶⁹ 1999 NZRMA 409, at page 434.

- We cannot conclude with adequate certainty that the adverse effects on river bed birds, particularly native birds will be minor.
- We cannot conclude with adequate certainty that the overall adverse effects on the Lower Dismal Valley swamp will be minor.
- Having given considerable thought to the framework of the HWRRP and the evidence provided and in light of conditions presented in closing, we consider that the granting of the resource consent applications will cause significant adverse effects on the reliability of supply of existing "AA permit block" abstractors.
- We have concluded, based on the evidence we had been provided with and taking into account the final suite of proposed conditions, that there remains significant uncertainty about whether the effects the proposed abstraction on instream aquatic life including the diversity and abundance of indigenous species will be minor.
- We have been unable to draw any firm conclusions about the potential adverse effects of the proposal on riparian margin ecosystems (excluding wetlands affected by Kakapo Brook flows) and off-riverbed birdlife so as to be satisfied the adverse effects will be minor.
- Overall having regard to the components of natural character we have described through the decision, the significance of some of the changes and uncertainty with respect to outcomes on aquatic life, bed substrate and riparian margins and taking into account the proposed conditions we consider the adverse effects on natural character will be more than minor.
- We are unable to draw any firm conclusions about the potential adverse effects of the proposal on riparian margin ecosystems (excluding wetlands affected by Kakapo Brook flows) and off-riverbed birdlife so we cannot conclude the effects will be no more than minor.

Conclusions on first gateway test

- 10.6 As we understand it section 104D (1) (a) is intended to impose a restraint on resource consents being granted for noncomplying activities unless they have only a "minor" effect. This is a "very small eye in the needle."⁷⁰
- 10.7 Also as we understand it, having close regard to the words as they appear within section 104D (1) (a) we are required to reach a point of a positive satisfaction that the adverse effects of the activity on the environment in the future if we do grant consent will be "minor".
- 10.8 So adopting that approach we conclude we are not satisfied that the adverse effects of the activity on the environment in the future will be minor. Therefore we reach the conclusion that this proposal does not pass the first gateway test.

Second gateway test: objectives and policies of the HWRRP

- 10.9 We now move to consider the proposed activity against the objectives and policies of the
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⁷⁰ *Queenstown Central Ltd v Queenstown Lakes District Council* [2013] NZHC 815.

HWRRP and to a lesser extent other relevant planning instruments. We concentrate on the HWRP because that plan is the most applicable regional plan.

- 10.10 Case law has established that the phrase "contrary to" in the context of section 104D(1)(b) of the RMA is not to be given a restrictive meaning. Therefore if a proposal does not comply with the objectives and policies of the relevant plan it does not necessarily mean it is contrary. In this context as we understand it the RMA envisages something that is "opposed in nature, different to, or opposite".
- 10.11 In addition, while an activity may be contrary to one or two objectives or policies, when all of a plan's objectives and policies are considered overall the proposal may not be contrary to them.

HWRRP

- 10.12 Given this plan determines available allocation of water for certain reaches of rivers within catchments and also provides for minimum flows or the means by which calculation of minimum flows can be made we consider that the Applicants' proposal presents a direct 'attack' on the plan.
- 10.13 As we noted earlier under section 88A, notwithstanding that the status of the activity at the time when the application was made is retained, that section still requires us to have regard to any plan or proposed plan which exists when the application is considered. Indeed the section requires that we must have regard to that plan.
- 10.14 The plan provides that under Rule 5.2 that the taking of water from the Hurunui or Waiau catchments that does not comply with the environmental flow and allocation regime in Table 1 is a prohibited activity. There is a proviso to the rule which provides relief from Rule 5.2 provided Rule 2.3(c) is complied with. However this proviso is of no value because rule 2.3(c) still requires compliance with Table 1, which we conclude this application cannot achieve.
- 10.15 We say this because the Applicants seek to take water from the point in the catchment where no available water is available to allocate. To address this the Applicants contend the HWRRP allows a 'transfer' of B permit water (in the case of the take for irrigation) and the water take for hydro electricity generation is non consumptive and is not subject from one specific reach to the allocation limits in Table1. We disagree on both counts.
- 10.16 So even allowing for our conservative approach to the application of section 88A we find that the plan prohibits the taking of water that does not comply with both the environmental flow and allocation regime within Table 1. Faced with this very clear position if we were to grant these resource consent applications we consider that we would be acting contrary to the plan.
- 10.17 Policy 3.2 is explicit. It provides no resource consent to take, and dam, divert or use water shall be granted if the proposed activity will cause the permit allocation limits specified in the Environmental Flow and Allocation regime shown in Table 1 to be exceeded at any point on the river and at any given time. Because we do not accept the Applicants can 'transfer' B permit water the result must be that the permit allocation limit specified in Table 1 would be exceeded. In the case of the take for hydro electricity generation, the allocation limit will be exceeded on the kakapo Brook which is part of allocation limit for A permits (being a tributary of the Upper Waiau River mainstem and tributaries).
- 10.18 Accordingly this is a direct contravention of what we consider to be a fundamentally important

policy in the plan in dealing with the critical issue of allocation of water. It also follows that Objective 3 will not be met. We have detailed the particular subparagraphs of Objective 3 that will not be met in that part of our decision under the heading principal issues in contention.

- 10.19 Objective 2 which deals with sustainable management of the rivers in the catchment particularly by managing water levels and flows is a critical objective within the HWRRP. Again for reasons advanced and detailed in our decision under the heading principal issues we are clear that the grant of consent would be contrary to Objective 2.
- 10.20 The plan also seeks via Objective 6 to ensure infrastructure for out of stream uses of water is developed in a manner which protects areas with high intrinsic, cultural and recreational values. Policy 6.1 prohibits the damming or impoundment of water within the parts of the Hurunui and Waiau River catchments shown as Zone A "high value areas" on the Map 3.
- 10.21 This proposed activity will be occurring within Zone A. Clearly the plan has determined that there are some parts of the catchment which are identified on Map 3 where because of natural cultural or social values being so high the construction of water storage and other infrastructure is deemed inappropriate. Also, the plan through its provisions, identifies other areas in the catchment where there are fewer environmental, cultural and geotechnical issues. In these areas the plan provides that with appropriate mitigation, storage proposals, whether in stream or out of stream are more likely to have acceptable effects on the environment. This proposal is contrary to Objective 6 and its accompanying Policy 6.1. Policy 6.1 seeks to prohibit impoundment of water within Zone A where this proposal is located. Prohibiting means to exclude, so this activity simply cannot take place in Zone A. To grant consent, would clearly be contrary to Objective 6 and Policy 6.1.
- 10.22 Objective 9 is a broad objective seeking to manage water in an integrated way with any change in water management being undertaken in a consistent way which is fair and equitable for all resource consent holders. If we were to grant consent to the Applicants' proposal we do not think we would be acting consistently with this objective indeed we think we would be acting contrary to it. In particular abstractors and/or potential abstractors in the Lower Waiau would be adversely affected/precluded access to water if we were to grant consent.
- 10.23 For all of the above reasons we conclude that the grant of consent would be contrary to the objectives and policies of the HWRRP taken as a whole. The grant of consent in our view would fundamentally undermine the consistent administration of the HWRRP. We also consider the grant of consent would imperil the integrity of the plan.
- 10.24 The grant of consent would in our view create a precedent which would enable the plan to be interpreted and applied in the manner and advanced by the Applicants. More precisely other applicants could seek to transfer water in the same manner the Applicants propose. If that were to occur, in our view the entire framework of the HWRRP would rapidly fail.
- 10.25 The CRPS and Policy 7.3.4 outlines the need to set allocation limits that provide for river health, mauri, ecosystems and other recreational and amenity values. Granting consent would be contrary to that policy. Other policies seek to promote the enhancement of freshwater environments, to maintain the life supporting capacity ecosystems processes and indigenous species along with the natural character of the water body. For reasons already advanced we consider that the grant of consent of this proposal would be contrary to those policies.

- 10.26 Taken overall we conclude that a grant of consent in this instance would be contrary to the objectives and policies of the CRPS as they relate to managing freshwater so as to require water quality is maintained in order for water abstraction and development of water infrastructure to occur.
- 10.27 The national policy statement for renewable electricity generation certainly seeks to support the development operation maintenance and upgrading of new and existing renewable electricity generation activities. The statement also requires decision-makers to recognise that constraints do occur in respect of establishing the development of renewable generation activities. However the policies also provide that even in the instance where environmental effects of new electricity generation activities cannot be avoided remedied or mitigated decision-makers shall have regard to offsetting measures or environmental compensation which will benefit the local environment and community affected.
- 10.28 We have found that there are adverse environmental effects of this proposal. The Applicants did not advance any offsetting measures because it considered there were no or minor adverse environmental effects. We have had regard to benefits to the local environment primarily being enhancing security of electricity supply to Hanmer. We accept in the main that the community in Hanmer forms part of the community affected by this proposal. However we conclude that the benefits of enhanced security of supply to Hanmer does not outweigh the serious adverse environmental effects we have earlier detailed. Also there are members of the community beyond Hanmer that could be affected by this proposal.
- 10.29 Accordingly, when taken as a whole we consider that the grant of consent would be contrary to the national policy statement for renewable electricity generation.
- 10.30 Turning to the national policy statement for freshwater management 2014 excepting the statement is at a higher level than for example the HWRRP we nevertheless conclude that the grant of consent to this proposal would, taken as a whole, be contrary to the objectives and policies relating to water quality contained within that statement.

Conclusions on second gateway test

- 10.31 For the above reasons, we consider that the proposal is contrary to the objectives and policies of the relevant provisions referred to above when read as whole and that the second gateway test has not been met.

11 PART 2 RMA

- 11.1 As we have noted above, given the finding we have made under section 104D, we do not have a discretion to grant consent. Nevertheless for the sake of completeness we record that when we have considered matters under section 104(1) we have been alive to the need to consider the applications is subject to Part 2 specifically sections 5, 6, 7 and 8.
- 11.2 Considering section 5, particularly the purpose of the RMA, we are clear in our view that because the Applicants seek to take more than the quantity of water available for allocation in the upper Waiau catchment granting of consent even taking into account proposed conditions would not ensure that the matters provided for in subsection 2 subparagraphs (a) through (c) of section 5 would be met. Indeed as we see it, the environmental flow and allocation regime provided for by Table 1 of the HWRRP ensures that those same matters are met. Here the Applicants propose not comply with that table so we conclude that the granting

of this proposal would not result in the sustainable management of water resources and would be inconsistent with the purpose of the RMA.

- 11.3 Touching briefly on sections 6 we do not consider that the application provides for those matters outlined in subsections (a) (b) and(c).
- 11.4 In respect of section 7 in our view subsections (c) (d) (f) and (g) would not be satisfied. In respect of section 8 we consider that the principles of the treaty of Waitangi have been taken into account primarily because the Applicants have undertaken a cultural impact assessment and has consulted with Te Rūnanga o Kaikōura.

12 OVERALL DECISION

Pursuant to the powers delegated to us by the Canterbury Regional Council; and for all of the above reasons and pursuant to sections 104, 104B, 104D of the Resource Management Act 1991;

- a) We are not satisfied that the potential adverse effects of the proposal are acceptable. In our view the Applicants have not demonstrated that they can adequately avoid, remedy or mitigate the adverse effects of the activities proposed. We are not satisfied that the adverse effects of the activity on the environment will be minor.
- b) We consider that the proposal is contrary to the objectives and policies of the NPSFM, the CRPS and the HWRRP.

12.1 We have reached the conclusion that the activity does not pass either of the gateway tests for noncomplying activities as required under section 104D. Accordingly, as we have no discretion to grant consent and we must refuse it. For the sake of completeness, we also record that we do not consider that the proposal would achieve the purpose of the Act.

12.2 Accordingly, we decline to grant the following consents:

CRC142964 – Water Permit to take, divert and use up to 1600 litres per second of water from Kakapo Brook, at or about map reference Topo50 BU23: 5006-7867, for the purpose of hydropower generation.

CRC142965 – Water Permit to take, divert and use up to 1600 litres per second of water from Kakapo Brook, at or about map reference Topo50 BU23: 5006-7867, for the purposes of irrigation.

CRC142967 – Water Permit for the damming and impoundment of surface water associated with electricity generation and irrigation activities. The intake structure will facilitate diversion of water from Kakapo Brook. The intake will be located at or about at or about map reference Topo50 BU23: 5006-7867. Diverted water will be impounded in two ponds located off-line of Kakapo Brook, approximately 700,000 cubic metres and 300,000 cubic metres in size. These ponds will provide storage for electricity generation and irrigation water. The storage ponds will be located in the Dismal Valley, at or about map references Topo50 BU23: 5309-8182.

CRC142968 – Discharge Permit for the discharge of water to water (the Hope River), at or about map reference Topo50 BU23: 5221-8296, at a rate not exceeding 1600 litres per second, for the purpose of hydropower generation.

DECISION DATED 23 NOVEMBER 2015 AT CHRISTCHURCH

Paul Rogers 

Mike Freeman 

Craig Welsh 

List of abbreviations and/or acronyms used in the decision

AICL	Amuri Irrigation Company Limited
CRC	Canterbury Regional Council
CRPS	Canterbury Regional Policy Statement
FRE3	The mean annual frequency at which the mean daily flow exceeds three times the median flow
HWRRP	Hurunui and Waiau River Regional Plan
IFIM	Instream Flow Incremental Methodology
NPSFM	National Policy Statement Freshwater Management 2014
NPS - REG	National Policy Statement for Renewable Electricity Generation 2011
NES Drinking Water	The Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007
NRRP	Natural Resources Regional Plan
ONFL	Outstanding natural feature and landscape
RMA	Resource Management Act 1991
7DMALF	Seven day mean annual low flow which is the average for the period of flow record of the lowest flow that occurs for seven consecutive days in a year

List of Submitters who appeared at the hearing

Week 1 – Tuesday 6th October – Thursday 8th October 2015

Tuesday 6th October 2015

Applicant – Legal Submissions – Pru Steven QC

Applicant – Gary Rooney

Applicant – Andrew Hurley

Applicant – John de Ruyter

Applicant – Gerald Strayton

Applicant – Ian McCahon

Applicant – Bas Veendrick

Wednesday 7th October 2015

Applicant - Peter Callander

Applicant - Andrew Brough

Applicant – Peter Lees

Applicant – Mark Sanders

Applicant – Phillip Jellyman

Applicant – Martin Bonnett

Thursday 8th October 2015

Applicant – Christopher Glasson

Applicant – Richard Draper

Applicant – Jane Whyte

WEEK 2 Monday 12th October – Wednesday 14th October 2015

Monday 12th October 2015

Commissioners Site Visit

Tuesday 13th October 2015

Submitter – Ainslie Talbot for Royal Forest and Bird Protection Society

Submitter – Rosalie Snoyink

Submitter – Scott Pearson for Fish & Game- North Canterbury

Submitter – Ken McAnergney

Submitter – Serge Bonnafox

Submitter – Andrew Barton for Amuri Irrigation Company Ltd

Submitter – Jane Demeter for BRaid

Wednesday 14th October 2015

Submitter – Lesley Shand

Reporting Officer – Natalie van Looy

- Philip Grove
- Leonard Fietje
- Adrian Meredith
- Jen Dodson

Applicants Reply submitted in writing on Monday 19th October 2015

Submitters who advised they were not presenting

Paul Incani

Geoff Lanagan

Upper Waiau Independent Irrigators

Gabriel Calcott

South Island Eel Industry

Colleen Phipps