

**BEFORE THE ENVIRONMENT COURT
I MUA I TE KOOTI TAIAO O AOTEAROA**

UNDER the Resource Management Act 1991

IN THE MATTER of appeals under Clause 14 of the First Schedule of the Act

BETWEEN **TRANSPOWER NEW ZEALAND LIMITED**
(ENV-2018-CHC-26)

FONTERRA CO-OPERATIVE GROUP
(ENV-2018-CHC-27)

HORTICULTURE NEW ZEALAND
(ENV-2018-CHC-28)

(Continued next page)

**SUPPLEMENTARY STATEMENT OF EVIDENCE OF MATTHEW
MCCALLUM-CLARK ON BEHALF OF SOUTHLAND REGIONAL COUNCIL**

PLANNING

03 June 2022

Judicial Officer: Judge Borthwick

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ARATIATIA LIVESTOCK LIMITED
(ENV-2018-CHC-29)

WILKINS FARMING CO
(ENV-2018-CHC-30)

**GORE DISTRICT COUNCIL, SOUTHLAND DISTRICT
COUNCIL & INVERCARGILL CITY COUNCIL**
(ENV-2018-CHC-31)

DAIRYNZ LIMITED
(ENV-2018-CHC-32)

H W RICHARDSON GROUP
(ENV-2018-CHC-33)

BEEF + LAMB NEW ZEALAND
(ENV-2018-CHC-34 & 35)

DIRECTOR-GENERAL OF CONSERVATION
(ENV-2018-CHC-36)

SOUTHLAND FISH AND GAME COUNCIL
(ENV-2018-CHC-37)

MERIDIAN ENERGY LIMITED
(ENV-2018-CHC-38)

ALLIANCE GROUP LIMITED
(ENV-2018-CHC-39)

FEDERATED FARMERS OF NEW ZEALAND
(ENV-2018-CHC-40)

HERITAGE NEW ZEALAND POUHERE TAONGA
(ENV-2018-CHC-41)

STONEY CREEK STATION LIMITED
(ENV-2018-CHC-42)

THE TERRACES LIMITED
(ENV-2018-CHC-43)

CAMPBELL'S BLOCK LIMITED
(ENV-2018-CHC-44)

ROBERT GRANT
(ENV-2018-CHC-45)

**SOUTHWOOD EXPORT LIMITED, KODANSHA
TREEFARM NEW ZEALAND LIMITED, SOUTHLAND
PLANTATION FOREST COMPANY OF NEW ZEALAND**
(ENV-2018-CHC-46)

**TE RUNANGA O NGAI TAHU, HOKONUI RUNAKA,
WAIHOPAI RUNAKA, TE RUNANGA O AWARUA & TE
RUNANGA O ORAKA APARIMA**
(ENV-2018-CHC-47)

PETER CHARTRES
(ENV-2018-CHC-48)

RAYONIER NEW ZEALAND LIMITED
(ENV-2018-CHC-49)

**ROYAL FOREST AND BIRD PROTECTION SOCIETY
OF NEW ZEALAND**
(ENV-2018-CHC-50)

Appellants

AND

SOUTHLAND REGIONAL COUNCIL

Respondent

Introduction, qualifications and experience

- 1 My name is Matthew Eaton Arthur McCallum-Clark. My qualifications and experience are set out in full in my statement of evidence dated 22 October 2021.
- 2 This supplementary statement of evidence responds to the Court's two questions arising on the morning of 3 June 2022 in relation to Appendix E.
- 3 As I understood it, the questions (paraphrased) were:
 - (a) What is the activity status of discharge rules if Appendix E is not met?
 - (b) Is Dr Snelder's assessment of clarity for the maps in his evidence consistent with the way clarity is dealt with in Appendix E?
- 4 In preparing this evidence, I have discussed the response to the second question with Dr Snelder.

Code of conduct

- 5 I confirm that I have read the Code of Conduct for expert witnesses as contained in the Environment Court Practice Note 2014. I have complied with the Code of Conduct when preparing my written statement of evidence and will do so when I give oral evidence.
- 6 The data, information, facts, and assumptions I have considered in forming my opinions are set out in my evidence. The reasons for the opinions expressed are also set out in my evidence.
- 7 Other than where I state I am relying on the evidence of another person, my evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

What is the activity status of discharge rules if Appendix E is not met?

- 8 In response to this question from the Court, I have prepared a table including all rules in the proposed Southland Water and Land Plan (**pSWLP**) and set out their activity status and a comment in relation to the type of rule (e.g., discharge to land or land use) and stated where those rules include any reference to Appendix E. This assessment of activity status and reference to Appendix E is repeated for both the

decisions version of the pSWLP and the version currently before the Court. Rules which include references to Appendix E are highlighted in blue. This table is attached to this evidence as **Appendix 1**.

- 9 Without wanting to expand upon the Court's question, I note that the way that Appendix E is used in the rules, even as a permitted activity condition, differs between rules. In my opinion, those differences are intentional.

Is Dr Snelder's assessment of clarity for the maps in his evidence consistent with the way clarity is dealt with in Appendix E?

- 10 No, it is not.
- 11 Dr Snelder sets out in Table 1 of his EIC (page 13) how clarity is assessed, which is based on the NPS-FM National Bottom Line (Table 8 – Suspended fine sediment). The National Bottom Line is set out for four different waterbody classes and specifies median visual clarity (measured in metres) and is based on 5 years of monthly measurements (see NPS-FM, Table 8 – Suspended fine sediment attribute). The NPS-FM does not require these measurements to be taken under a specified flow condition (they are generally understood to be taken across the range of flows that occur). The attribute states in Table 8 have a threshold (in metres), which is compared to the median of the 5 years of monthly measurements.
- 12 Clarity in Appendix E sets out standards for visual clarity in two ways:
- (a) As an absolute threshold of not less than X metres at the edge of the reasonable mixing zone when the flow is at or below the median flow; and
 - (b) As a percentage change threshold of no more than Y% at the edge of the reasonable mixing zone.
- 13 As written, the Appendix E thresholds (X metres and Y%) must always be complied with.
- 14 Appendix E also uses a different waterbody classification system and has different thresholds to the NPS-FM.
- 15 Dr Snelder advises that it is not possible to definitively compare the leniency of the NPS-FM National Bottom Line to the water clarity standards in Appendix E for three reasons. First, the NPS-FM waterbody

classes are different to those used in the pSWLP (and therefore Appendix E). Second, any non-compliance with the Appendix E clarity thresholds is classed as a failure, whereas, as a median, up to 50% of observations can be non-compliant with the threshold for the NPS-FM suspended fine sediment attribute. Third, the Appendix E percentage change standard (Y%) has no counterpart within the NPS-FM suspended fine sediment attribute.

A handwritten signature in green ink, appearing to read 'mccallum', is positioned above a horizontal dotted line.

Matthew McCallum-Clark

03 June 2022

Appendix 1 – Proposed Southland Water and Land Plan rules, activity status, and relationship to Appendix E

Note: Where a rule/activity status is tied to Appendix E, that has been highlighted blue.

pSWLP Rules	Decisions Version	Disputed Version
Region-wide Rules		
Rule 1	N/A – ‘operational’ rule	N/A – ‘operational’ rule
Rule 2	N/A – ‘operational’ rule	N/A – ‘operational’ rule
Rule 3	N/A – ‘operational’ rule	N/A – ‘operational’ rule
Rule 4	N/A – ‘operational’ rule	N/A – ‘operational’ rule
Discharge Rules		
Rule 5 – Discharges to surface waterbodies	DA – discharge to water – if discharge meets Appendix E standards	DA – discharge to water – if discharge meets Appendix E standards
Rule 6 – Discharges to surface waterbodies that do not meet water quality standards	NCA – discharge to water – if discharge does not meet Appendix E standards	NCA – discharge to water – if discharge does not meet Appendix E standards
Rule 8 – Discharges of surface water	CA – discharge to water	CA – discharge to water
Rule 9 – Discharge of agrichemicals onto or into surface water	PA – discharge to water	CA – discharge to water
Rule 10 – Discharge of agrichemicals to land where they may enter water	PA – discharge to land	PA – discharge to land
Rule 11 – Discharge of vertebrate pest control poisons	PA – discharge to land	PA – discharge to land
Rule 12 – Discharge of non-toxic dyes	CA – discharge to water	CA – discharge to water
Rule 13 – Discharge from subsurface drainage systems	PA – discharge to water	PA – discharge to water – with clarity and sediment Appendix E standards (in dispute)
Rule 14 – Discharge of fertiliser	PA – discharge to land	PA – discharge to land
Rule 15 – Discharge of stormwater	PA/DA/NCA – discharge to water or land	PA (non-reticulated) – with clarity and sediment Appendix E standards (in dispute) DA (reticulated) – provided Appendix E met
Rule 16 – Discharge of water from bores and wells for aquifer testing	PA – discharge to water	PA – discharge to water
Rule 17 – Dust Suppressants	PA – discharge to land	PA – discharge to land

Rule 18 – Discharge of water from purging of instruments at a water treatment plant and portable potable water treatment units	PA – discharge to land	PA – discharge to land
Rule 18A – Discharges from emergency fire-fighting	PA – discharge to water or land	PA – discharge to water or land
Rule 18B – Discharges from emergency response training activities	PA – discharge to water or land	PA – discharge to water or land
Rule 19 – Discharge of water associated with water treatment processes	CA – discharge to land – provided Appendix E met	CA – discharge to land – provided Appendix E met
Land Use Rules		
Rule 20 – Farming	PA/RDA/DA/Prohib – land use rule	PA/RDA/NCA/Prohib – land use rule (in dispute)
Rule 20A		PA/RDA/NCA/Prohib – land use rule (in dispute)
Rule 20AA		PA/RDA/NCA/Prohib – land use rule (in dispute)
Rule 24 – Incidental discharges from farming	PA/NCA – discharge to land	PA/NCA – discharge to land (in dispute)
Rule 25 – Cultivation	PA/RDA – land use rule	PA/RDA – land use rule (in dispute)
Wastewater, Effluent and Sludge		
Rule 26 – Discharges from on-site wastewater systems	PA/DA/Prohib – discharge to land	PA/DA/Prohib – discharge to land
Rule 27 – Discharges from pit toilets	PA/DA – discharge to land	PA/DA – discharge to land
Rule 28 – Discharges of liquid from waterless composting toilet systems	PA/DA – discharge to land	PA/DA – discharge to land
Rule 29 – Discharges of aerobically composted human excreta	PA/DA – discharge to land	PA/DA – discharge to land
Rule 30 – Discharges from mobile toilets	Prohib – discharge to land or water	Prohib – discharge to land or water
Rule 31 – Dump stations	NCA – discharge to land	NCA – discharge to land
Rule 32A – Reconstruction of effluent storage facilities	N/A – ‘operational’ rule	N/A – ‘operational’ rule

Rule 32B – Construction, maintenance and use of new agricultural effluent storage facilities	PA/CA/DA/NCA – land use and discharge to land rule	PA/CA/DA/NCA – land use rule
Rule 32C – Construction, maintenance and use of new non-agricultural effluent storage facilities	RDA/DA/NCA – land use and discharge to land rule	RDA/DA/NCA – land use rule
Rule 32D – Existing agricultural effluent storage facilities	PA/DA – land use and discharge to land rule	PA/DA/CA/DA – land use rule
Rule 32E – Incidental discharges		PA/DA – discharge to land
Rule 33 – Community sewerage schemes (discharge to land)	DA/NCA – discharge to land	DA/NCA – discharge to land
Rule 33A – Community sewerage schemes (discharge to water)	NCA – discharge to water	DA – discharge to water – provided Appendix E met, otherwise NCA
Rule 34 – Industrial and trade processes	DA/NCA – discharge to land	DA/NCA – discharge to land
Rule 35 – Discharge of agricultural effluent to land	PA/RDA/DA/NCA/Prohib – discharge to land	PA/RDA/DA/NCA/Prohib – discharge to land
Rule 35A – Feed pads/lots	PA/DA – land use rule	PA/DA – land use rule
Rule 35B – Sacrifice Paddocks	PA/DA – land use rule	PA/DA – land use rule (in dispute)
Rule 36 – Horticulture wash-water	PA – discharge to land	PA – discharge to land
Rule 37 – Agricultural dips	PA – discharge to land	PA – discharge to land
Rule 38 – Animal and vegetative waste	PA – discharge to land	PA – discharge to land
Rule 39 – Other agricultural effluent disposal	PA – discharge to land	PA – discharge to land
Rule 40 – Silage storage	PA/RDA/NCA – use of land	PA/RDA/NCA – use of land
Rule 41 – Silage leachate	PA/DA – discharge to land	PA/DA – discharge to land
Landfills		
Rule 42 – Cleanfill sites	PA/RDA – discharge to land	PA/RDA – discharge to land
Rule 43 – Farm landfills	PA/DA – discharge to land	PA/DA – discharge to land
Rule 45 – Landfills	DA – discharge to land	DA – discharge to land
Land Contamination		

Rule 46 – Land contaminated by a hazardous substance	PA/DA – discharge to land	PA/DA – discharge to land
Rule 46A – Site investigations	PA/DA – use of land	PA/DA – use of land
Rule 47 – Closed landfills	PA/DA – discharge to land	PA/DA – discharge to land
Rule 48 – Cemeteries	PA/DA – use of land and discharge to land	PA/DA – use of land and discharge to land
Taking and Using Water	Not assessed	Not assessed
Rule 49 – Abstraction, diversion and use of surface water		
Rule 50 – Community water supply		
Rule 51 – Minor diversions of water		
Rule 52 – Water abstraction, damming, diversion and use from the Waiau catchment		
Rule 52A – Manapōuri Hydro-electric Generation Scheme		
Rule 53 – Bores and wells		
Rule 54 – Abstraction and use of groundwater		
Structures in river and lake beds and wetlands	Not assessed	Not assessed
Rule 55A – General conditions for activities in river and lake beds		
Rule 55 – Monitoring and sampling structures		
Rule 56 – Boat ramps, jetties, wharves and slipways		
Rule 57 – Bridges		
Rule 58 – Cables, wires and pipes		
Rule 59A – On-farm sediment traps		
Rule 60 – Dams and weirs		
Rule 61- Erosion control structures		
Rule 62 – Fords		

Rule 63 – Moorings and signs		
Rule 63A – Navigational aids and health and safety signs		
Rule 64 – Temporary canoe gate or ski lane markers		
Rule 65 – Whitebait stands		
Rule 65A – Maimai		
Rule 66 – Maintenance of structures		
Rule 67 – Alteration or extension of structures		
Rule 68 – Demolition or removal of structures		
Rule 69 – Structures not covered by, or not complying with, rules		
Bed disturbance activities in river and lake beds		
Rule 70 – Stock exclusion from waterbodies	PA/DA/NCA – use of land/use of bed	PA/DA/NCA – use of land/bed disturbance (in dispute)
Rule 71 – Channel realignment, widening or deepening	DA – bed disturbance	DA – bed disturbance
Rule 72 – Dry cuts	RDA/DA – bed disturbance	RDA/DA – bed disturbance
Rule 73 – Gravel extraction	RDA/DA – bed disturbance	RDA/DA – bed disturbance
Rule 74 – Wetlands	PA/DA/NCA – use of land	PA/NCA – use of land
Rule 75 – Vegetation flood debris removal	PA/RD – bed disturbance and discharge	PA/RD – bed disturbance and discharge
Rule 76 – Vegetation planting	PA/DA – bed disturbance	PA/DA – bed disturbance
Rule 77 – Vehicles and machinery	PA/RDA – bed disturbance and discharge	PA/RDA – bed disturbance and discharge
Rule 78 – Weed and sediment removal for drainage maintenance	PA/DA – bed disturbance and discharge	PA/DA – bed disturbance and discharge (in dispute)
Rule 79 – High country burning	PA/RDA/DA – use of land	PA/RDA/DA – use of land