

BEFORE THE CANTERBURY REGIONAL COUNCIL

IN THE MATTER of the Resource Management Act
1991

AND

IN THE MATTER of Proposed Plan Change 3 (SCCS
Area) to the Operative Canterbury
Land and Water Regional Plan

**STATEMENT OF EVIDENCE OF SARAH MARGARET DAWSON ON
BEHALF OF HUNTER DOWNS DEVELOPMENT COMPANY LIMITED
25 September 2015**

INTRODUCTION

Qualifications and Experience

- 1 My name is Sarah Margaret Dawson.
- 2 I hold qualifications of Bachelor of Engineering (Chemical) with First Class Honours and Master of Science (Resource Management) with Distinction. I am a Full Member of the New Zealand Planning Institute, and member of the Resource Management Law Association of New Zealand and the International and New Zealand Associations of Impact Assessment. I was a recipient of the New Zealand Planning Institute's Distinguished Service Award in 1999. I am an accredited Hearings Commissioner with Chair endorsement.
- 3 I have practised as a planner since 1977, as both a consultant and a senior local authority planner. I have been based in Christchurch for most of those 39 years, providing consultancy services for a wide range of clients, mostly throughout the South Island, including local authorities, land and water resource users, and the infrastructure and electricity sectors. Following 20 years as a consultant with Boffa Miskell Limited, I now practice as Sarah Dawson Consulting.
- 4 One of my particular areas of expertise is the development of District and Regional Plans and in the on-going variation and changing of Plans. I have written or, at least, substantially worked on the preparation of numerous District and Regional Plans, and Plan Changes, in different parts of New Zealand. For many of these, I have been involved from the stage of early consultation and policy development to the resolution of appeals. I am currently a member of the Independent Hearings Panel for the Christchurch Replacement District Plan.
- 5 The other main area of my planning and resource management work is the preparation and auditing of assessments of environmental effects, and the processing of resource consents through the various statutory steps and requirements. I have been engaged by numerous clients to co-ordinate and prepare assessments of environmental effects for a wide range of complex projects involving many inter-related technical assessments.
- 6 In regard to this current matter, I have been engaged by Hunter Downs Development Company Limited (“**HDDCL**”) to prepare planning evidence on Plan Change 3 (“**PC3**”). I was not involved with the preparation of HDDCL’s submission on PC3.
- 7 I have provided advice to HDDCL, and its related or predecessor entities, on land and water management matters since 2005. I co-ordinated the preparation of the consent application, assessment of environmental effects (“**AEE**”) and associated specialist technical reports for the granted water take and use permit for the Hunter Downs

Irrigation Scheme. This permit is for the take of water from the lower Waitaki River and the use of that water for irrigation across the scheme command area in South Canterbury. Although consented prior to the Canterbury Land and Water Regional Plan, the use permit includes requirements for Scheme and Farm Environmental Management Plans and associated management conditions to address water quality and quantity effects of the use of water for irrigation. I presented planning evidence for that water permit. Since that time I have continued to provide advice in relation to the Hunter Downs Irrigation Scheme, in particular advising about ongoing changes to the relevant statutory planning documents, and the consenting requirements for the scheme's construction and future use.

Scope of Evidence

8 My evidence addresses the following matters:

- (a) Providing improved clarity of the role of irrigation schemes in meeting the intended water quality outcomes for the South Coastal Canterbury area;
- (b) Providing for the use of land for farming activities within the command area of an irrigation scheme as a permitted activity where a discharge consent is held;
- (c) Ensuring activities required for the augmentation of Wainono Lagoon are appropriately recognised and provided for; and
- (d) Supporting the approach to addressing over-allocation of surface and groundwater resources by using irrigation scheme water where available.

9 In this evidence, when I use the term:

- (a) "**HDIS**", I mean the Hunter Downs Irrigation Scheme;
- (b) "**WDIS**", I mean the Waihao Downs Irrigation Scheme;

10 In preparing this evidence I have reviewed:

- (a) The evidence of **Mr Richard Timpany, Mr Brian Ellwood and Dr Donna Sutherland** for HDDCL;
- (b) The National Policy Statement on Freshwater Management 2014 ("**NPSFWM**");
- (c) The Canterbury Regional Policy Statement 2013 ("**CRPS**");
- (d) The Waitaki Catchment Water Allocation Regional Plan 2005 ("**WAP**");
- (e) The Canterbury Land and Water Regional Plan ("**CLWRP**");
- (f) The Canterbury Water Management Strategy ("**CWMS**");

- (g) The South Coastal Canterbury ZIP Addendum 2014 (“**ZIP Addendum**”);
 - (h) PC3, and the associated section 32 and 42A Reports; and
 - (i) The relevant submissions and further submissions of other submitters.
- 11 I have read and agree to comply with Code of Conduct for Expert Witnesses (Environment Court Practice Note 2014). This evidence is within my area of expertise except where I state that I am relying on facts or information provided by another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

EXECUTIVE SUMMARY

- 12 The HDIS scheme is important to achieving the intended zone outcomes for the South Coastal Canterbury area. It is identified as being critical to delivering the augmentation of Wainono Lagoon, to improve the water quality of the lagoon and tributaries, and thereby allowing the discharge of nutrients associated with increased irrigation and the associated wider social and economic community benefits this will bring.
- 13 I consider that the policies of PC3 do not explicitly or clearly recognise this key role of irrigation development in meeting zone outcomes. Greater recognition in the plan policies would ensure the importance of irrigation is able to be considered as part of resource consents, while also providing greater transparency and clarity to plan users, and certainty for irrigation schemes that the plan supports the development of irrigation and its benefits in improving water quality. I support the amendments to Policy 15.4.8 and new Policy 15.4.14A sought by HDDCL.
- 14 I support Policy 15.4.14 which provides for the management of discharges within the command area of an irrigation scheme by requiring any discharge permit to include a range of appropriate conditions. I consider the policy accords with the intent of the ZIP Addendum to achieve water quality outcomes and provides an appropriate basis for the collective management of nutrient discharges by the irrigation scheme operator.
- 15 Rule 15.5.11 controls the discharge of nutrients onto or into land within the command area of an irrigation scheme. However, use of land for a farming activity within an irrigation scheme command area is not provided for through the PC3 rules (nor in the general rules in the CLWRP). I consider it would not be effective nor efficient for individual property owners, who are part of an irrigation scheme, to have to obtain individual land use consents for farming where a global nutrient discharge consent is already held by the scheme. I support the inclusion of the new Rule 15.5.11A sought by HDDCL (with a

minor amendment), which provides for the use of land for farming as a permitted activity where the property is part of an irrigation scheme that holds an appropriate nutrient discharge consent.

- 16 I consider Policy 15.4.32, which protects the environmental benefits from argumentation of the Waihao River by the Morven Glenavy Irrigation Scheme, should be broadened to protect water discharged for the augmentation of Wainono Lagoon. This will recognise the importance of augmentation to the zone outcomes and ensure wider benefits of introduced augmentation water are not subsequently lost through allocation of that water to other activities. I consider the concerns expressed in the s42A Report would be able to be fully addressed through other proposed policies and rules in PC3.
- 17 Several policies and associated rules of PC3 support and enable the flow and discharge of water, and other activities, associated with the augmentation of Wainono Lagoon. While I support these provisions, I agree with HDDCL's submission to amend Rule 15.5.24 by deleting Condition 5 which restricts the scale of the increase in river flow at the point of the augmentation discharge. This requirement creates difficulty for augmentation to be achieved as a restricted discretionary, due to the augmentation flows required to offset predicted nutrient increases and improve the trophic state of the lagoon to a TLI of 6.0. The required flows would result in Condition 5 being breached, triggering the need for resource consent as a fully discretionary activity. I consider that this would be neither effective nor efficient, and is unnecessary. Specifically, the range of matters of discretion under the restricted discretionary activity (and further amendments I support) would capture and address any relevant adverse effects of the rate and volume of the augmentation discharge.
- 18 I also do not support additional conditions within Rule 15.5.24 as requested by DOC which seek to restrict the turbidity of the augmentation discharge, and ensure the augmentation wetland does not locate on, or affect land, managed by DOC. I consider these matters are also sufficiently addressed in the matters of discretion for Rule 15.5.24, or through landowner approval processes outside the consenting process.
- 19 Policy 15.5.25 provides for reduction of over-allocation of water by requiring applicants for replacement water permits to use irrigation scheme water, where available, to the fullest extent possible. I consider this policy provides an appropriate basis to address over-allocation of surface and groundwater resources by substituting for out-of-catchment sourced irrigation water where available, to support the intent of the ZIP Addendum. In so doing, it will also provide certainty for irrigation schemes such as HDIS.

PROVISION FOR IRRIGATION SCHEMES

The Role and Importance of Irrigation Development to Improving Water Quality

- 20 The ZIP Addendum clearly recognises the importance of the consented HDIS irrigation scheme to meeting the intended outcomes for the South Coastal Canterbury area. In particular, it recognises that highly reliable and secure irrigation is important for a vibrant economy and sustainable growth. Furthermore, the HDIS scheme is recognised as being critical to delivering the augmentation of Wainono Lagoon to improve the water quality and ecological health of the lagoon and, as a consequence, realise the potential of irrigation to facilitate farm development within set nutrient limits.¹ The ZIP Addendum additionally recognises that the wider community will benefit from the influence that augmentation has on limits.²
- 21 These linkages are also recognised in PC3 in the proposed introductory discussion to sub-regional Section 15A. This recognises the additional irrigation through the consented HDIS and WDIS and the increased economic development that this will bring, whilst also recognising the key link between HDIS and the augmentation of surface water flows into Wainono Lagoon. These are stated as being parts of a solutions package which will improve the water quality of the lagoon and tributaries, whilst allowing the discharge of nutrients associated with the increased irrigation³.
- 22 There is some recognition in the proposed policies of the means by which irrigated land-uses and irrigation schemes will manage land use to maintain or improve water quality in the Northern Streams and Waihao-Wainono Area, and improve water quality through enabling augmentation of Wainono Lagoon; specifically by:
- (a) Not exceeding the nitrogen load limits identified for identified catchment areas;⁴
 - (b) Requiring all farming activities to manage nitrogen losses in accordance with relevant maximum and flexibility caps;⁵
 - (c) Requiring all farming activities to operate at good management practice or better, and prepare and implement farm management plans;⁶
 - (d) Managing nutrient discharges within the command area of an irrigation scheme by meeting the total nitrogen load loss limits, proportioning the irrigation scheme load across the operational scheme area, not exceeding the maximum caps on any

¹ Pages 3, 5 & 9, South Coastal Canterbury ZIP Addendum, September 2014.

² Page 7, South Coastal Canterbury ZIP Addendum, September 2014.

³ Page 15-3, Section 15A South Coastal Canterbury Area.

⁴ Policy 15.4.2.

⁵ Policies 15.4.5 & 15.4.7.

⁶ Policy 15.4.4.

property, requiring farm environment plans, and requiring the scheme to manage all nitrogen losses from properties in the scheme;⁷

- (e) Enabling augmentation of Wainono Lagoon and catchment restoration activities, and in the absence of this requiring further nutrient loss reductions;⁸
- (f) Improving water quality in Wainono Lagoon by enabling the discharge of water into the lagoon through a constructed wetland.⁹

23 However, these policies do not specifically recognise the role and importance of irrigation development in improving water quality, achieving augmentation, and meeting the zone outcomes as expressed in the ZIP Addendum. The water quality and land-use management controlling aspects are expressed in some detail in the policies, as are the details of the discharge of augmented water to Wainono Lagoon. However, in my opinion, the key role of irrigation development¹⁰ in facilitating augmentation of Wainono Lagoon to improve its quality, and thereby allowing the wider community benefits from the irrigation, is not explicit or clearly recognised.

24 HDDCL's submission seeks an amendment to Policy 15.4.8 and the addition of a new Policy 15.4.14A as follows (deletions ~~struck out~~, additions underlined):

15.4.8 Improve water quality within the Waihao-Wainono Area by:

(a) enabling the development of irrigation in the Waihao-Wainono Area using consented Waitaki River water to facilitate the augmentation of Wainono Lagoon; and

(b) enabling farming activities to access the higher flexibility caps in Table 15(m) only once ~~when~~ augmentation of Wainono Lagoon has occurred ~~in the preceding calendar year.~~

15.4.14A Enable the development of new irrigation in the Waihao-Wainono Area and Northern Streams Area for the purposes of giving effect to:

(a) the consented HDIS and WDIS schemes, which are intended to take water from the Waitaki River for the irrigation of a further 27,000 hectares; and

(b) the augmentation of Wainono Lagoon.

25 The s42A Report notes, but does not discuss, HDDCL's request regarding Policy 15.4.8. Nor does it appear to refer to HDDCL's request to add a new Policy 15.4.14A. The Report does not recommend any changes in response to these submissions.¹¹ I consider that greater and more explicit recognition of the role and importance of irrigation development

⁷ Policy 15.4.14.

⁸ Policy 15.4.15.

⁹ Policy 15.4.16.

¹⁰ As expressed in the ZIP Addendum and proposed Section 15A introduction

¹¹ Page 130 – 131, Section 42A Report.

to achieving the zone outcomes should be provided in the Plan policies. The ZIP Addendum will have limited status in terms of the RMA hierarchy of higher order documents, unless incorporated within the provisions of a plan change. Similarly, the introductory statements in Section 15A will have limited status when considering resource consents under the Section 15A provisions. Including these matters in the plan change policies will provide greater transparency and clarity to plan users of the role of irrigation. It would also provide certainty for the HDIS (and WDIS) schemes in ensuring the plan supports the development irrigation, and its benefits in supporting the improvement of water quality.

- 26 Policy 15.4.8 recognises the importance of enabling augmentation to allowing the higher flexibility caps to be accessed. In a plan structure sense, I consider providing a link between irrigation facilitating augmentation, to augmentation facilitating the higher flexibility caps to be accessed, whilst improving water quality, sits within this policy. New Policy 15.4.14A recognises that enabling irrigation for the HDIS scheme is critical to augmentation and improving catchment water quality (as well as to the wider community benefits of irrigation in this area). I consider this policy is appropriately located with the other policy relating to irrigation schemes.
- 27 I consider this additional recognition of irrigation development would support a number of relevant objectives of the CLWRP, specifically:
- (a) it will support the delivery of regionally significant irrigation infrastructure to positively contribute to economic, cultural and social wellbeing, consistent with Objective 3.3;
 - (b) it will ensure community outcomes for water quality and quantity are had regard to, consistent with Objective 3.12;
 - (c) it will support the improvement of degraded outstanding freshwater bodies and hapua, consistent with Objective 3.14.
- 28 In supporting the achievement of the above CLWRP objectives, I consider the changes sought to the policies will therefore give effect to the CRPS which is subsumed in the CLWRP. It will also give effect to the NPSFWM in part, recognising that PC3 does not address the NPS National Objectives Framework. ECAN is intending to take a staged progressive approach to implementing the NPS in the South Coastal Canterbury area in accordance with Policy E1 of the NPS, which will result in a further change to the sub-regional section notified in 2023/24.¹²

¹² Part Revised NPSFM 2-14 Implementation Programme, 13 September 2014

- 29 While the s42A Report recommends no changes in response to HDCCL’s submission, amendments are recommended to Policy 15.4.8 in response to other submissions.¹³ Specifically, the amendment would allow farming activities to access the higher flexibility caps in Table 15(m) only if the freshwater outcomes in Tables 15(a) and (b) are met. The s42A Report considers this reflects the intention of the Zone Committee and would be consistent with the NPSFWM.
- 30 Table 15(m) includes a footnote to the highest flexibility caps requiring that the freshwater outcomes in Tables 15(a) and 15(b) must also be met. I note however that the outcomes in Tables 15(a) and (b) are aspirational outcomes to be achieved by 2030. This is further reflected in columns “C” and “F” of Table 15(m) which only require the outcomes in Tables 15(a) and (b) to be met after 1 January 2030. I consider that a further amendment is required to Policy 15.4.8, to recognise the intent of the Table 15(a) and (b) outcomes as follows (additions underlined shaded):

15.4.8 Improve water quality within the Waihao-Wainono Area by:

- (a) enabling the development of irrigation in the Waihao-Wainono Area using consented Waitaki River water to facilitate the augmentation of Wainono Lagoon; and*
- (b) enabling farming activities to access the higher flexibility caps in Table 15(m)(l) only once ~~when~~ augmentation of Wainono Lagoon has occurred in the preceding calendar year. and after 1 January 2030, the freshwater outcomes in Tables 15(a) and 15(b) are met.*

Policy for Nutrient Discharges from Irrigation Schemes

- 31 Policy 15.4.14 provides for the management of discharges within the command area of an irrigation scheme by requiring any discharge permit granted to an irrigation scheme to include conditions that require:
- (a) total nitrogen load limits in Table 15(p) to be met;
 - (b) the scheme load in Table 15(p) to be apportioned to the area of the scheme that is operational;
 - (c) the maximum caps in Table 15(n) to be met on any property;
 - (d) all properties in the command area to be subject to a Farm Environment Plan; and
 - (e) the scheme to manage all nitrogen loss from properties supplied with water from the scheme.

¹³ Page 131, Section 42A Report.

- 32 HDDCL's submission supports the retention of the policy without amendment. The s42A Report recommends no changes to this policy.¹⁴
- 33 The policy accords with the intent of the ZIP Addendum¹⁵ to implement Good Management Practice for nitrogen loss to achieve the water quality outcomes, to provide a nitrogen load allocation to consented irrigation schemes, cap nitrogen loss for farming systems, and use Farm Environment Plans. Overall, I consider the policy provides an appropriate basis for collective management of nutrient discharges from irrigation schemes by the scheme operator. Such an approach also provides certainty for the HDIS (and WDIS) schemes in setting clear limits, while providing administration benefits for ECAN from collective management by the scheme operator.
- 34 I consider it also supports a number of relevant objectives and policies of the CLWRP, specifically it will:
- (a) better support the management of the quality of water to safeguard life-supporting capacity of ecosystems and ecosystem processes, consistent with Objective 3.8;
 - (b) ensure community outcomes for water quality and quantity are had regard to, consistent with Objective 3.12;
 - (c) support the improvement of degraded outstanding freshwater bodies and hapua, consistent with Objective 3.14;
 - (d) support activities operating at good environmental practice or better to optimise efficient resource use and protect the region's freshwater resources from quality and quantity degradation, consistent with Objective 3.24;
 - (e) support the achievement of the freshwater outcomes for lakes and rivers in Tables 15(a) and (b), consistent with Strategic Policy 4.1, and support the achievement of the water quality limits in Tables 15(c), (d), and (e) consistent with Strategic Policy 4.2;
 - (f) support the achievement of the nutrient load limits and nutrient discharge allowances for the catchments, consistent with Policy 4.35;
 - (g) support sustainable farming practices through encouraging irrigation scheme based initiatives to improve land and water use practices for farming activities, reduce nutrient loss and discharges, and facilitate scheme wide initiatives, reporting, and auditing of constituent farms, consistent with Policy 4.36(c);

¹⁴ Pages 161 – 162, Section 42A Report.

¹⁵ Page 8, South Coastal Canterbury ZIP Addendum, September 2014.

(h) support the use of Farm Environment Plans as a primary means to identify and deliver good environmental practice, consistent with Policy 4.40.

35 In supporting the achievement of the above CLWRP policies, I consider Policy 15.4.14 will therefore give effect to the CRPS as subsumed within the CLWRP. It will also give effect to the NPSFWM in part, recognising ECAN's staged progressive approach to implementing the NPS in the South Coastal Canterbury area.

Rule for Nutrient Discharges from Irrigation Schemes

36 Rules 15.5.11 and 15.5.12 are the two specific rules under the heading "Irrigation Schemes". These rules control the discharge of nutrients onto or into land within the command area of an irrigation scheme.

37 Rule 15.5.11 provides that such discharges are a discretionary activity subject to:

- (1) the nitrogen load limits in Table 15(p) being met; and
- (2) the application for resource consent not including any land that is part of a Nutrient User Group or Farming Enterprise.

38 Mr Ellwood's evidence addresses practical issues with Condition (2). Rule 15.5.12 then provides that non-compliance with the conditions of Rule 15.5.11 is a prohibited activity. However, the use of land for a farming activity within the command area of an irrigation scheme is not provided for in these rules.

39 HDDCL's submission identifies this as a gap in the proposed rules for irrigation schemes. Rules 15.5.1 – 15.5.5 provide for the use of land for farming activity and address nitrogen loss conditions, but these rules specifically exclude properties supplied with water from irrigation schemes. As noted in the s42A Report¹⁶, the general rule in the CLWRP (Rule 5.60), which provides for the use of land for a farming activity, does not cover properties that are part of an irrigation scheme where the discharge permits have been obtained under rules in the sub-regional Chapters of the CLWRP (such as Rule 15.5.11).

40 HDDCL, therefore, seeks the following enabling rule in this sub-regional Chapter that would provide for the use of land for a farming activity as a permitted activity, where the property is part of an irrigation scheme and the scheme holds a nitrogen discharge consent (additions underlined):

¹⁶ Page 163, Section 42A Report.

15.5.11A The use of land for a farming activity on a property that is supplied with water by an irrigation scheme is a permitted activity provided the following condition is met:

1. The irrigation scheme holds a nitrogen discharge consent for the area where the property is located.

- 41 I consider it would not be effective nor efficient for individual property owners who are part of an irrigation scheme to have to obtain individual land use consents for farming where a global discharge consent is already held by the scheme. In reality, the same matters would need to be addressed in the land use consent, as have been addressed through the scheme's global discharge consent. Applying for individual land use consents for the use of land for farming would add consenting and administrative costs, introduce risk of inconsistency between the individual land use and scheme discharge consents, and would prevent the realisation of the administrative benefits of being part of an irrigation scheme which collectively manages the scheme's nutrient discharges.
- 42 The s42A Report recommends acceptance of HDDCL's relief and notes that such a rule would be similar to Rule 5.60 of the CLWRP.¹⁷ The s42A Report recommends the following rule wording be included (additions underlined):

15.5.12A The use of land for a farming activity on a property that is supplied with water by an irrigation scheme, provided the irrigation scheme holds a consent that is subject to conditions that specify the maximum rate of discharge that may be leached from the land for the area where the property is located is a permitted activity.

- 43 I consider the s42A rule wording to be imprecise, and does not reflect the format of other rules in PC3. In particular, while it is subject to the scheme holding a consent that specifies, "*the maximum rate of discharge that may be leached*", it is unclear that it is nutrients which are the contaminant to be controlled. Furthermore, the rule only requires the scheme to hold a "*consent*", which could include a water permit with such conditions. I consider the rule should be limited to requiring a nutrient discharge consent for the scheme, so as to be consistent with the management approach of the Plan Change (Rule 15.5.11) and parallel Rules 5.60 – 5.62 of the CLWRP. I, therefore, consider that HDDCL's rule wording should be generally adopted, but amended as follows to make permitted activity status contingent on the scheme holding a discharge consent with conditions specifying the maximum rate of nutrients that may be discharged or leached (additions underlined):

¹⁷ Pages 162 – 164, Section 42A Report.

15.5.11A The use of land for a farming activity on a property that is supplied with water by an irrigation scheme is a permitted activity provided the following condition is met:

1. The irrigation scheme holds a discharge consent which specifies the rate of nutrients that may be discharged or leached for the area where the property is located.

RESTORATION OF WAINONO LAGOON

Protection of Augmentation Water from Reallocation

- 44 Policy 15.4.32 provides for the protection of the environmental benefits from augmentation of the Waihao River by the Morven Glenavy Irrigation Scheme by avoiding the allocation of that water for abstraction to other uses.
- 45 HDDCL's submission supports the intent of the policy, but considers it should be broadened to protect augmentation water from other irrigation schemes, such as that for augmentation of Wainono Lagoon under the HDIS scheme, as follows (deletions ~~struck out~~, additions underlined):

15.4.32 Environmental benefits from the discharge of water for augmentation and environmental purposes ~~from the Morven Glenavy Irrigation Scheme into the lower reach of the Waihao River~~ a surface water body are protected by avoiding the allocation of that discharged water for abstraction.

- 46 As set out earlier in my evidence, the ZIP Addendum clearly recognises the importance of augmentation of Wainono Lagoon to achieving the zone outcomes. The ZIP Addendum also recognises that augmentation water delivered via a wetland to the Hook River is considered the most likely and most effective intervention. This is further confirmed by the South Coastal Canterbury Streams limit setting process: Overview Report¹⁸ (Overview Report), supporting the Plan Change, which recognises that augmentation into the lower Hook River is expected to eliminate the periods of zero flow, and improve water quality, thus benefiting fish populations and invertebrate communities they feed on.¹⁹
- 47 Recognising the importance of augmentation to zone outcomes, I support Policy 15.4.32 being broadened as sought in HDDCL's submission. This will ensure the wider benefits of introduced augmentation water are not subsequently lost through allocation of that water to other activities.

¹⁸ Norton and Robson (2015) South Canterbury Coastal Streams (SCCS) limit setting process: Predicting consequences of future scenarios: Overview Report, Report No. R15/29

¹⁹ Page 90, South Canterbury Coastal Streams (SCCS) Limit Setting Process, February 2015.

- 48 The s42A Report considers that widening the policy to include other surface waterbodies and discharges carries a risk that the policy enables augmentation discharges without knowing the potential effects. The report, however, does recommend removal of the reference to the Morven Glenavy Irrigation Scheme to future proof the policy in case the scheme changes name or another provider provides for the augmentation discharge into the Waihao River.²⁰
- 49 I consider there is no risk from broadening Policy 15.4.32 as sought in HDDCL's submission. The focus of the policy is clearly on protecting flows of water intended for augmentation from reallocation to other activities, as opposed to supporting the discharge of that water for augmentation. Instead Policy 15.4.15 addresses enabling augmentation of Wainono Lagoon and Policy 15.4.16 addresses the discharge of water for this augmentation. Policy 15.4.16 sets clear direction as to how the environmental effects of augmentation are to be addressed. I consider this policy, and associated Rule 15.5.24, will ensure that the environmental effects of any discharge of augmentation water to improve water quality in Wainono Lagoon can be fully considered at resource consent stage. In my opinion, broadening Policy 15.4.32 to, at least, include Wainono Lagoon would ensure the environmental benefits of any consented augmentation water would not be lost through its re-allocation.
- 50 I further consider that broadening Policy 15.4.32 to protect augmentation water for Wainono Lagoon will support a number of relevant objectives and policies of the CLWRP, specifically:
- (a) it will ensure community outcomes for water quality and quantity are had regard to, consistent with Objective 3.12;
 - (b) it will support the improvement of degraded outstanding freshwater bodies and hapua, consistent with Objective 3.14;
 - (c) it will better support the management of the quality of water to safeguard life-supporting capacity of ecosystems and ecosystem processes, consistent with Objective 3.8.

²⁰ Pages 236 – 237, Section 42A Report.

Wainono Augmentation and Restoration

- 51 Several policies and associated rules of PC3 support, and enable, the flow and discharge of water and other activities associated with the augmentation and restoration of Wainono Lagoon. HDDCL's submission supports the following provisions:
- (a) Policy 15.4.15 – Improve water quality by enabling augmentation of Wainono Lagoon and catchment restoration activities, and in the absence of this require further nutrient loss reductions;
 - (b) Policy 15.4.16 – Improve water quality in Wainono Lagoon by enabling the discharge of water into the lagoon through a constructed wetland;
 - (c) Rules 15.5.20 and 15.5.21 – Enable the use and disturbance of riparian land for planting or removal of vegetation, and the associated take, use and discharge of water and sediment, for the purposes of the Wainono Restoration Project;
 - (d) Rules 15.5.22 and 15.5.23 – Enable bed disturbance and the take, use and discharge of water and contaminants for the purpose of habitat restoration;
 - (e) Rules 15.5.24 and 15.5.25 – Enable the use of land for a wetland, discharge of water into the wetland, and discharge of water from the wetland to augment Wainono Lagoon.
- 52 HDDCL's submission supports these provisions, given the importance of the augmentation and restoration of Wainono Lagoon to the zone outcomes as expressed in the ZIP Addendum. It does, however, seek one change to Rule 15.5.24 to delete reference to Condition 5 which restricts the scale of the increase in flow in the river or watercourse at the point of augmentation discharge from the wetland. I return to this point in evidence below.
- 53 HDDCL's further submission also opposes changes to Rule 15.5.24 sought by the Department of Conservation (DOC). DOC seeks the inclusion of new conditions to Rule 15.5.24 which would restrict the turbidity of the augmentation discharge to 6 NTU, and ensure the augmentation wetland is not located on DOC land, or significantly affect land managed by DOC.²¹
- 54 For the reasons I expressed earlier in my evidence, I consider the proposed provisions enabling flow and discharge of water, and other activities, associated with the augmentation and restoration of Wainono Lagoon will support achievement of the zone

²¹ Submission 64095, V3pLWRP-534.

outcomes expressed in the ZIP Addendum, and the objectives and policies of the CLWRP (and consequently the NPSFWM, and CRPS).

- 55 Practically Rule 15.5.24 does, however, present some difficulty for augmentation to be achieved as a restricted discretionary activity. The rule provides that the use of land for a wetland, and discharge of water into the wetland, and then discharge ultimately to Wainono Lagoon for augmentation is a restricted discretionary activity, subject to conditions. Condition 5 requires that the discharge from the wetland does not result in an increase in the flow in the river or artificial watercourse at the point of discharge by *“more than one percent of a flood event with an Annual Exceedance Probability of 20 percent (one in 5 year event)”*. Non-compliance with Condition 5 is to be assessed as a discretionary activity under Rule 15.5.25.
- 56 My understanding is that conditions of this nature are typically intended at ensuring discharges do not result in increased flooding risk, channel scouring, erosion of the banks, and ultimately sedimentation of water bodies. The s42A Report does not recommend the deletion of Condition 5, noting that without evidence as to why this condition would prevent augmentation, the submission is not recommended to be accepted.²²
- 57 HDDCL’s submission notes that Condition 5 is overly restrictive to providing augmentation flows, and particularly any periodic higher flushing flows. A supporting technical publication for PC3 (*Assessment of Augmentation of Water Flows in Wainono Lagoon*)²³ provides an analysis of the augmentation flow needed to offset predicted nutrient increases and improve the trophic state of Wainono Lagoon to \leq TLI 6.0 (as per the intended PC3 outcomes). This identifies that TLI \leq 6.0 could be achieved by increasing inflows to the lagoon to between 2.5 and 3x current inflows, which amounts to an augmentation flow of between 952 l/s and 1270 l/s. The evidence of Dr Sutherland confirms that this level of augmentation flow would result in dilution, sufficient to achieve a TLI of \leq 6.0.²⁴
- 58 The Appendix 18 report identifies that, at certain times, a higher flow could be required. In particular, a lagoon exchange flow of 4m³/s for 5 days in early October would result in a complete replacement of the average lagoon water volume at the end of winter when nitrogen loading is typically highest. This is intended to provide a large dilution benefit prior to summer conditions that typically produce the greatest algal biomass and risk of blooms. In addition, further lagoon exchange flows may be required in summer response

²² Pages 208 – 212, Section 42A Report.

²³ Appendix 18 to the Overview Report, Sutherland and Norton (2011) Assessment of Augmentation of Water Flows in Wainono Lagoon.

²⁴ Paragraph 28, Evidence of Dr Sutherland for HDDCL.

to a nuisance cyanobacteria bloom.²⁵ Consequently, at certain times, high flows will be required from the wetland to achieve lagoon augmentation outcomes.

- 59 While this report did not consider the precise location(s) of the augmentation discharge in any detail, it states that it is likely to be in the lower reaches of the Hook River. The evidence of Mr Ellwood notes that the 1 in 5 year flood flow in the Hook River is 44 m³/s, and that Condition 5 would therefore have the effect of restricting the augmentation discharge to 440 l/s.²⁶ The required augmentation flow would, therefore, breach Condition 5. This would trigger the need for resource consent as a full discretionary activity. I consider it is unnecessary to require resource consent as a full discretionary activity when the relative effects of increased flows on flood potential, channel scouring, and bank erosion can equally be effectively be considered through a restricted discretionary resource consent. Triggering a full discretionary resource consent would be neither effective nor efficient in that it would open up the assessment of the application to a much wider range of considerations, beyond those matters the Council has otherwise restricted its discretion in Rule 15.5.24.
- 60 The matters of restricted discretion in Rule 15.5.24 are broad and capture such matters as the appropriateness of the discharge point, adverse effects on people and property arising from raised groundwater levels, adverse effects on the lagoon and Waihao Box, and adverse effects on water quality. I consider these matters could broadly capture issues of increased flood risk, erosion, and sediment in the assessment of any resource consent application for augmentation. However, more focussed discretion on these matters may be desirable.
- 61 I note, in relation to Rule 15.5.21 for planting or removal of vegetation and removing fine sediment for the Wainono Restoration Project, the s42A Report recommends the addition of a further matter of discretion: “*adverse effects on bank stability, erosion and capacity of the waterway(s)*”.²⁷ If a more specific recognition is required in the matters of discretion for Rule 15.5.24 as to the flooding risk and erosion effects of a higher augmentation flow, then I consider this matter could be added. I further note that, as a result of DOC’s submission, the s42A Report recommends addition a further matter of discretion to Rule 15.5.24 requiring consideration of the “*rate and volume of discharge*”²⁸. I support this addition in the context of considering consent for any augmentation proposal.

²⁵ Page 41 – 43, Appendix 18 to the Overview Report, Sutherland and Norton (2011) Assessment of Augmentation of Water Flows in Wainono Lagoon, May 2011.

²⁶ Paragraphs 43 – 45, Evidence of Mr Ellwood for HDDCL.

²⁷ Pages 203 – 205, Section 42A Report.

²⁸ Page 212, Section 42A Report.

- 62 I do not, however, support DOC's request for additional conditions to Rule 15.5.24 regarding turbidity, and wetland location.
- 63 It is Dr Sutherland's evidence that, given the very high natural turbidity in Wainono Lagoon relative to Waitaki River derived water, a turbidity limit of 6 NTU is not necessary, although Waitaki River flood flows, where the turbidity exceeds the median turbidity of the lagoon, should not be diverted to the lagoon.²⁹
- 64 I further note that turbidity effects are addressed in Appendix 18 to the Overview Report, which recommends monitoring turbidity in the augmentation discharge (potentially into the lower Hook River) and providing for augmentation to be shut-off in the event that monitored turbidity exceeds an (undefined) pre-defined trigger level in the source water.
- 65 My interpretation of this Report's recommendation, and Dr Sutherland's evidence, is that this concern would be addressed through appropriate conditions on any resource consent to discharge the augmentation flow from the wetland to the chosen tributary. Turbidity effects are adequately captured under the proposed matters of discretion for resource consent in Rule 15.5.24, which require consideration of effects on the lagoon, and water quality in the lagoon and significant habitats of indigenous flora and fauna. This would include any significant habitats in the augmentation tributary.
- 66 Wetland location, with regard to DOC's landowner interests, is also addressed through the matters requiring consideration of the appropriateness of the wetland location and discharge point. In any event, I agree with the s42A Report, that any construction of the wetland would need permission of the landowner, separate from the resource consent process.³⁰
- 67 Overall, taking into account the relevant matters, I consider Rule 15.5.24 should be amended as follows (deletions ~~struck out~~, additions underlined):

15.5.24 The use of land for a wetland, the discharge of water into that wetland, and the subsequent discharge of water from that wetland for the purpose of augmenting Wainono Lagoon, is a restricted discretionary activity, provided the following conditions are met: The activity does not take place on land that is listed as an archaeological site; and

1. *The activity is not within a Community Drinking Water Protection Zone as defined in Schedule 1; and*
2. *The discharge from the wetland is not within 100m of any abstraction point used for drinking water; and*
3. *A management plan is prepared and submitted with the application for resource consent; and*

²⁹ Paragraph 41, Evidence of Dr Sutherland for HDDCL.

³⁰ Page 210, Section 42A Report.

- ~~4. The discharge from the wetland does not result in an increase in the flow in the river or artificial watercourse at the point of discharge by more than one percent of a flood event with an Annual Exceedance Probability of 20 percent (one in five year event); and~~
- ~~5.4. The discharge does not result in the erosion of the bed or banks of any receiving waterbody; and~~
- ~~6. The turbidity of the discharge does not exceed 6 NTUs (Nephelometric Turbidity Units).~~

The exercise of discretion is restricted to the following matters:

1. The appropriateness of the location of the wetland and any associated discharge points.
2. The content and quality of the management plan, and the methods proposed to:
 - a) avoid or mitigate adverse effects resulting from the construction and use of the wetland; and
 - b) control livestock access to and within the wetland including any proposed grazing regimes; and
 - c) control plant and animal pest species within the wetland; and
 - d) ensure the purpose and ongoing functioning of the wetland is achieved; and
 - e) monitor and report on the discharges to and from the wetland; and
 - f) manage the timing of the discharge to the wetland.
3. The appropriateness of integration with existing or planned infrastructure and water conveyance systems; and
4. Adverse effects on people and property arising from raised groundwater levels and reduced drainage capacity in the drainage system; and
5. Adverse effects on the Wainono Lagoon and the Waihao Box; and
6. Adverse effects on water quality in Wainono Lagoon and significant habitats of indigenous flora and fauna; and
7. Adverse effects on sites or areas of wāhi tapu, wāhi taonga or mahinga kai; and
8. The potential benefits of the activity to the community and the environment; and
9. Adverse effects on Ngāi Tahu cultural values; and
10. Rate and volume of the discharge.
11. Adverse effects on bank stability, erosion and capacity of the waterway(s).

TAKING AND USE OF WATER FOR IRRIGATION SCHEMES

- 68 Policy 15.4.25 provides for reduction of over-allocation of water by requiring applicants for replacement water permits to use irrigation scheme water, where available, to the

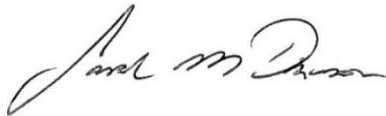
fullest extent possible. HDDCL's submission supports the retention of the policy without amendment. The s42A Report recommends no changes to this policy.³¹

- 69 The policy accords with the intent of the ZIP Addendum to improve tributary flows, including to support the health of Wainono Lagoon, through capping current water allocation and reduce over-allocation over time as new water sources become available and irrigation efficiency improves. Overall, I consider the policy provides an appropriate basis to address over-allocation of surface and groundwater resources by substituting for out-of-catchment sourced irrigation water, where available. Such an approach also provides certainty for the HDIS (and WDIS) schemes in directing the use of irrigation water from the schemes over existing over-allocated sources, to the fullest extent possible.
- 70 I consider it also supports a number of relevant objectives and policies of the CLWRP, specifically it will:
- (a) support the delivery of regionally significant irrigation infrastructure to positively contribute to economic, cultural and social wellbeing, consistent with Objective 3.3;
 - (b) better support the management of the quantity of water in waterbodies to safeguard the life-supporting capacity of ecosystems and ecosystem processes, consistent with Objective 3.8;
 - (c) maximise social and economic benefits by the efficient storage, distribution and use of the water made available within the Plan's allocation limits or management regimes, consistent with Objective 3.10;
 - (d) enable groundwater resources to remain a sustainable source of high quality water, while supporting base flows or levels in surface water bodies, springs and wetlands, consistent with Objective 3.13;
 - (e) have regard to community outcomes for water quality and quantity, consistent with Objective 3.12;
 - (f) support the improvement of degraded outstanding freshwater bodies and hapua, consistent with Objective 3.14;
 - (g) assist to optimise efficient resource use and protect the region's freshwater resources from quality and quantity degradation, consistent with Objective 3.24; and

³¹ Pages 228-229, Section 42A Report.

(h) support the achievement of the freshwater outcomes for lakes and rivers in Tables 15(a) and (b), consistent with Strategic Policy 4.1, and support the achievement of the water quantity limits in Tables 15(f) - (k) consistent with Strategic Policy 4.2.

71 In supporting the achievement of the above CLWRP policies, I consider Policy 15.4.25 will therefore give effect to the CRPS, as subsumed within the CLWRP. It will also give effect to the NPSFWM in part, recognising ECAN's staged progressive approach to implementing the NPS in the South Coastal Canterbury area.

A handwritten signature in black ink, appearing to read 'Sarah M Dawson', written in a cursive style.

Sarah Margaret Dawson

25 September 2015