BEFORE THE HEARING COMMISSIONERS DUNEDIN

IN THE MATTERof the Resource Management Act 1991<br/>(RMA or the Act)ANDof Proposed Otago Regional Policy<br/>Statement 2021 (Freshwater Planning<br/>Instrument)

# STATEMENT OF EVIDENCE OF VANCE HODGSON (PLANNING) ON BEHALF OF HORTICULTURE NEW ZEALAND

28 JUNE 2023



## **EXECUTIVE SUMMARY**

- 1. The submission of HortNZ sets out how water is used throughout the horticultural production process; from growing the crops, washing, and processing produce for market, to fighting frosts (some fruits). To service these activities, the industry is reliant on having enough water supply at specific times, particularly in summer.
- For some crops, such as vegetables that are grown above ground and fruit with skins that may be eaten, the quality of the irrigation water is important to manage food safety risks. All horticultural operations result in discharges, these are mainly non-point source discharges associated with rainfall or with irrigation.
- 3. The submission then sets out the importance of the Otago region for food production as it relates to domestic food supply and security, and in terms of export contribution.
- 4. As expressed through my evidence on the non-FPI pORPS process, the production, supply and security of food is, in my opinion, a resource management issue of concern that has in the past had little direct attention and assumed to be dealt with broadly in planning instruments. This issue straddles several of the significant resource management issues of the pORPS and importantly within the context of climate change. The new significant resource management issue developed through planning caucusing during the non-FPI process and expressed as SRMR-I10A in the s42A Reply Report 5A: SRMR Significant Resource Management Issues for the Region, provides further recognition of food production values as do other parts of the pORPS.
- 5. My evidence addresses a number of submission points of HortNZ requesting that matters concerning food production be included in the FPI instrument of the pORPS. Where I have agreed with the s42A report writers' opinion on a HortNZ submission point (to accept or reject), I have not commented further unless I considered this would assist the Panel.
- 6. I agree that the pORPS is an appropriate response to the resource management issues in Otago and consider that except for improvements that could be made to some provisions to clarify food production values as they relate to freshwater, the pORPS is the most appropriate way to achieve the purpose of the Act.

#### INTRODUCTION

## Qualifications and experience

- 7. My full name is Vance Andrew Hodgson. I am a director of Hodgson Planning Consultants Ltd, a resource management consultancy based in Waiuku. I have been employed in resource management related positions in local government and the private sector since 1994 and have been in private practice for 19 years. I hold a Bachelor of Resource and Environmental Planning (Hons) degree from Massey University.
- 8. I have worked in the public sector, where I was employed in student, assistant and senior policy planning roles by the Franklin District Council. I have provided resource management consultancy services to various district and regional councils. The scope of work for the public sector has been broad, covering plan change processes, submissions to national standards/regulations/policy statements and regulatory matters, mediation and appeals.
- 9. I have worked in geographic information system positions in the United Kingdom and worked for CKL Surveying and Planning Limited in Hamilton.
- 10. Living and working in the rural environment of South Auckland / North Waikato, I have had a continuous association with the rural production sector and in particular the horticultural industry.
- 11. In private practice I regularly advise a range of private clients on statutory planning documents and prepare land use, subdivision, coastal permit, water permit and discharge permit resource consent applications. I have experience in resource consent applications, hearings and appeals on a range of activities, particularly for activities in the rural environment. I have provided independent expert resource management advice to Horticulture New Zealand (HortNZ) on policy matters across New Zealand since 2012.

## Code of Conduct

12. I have been provided with a copy of the Code of Conduct for Expert Witnesses contained in the Environment Court's Practice Note dated 1 January 2023. I have read and agree to comply with that Code. This evidence is within my area of expertise, except where I state that I am relying upon the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

## Scope of evidence

- 13. I gave evidence in the non-freshwater parts of the pORPS hearing on significant resource management issues, dated 23 November 2023.
- 14. My evidence addresses a number of submission points of HortNZ requesting that matters concerning food production be included in the Freshwater Planning Instrument of the pORPS. Where I have agreed with the s42A report writers' opinion on a HortNZ submission point (to accept or reject) I have not commented further unless I considered this would assist the panel.
- 15. I rely on the technical assessment evidence provided by Stuart Ford (economic), and the industry evidence provided by Leanne Roberts.

## PLAN CHANGE PROVISIONS RELATING TO HORTNZ

## SRMR – 15 – Freshwater demand exceeds capacity in some places

## SRMR-15 Statement

- HortNZ (FP1047.008) sought an amendment to the issue Statement to note that rural land uses are changing in Otago's catchments to meet food production demands.
- 17. How these land uses are changing in Otago's catchments is addressed in the industry evidence of HortNZ. Clearly there are changes in New Zealand's food production system occurring as both domestic and international food demand increases and in a response of other factors such as climate change, population growth and environmental regulation. Recent weather-related events, supply chain issues and international conflict have further exposed food security and supply issues.
- 18. The production, supply and security of food is, in my opinion, a resource management issue of concern that has in the past had little direct attention and assumed to be dealt with broadly in planning instruments. There has been a shift in recent times with the value of domestic food supply being recognised within a series of policy instruments including:

- (a) National Policy Statement for Freshwater Management 2020 Cl 3.33 Specified Vegetable Growing Areas;
- (b) Proposed Change 1 to the Waikato Regional Plan: Healthy Rivers (decisions version).
- (c) Proposed Change 7 to the Canterbury Land and Water Regional Plan (decisions version).
- (d) Proposed Plan Change 2 to the Horizons One Plan (decisions version).
- 19. More direct recognition of domestic food supply matters are likely in the future planning system. On 27 June 2023 the Environment Committee report on the Natural and Built Environment Bill was published. The Environment Committee recommended by majority that it be passed with amendments that include the need for the National Planning Framework to provide mandatory direction on enabling supply of fresh fruit and vegetables. The committee stating that:

We consider that ensuring the domestic supply of fresh vegetables and fruit is specifically worth attention in the NPF.<sup>1</sup>

20. This issue straddles several of the pORPS significant resource management issues and importantly within the context of climate change. The new significant resource management issue developed through planning caucusing during the non-FPI process and expressed as SRMR-I10A by the s42A report writer, further assists with recognising this issue in the pORPS.

## Social and Cultural

The ability for activities to access and use natural and physical resources provides for the social and cultural well-being of people and communities including by supporting employment, liveability, recreation, resilience, food security and investment into communities<sup>2</sup>

21. In terms of the issue Statement for SRMI-15 Freshwater demand exceeds capacity in some places, the s42A report writer is of

<sup>&</sup>lt;sup>1</sup> <u>natural-and-built-environment-bill-proof.pdf (www.parliament.nz)</u>

<sup>&</sup>lt;sup>2</sup> Reply Report 5A: SRMR – Significant Resource Management Issues for the Region

the opinion that the changes sought through the HortNZ submission:

"provide unnecessary detail which do not assist in defining the issue about freshwater demand, given that those matters are covered more generally by the statements about urban growth, changes in rural land use and increased demand for hydro-electricity"<sup>3</sup>.

- 22. I agree that the reference to 'changing rural land use' is a broad reference that would cover many changes in rural land use in Otago's catchments, including the specific matters raised by HortNZ. I also agree with the s42A report writer that in defining an issue Statement in the style of the pORPS, the more detailed references sought by HortNZ here are not necessary and note that if they were added, other matters may also be valid to include.
- 23. However, I do consider that matters concerning food production need to then be clearly developed through the context and impact snapshot narrative for SRMR-I5. This is the case in other parts of the pORPS where food production values and associated issues are expressed e.g., SRMR-I1, SRMR-I4, SRMR-I6, SRMR-I8, SRMR-I10A (as above) and the asnotified FMU visions.

SRMR-11 Natural hazards pose a risk to many Otago communities

Impact Snapshot: Economic

Loss or changes in production flows can be either temporary or permanent depending on financial resilience of businesses, which is a function of their existing loan commitments, credit worthiness and insurance cover. Food security can also be affected. Whilst the community and its businesses have substantial resilience to severe weather events and supply chain disruptions, there can be cumulative impacts from repeated events.

<sup>&</sup>lt;sup>3</sup> Paragraph 543: Section 42A report for the Proposed Otago Regional Policy Statement: Freshwater Planning Instrument.

SRMR-14 Poorly managed urban and residential growth affects productive land, treasured natural assets, rural industry, infrastructure and community well-being

#### Context

In addition, the productive land in Otago contributes to the social and economic well-being of the community through production of food and other rural productionbased products. In some parts of Otago, land and soil resources are particularly valuable for food production. However, where development occurs in a place or manner that removes or reduces the potential to use productive land, including through reverse sensitivity effects, the ability of land to support primary production is compromised.

#### Impact Snapshot: Environmental

Urban or rural lifestyle expansion can remove land and soil resources from productive uses, including for the production of food.

SRMR–16 – Declining water quality has adverse effects on the environment, our communities, and the economy

#### Impact Snapshot: Social

For the wider community, water is a source of kai and for harvesting and food production. Water is also a source of recreation, including swimming, fishing and water sports. There are multiple dimensions to the way water quality impacts on peoples' interaction with water bodies, including environmental, health, landscape, and aesthetic factors

SRMR-18 – Otago's coast is a rich natural, cultural and economic resource that is under threat from a range of terrestrial and marine activities

#### Context

Activities occurring within or affecting the coastal environment include urban development, recreational activities, transport infrastructure, energy generation and transmission, land and marine based (e.g. aquaculture) food production industries and other rural industry activities, carbon forestry and important contributors to the existing and future plantation forestry, fishing, tourism, and mineral extraction. Such activities can be are health and well-being of communities, when they are located and managed appropriately. A number of these activities provide a significant contribution to the regional economy.

## SRMR-15 Context

- 24. HortNZ (FP1047.009) sought an amendment to the Context to identify that food production can create increased demand for freshwater.
- 25. Population growth has an inherent relationship with food production to meet the corresponding food demand and human health and wellbeing needs. As set out in the evidence of HortNZ, water is necessary for food production to meet that demand.
- 26. Paragraph two of the Context already identifies that population growth (and land use intensification) can create increased demand for freshwater for irrigation. Irrigation can serve many purposes, with the NPS-FM describing those purposes in Appendix 1B Other values and attributes to be considered as follows:

8 Irrigation, cultivation, and production of food and beverages

The FMU or part of the FMU meets irrigation needs for any purpose.

Water quality and quantity is suitable for irrigation needs, including supporting the cultivation of food crops, the production of food from farmed animals, non-food crops such as fibre and timber, pasture, sports fields and recreational areas. Attributes will need to be specific to irrigation and food production requirements.

- 27. In the construct of paragraph two of the Context, I agree with the s42A report writer that a specific refence to food production is not necessary. As above, *irrigation* covers this. However, I do consider that this sentence in paragraph two could be improved.
- 28. The sentence as proposed in the s42A is as follows:

Population growth and land-use intensification in urban and rural environments can create increased demand for freshwater for human consumption, irrigation, renewable electricity generation and other economic uses.

29. It reads as though human consumption, irrigation, renewable electricity generation uses are all economic. Removing the word economic would widen the context. The sentence would then read:

Population growth and land-use intensification in urban and rural environments can create increased demand for freshwater for human consumption, irrigation, renewable electricity generation and other economic uses.

## SRMR-15 Impact Snapshot

- 30. The submission of HortNZ seeks two outcomes. First, that the 'Impact snapshot' be amended to link the health and safety issues associated with water demand including drinking, sanitation and food production. Secondly, to link the impact snapshot to the FMU vision statements seeking outcomes whereby innovative and sustainable land and water management practices support food production and improve resilience to the effects of climate change.
- 31. When reflecting on the format of the pORPS and other provisions, I agree with the s42A report writer that this change is not required here.
- 32. This matter is also covered in the Economic Impact Snapshot which as per the s42A recommendations is to read:

Freshwater in the Otago region is a factor of production that directly contributes to human needs (*urban* water supply) agriculture primary production, industry and hydro-electric power supply and mineral extraction. Freshwater also indirectly contributes to the tourism industry through maintenance of freshwater assets for aesthetic and commercial recreational purposes. Lack of freshwater can negatively impact economic output of those industries that rely on water in the production process. To varying degrees these impacts can be mitigated through water efficiency measures and innovation. 33. While I support the above, the impact of the lack of freshwater for food production is wider than an economic impact. As set out in the evidence of HortNZ, water is necessary for food production to meet human health and wellbeing needs. In my opinion the SRMR-I5 Social Impact Snapshot would be improved by an amendment consistent with that proposed in the s42A for the SRMR-I6 (water quality related) Social Impact Snapshot:

For the wider community, water is a source of kai and for harvesting and food production.

# SRMR – 16 – Declining water quality has adverse effects on the environment, our communities, and the economy

## SRMR-16 Context

- 34. Similar to the submission on SRMR-15, HortNZ sought that the Context for SRMR-16 be amended to link to the health issues associated with water quality.
- 35. The s42A author has recommend accepting the submission. The reasoning (that I support) is that the amendment represents an improvement to the description of the issue.

## SRMR-16 Impact Snapshot - Economic

- 36. HortNZ requested an amendment to reference food production as an activity affected by water pollution.
- 37. The s42A author does not consider that it is necessary to expand on the list that is included in the Economic Impact Statement on the basis that the list is non-exhaustive by referring to "and many other sectors that depend on clean water".
- 38. In my opinion the pORPS would be improved by adding a reference to food production being affected by the effects of water pollution. The evidence of HortNZ sets out this issue and I note other regions specifically recognise this fact in their policy frameworks. For example, The Horizons One Plan, where Domestic Food Supply is listed as a Water Use Value in identified Water Management Zones and the management objective being that "the water is suitable for domestic food production".
- 39. The Otago region is characterised by a number of iconic sectors. Food production is one of those and in my opinion, effects on this activity (from an economic and social impact

perspective) are equally if not more important to identify than effects on property values.

SRMR-16 Impact Snapshot - Social

40. HortNZ as a further submitter supported other submitters requested amendments on the Social Impact Snapshot to include reference to the other social aspects of communities affected by water quality, including food production and human health. I agree with the s42A author that these points of detail and clarification are suitable amendments and support the Social Impact Snapshot to read as follows:

For the wider community, water is a source of kai and for harvesting and food production. Water is also a source of recreation, including swimming, fishing and water sports. There are multiple dimensions to the way water quality impacts on peoples' interaction with water bodies, including environmental, health, landscape, and aesthetic factors...

## LF-FW-O1A

- 41. The s42A report writer recommends including a region-wide objective for freshwater (LF-FW-O1A) and consequently deleting the content of the freshwater visions the author considers are addressed by this new objective. This is not a long-term vision under clause 3.3 of the NPSFM but proposed as an objective that sets out the long-term, region-wide outcome for the region's freshwater.
- 42. Redrafted FMU and rohe visions are proposed. The substantive change as it relates to the HortNZ submissions is how food production is reflected in the relevant freshwater vision statements.
- 43. As previously noted, the submission and evidence of HortNZ set out that food production systems are coming under increased pressure from population growth (for land and volume of production), competing resource use, climate change, and the need to improve environmental outcomes.
- 44. As I understand the evidence of HortNZ, while NZ is a net food exporter, many of the vegetables and some of the fruit that we grow are only for domestic food supply and some of that production occurs in Otago.
- 45. There are existing and potential future problems associated with the food production system and the resources upon

which that system relies. Food is clearly a human health need and that relationship to the purpose of the RMA is therefore explicit. Food production enables people and communities to provide for their health and wellbeing.

- 46. Undoubtedly, there are resource use conflicts, resource allocation issues and environmental effects (including cumulative effects) associated with food production.
- 47. The submission and evidence of HortNZ has also clarified the positive effects associated that can occur via a transition to low emissions food production activity. This is not a solution to the issue of climate change but a positive contribution to mitigating the effects. Land use change is an inevitable climate change impact and will also be one of the key responses to the effects of climate change. Again, I note the 27 June 2023 report of the Environment Committee on the Spatial Planning Bill where this matter is covered as follows and is an indication of the likely direction of travel for the future *planning system*.

Clause 17 Contents of regional spatial strategies: key matters:

(ja) matters relating to climate change mitigation, including—

(ii) areas that are suitable for land use change that would support reductions in greenhouse gas emissions:

(jb) matters relating to risks arising from natural hazards and the effects of climate change, including—

(iii) areas that are suitable for land use change that would reduce those risks or increase resilience to them<sup>4</sup>

48. There is a value-based issue related to food production. This is a matter the NPSFM expresses through Appendix 1B (Irrigation, Cultivation, and Production of Food and Beverages) for the National Objectives Framework process. Additionally, Specified Vegetable Growing Areas are identified in two specific regions (not Otago) to address the relationship of food production with food security and domestic food supply.

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<sup>4</sup> Final%20report%20%28Spatial%20Planning%20Bill%29 (2).pdf

49. I was not involved in the visioning consultation process but note that food production values are expressed in the asnotified visions of four of the five FMUs.

LF-VM-O2 – Clutha Mata-au FMU vision

(7) in the Dunstan, Manuherekia and Roxburgh rohe:

(b)(ii) innovative and sustainable land and water management practices support food production in the area and reduce discharges of nutrients and other contaminants to water bodies so that they are safe for human contact, and

LF-VM-O3 – North Otago FMU vision

(6) innovative and sustainable land and water management practices support food production in the area and improve resilience to the effects of climate change.

F-VM-O4 – Taiari FMU vision

(8) innovative and sustainable land and water management practices support food production in the area and improve resilience to the effects of climate change.

LF-VM-O6 – Catlins FMU vision

(6) healthy, clear and clean water supports opportunities for recreation and sustainable food production for future generations.

50. In recommending the new region-wide objective and redrafted FMU and rohe visions, the s42A report writer makes the following statement:

I acknowledge that there are many commonalities between the visions as notified and, in some cases, subtle differences (with a lack of clarity about whether that was intentional or not). I agree with DOC that the visions are inconsistent in their structure, content, and drafting and that this should be addressed so that the visions are clear and consistent.<sup>5</sup>

<sup>&</sup>lt;sup>5</sup> Para 890, s42A Hearing Report, pORPPS, Freshwater

- 51. Having not been involved in the visioning exercise I am also unable to clarify if the differences in the visions as notified were intentional or not, but I assume that given these were developed through consultation that this was deliberate and an expression of a FMU or rohe vision from that process. The evidence of Leanne Roberts for HortNZ sets out the grower's input into the process.
- 52. I would be uneasy recommending a substantive re-write that might misinterpret the outcomes of that process. The visions might be inconsistent in their structure, content, and drafting, but I don't see that a problem as long as these are clearly freshwater visions (as per cl 3.3 of the NPSFM) that relate to the FMU or part of an FMU as developed through engagement with communities and tangata whenua.
- 53. In recommending a new region-wide objective, the s42A report writer makes the comment that this could not technically be considered a long-term vision under clause 3.3 of the NPSFM and has not 'specifically called this a 'regionwide vision'. I have no issue with the new objective but am concerned that the substantive amendments to the notified visions, means that something may have been lost from the engagement exercise.
- 54. The recommendation of the s42A report writer is that LF-FW-O1A(7) replaces:
  - LF-VM-O2(7)(b)(ii),
  - LF-VM-O3(6) and
  - LF-VM-O4(8).
- 55. The new region-wide objective to read:

(7) innovative and sustainable land and water management practices provide for the health and wellbeing of water bodies and freshwater ecosystems and improve resilience to the effects of climate change, and

56. The new objective removes the reference to specific activities and instead focuses on the outcome sought in the water bodies. The s42A report writer states that in my view, although food production was a matter specifically raised by communities, the key part of these references is the focus on practices, rather than the particular use they are supporting.

- 57. This is a worthy objective but new LF-FW-O1A(7) does not deliver a vision for food production in the context of a longterm vision for freshwater for the Dunstan, Manuherekia and Roxburgh rohe, the North Otago or Taiari FMU.
- 58. LF-VM-O6(6) does for the Catlins FMU vision.

(6) healthy, clear and clean water supports opportunities for recreation and sustainable food production for future generations.

- 59. This expresses clearly what the community and tangata whenua want the Catlins FMU to be like in the future.
- 60. As above I consider new LF-FW-O1A(7) a worthy objective, applicable region-wide and not activity specific. However, the community engagement determined that more nuanced, food production activity related long-term visions for freshwater were sought in the Dunstan, Manuherekia and Roxburgh rohe, the North Otago and Taiari FMU.
- 61. In my opinion the visions for the Dunstan, Manuherekia and Roxburgh rohe, the North Otago FMU, and Taiari FMU, could be amended to reflect the wording proposed in new LF-FW-O1A(7), amended to focus on food production.

(7) innovative and sustainable land and water management practices **support food production and** provide for the health and well-being of water bodies and freshwater ecosystems and improve resilience to the effects of climate change.

62. If the substantive vision statement re-write recommended by the s42A report writer is accepted, then as an alternative, new LF-FW-O1A(7) could be amended as above to provide a region wide objective that seeks to achieve the same outcome for freshwater across the region.

# LF-FW-O8

- 63. The submission of HortNZ sought an amendment to LF-FW-O8 to include the wellbeing along side the health of people and thriving Mahinga kai in clause 1. The s42A recommendation is to delete LF-FW-08 and include an objective for freshwater that addresses all of the matters contained in LF-FW-O8 as notified.
- 64. The new clause proposed in LF-FW-O1A is as follows:

(6) the health of the water supports the health of people and their connections with water bodies,

- 65. The s42A report writer does not consider that people providing for their social, economic, and cultural wellbeing is an outcome for freshwater – rather it is an outcome from using freshwater and that the objective should be focused on achieving healthy freshwater as a way to support wellbeing.
- 66. I don't disassociate the two elements, and in supporting peoples' connections with water bodies as proposed in LF-FW-O1A(6) well-beings are recognised. In my opinion explicitly recognising this in LF-FW-O1A(6) provides a clear objective for freshwater regionally.
- 67. LF-FW-O1A(6) is in my opinion better expressed as:

(6) the health of the water supports the health <u>and</u> <u>wellbeing</u> of people and their connections with water bodies,

## LF-FW-M6

- 68. HortNZ submissions on LF-FW-M6 sought changes to ensure freshwater allocation and use decisions recognised domestic food security.
- 69. A key recommendation of the s42A report writer is to include a new policy LF-FW-P7A on water allocation and use. That new policy would recognise an allocation need (within limits) for 'land-based primary production'. This accords with the acknowledged significant benefits of these activities on highly productive land and the National Policy Statement for Highly Productive Land 2022 (**NPSHPL**).
- 70. I support the s42A report writers' recommendation on this matter.
- 71. I note the evidence of HortNZ identifies that future allocation and limit setting decisions will need to recognise other food production systems that do not meet the definition of landbased primary production in the NPSHPL and may or may not be on highly productive land (HPL);

land-based primary production means production, from agricultural, pastoral, horticultural, or forestry activities, that is reliant on the soil resource of the land.

72. As described by HortNZ, indoor and covered cropping activity that may not be soil reliant is increasingly becoming a critical

component of the national food production system, responding to climate change, increase food demands, environmental effects.

73. Recent guidance from MfE on the NPSHPL has highlighted that non-soil reliant hydroponic growing systems were excluded from the definition of land-based primary production as hydroponic growing systems occur inside buildings and are not "reliant on the soil resource of the land". The guidance prompts local authorities to ensure there is sufficient non-HPL land available for primary production activities and other rural activities that do not directly rely on the versatility of the soil but still need to locate in a rural environment.<sup>6</sup>

## CONCLUSION AND RECOMMENDATIONS

- 74. I agree that the pORPS is an appropriate response to the resource management issues in Otago and consider that except for improvements that could be made to some provisions to clarify food production values as they relate to freshwater, the pORPS is the most appropriate way to achieve the purpose of the Act.
- 75. Those improvements include:
  - (a) Amend SRMR-15 Freshwater demand exceeds capacity in some place

# Context

Population growth and land-use intensification in urban and rural environments can create increased demand for freshwater for human consumption, irrigation, <u>renewable electricity</u> <u>generation</u> and other **economic** uses.

# Impact Snapshot - Social

Ensuring appropriate freshwater supply for human use-is available is essential, including as part of planned urban growth and to support rural communities. It is possible this may require consideration of additional freshwater storage in the future. The region's freshwater assets also support a range of recreation uses, for example

<sup>&</sup>lt;sup>6</sup> <u>Page 56.</u> <u>National-Policy-Statement-HighlyProductive-Land-Guide-to-implementation-</u> <u>March-2023.pdf (environment.govt.nz)</u>

camping, fishing, water sports, and swimming. These values are strongly linked to environmental, <u>health</u>, <u>landscape</u> and <u>aesthetic</u> is essential. values and as such, reduced environmental flows have a corresponding negative impact on social and cultural values, <u>including people's wellbeing</u>. <u>For the wider community, water is a source of kai</u> for harvesting and food production.

(b) Amend SRMR-16 – Declining water quality has adverse effects on the environment, our communities, and the economy

#### Context

Water quality affects a wide range of environmental health factors, human <u>health and</u> survival needs, and cultural, social, recreational, and economic uses. Some of the biggest impacts on water quality in Otago are considered to come from agriculture and urbanisation, through diffuse discharges and point source discharges.

Impact Snapshot - Economic

Water pollution (from nutrients, chemicals, pathogens, and sediment <u>and other</u> <u>contaminants</u>) can have far-reading effects potentially impacting <u>food production</u>, tourism, property values, commercial fishing, recreational businesses, and many other sectors that depend on clean water.

Impact Snapshot - Social

For the wider community, water is a source of kai and for harvesting and food production. Water is also a source of recreation, including swimming, fishing and water sports. There are multiple dimensions to the way water quality impacts on peoples' interaction with water bodies, including environmental, health, landscape, and aesthetic factors. (c) Amend the visions for the Dunstan, Manuherekia and Roxburgh rohe, the North Otago FMU, and Taiari FMU or as an alternative amend LF-FW-O1A as follows:

> innovative and sustainable land and water management practices **support food production and** provide for the health and well-being of water bodies and freshwater ecosystems and improve resilience to the effects of climate change.

(d) Amend LF-FW-O1A as follows:

(6) the health of the water supports the health **and wellbeing** of people and their connections with water bodies,

## Vance Hodgson

28 June 2023