ACTION FOR HEALTHY WATERWAYS – CONSULTATION

Have your say
The Government is asking New Zealanders for their views on proposals to stop freshwater health getting worse and to restore waterways to a healthy state in a generation. MfE have prepared a discussion document setting out the proposals, which is available on their website. Their discussion document can be found at the following address: https://www.mfe.govt.nz/publications/fresh-water/action-healthy-waterways-discussion-document-national-direction-our

Questions from the discussion document have been grouped by theme, but answers can be provided to specific questions if preferred.

Personal Information

Company name: Greenstreet Irrigation Society Limited
Given names*: Ben
Surname: Shearer
Contact person: Ben Shearer

Submitter type (please select one)*:
○ Individual
○ NGO
☒ Business/Industry
○ Local Government
○ Central Government
○ Unspecified/Other

Greenstreet Irrigation Society Ltd
C/- Irrigo Centre Ltd
Personal details removed
Who Are We?

Greenstreet Irrigation Society Limited (GISL) was formed in 1974. The scheme operates within the confines of the North and South branches of the Ashburton River and has an irrigation command area of approximately 2,800 ha.

The land irrigated by water from the scheme is used for a mixture of dairy, dairy support, sheep, dry stock and cropping. Until relatively recently the scheme has predominantly utilised border dyke irrigation, although in recent years there has been a significant shift towards spray irrigation. The change to spray irrigation has largely been as a result of drilling deep bores and changing from taking surface water to deep groundwater. The drilling of deep bores, together with the introduction of the infrastructure required for spray application has come at a significant cost to Scheme members.

One of the main drivers for the move to using deep groundwater instead of surface water has been the fact that the management regime for the river will change shortly with a significant increase in minimum flow restrictions. Consents to take water from the river, including hydraulically connected groundwater consents, are currently within a consent review process to give effect to higher minimum flows set out within the ECan Land and Water Regional Plan (LWRP). This is seen
as a good thing for the river, although means significant investment is required by Scheme members.

Although the Scheme is located between the North and South branches of the Ashburton River, these are not the only surface water features for the Scheme to consider. There are a number of spring fed creeks that run through the area, which discharge to the Ashburton River.

Over the last few years Scheme members have been drawing up Farm Environment Plans (FEP’s) and have been implementing changes on farm to ensure that their farming operations follow good management practices. Many Scheme members have converted from border irrigation to spray irrigation. This change, in conjunction with the introduction of FEP’s, will have resulted in significant improvements in the environmental effects that occur as a result of farming land within the Scheme boundary.

The LWRP has been operational in our area since 2012. This is a “hold the line” Regional Plan, which limits land use intensification, requires consents for farming activities and implementation of Good Management Practice nitrogen loss rates.

The Ashburton River generally has high quality water in the upper North and South Branches, but raised nitrate and increasing nitrate and phosphorus trends in the lower north branch. The main-stem of the Ashburton River downstream of State Highway 1 has had high nitrate levels in the past, although there has been improvement since the removal of point source discharges from the Ashburton township (sewage, landfill, storm-water and industry discharges). However, water in this reach of the river is consistently unsafe for swimming due to faecal contamination, which is predominantly due to the presence of large riverbed bird colonies.

Given our experience and specific geographic context, we would like to provide feedback on some aspects of the proposed Freshwater package which affects our scheme and shareholders.

**General responses to the proposals**

**Proposals as a whole**

*please refer to questions 1-3 on page 19 of the discussion document*

GISL support the main intent of the Freshwater package. Most of the changes proposed are likely to help ensure water quality improvements. However, we believe a greater emphasis should be placed on enabling catchment scale solutions and targeting actions based on risk will achieve better, more balanced outcomes. National bottom lines for all types of rivers and streams i.e. the one glove fits all approach, will not result in appropriate outcomes.

**Impacts and implementation**

*please refer to questions 4-6 on page 19 of the discussion document*

We are concerned about the impact of the proposed 1 ppm DIN bottom lines. There is limited data available for the tributaries of the Ashburton River and so we are not certain of the extent to which this bottom line may impact upon Greenstreet scheme members. However, we note that other spring fed lowland creeks and drains in the Mid-Canterbury area will require mean nitrogen loss reductions below that of pre-development land use which will critically impact upon our thriving and vibrant community. Whether there would be similar effects within Greenstreet is unknown, although significant impacts upon other areas of our District will impact upon our community.

We are also concerned about the minimum 5 m setback from waterways and a lack of clarity around where the consents for intensification apply as we currently operate under the LWRP framework in
Canterbury, which already addresses these issues. Given the topography, climate and soils in our catchment, the setbacks required from our existing farm planning regulations will be sufficient to achieve the ecosystem health outcomes.

Lastly, we have experience with Farm Environment Plans and, while we support their implementation, we are aware of the resourcing challenges ahead and are concerned the high qualification standards needed will limit the uptake of farm plans and audits as we do not believe there are sufficient people available to meet the proposed targets.

Questions on the proposed amendments to the National Policy Statement for Freshwater Management and ecosystem-health aspects of the proposed National Environmental Standards for Freshwater

Te Mana o te Wai

please refer to questions 9-12 on page 36 of the discussion document

GISL does not support the concept of Te Mana o te Wai i.e. water first, we also feel that any hierarchy of obligations is best served through an amendment of Section 5 of the RMA, not a National Policy statement.

2.1 Objective currently states:

"The objective of this National Policy Statement is to ensure that resources are managed in a way that prioritises:
 a) First the health and wellbeing of waterbodies and freshwater ecosystems; and
 b) Second, the essential health needs of people; and
 c) Third, the ability of people and communities to provide for their social, economic, and cultural wellbeing, now and in the future"

The above objective could be interpreted as suggesting that (b)...essential health needs of people is subservient to (a)...health and well-being of waterbodies... while (c).... ability of communities to provide... is subservient to both (a) and (b).

If this is indeed the case, then it is likely much economic activity that is currently taken for granted will be seriously compromised, with flow-on impacts in terms of both employment and community health and wellbeing, both of which are dependent on sustainable economic activity.

Perhaps even more importantly, it may well upend all previous case law about making a reasonable judgement and balancing values as per Part 2 of the Resource Management Act (RMA).

It is significant that the NPS–FM still needs to be interpreted within the construct of sustainable management (Part 5 of the RMA) to enable Regional Councils to appropriately consider the level of protection, use and development i.e. not development everywhere and not protection everywhere.

As currently framed, the NPS-FM would be a massive challenge for communities to prioritise environmental quality above all else, in every situation, everywhere. It would appear to completely miss the point that we are not starting from a blank sheet of paper, and that the environment and landscape have changed massively over the last century or so.

Appendix 1A (Compulsory values – 1 Ecosystem health – last para p.24) states: “In a healthy freshwater ecosystem, water quantity, quality, habitat and processes are suitable to sustain
appropriate indigenous aquatic life as would be found in a minimally disturbed condition (before providing for other values).” Given the current environment, and the changes made over many decades, this statement appears completely unrealistic as a goal for many parts of NZ. While the general consensus is for improved water quality, it must reflect the state of the current environment to some degree, not a hypothetical return to the environment (including low population) we had two centuries ago.

Water supports our people as much as our people support the water. We feel it is important to recognise the synergistic relationship between the health of our water with the health and wellbeing of our people. By setting the ecosystem health of the water above all else, we risk significant degradation of the wellbeing of the people and communities who should benefit the most from these proposals.

One of the problems with the concept of Te Mana o te Wai will be the unintended consequences of adopting this philosophy. Clearly there is potential for there to be significant adverse effects upon our economy and community. In addition to this the approach poses some interesting questions and dilemmas specifically related to catchments such as the Ashburton River. The major water quality issue within the Ashburton River is faecal contamination which is linked predominantly to the presence of large riverbed bird colonies.

These bird colonies include the endangered Black Billed Gull. If we really adopt a “water first” philosophy and make the necessary changes to ensure that we meet the national bottom lines, what should then happen to the birds that call the Ashburton River home? At the present time the community invests time and money to help encourage and assist the nesting birds. However, this does not support the “water first” approach and so presumably this work should stop and the birds should be discouraged from nesting in the river.

It seems unlikely that this will occur, which suggests that the approach required is catchment specific and that there needs to be a balance of many key attributes. The Wheel of Water research programme\(^1\) looked at collaborative decision making for setting water quality and quantity limits in New Zealand. The project supported integrated decision making and processes that take into account environmental, economic, social and cultural implications at the catchment scale. This type of approach ensures that outcomes are optimised and that appropriate and informed decisions are able to be made.

Such balancing within the limit setting process should be done collaboratively, as has already been the case for many catchments within the Canterbury Region.

**Proposed Relief**

- The health of the water is equal to the health of the people
- Limit setting needs to be on a localised scale incorporating a balancing approach to the many attributes within the specific catchment
- Changes to the hierarchy of obligations should be through amending the RMA

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\(^1\) [http://flrc.massey.ac.nz/workshops/13/Manuscripts/Paper_Snelder_2013.pdf](http://flrc.massey.ac.nz/workshops/13/Manuscripts/Paper_Snelder_2013.pdf)

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New planning process for freshwater and redrafted National Policy Statement

please refer to questions 17 on page 36 of the discussion document and questions 40-42 on page 53 of the discussion document

We support the need for improved planning processes to speed up the implementation of regional plans and the use of independent panels to hear and review submissions. However our experience with operating under the ECan Act has meant planners have needed to truncate the consultation process and investigation of solutions to the point where planning policies and rules have been created with fundamental flaws, unable to be reviewed at Environment Court or meets the points of law criteria for an appeal.

We support Barrhill-Chertsey Irrigation Limited’s submission which details their experience with the introduction of the Farm Portal in Plan Change 5 of the LWRP.

We also support Canterbury Regional Council’s submission to avoid using Councillors as the community representatives on the independent hearing panels.

Proposed Relief
- Ensure Councillors are not included in panels to hear submissions
- Ensure significant matters of merit can still be considered by the Environment Court

Nitrogen, phosphorus, and sediment attributes

please refer to questions 20-21 and 30-35 on pages 52 and 53 of the discussion document

GISL do not support the inclusion of a Dissolved Inorganic Nitrogen attribute. We support IrrigationNZ, DairyNZ and Canterbury Regional Council’s assessment of the inappropriateness of standardised limits for some attributes. In particular, we support the following comment from IrrigationNZ’s submission:

“In principle when setting national bottom lines, the following should be true:

- The attribute and its level should be effects based.
- For a single attribute to be set as a national bottom line, the resulting effect or risk of effect should be consistent across New Zealand.

It is our view that a number of national bottom lines do not meet the above principles while others do. The attributes that do in our opinion are:

- E. coli for contact recreation
- Dissolved Oxygen (DO) for ecological health
- N Toxicity for ecosystem health
- Sediment effects on aquatic habitat².
It is our understanding the relative effects of the proposed national bottom line concentrations for DIN and DRP can range from benign to severe depending on the receiving environment and ecosystem health can vary widely with the same nutrient concentrations in different parts of the country.

Being sandwiched between the North and South branches of the Ashburton River, and with a number of creeks running through the catchment which discharge to the Ashburton River, it is likely that farming practices within our scheme will have some impact upon downstream water quality. However, the contribution of total downstream river flow that water drained from properties within our scheme will make to total river flow, will be small. Because of this, significant reductions in nutrient losses from farms will be required to achieve only small improvements in river water quality.

The following graph shows the total oxidised nitrogen for water samples taken from the Ashburton River main stem (State Highway 1 Bridge) over the last 10 years. The graph does not identify an obvious trend. The mean over the last 5 years is 0.97g/m$^3$. Although this may meet the proposed DIN bottom line, because we do not know the DIN concentrations of water in the creeks within our Scheme, we are unsure what impact a proposed DIN of 1g/m$^3$ may have upon the scheme.

![Figure 2: Total Oxidised Nitrogen samples for Ashburton River at SH1 (Source: LAWA)](image)

GISL support Canterbury Regional Council, IrrigationNZ and Amuri Irrigation Collective's submissions questioning the robustness of the science behind the 1ppm DIN limit, particular the lack of consideration of the context of the physical nature of the waterbody. While there are general correlations between periphyton growth and elevated DIN levels, there is significant variation depending on the flows and bed of the waterway, availability of other limiting nutrients, and physical habitat. Due to these variabilities, we are concerned about the appropriateness of a single standardised national bottom line for a DIN attribute.

3 For instance, in rivers with warm temperatures and long accrual times.

4 Waipahi River at Cairns Peak has a median DIN level of ~1mg/L and a median MCI score of 108.3 while Waiwera at Maws Farm has a median DIN level <1mg/L and a median MCI score of 84.5. State of the Environment Surface Water Quality in Otago 2006 to 2017. ORC report available at [www.orc.govt.nz/media/6957/final_orc_soe_report_2006_to_2017.pdf](http://www.orc.govt.nz/media/6957/final_orc_soe_report_2006_to_2017.pdf)

5 LAWA on-line data
In addition to this there are some significant gaps in understanding between what occurs at the farm scale level and what impact this may ultimately have upon stream water quality. Because of this there is not a clear understanding of cause and effect. This means that we have little robust understanding of the land use changes required to meet the proposed bottom lines and therefore have little hope of reliably assessing what the effects may be of striving to achieve them. Further detailed studies and research are required to help fill such gaps in current understanding.

Although current understanding of cause and effect may be limited, it is clear that significant changes to land use to achieve the DIN bottom line will have a detrimental effect on the entire fabric of the Mid-Canterbury community. This will impact upon our scheme members whether or not significant changes will be required within the scheme boundary itself. Alternative land uses which could achieve large reductions in nitrogen losses, such as forestry, employ significantly fewer staff, have less annual turnover, spending less in the community for goods and services. In addition to this, land values and land owner equity will be reduced with flow-on effects including lower rates income for Councils.

A smaller population will mean smaller schools and fewer activities, providing fewer opportunities for connection. We know isolation and a lack of connection severely impact upon mental health, as does stress and loss of identity. GISL are concerned these wider social impacts have not been fully considered when setting a national DIN bottom line, particularly when the science does not support a consequential improvement in ecosystem health from this proposal.

**Proposed Relief – Option 1: Maintain and Improve DIN**
Our preferred relief supports Canterbury Regional Council and IrrigationNZ’s submission to set a national bottom line of current levels in a water body, with plans in place to improve where site-specific assessments identify more applicable limits for a waterbody.

**Proposed Relief – Option 2: Permit Exceptions**
GISL support the inclusion of exception criteria, where a DIN limit can be set at a toxicity level or re-evaluated through a regional planning process. GISL accepts that the 1ppm DIN limit may be an appropriate limit for most waterbodies in New Zealand. However, due to natural physical features of some water bodies, the limit is simply unattainable in some waterbodies and exceptions should be made on a case by case basis.

**Proposed Relief – Option 3: DIN Limits by River Classification**
Identify appropriate DIN bottom lines by river type. GISL believe a classification system will provide certainty in planning processes and more refined limits, however recognise a classification system still does not fully take into account the physical context of a particular waterbody and is therefore our least preferred relief option.

**Flows and metering**
*please refer to questions 37 and 38 on page 53 of the discussion document*
GISL support IrrigationNZ’s position on water metering and telemetry requirements.

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6 River type defined as one of the 9 river classes of the NZ River Environment Classification System
Improving farm practices

Restricting further intensification

please refer to questions 51-53 on page 80 of the discussion document

Effects on existing consented land use activities
GISL support the introduction for restrictions in intensification where no controls have yet been implemented through regional plans. However, Gisl and their shareholders have been operating under the Canterbury LWRP since 2012.

The LWRP is a “hold the line” regional plan, introducing limits on intensification and requiring all but low risk farming activities to hold a resource consent either as individuals or collectively through enterprises or irrigation schemes. These consents require implementation of farm environment plans, audits and compliance with strict nutrient loss limits. As of 2020, nutrient limits are restricted further as nitrogen loss limits are limited to the 2009-13 land use activity operating at Good Management Practice. On average, this is a 30% reduction of nitrogen losses.

The tight restrictions of consented nitrogen loss limits effectively control winter grazing, dairy conversions and increases in irrigation area, as an individual is unlikely to comply with their current legal obligations, unless they can demonstrate some other efficiency gains in order to remain within their nutrient cap. Controls of other contaminants, such as pathogens and sediments, are addressed and audited through Farm Environment Plans where the farmer will need to demonstrate Good Management Practice of the new activity to specifically mitigate these effects.

Obtaining a separate resource consent in order to manage winter grazing, irrigation or significant changes in land use will merely increase cost and complexity, without any further benefits to the environment.

Proposed Relief – Consents for Intensification
GISL propose all regions which have operational regional plans limiting nitrogen losses and audited farm environment plans are excluded from the temporary intensification consenting requirements.

Management of Intensification of Commercial Vegetable Growing Activities
GISL do not support the requirements for all operators to obtain resource consent for increasing their productive area.

Small market gardens often have a large number of short rotation crops, which are challenging to model as Overseer’s nutrient model’s assumptions become significantly less accurate for blocks less than 4 ha in size. An Overseer nutrient budget is also enormously complicated, as the monthly modelling inputs cannot account for the short rotation crops grown (e.g. 6 weeks). Furthermore, market gardens often only supply the domestic market, therefore they will need to grow in order to ensure fresh produce is available at a reasonable price. Requiring consent and demonstration of no increase in contaminant discharges will likely prevent growers expanding at all, which will only increase the costs of these products to the consumers.

GISL’s other concern is that these requirements to not take into consideration the risk the activity may have on the environment.

Proposed Relief – Commercial Vegetable Growing Operations
GISL support Option 2 – New operations to be managed above Good Management Practice, however only for properties greater than 4 ha with waterways and greater than 50 ha without waterways.
Implementation Issues
Members of GISL have been gaining experience over the last few years on improving their environmental practices having developed and implemented Farm Environment Plans and securing Land Use Consents for farming which require a robust auditing regime.

From our experience, further clarity is required about the definition of “dairy-support” if an increase above 10 ha is to be a trigger for consent. From our experience, “dairy-support” consists of a considerable range of activities from intensive winter grazing, to rearing calves and replacement stock, to growing grains for feed, and it is often interchangeable within mixed livestock operations or arable systems.

GISL are also concerned about blanket rules requiring consent for increases in a number of activities above 10 ha, without consideration of the risk the property actually presents to the environment. In sensitive catchments, allowing changes up to 10 ha may not address issues, however in other areas, such as the Canterbury Plains, 95% of properties do not have a natural water body and these changes can occur without any potential impact on surface water quality.

Proposed Relief – Implementation
GISL seek to limit consents for “dairy-support” activities to only “intensive winter grazing” activities, which is defined by the Canterbury LWRP as:
“...the grazing of cattle within the period of 1 May to 30 September, where the cattle are contained for break-feeding of in-situ brassica and root vegetable forage crops or for consuming supplementary feed that has been brought onto the property.”

Farm plans and Audits
please refer to questions 54-57 on page 80 of the discussion document

We support the implementation of farm plans and auditing of the freshwater modules. Most GISL shareholders have completed farm environment plans and many have consents in place with associated auditing requirements. Feedback from the auditors and shareholders have indicated the process is very engaging and helpful in improving on-farm performance.

Our main concern is about the capability of industry to implement compulsory farm plans by Certified Farm Planners by 2025. Our understanding is that it is difficult to attract and retain qualified staff to undertake these activities.

We are also concerned about the requirement to ensure all farm plans are developed by a Certified Farm Planner. Not only will the qualifications and experience requirements severely limit the pool of people available to complete this work and increase the time needed to train new people into this area, but it will also reduce the engagement of the farmers within the process.

Farm plans are also only one part of an Environmental Management System (EMS), where good practice requires a Plan-Do-Check-Act7 model of continuous improvement. A critical part of this process is the Audit of the plan, as well as the review of the process in reflection of the feedback from the audit. Federated Farmers recently surveyed their members operating land use consents in Canterbury and found the biggest driver of change was the Audit of their FEP’s. Our experience supports this view, with many shareholders strongly driven by wanting to do well in their audits and genuinely appreciative of the feedback an audit provides.

GISL are therefore concerned insufficient thought has been given to the implementation of the auditing and extension process which will be fundamental to the success of the programme as a whole.

Proposed Relief – Farm Plans
We support the preparation of farm plans by the farmer themselves, with lesser qualified support or through group facilitation programmes. By simplifying the initial set up, you can improve engagement with farmers through lower costs and fewer barriers, as well as initiate this process quicker. Ultimately, all farmers need to be held to high standards of Good Management Practice, therefore inadequate farm plans will be picked up and addressed through the Audit by highly qualified and experienced auditors.

We also propose farm plans are prepared on a catchment basis, targeting the highest risk catchments first within the following timeframes:

- High Risk Catchments\(^8\): 31\(^{st}\) December 2025
- Medium Risk Catchments\(^9\): 31\(^{st}\) December 2027
- Low Risk Catchments\(^10\): 31\(^{st}\) December 2030

Immediate action to reduce nitrogen loss

*please refer to questions 58-64 on page 80 of the discussion document*
GISL support DairyNZ’s submission on these matters, particularly an emphasis on Simple N Surplus as this is a more comparative metric for identifying a risk a property may have for nitrogen loss.

Excluding stock from waterways and Setback Distances

*please refer to questions 65-68 on pages 80 and 81 of the discussion document*
GISL support DairyNZ’s and MHV Water’s submission on these matters. Our primary concern is the lack of consideration for the risk of run-off from a property with the minimum set back and the moving of existing fencing.

GISL agree setbacks from fences are essential for capturing and filtering run-off from properties into waterways, however the size of these setbacks should depend upon matters such as:

- Infiltration rate of the soils
- Risk of high intensity rainfall
- Slope of the land
- Sensitivity of the receiving environment

In some areas, this may mean a 5 m setback is insufficient, while in other areas a 5 m setback achieves no more improvement than a 1 m setback. On the Canterbury Plains, the risk of run-off into waterways is generally low as the soils are free draining, there is relatively low rainfall and the land is relatively flat. In our catchment, setbacks of 1-2 m will adequately capture run-off.

We also refer to the MHV Water Waimanu Farm Case Study, which estimates the costs of replacing the fencing and extending the planting to a 5 m setback at $43 per metre of waterway, or $116,000

\(^8\) Where water quality is deteriorating

\(^9\) Water quality in catchment not meeting bottom-line attributes and either improving or no trend

\(^10\) Water quality in catchment is meeting national bottom-line attributes and either improving or no trend
for the property. This is a significant investment for a farm that is unlikely to result in further improvements in water quality.

Also, the proposed package does not take into consideration the loss of good will with farmers who have invested heavily in their time and capital to adequately mitigate run-off on their property, but whom have an average less than 5 m. Where risks are adequately addressed through Farm Environment Plans and Audits, farmers should only need to extend their setback areas when fences are due for replacement.

Proposed Relief – Setback Distance and Fences
GISL’s preferred relief is for the NES to use setback limits based on a risk matrix, which takes into consideration the major drivers of run-off on a property. We propose the following setbacks based on risk:
- Low Risk: 1 m
- Medium Risk: 3 m
- High Risk: 5 m

Furthermore, we propose existing fences with sufficient setback distances are only moved at the end of the life of that fence.

Controlling intensive winter grazing
Please refer to questions 69-70 on page 81 of the discussion document
GISL support DairyNZ’s submission on these matters.

Feedlots and stock holding areas
please refer to questions 71-75 on page 81 of the discussion document
GISL support DairyNZ’s submission on these matters.

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