



Submission

September 2021

TO THE

**Ministry for the Environment & Ministry for
Primary Industries**

ON THE

**Certified Freshwater Farm Plans Regulations
and Stock Exclusion Regulations: Proposed
changes to the low slope map**

BY

Beef + Lamb New Zealand Ltd

Executive summary

Beef + Lamb New Zealand (B+LNZ) welcomes the opportunity to provide feedback on these key aspects of the essential freshwater package and recognises the Government's willingness to address areas that have been highlighted as of concern.

As a general comment we note that the Freshwater Farm Plan, Stock Exclusion, Intensive Winter Grazing, and Wetland consultations must be addressed together. It is very difficult for us to provide considered feedback on the implications of policy approaches that rely upon a Freshwater Farm Plan until there is a common understanding of what a Freshwater Farm Plan is.

We are broadly supportive of the proposals within the Certified Freshwater Farm Planning discussion document but have some concerns. More specifically we note there are a range of remaining issues with what is proposed. Our concerns are underpinned by principles of transparency, practicality, cost management, effectiveness and efficiency, and a focus on achieving wider environmental outcomes.

We have concerns about the ability to implement these proposals in a way that is effective and reflective of the effects-based approach embedded within the Resource Management Act 1991 and that must be used when regulating farm environmental management within a catchment context. Time and space must be provided to get the required structures and guidance in place prior to the mandatory implementation of certified freshwater farm plans. We do not believe that *all* farm operators should be required to have a certified freshwater farm plan. The requirement to have a Certified Freshwater Farm must be grounded in the true need for these tools given the catchment context and risks posed by different kinds of farming operations or activities.

Depending on the options chosen and further detail provided, there is a strong risk that Certified Freshwater Farm plans will be overly prescriptive and limit farmer engagement with freshwater and ecological management. We require assurances that costs can be effectively managed and farmers' consumer rights are protected before we can support farmers paying for freshwater farm plan certification and audit. We want to ensure the retention of a risk-based approach, and that each farm's unique circumstances and aspirations are taken into account when looking at how freshwater, or other natural systems or resources, can be managed. Different certification approaches and requirements could be applied based on the risks posed by different farming operations in different locations.

Certified Freshwater Farm Planning also needs to consider the wider set of pressures faced by farming communities and the opportunities that collective action can provide. This includes the adoption of certified freshwater farm plans utilising existing infrastructure within assurance programmes to reduce duplication, costs and administrative burden, and protect farmers' privacy. Only by considering using a 'bottom-up' approach tied to existing programmes and community aspirations will the desired environmental outcomes be achieved. Although the proposals do not address the wider implementation framework that these regulations will sit within, it is imperative that farmers are provided with a variety of means to complete their certified freshwater farm plan in a way that aligns with their community and personal aspirations or values.

Given the relatively high level of the content in the discussion document, we request a second consultation on the detailed set of regulations and guidance determining the Certified Freshwater Farm Plan process. Given B+LNZ and the sectors long and deep experience in Farm Planning support assurance schemes we request that the government enters into a co-design approach from this point forward with the development of the Certified Freshwater Farm Plan and the wider Farm Plan assurance scheme with designated B+LNZ staff and other nominated industry personnel. This will be especially important if the proposed timeframes for implementation in the first half of 2022 are maintained.

With regard to the stock exclusion proposals, we do not agree that the proposed changes to the stock exclusion regulations provide enough flexibility for regional councils to achieve results in diverse farming landscapes. We propose an alternative approach, as well as some suggested changes to the Government's proposed approach if our alternative is not favoured. This could include slight changes to the definition of the 'low slope' map and 'wide river' to better accommodate the diversity of landscapes and farming systems in Aotearoa New Zealand.

We have combined our submissions on the Freshwater Farm Plan and Stock Exclusion consultations into one document. We will provide further submissions on the Intensive Winter Grazing and Wetland proposals in the coming weeks. In this document, we first address the content outlined within the Freshwater Farm Plan

regulations discussion document and provide a summary of our views. Then, we submit an alternative approach for managing stock exclusion from waterways and submit our views on the proposed Stock Exclusion regulations.

Discussion on freshwater farm planning starts on page 5 and on page 21 there is a detailed list setting out what we oppose, support and want to see noted.

Discussion on the proposed changes to the low-slope map for stock exclusion starts on page 30.

1. Introduction

Beef + Lamb New Zealand (B+LNZ) welcomes the opportunity to provide feedback on Certified Freshwater Farm Plans Regulations and the proposed changes to the low slope map incorporated by reference into the Resource Management (Stock Exclusion) Regulations 2020.

B+LNZ is the industry-good body funded under the Commodity Levies Act through a levy paid by producers on all cattle and sheep slaughtered in New Zealand. It is the organisation mandated by sheep and beef cattle farmers to speak on their behalf.

The sheep and beef industry is diverse, adaptable and very resilient. We have continually made eco-efficiency gains in how red meat is produced. Collectively sheep and beef farmers have maintained meat production, while decreasing the total number of animals farmed and their environmental footprint. This has been done off the back of an ongoing search for knowledge and science-based practical on-farm changes. If a robust science-based rationale, and a practical pathway for change can be provided, sheep and beef farmers have shown repeatedly that they will change farm practices and change them rapidly. Much of the concern from farmers and B+LNZ as their representatives is because what has been proposed to date has not meet the robust science based or practically implementable thresholds we know is required to make effective change.

Sheep and Beef farmers have also protected significant areas of native biodiversity and are stewards of the second largest estate of native bush, only exceeded by the Crown. This has been done in the context of losing some of their most productive land to other land uses (a total of four million hectares over 30 years). Sheep and beef farmers are proud kaitiaki of the land and, while recognising more can still be done, are proud of their sector's sustainability and environmental integrity.

B+LNZ's vision is 'Sustainable and profitable farmers, thriving rural communities, valued by New Zealanders'. An important part of B+LNZ's role is investing in building capability and capacity to support a vibrant, resilient, and profitable sector based around thriving communities. Protecting and enhancing New Zealand's natural capital and economic opportunities through a holistic approach to environmental management is fundamental to the sustainability of the sector and to New Zealand's wellbeing for current and future generations.

We believe that policy and implementation pathways should enable and empower individuals and communities to build resilience across all their wellbeings¹. Policy approaches and pathways need to provide for clear and time-bound outcomes that provide business and community certainty. They must also be considerate of the pressures their intended audience is facing and what additional change, or the threat of change, could mean.

Regulatory requirements must also be commensurate with the impact of the particular activity, farming system, or land use that the provisions apply to, and rules and standards need to be effects-based, equitable across land uses and farming systems, and provide accountability for contaminants.

Flexibility must be provided for farmers to adapt and innovate to meet the multiple demands on their businesses both environmentally and from markets, and policy frameworks need to empower and incentivise the practice changes required to deliver on an environmentally, economically, socially and culturally sustainable future for Aotearoa New Zealand.

Along with other industry groups and regional councils, B+LNZ have been actively supporting farmers to engage, co-develop and take ownership of farming practices and programmes that support reduced contaminant risks and loading (Knook, 2020). B+LNZ has been a leading proponent of farmer-developed and farmer-led farm plans as an effective on-farm management tool that guides decision-making and provides for innovation and adaptation.

We have been actively supporting farmers to develop a variety of farm planning resources for the last decade. This has been through the development of our Land Environment Plan templates, and workshops supporting farmers to complete these. We have refreshed this content and in March 2021 launched the Environmental Module of B+LNZ's Farm Plan. The overall Farm Plan framework seeks to take an integrated

¹ According to the NZ Living Standards framework, 'wellbeings' are the different ways that one can measure the 'capability of people to live lives that they have reason to value.' For more information about the definitions of 'wellbeing' in New Zealand, please read https://www.landcareresearch.co.nz/uploads/public/Publications/Working-papers-and-reports/LC3901_TechnicalReport.pdf

approach to farm and natural resource management, ensuring actions are aligned to the farm's vision and goals and enable the business to capture market opportunities while building resilience into the core farm system.

We are committed to supporting the adoption and implementation of Farm Plans in a manner that supports on-farm management decisions and continues to achieve lasting and/or improved environmental outcomes.

However we have been, and remain, concerned about using farm plans as a compliance tool. The adjustment of farm plans into a more regulatory space does not mean they can't still be used to support farmers to make good decisions. Our guiding principles are that freshwater farm plans should be based on industry-led farm plan approaches, be practical, effects-based and not inputs-based, and ensure the privacy of farmers' data.

B+LNZ wants to provide ways and means for farmers and growers to meet certified freshwater farm plan standards without significant or undue cost or administrative burden. Our preferred way to ensure quality outcomes for both farmers and the natural environment is to have a certified template that farmers can complete. Ideally, the completion of this template could be done independently of external advisors. These template Certified Freshwater Farm Plans would be sufficient to meet requirements and would be audited and assessed on their quality content and implementation and adjusted as required overtime. We acknowledge that this is different from what is currently provided for in the regulations in Part 9a as currently written but seek the opportunity to discuss this further with MfE and Regional Councils.

To be clear, we do not believe that all farmers should be required to complete a certified freshwater farm plan. For those who are required to complete one, we envision that a variety of methods could be used to deliver certified freshwater farm plans. More specifically, farmers should be able to work within certified industry assurance programmes to have their freshwater farm plans certified and audited via processes approved by the national body and regional councils. In all, we welcome the content providing a high-level overview of the certified freshwater farm planning process but submit that the level of detail provided within the discussion document (particularly in the areas of guidance) is insufficient to understand the full impact. We therefore request a co-design approach is taken with industry from this point forward followed by further consultation on the detailed regulations.

We have also been actively engaged with regional councils and Central Government when designing the best ways to manage stock access to waterways. New Zealand's diverse landscapes mean that a rigid and blanket approach will always result in inaccurate assessments of the risks, effects, and resulting management actions that should be taken. We recommend that the s360 regulations are deleted and replaced with a more regional and place-based set of standards. If these regulations are not removed, we seek further amendments based on the proposed changes.

The Freshwater Farm Plan (FW-FP), Stock Exclusion, Intensive Winter Grazing, and Wetland consultations must be addressed together. They are key components of the Essential Freshwater Package that many of our farmers want to ensure can work on-farm to achieve the best outcomes. B+LNZ is disappointed that these four aspects of the essential freshwater package have not been addressed as a package with an overarching consultation. Instead, the materials have different scopes of considerations and do not talk to one another about how integration could best occur. The consultations have also been released at a time of the year that is very busy for our levy payers and the decision to consult at this time likely has a significant impact on the level and quantity of farm operator engagement. This is not public engagement that has the interests of the governed front of mind.

We have asked the Government to take a more considered approach to new environmental rules and these four consultations are a reminder of the importance of getting the rules right before they're released and avoiding re-work. We request to work with officials on how best to ensure changes made can be effective and efficient on the ground.

We have combined our submissions on both consultations into one document. First, we address the content outlined within the Freshwater Farm Plan regulations discussion document and provide a summary of our views. Secondly, we submit an alternative approach for managing stock exclusion from waterways and submit our views on the proposed Stock Exclusion regulations.



2. Freshwater farm plans

2.1 Introduction

Environmental Farm Plans are first and foremost management tools which enable farmers to understand and document the natural resources (land, water and soil) on their farm, then optimise their farming systems within the natural capital² of these resources. Environmental, or wider, Farm Plans provide value to the farming business and are intended to be a living document which informs and underpins day-to-day management decisions as well as wider choices around land uses and farming systems. A detailed Farm Plan captures stewardship and sustainability, recording plans and measurable actions taken (or planned) to address environmental concerns. Being able to demonstrate good practice can also underpin brand assurances to international markets and customers.

Farm Planning has been used as a soil conservation and farm management tool in New Zealand since the 1950s. The role, scope, and purpose of Farm Plans have expanded over time. Their value as a farm or environmental management tool, regulatory requirement, or to underpin market assurance programmes depends on their level of 'farmer-focus' (Stokes et. al, 2021). The more ownership, agency and engagement provided to farmers in the planning process, as stewards of their farm, lands, and waterways, the more power farm plans have to make lasting and sustainable change.

B+LNZ's position is that 'live' Farm Plans 'owned' by farmers are more effective than one prescribed by someone else, irrespective of the qualifications of the person prescribing. Farmers should be involved in the preparation of their own Farm Plan as they have the most comprehensive understanding of their land and farming systems and their active involvement is key to implementing, where required, changes to farm systems or management approaches on the ground to address environmental risks.

Farm planning needs to take a broader approach to sustainability than acting solely as a regulatory compliance tool. Farm planning should consider the economic, environmental, and social wellbeing of a farming business. It can work at different temporal scales and act to provide long-term strategic direction as well as inform day-to-day decision making. Farm planning is predominantly a knowledge connection and project planning tool.

Tailored Farm Environment Plans enable farmers to understand and document their natural resources and the farm's natural capital. This understanding helps farmers record or better identify risk and prioritise actions across their property for the purpose of maintaining and enhancing their natural resources including soil, water quality, and biodiversity. This approach suits the complexity and dynamic nature of the farming

² Natural capital has been defined as the "stocks of natural assets that yield a flow of valuable ecosystem good and services into the future" (Costanza, & Daly, 1992). In terms of farm systems, they include the farm's soils and geology, climate and air, freshwater, and living things (biodiversity).

landscape by supporting active resource management at the farm and paddock scale. This focuses on the natural character of the farm in its catchment context, along with the identification and management of critical source areas. It is an approach which is farm- and catchment-specific, adaptable and which will be effective in improving water quality and health as required.

Farm plans cannot be considered in isolation. They must sit within a wider implementation context that is community-centric in achieving catchment environmental aims, and should integrate environmental management into the wider aims and objectives of a farm business. Support and enablement of industry assurance and Farm Environment Planning programmes such as the red meat sector's New Zealand Farm Assurance Programme (NZFAP and NZFAP+) and B+LNZ's Farm Planning programme is key to this. Catchment community programmes and collectives will also be required to support the effective implementation of farm planning.

B+LNZ submits that tailored integrated sub-catchment management provides the most efficient and effective method to sustainably manage land and water resources in a way which provides for the economic, social, and cultural wellbeing of communities. The sub-catchment is the base planning unit for environmental management, with activity within that unit enabled and empowered through Farm Planning.

The proposals in the discussion document do not provide enough detail for us to really understand how the work done in catchment communities, alongside farmer ownership of community objectives will be retained as certified Freshwater Farm Planning transitions into a compliance tool. The proposals also do not provide us with enough clarity on what 'roles' a Freshwater Farm Plan is expected to play as part of the implementation of the National Policy Statement for Freshwater Management or wider regulatory obligations or consumer demands. FW-FPs should not be seen, or promoted, as the answer on their own. They need to be seen within a broader response that includes regional and catchment planning and consenting. Their role should be to encourage farmer engagement with freshwater (and wider environmental) management and document on-farm risks to freshwater health and their management.

The expectation throughout the consultation document is that a large amount of detail and standardisation would be provided for via 'guidance material' from MfE. There are also significant expectations placed on multiple national entities (likely operating out of central government) to manage the process and confirm its effectiveness.

Depending on the detailed design and implementation, certified freshwater farm planning could become more of a tick-box or 'command and control' exercise predominantly controlled by central government officials or Ministers. We would see this as a massive lost opportunity.

Instead, farm plans must be made by farmers to describe what realistic measures they will take to manage their on-farm risks and stewardship responsibilities. Farmers need the continued flexibility to target the content within a certified freshwater farm plan, and wider environmental or integrated farm plan, to their own situations and aspirations.

We also do not believe that all farmers should be required to complete a Certified Freshwater Farm Plan, regardless of their catchment context or risks that their farming activities pose. The purpose, role, and benefit of a given part of a 'farm plan,' including a certified freshwater farm plan component, will need to be clearly articulated and integrate with other components. In certain circumstances, low-risk farming operations should be exempt from the requirement to complete certified and audited freshwater farm plan. This can consider the farm operators follow an accepted industry-led farm (environment) plan if needed.

It is critical to allow time to get the system up and running before specific deadlines are imposed. We want to see deadlines for the first farm plans that are realistic, not ambitious. The process proposed for the Certified Freshwater Farm Plan must balance the need for quality assurance with the need for pragmatic tailoring of actions and management at the farm level.

It is also critical for B+LNZ and other agricultural entities to contribute to the development and review of the guidance (outside the Resource Management Act) required for the certified freshwater farm plan system to work in practice.

Farm planning is a proven, effective tool for farmers and can be useful for regulators. However, the key to their success is ensuring that their content requirements and purpose are suitable to the context of the local environment and community.

2.2 Detailed content

The content in the discussion document aligns with many of B+LNZ's policy positions which support the provision of practical solutions within the farm planning space. We agree with options presented that have flexibility for farm practice decisions when providing for effects-based management.

We oppose the approaches in some of the options presented which specify activity-based standards. These activity standards would determine what actions farmers would be required to do, and how they need to do it. The management of farm actions in this way is unwelcome. However, there can be a place for process standards.

Process standards can specify the process a farm operator needs to go through to develop their FW-FP and meet requirements. This includes what the FW-FP should consider, and how it can be deemed adequate. Likewise, process standards can provide certainty for accreditors that they have the flexibility to approve farm plans and actions that effectively manage risks given the catchment context (without the need for input standards).

We support having clarity on things a Farm Plan should consider to ensure national, regional, community and farm objectives are met, and a process for setting priorities within this and planning for their achievement over time.

The option chosen for many of the topics within the discussion document will determine our support. In addition, even if our preferred option is chosen, there is not enough detail provided to have confidence that it will effectively deliver on expected outcomes. This is especially the case for determining the appropriateness and prioritisation of actions, the timing options for certification, re-certification, and auditing and the phasing and staging of implementation.

There is not enough detail provided for us to have confidence that Certified Freshwater Farm Plans will be able to deliver on farmers', regulators' and community expectations. In addition, the plans around implementation of the proposed process will need further assessment in as much (if not more) detail as the proposed processes for farm planning content, certification, and auditing.

We are concerned that there is not a continued risk-based approach to planning and environmental management in the preferred options throughout the discussion document. The same risks-based, prioritisation approach we support on farm should also be reflected through in the implementation of farm planning as a regulatory option. This includes prioritisation of rollout to reflect the limits of New Zealand's farm planning capacity (e.g. targeting at-risk regions) and a re-certification and re-audit regime that again focuses on relative risk.

Although it is beneficial to have a better understanding through this discussion document of 'what' is intended to occur, there is not sufficient evidence of analysis on 'how' the process will become a reality. While officials have stated their support for Catchment Community approaches throughout the engagement period (Ministry for the Environment, 34:56-35:05, 2021) this is not clearly articulated throughout the discussion document. Alignment between the preferred standards and processes for Freshwater Farm Plans and implementation approaches is required.

We would need to see further clarification on the Government's intentions before we were in a position to support the widescale adoption and implementation of freshwater farm plans as a regulatory tool. We have concerns about the limited resources within regional councils, agri-business and environmental specialists, and industry bodies. We have further concerns around potential cost, the potential for unnecessary administrative requirements, and potential privacy implications.

Our approach to dealing with this would be to ensure that industry groups, regional councils, and farm plan practitioners are able to co-design the further refinement of the Certified Freshwater Farm Plan system, parties are able to submit their views as part of a second round of consultation on the detailed regulations, that the infrastructure required to complete a suitable Freshwater Farm Plan is in place prior to requirements coming in, and that there is clarity provided on what parts will need to be a flexible work-in-progress and which aspects must be implemented as stated.

A focus on ensuring that any national bodies or regional approval schemes are ready prior to Certified Freshwater farm plan adoption is key. Sufficient and capable agri-environmental specialists who are able and willing to be certified by these groups will also be required. A trial process for Certified Freshwater Farm

Plans could be utilised in certain catchments (prior to the Minister using their powers under Part 9a to require Freshwater Farm Plan adoption) to ensure any bumps in the system can be smoothed out prior to them being locked in regulatory provisions.

Given the limited information and clarity provided, requiring the adoption of Freshwater Farm Plans as early as the first half of 2022 will result in undesirable or ineffective implementation outcomes. We remain committed to working with officials to help manage this risk.

This submission is broken into two parts. First, we have commented on key issues that are relevant from a farmer's perspective when engaging in the Certified Freshwater Farm Planning Process. Then, we have summarised our views on content in consultation document where appropriate.

2.3 Regulatory requirements and their connections

2.3.1 Connections with the NPS-FW and other policy settings

We agree with the information provided on how the freshwater farm plan system fits within regional council planning processes and want to highlight a number of additional considerations as part of this assessment.

First, the use of a Freshwater Farm Plan as a regulatory tool is a relatively new construct. The way this tool fits within the wider planning context will need to be constantly assessed at a local and national level to ensure effective delivery. We see Freshwater Farm Plans as key tools to support the documentation and adoption of good management principles on-farm. The shift from adopting these principles as a matter of practice versus a matter of regulatory compliance is significant. We see it raising a number of integration questions that need to be thought through.

Key amongst these being confusion over how 'national permission' to undertake activities using FW-FPs (e.g. intensive winter grazing) sits relative to existing regional planning rules for those activities. The *King Salmon* case provides a precedent for understanding the hierarchy of regulation, but that will do little to help individual businesses 'know' what to do.

Regional councils and unitary authorities across New Zealand are focused on amending their regional plans in response to the NPS-FW, and so there is little capacity to support individual businesses to see how an increasingly complex set of rules that govern their operations fit together. Reform of the Resource Management Act, and what that might mean in terms of the value of existing legal precedents, only adds to this.

In our experience, being able to provide a consistent, measured and clearly articulated direction is critical to influencing practice change in our sector. We are concerned that the uncertainty of how a number of current regulatory changes and proposals work together could act as a disincentive for actual activity if there is not a clearly understood vision of how they will link together. It will also be important to clearly articulate these linkages at a farm and catchment scale.

The ability for Certified Freshwater Farm Plans to reflect the local objectives and problems within their catchment and sub-catchment is key to ensuring an effects-based, rather than inputs-based, approach is taken to managing freshwater ecological health. The proposed guidance outlining how a farm operator and certifier can define ecosystem health is appreciated and will need to clearly articulate how a certifier or catchment community can assess whether and what improvements to ecosystem health are needed and how farm management actions and practice can support this.

To highlight how on-farm actions are making a difference to freshwater health outcomes, significant investment by councils and farming communities is required to build a stronger understanding of on-farm actions and downstream effects. Changes and trends in freshwater health due to non-point source discharges and land-use change can be very difficult and expensive to measure reliably and accurately. Often a series of measurements over a period of years or even decades is needed to reliably and accurately show environmental changes or relationships between land-use change and freshwater health. This is due to the complexity of freshwater environments and the high temporal and spatial variability that exists (Ministry for the Environment & Stats NZ, 2017; Ministry for the Environment (2004).

These challenges should not prevent the suitable utilisation of Freshwater Farm Plans however.

In the Aparima catchment (six individual sub-catchment groups) in Southland, a farmer survey was conducted in 2019 and 2020. The surveys have shown that farms with farm environment plans were significantly more likely to have water resource management practices (such as stock exclusion, buffer

zones and riparian planting) and nutrient management practices (such as targeted fertiliser use and nutrient budgeting) implemented. Also farms with farm plans were more likely to report sound winter grazing practices (ResearchFirst, 2020).

The results from the Aparima catchment show that farm plans can make a difference to implementing on-farm actions and result in change. Freshwater health is affected by underlying geological and hydrological systems, land use and on-farm actions. The uptake of farm plans and subsequent improvement in uptake of established good farming practices would suggest that implementation of farm plans can lead to better overall freshwater health outcomes.

Monitoring and reporting on the actions within FW-FP can build a better picture of the direct effect that on-farm management choices have on freshwater health outcomes. However, the typical quantitative assessments used (kilometres of fencing along waterways, hectares of highly erodible land managed etc) do not capture the additional benefits or changes associated with people, their farms, and their communities. Assessing the 'success' of FW-FPs only by the actions listed within them, does not capture the wider benefits associated with Farm Plan adoption – e.g. related biodiversity outcomes.

When considering the role of tangata whenua in the freshwater farm plan system, we agree that regional councils should provide the key point of connection (Q2). They need to work with tangata whenua to collate catchment values in a way that is accessible for farm operators and certifiers, and supports their understanding of Te Mana o Te Wai. We agree that individual farm operators should not be expected to engage with tangata whenua on the detail of their Freshwater Farm Plan and instead should be able to rely on resources provided by the regional council in partnership with tangata whenua (Q47).

Further detail on exactly how this will work, however, is lacking. We look forward to working with regional councils and tangata whenua on ways to deliver this. However, this engagement and delivery will take time that is currently not provided for in the proposed implementation timeframes.

2.3.2 The role of 'guidance' and practice standards

Throughout the consultation material, there is continued reference for the development of 'guidance' and 'practice standards' to inform the content and interpretation of the regulations. Regulation of farm practice cannot be too prescriptive due to dynamic interplay with nature and hence requires a mix of adaptive precaution and response as events unfold. Caution is required to ensure the process of identifying adverse effects does not degenerate into overly prescriptive expectations losing sight of pragmatic reasonableness and cost-benefit assessment of actions.

The industry has shown that when given the opportunity, changes on-farm can be swift and supported without the need for detailed lists of what needs to be done to achieve expected outcomes (i.e. practice standards). This has been the case with the Intensive Winter Grazing module development and implementation. We understand the desire to prioritise management of 'higher risk' activities, but there is not sufficient evidence to suggest that greater standardisation equates to more consistent adoption of good management practice or improved environmental outcomes. Rather, unworkable permitted activity requirements have been shown to be extremely challenging to implement on the ground and have potentially tenuous links to clear freshwater health outcomes. Prescriptive standards without evidentiary basis of environmental outcomes is regulation for the sake of regulation. These standards can compromise farmer engagement and undermine the utilisation of time and resources which could be better used to ensure environmental outcomes.

With regard to Q6 on Regulated Outcomes, we do not support inclusion of Option 2 but do support the proposal for the detailed explanations in Option 2 to be included in guidance material. These in theory could provide further clarity for implementation of the expected regulated outcomes. However, not all farm systems will need to address every outcome and prescribing this will place unnecessary burden on farmers and their advisors. We want to ensure that any practice standards used in regulation concern the process to be followed, not inputs or practice required (Q10, Q13).

We agree with the preferred option for Q13 on identifying actions to avoid, remedy or mitigate risks/impacts. We seek that Option 1, the certifier's expert discretion, is adopted and that guidance be used to inform the actions chosen. We do not support practice standards being used to describe which actions are acceptable to choose from. Instead, we submit that practice standards should be used to support certifiers' identification of suitable actions. The ability to reflect emerging innovation will provide for better quality Certified Freshwater Farm Plans that are suited to the local context and farming operation. Updated guidance over

time can manage the risk of inconsistency in the urgency and ambition of the actions included in certified freshwater farm plans without the need for rigid practice standards determining mitigation actions. A prescribed list of actions included within regulations will limit positive engagement with certified farm plans and limit opportunities to utilise the best action for the issue at hand given the catchment and farm context.

2.3.3 Consents and farm plans

There is the expectation within this discussion document, and the wider Essential Freshwater Package, that Certified Freshwater Farm Plans could be used as either a replacement for a consent application or as part as a permitted activity or consent condition. There needs to be adequate consideration of what this would mean not just from a farmer's perspective, but also from a resource management planning perspective.

Freshwater Farm Plans should be active and flexible to change and evolve over time. This ensures they remain relevant to the individual farm and landowner as well as communities and catchments by supplying up-to-date information. Flexibility to develop and modify farm plans ensures an evolving understanding and awareness of issues, as well as an ability to capitalise on opportunities that may contribute to better personal, social, economic, or business outcomes.

This flexibility could be compromised given the proposed level of standardisation required, especially if they are being used to meet resource consent conditions. However, the Freshwater Farm Plans must have clear sight of the effects-based bottom lines that must be managed to achieve freshwater health objectives. The bottom line that must be satisfied regardless of circumstance must be clear and unambiguous (Q1, Q13).

Freshwater Farm Plans should reflect the potential impact of a farming operation and should have the ability to use a lighter approach for those whose risks and impacts are relatively low. We welcome the ability for farmers and their advisors/certifiers to prioritise the contents of the farm plan, especially the risk assessment and actions register, based on the risks, costs, benefits, and potential impacts (Q10). In addition, the proposal for regional councils to have the discretion to decide whether to impose an infringement fee for non-compliance on a farm operator (Q43) is a positive step for local governance. We wish to ensure however that guidance consistently refers to the requirements as the need to "avoid, remedy, or mitigate" significant adverse risks or impacts. This use of 'or' versus 'and' is not consistently used throughout the consultation document which is concerning and has significant implications for the preparation and implementation of Certified Freshwater Farm Plans.

High-risk farming activities that could be managed either via farm planning or other tools need guidance that clearly states the interpretation of how these activities should 'avoid, remedy or mitigate' potential impacts. Guidance will also need to provide advice on how the base level of information requirements could change depending on the presence and management of 'high-risk farming' activities (Q13). However, detailed practice standards will not work. These are too prescriptive, not effects-based, and poorly account for the dynamic nature of farming. There are ample recent examples of how such rigid standards (such as depth of pugging utilised within the Intensive Winter Grazing NES Standards) disengage farming communities, place undue pressure on regional councils, and are not practical to implement.

Where regulations currently provide a mechanism for a farm operator to complete a Certified Freshwater Farm Plan instead of applying for a resource consent, we recommend a farm operator should only need to assess the risks, mitigations, and actions associated with that specific regulated activity, such as winter grazing. The need to complete a full certified freshwater farm plan when their local council planning process is not in place yet could place extra burden on landowners who, in theory, could become the best advocates for the use of farm planning instruments as regulatory tools. We look forward to working with officials to develop this based on technical planning and farm management expertise.

2.3.4 Connections with Stock Exclusion Requirements (Q13)

It is unclear how certified freshwater farm plans will make the informed assessment of when eligible livestock should be excluded from wide rivers on 5-10 degree slopes. Although we note the potential use of practice standards for the management of stock on these slopes, we do not have confidence that these standards will be workable on-farm in every case. Depending on how these are written, they could result in stock exclusion requirements regardless of other mitigation activities that should be higher priorities. Although we appreciate the risk stock access to waterways can pose, management via a set of practice standards would be perceived to be draconian regulation by stealth and may not achieve the intended environmental outcomes.

We provide comment within our submission on the proposed changes to the 'low slope' map in the s360 regulations on the use of farm planning to manage the diversity of Aotearoa New Zealand landscapes and farming systems.

We request the ability to co-develop guidance, practice standards etc. on this, and other matters within the discussion documents. Ideally, this would be done via a second round of consultation on the detailed guidance and regulations prior to their formal adoption in legislation.

2.4 Role of the certifier and auditor

B+LNZ supports the distinctions made between the roles and responsibilities for certifiers and auditors, the process for the appointment and approval of certifiers and auditors as well as their removal. The preferred options, and the analysis provided within the Regulatory Impact Statement sitting behind them is appreciated.

We especially value:

- The ability of a farmer to develop their own farm plan with the potential support and guidance of an advisor or certifier. This supports what we know to be the most effective way to ensure practice change and farmer engagement with farm planning tools.
- The distinction between a national body responsible for the potential training, appointment, and supervision of certified farm planners and the ability for a regional council to provide additional requirements to these based on their community and environmental context (Q16 and Q34). This is a suitable mechanism to provide for national standardisation while balancing the need for regional councils and their communities to tailor requirements to their landscapes and farming operations.
- The distinction between the qualifications and expertise of a certifier versus an auditor. We agree that the auditing assessment currently within Part 9A should be on stated actions, and their on-time completion. As a result of this, there is greater responsibility placed on the certifier to ensure the right actions are identified and the farmer is the driver of these decisions. This includes the ability for the certifier to apply a test of 'reasonableness' instead of a universal measure of what is a suitable action to include within a Certified Freshwater Farm Plan (Q15). This better reflects the diverse nature of farming operations and their financial and ecological context. The qualifications and experience of the certifier need to be assessed against their ability to instil trust with clients and effectively manage challenging conversations.

We take issue with:

- The requirement to have plans recertified every three years and an audit within the first 18 months of certification of a farm plan and at least every three years after that. The recertification and auditing of a farm plan should be based on the risk profile of its activities and receiving environment. This would better align with the other risk-based processes proposed throughout the document. (See below for further details)
- The proposal for farmers to have to engage and pay for both the certification and audit of their individual certified freshwater farm plan. We believe that flexibility should be provided for industry assurance schemes, catchment collectives, or other means to pay for the development and audit of certified freshwater farm plans.
- We also believe that farmers should be able to complete a certified template that can then be assessed as meeting requirements when audited. This audit would assess the suitability of the actions stated as well as their completion. This is slightly different from what is proposed as the process by MfE, as well as currently provided for within Part 9A, which allows for the use of templates as long as the freshwater farm plan is certified once complete and an audit is completed to assess the actions done, but not their suitability.

There are a number of missing pieces that we see from the discussion document. We request the opportunity to work with officials to address these. Namely:

- The role of an auditor and process to report what is considered to be 'significant' non-compliance and the definition of this 'significance' or its assessment.

- Further detail on the connection between the complaints process and the removal of the certifier's accreditation. The 'informing' of regional councils may not be enough (Q32 and Q30).
- The required (or not) role of the certifier to support the continued implementation of the actions within the FWFP or managed updated as required (Q18).
- How an auditor would decide what was a 'major change' in farming system is unclear. Specifically, would the implementation of actions to manage certain environmental risks (for example by the retirement of highly erodible land) be a 'significant change' given that land-use change could have a significant impact on the dynamics and operation of the farming system? Further clarity is required for when a change in the farm plan is required versus an addendum. We request the ability to work with officials and others further on this (Q26).
- The management of the costs and (transparency of these costs) associated with the requirement to have a freshwater farm plan certified and audited, especially if this requires time to 'walk the farm.' This is discussed further in the 'Ensuring Farmer Privacy and Consumer Protection' section of this submission (Q18).
- The limited detail provided on what is 'reasonable' when determining the timeframes for actions (Q15).
- The skills and characteristics of an auditor, in addition to their certification by a professional body. Ideally, these individuals would also be a 'trusted advisor' and comfortable operating within diverse farm systems and operations in varied landscapes when assessing completion of stated actions.
- The scope of Part 9a of the RMA to require all farmers to complete a certified freshwater farm plan. Instead of requiring all farmers to have a certified freshwater farm plan, we want to focus our limited resources for auditing and certifying on those properties that represent the greatest risk profile.

2.5 Connection to existing Farm Plans and Integrated Farm Planning Q3

The ability for industry or council programmes to be recognised as appropriate agents to deliver adequate Freshwater Farm Plans is welcomed. Alignment with industry assurance schemes is critical for rapid implementation and embedding freshwater farm planning into existing activities. The emphasis on Industry Assurance Programmes (IAP) is important for sectors with considerable uptake of existing programmes and/or market requirements for these programmes.

There will need to be a mechanism for existing programmes to adjust their requirements based on the FW-FP content as well as for new programmes to be developed and certified as appropriate to deliver FW-FP. It's equally important to ensure Certified Freshwater Farm Plans can align with, not work against, existing programmes.

In addition to this, certification of equivalent FW-FP programmes (templates and processes) should be enabled so that farmers could choose to use a certified programme rather than independently complete a certified freshwater farm plan. In this situation, a farm operator within an approved industry or catchment-based process would retain responsibility for assessing their risks and selection of on-farm actions to manage. They would be provided support and expertise to develop their Certified Freshwater Farm Plan but not require an independent certifier to approve their bespoke farm plan. Instead, quality assurance reviews of the programme would occur and consider how well the regulated actions and content is being achieved. This assurance programme can also provide insights/audit of how implementation on-farm is occurring based on the actions stated. This approach would suit catchment collectives and other forms of collaborative governance approaches.

Requiring each freshwater farm plan to be individually certified adds significant cost to each farm, and risks delaying implementation due to the limited availability of suitably experienced personnel capable of and willing to provide certification services. Certifying IAPs or equivalent programmes would enable much faster implementation and retain more funds on-farm for further re-investment in environmental enhancements.

There are also, however, significant parts of the agricultural landscape that operate without IAPs - alternative pathways are required for sectors or parts of the sector without dominant uptake of or existing requirements for IAPs. This could look like support for the development of appropriate catchment collective schemes that are supported by certified freshwater farm planners and/or regional councils and industry bodies.

We will also need to think carefully about managing the implementation of novel certified freshwater farm plan requirements with existing Farm Environmental Plan requirements in regions like Hawke's Bay, Canterbury, or Southland. In addition to the catchment context being provided by regional councils, it would be beneficial for each council to summarise where their regional rules are more or less stringent than what is in the NES-FW, Stock Exclusion Regulations, etc. This would be something required by Certifiers to better understand how they can best advise farmers depending on their location. Ideally, this information could be easily inserted into a Freshwater Farm Plan and key areas highlighted that needed particular consideration.

2.6 Ensuring farmer privacy and consumer protection

While there is acknowledgement of privacy concerns within the consultation document as it relates to reporting requirements and proposed mechanisms to manage this (Q51), it is unclear how anonymity will be ensured throughout the entire process. We are concerned that the Certified Freshwater Farm Plan provides a platform by which government (regional and central) can collect inappropriate and irrelevant information around individual farming businesses. For example, the FAQ document states: "Freshwater farm plans are likely to be provided to regional councils when certified, and some *data may* get aggregated and reported to ensure the freshwater farm plan system in tracking towards progress" (pg 2, Discussion Document, emphasis added).

While the general inference throughout the consultation materials is that farm plan content would not be public and that data that is reported publicly will be aggregated where possible (and therefore an individual farmer's information will not be public) there is still a risk that freshwater farm plans provided for review along the way could become public without the proper protections utilised. This includes when a freshwater farm plan is potentially provided to the regional council and the farm business is 'certified'. It also includes when a Certifier is seeking approval to operate in a given region and submits examples of their previous work and experience.

B+LNZ believes that farmers private information should remain just that, private. The information gathered from Certified Freshwater Farm Plans should not be more than what is absolutely necessary to ensure critical compliance within the catchment context. While the Local Government Official Information Management Act contains some protections there is limited mention of this in the discussion document or what guidance would be provided to councils on this. Guidance should not be able to be interpreted differently across regions. It will need to include direction for how data is stored, accessed, and deleted, as well as penalties applied for misuse. Information that is especially sensitive and should not be shared publicly includes crop type and rotations, water reticulation approaches, and other aspects of farm management that could be considered 'intellectual property' and thus form part of a farm's domestic or international competitive advantage (Q52). This is a particularly sensitive area for farmers and not getting the privacy settings right could act as a real dis-incentive to farmers embracing the FW-FP process.

Practice standards for how councils (and the national body) should treat Freshwater Farm Plans, and their content, throughout the entire process from farmer development through to auditing is required. B+LNZ request co-development of this with MfE officials and others.

Essential Freshwater rules require that almost all farms a) have a certified farm plan and b) are audited on a regular basis. A certifier should only need to report to the regional council the presence of a certified farm plan (suggested by Land title[s] – enabling GIS mapping of a catchment's plan coverage) and could report current length of waterways with stock access actively managed, length of waterways with established riparian areas, area of erodible land protected and area of wetland protected. This would create a benchmark for councils to base additional progress on.

The auditor would then confirm the presence of the certified freshwater farm plan, progress against the plan, any extraordinary circumstances, re-audit frequency and audit grade.

This approach would ensure councils can report on both the existence of certified freshwater farm plans and progress against the plans, but removes all risk of farm specific information inadvertently being held in a manner that it could be accessed or released by a council.

The certifier could also report current and planned stock exclusion, riparian planting, erodible land protected and wetlands protected.

Proposed table for Certifiers to report to council at time of certification:

	Total length (km) of waterways where stock access to waterways is being actively managed	Total Length (km) of waterways with riparian areas established (i.e. non-grass)	Total area (ha) erodible land protected	Total area (ha) of wetland protected
Current (at time of certification)				
Planned – Years 1-3				

We support the amalgamation of the following information at a catchment/regional scale, enabling councils to report overall progress. The below table could be a starting point:

Timeframe	Quantity of eligible properties requiring a Certified Freshwater Farm Plan	Quantity of 'Certified' Freshwater Farm Plans in the region	Total area as well as percentage of eligible farming land area that is managed via a FW-FP	Area (ha) established in native vegetation to manage sediment risk or other contaminant losses	Area (ha) established in space planted trees to manage erosion, sediment risk or other contaminant losses	Area (ha) of land exclude from stock (i.e. Critical Source areas or native retirement) to manage erosion, sediment risk or other contaminant losses	Percentage of 'highly erodible' land area on farming operation that is managed via FW-FP actions	Additional km of stock exclusion along waterways (potentially within or adjacent to the 'low slope' map area)
At onset of certification								
Year ____								
Year ____								
Year ____								
	# of audits completed							
	# of recertifications completed							

The interpretation of above descriptors will need to be done uniformly. For example, the definition of 'highly erodible' land will need to be applied in the same way across regions. In addition to this, the definition of what waterway is 'adjacent' to an area of 'low slope' land. Note that B+LNZ is submitting that the 'low slope' map currently in the s360 regulations is not suitable to Aotearoa New Zealand's diverse landscape or varied catchment contexts.

In addition to protecting a farmer's privacy, consideration must also be given to the farm operator's rights as a consumer of certification and auditing services. This includes not being misled, having fair terms available, and having access to a dispute resolution process. Some of these rights are highlighted in the consultation document but there is not enough detail provided for us to have confidence that these rights will be upheld.

As a result of the implementation of the Certified Freshwater Farm Plan process, the market demand for the development of regulatory farm plans will expand significantly along with the demand for specific (and highly technical) certification and auditing services.

B+LNZ's view is that we should build off existing schemes wherever possible and be careful about the risks of creating new markets with limited supply of suitable certifiers and therefore means of ensuring competitive options for farmers. We are concerned about the direct costs both to farmers and regional councils (which would then flow back to farmers through increased rates) of implementing this process.

Systems will need to be put in place to ensure prices charged for farm planning activities by certifiers, including their time to 'walk the farm', are fair and reasonable. This is especially important considering the regulatory nature of the freshwater farm plans and the need to ensure consistent quality from all suppliers entering the market. However, if there are sufficient suppliers of quality Freshwater Farm Plans available, measures such as this have less utility.

Based on analysis completed by BakerAg (Crook and Walker, 2021) on behalf of B+LNZ, "the initial FW-FP development... could cost up to \$12,500 per farm operation depending on the scale, the amount of support/advice sought from an advisor and, the number of complexities on the property" (pg, 24). In addition

to upfront costs, annual ongoing costs are estimated at \$2,000/yr which includes re-certification and auditing every three years and the farmer allowing time for record keeping of environmental works (pg, 24).

These costs were developed based on in-depth assessment of the existing costs for FW-FP development occurring as part of regulatory requirements across the country. The authors note that:

“These costs are based on the price to complete an environmental plan, including the farmer’s time spent away from the core business. These prices are dependent on how readily available information is to the farmer and advisor to complete a FW-FP. In addition to the farmers’ time spent collecting information..., the availability of data from regional councils and catchments for mapping purposes will increase costs if farmers need to engage with additional contractors to secure the information to support their FW-FP” (pg 25).

The variance in costs associated with the development of a FW-FP relate to the amount of time required to provide for a farmer’s time versus an external advisor’s time as well as the complexity of the farm system (pg 26). None of this expenditure relates to the risk profile of the farm operation or the potential impacts of farm operations on freshwater health.

In addition to analysis completed by BakerAg, B+LNZ was able to gather estimates from other sources for how costly the development of a Freshwater Farm Plan could be. More specifically, estimates from the Horizon’s Regional Council came to \$20.65/ha cost of ‘farm plan’ development based on an approved template (G. Cooper, personal communication, 24 August 2021).

These costs are based on the time required by contractors to work with the farm operator to complete a Sustainable Land Use Initiative Plan as well as council staff’s time for contract management and marketing. These costs don’t include data management, checking accuracy of mapping shapefiles, other quality control, or costs of reporting. These plans also do not cover all of the information (proposed to be) required by a certified FW-FP including the freshwater health and catchment context, on-ground mapping of drainage, CSAs, bridges, culverts and stock crossings.

The costs associated with the provision of the ‘base data’ requirements could vary significantly given the existing public data available within a given region. For example, farmers within the Sustainable Land Use Initiative Whole Farm Plan are provided with detailed knowledge of the slope, erosion susceptibility and land characteristics for their property. These plans can also identify water resources, biodiversity, and farm infrastructure (Horizons Regional Council).

The programme has been provided for the last 15 years and, to date, a total of \$79 million has been invested in it by central government, ratepayers and landowners. Given the council’s and contractor experience with this programme the costs for the development of the novel certified freshwater farm plan would likely be greater than \$20.65/ha.

To reduce costs, regional councils should provide guidance for farm operations for them to understand the catchment context. They should also make available data available free of charge and in an accessible format(Q47).

To manage the costs for the development of FW-FP for farmers, one potential solution to this is to develop a ‘trust’ model that manages a pool of money that can be used to support the completion of FW-FPs at least cost and that helps set standard prices for typical services completed in a FW-FP. Another system could require a minimum number of certifiers available per number of farms required to have a FW-FP, to manage demand and hence pricing. A further option is the direct financial support from Central Government or regional councils towards the costs of certification in regions until there is sufficient demand and supply of certifiers in a region. This would support early adoption and the building of capability across New Zealand. There is a myriad of ways to do this but, depending on the demand and supply in the market for FW-FPs, measures will need to be put in place.

Further guidance/controls around the market supports, the value for money provided for farm planning services, and availability of freely accessible ‘base information’ is required. We look forward to discussing how this could best be done further.

2.7 Farm Planning content requirements

We are glad to see some initial thinking on the basic information requirements for Certified Freshwater Farm Plans has been presented for feedback. We want to ensure that the content requirements within Certified Freshwater Farm Plans do not create unnecessary burden on farm operators, or their certifiers, to meet the risk-based expectations for the farm specific environmental situation. We strongly prefer Option 1 (rather than 2) for regulating outcomes (Q6). We agree that some content in Option 2 could be used as guidance. We note that some of the content under Option 2 for ecosystem health could be too prescriptive and not outcome based. This could be resolved by presenting a range of issues that need to be considered as identified in the catchment plan and then tailor solutions based on this. Regardless, guidance needs to remain just that, guidance. Clarity on the role of guidance resources and their ability to be adapted to utilise innovative technologies and techniques is required.

Based on the lack of detail for the proposed data requirements in the Appendix 1 to the Discussion Document, it could be very costly and challenging to meet expectations (Q8 and Q9). This is especially the case for farming businesses that are operating extensive and/or complex farm systems as well as those operating across varying landscapes and catchments.

For example, there is no clarity on what is required in regard to the assessment of slope and soil type. It's unclear whether (for example) land-slope can be defined as flat, rolling or steep, and what universal assessments will be provided for soil type. The infrastructure to measure slope at high resolutions is currently relatively limited and restricted within New Zealand. However, LiDAR data availability across the country could change this relatively rapidly. In terms of soil mapping, national datasets such as S-Map are not universally available across the country. In both cases the level of detail required (irrespective of the availability or not of detailed information) needs to be appropriate to the value provided by the additional detail. Ensuring that there is affordable, accessible, quality, and sufficient quantity of data available to farmers and their certifiers is key.

Given the scope and scale of the base requirements, a farmer could need to employ multiple technical experts at high costs for little gain. This does not align with the need to ensure efficient implementation of the Certified Freshwater Farm Plan requirements. Regional councils and Central Government will need to provide robust information including content on which contaminants are most important to address in the catchment, especially as this relates to the location of the farm.

At present, there are not sufficient data sources for this basic analysis outlined in Appendix 1 to be completed for all locations. We look forward to providing additional insights into Appendix 1 and other proposed guidance material.

In addition to ensuring that the content requirements do not place undue burden on farm operators to begin with, it is also important to ensure effective quality control measures are put in place to ensure that actions within Freshwater Farm Plans are fair and reasonable. Although there is mention of a dispute resolution process within the discussion document, we do not believe there is sufficient detail provided to ensure there is an effective means for farmers, or certifiers, to ensure that a Certified Freshwater Farm Plan is sufficiently robust to meet the needs of the catchment context without being unnecessarily burdensome on the farm operator. We look forward to working with officials, and/or the national body to build this process.

2.8 Certification, auditing, and re-certification

B+LNZ welcomes the need to ensure that certified farm plans remain up-to-date and can best reflect the changing dynamics of the farm, receiving environments, landscape, and regulatory climate. However, we do not have confidence that auditing and "re-certification will be a simple review process to ensure the plan is still accurate and fit for purpose" (pg 31).

We agree that emphasis should be placed on ensuring actions developed in a plan are appropriate and decided in partnership between the certifier and the farm operator. Additionally, we support the proposed audit focus on assessing whether identified actions have been completed or not in stated timeframes.

As shown below the proposed process to be followed for certification, auditing, and recertification is overly onerous and costly and will not provide additional value. It is also unclear what 'drafting gates' will be used to require different types of farm operations, with varying degrees of risk, to complete their certified freshwater farm plan, have it certified, and then audited within a given timeframe. We submit that this process will need to be streamlined and risk-based, rather than universally adopted (Q36 and Q24). To be clear, part of a 'risk-

based approach' could the exclusion of low-risk farm operations from the certified freshwater farm plan requirements and/or a required audit frequency for low-risk farm operations required to complete a certified freshwater farm plan.

Based on the information provided, a farmer who (in theory) met all of the council requirements and passed their audit confidently would be certified or audited two out of every three years:

2022	2023	2024	2025	2026	2027	2028	2029	2030
Prepare and certify plan		First audit	Recertify plan		Second audit	Recertify plan		Third audit

Based on this schedule, a farmer would be required to engage a certifier or auditor every 18 months, regardless of their audit history, receiving environments, intensity of farming operation or mitigation of 'high-risk' activities.

This schedule will be impractical to implement and likely lead to strong farmer disengagement with the entire process. Instead, we propose that a risk-based approach is taken to both the certification/auditing and re-certification/re-auditing process. Default requirements of three- or five-yearly for re-certification and re-auditing process does not suit this risk-based approach.

We propose that an audit frequency of five years is retained but recertification is only required if there is a major system change on farm, a change in the key personnel operating the farm, or regional council conditions for FW-FP. If there were any substantial changes in the auditing system used within an industry assurance programme, an audit could also be triggered automatically. To be clear, auditing does not need to occur on a 'three-yearly' or 'five-yearly' basis.

We submit that farmers should be given at least a one-year lead-in time to prepare for their certification or audit. This one-year heads-up assumes that all systems are in place to support the preparation of certified farm plans by suitable individuals/industry assurance schemes. The deadline for certification put in place by the Minister (or regional council) should consider the pressures within the farm calendar, the timeframes for regional council Resource Management Plan review and implementation and the integration with any other proposed environmental requirements such as managing climate change, and biodiversity etc.

Certification and auditing requirements with the FW-FP will need to consider other auditing timeframes and requirements farmers are facing as part of their resource consent conditions, industry assurance programmes, or animal tracking requirements. Although some of these systems can adjust to suit the FW-FP timetables, the FW-FP system will need to provide for flexible integration as much as possible.

In addition, regional councils could be provided discretion to *extend* the dates for audit (or certification) based on the implementation and requirements within their Regional Plans aligned with the National Policy Statement for Freshwater Management. We do not think that an audit or certification frequency of less than three years will provide additional value for farming operations or catchments with well managed risks to freshwater health.

We agree with DairyNZ that the new system must not require immediate re-work by farmers. A transition period will be needed for those already with FEPs in place to reduce overly burdensome changes within short timeframes.

2.9 Making this happen in practice

B+LNZ submits that having a good process in place is only part of the requirement for effective implementation. Sufficient time, money, staff resources from governing bodies, let alone industry bodies, will also be required. This is not a situation where building the plane while flying it will work.

The feasibility of the implementation timeframes proposed for getting new markets operating, and for getting farmers through the system once it is operational, is extremely aspirational and unrealistic. We do not agree with the preferred implementation timeframes.

The requirement to have Certified Freshwater Farm Plans in place within the first half of 2022 for some farms will be very challenging given the infrastructure, skillsets, and process needs required to make this happen

(Q5). This is not something to be rushed given the need to ensure high levels of engagement and quality environmental outcomes. It is unclear how many farmers would be covered by this first tranche of farm plans, and whether the rollout will be staged relative to the available capacity in the region.

The first set of farm plans may face a more challenging road than those that follow given the current information, the number of and skillsets of the potential certifiers, and lack of systems and skilled people in place within regional councils at this point. While we want to support the effective implementation of these processes, it is more important to get things done well and set realistic timeframes from the outset, rather than rely on troubleshooting along the way.

To get this done right, multiple parties will need to come to the table, regardless of the timing. We seek further clarification on the Government's intention to support the widescale adoption and implementation of freshwater farm plans as a regulatory tool given the limited resources within regional councils, farm consultants and possible certifiers, and industry bodies.

B+LNZ seeks that in addition to the proposed regulations, implementation support must be put in place to better incentivise and enable catchment and sub-catchment approaches to sustainable land and water management, and adoption of catchment scale mitigation actions where required.

Regulatory, non-regulatory, voluntary, and financial instruments are all required to implement mitigations that look beyond individual property boundaries to identify the most cost-effective and influential solutions to diffuse contaminants. Different approaches will be required depending on the catchment, political, ecological, and social context. However, applying strict regulatory and inflexible requirements "is seen by many land users as blunt, one-size-fits-all, and not appropriate for their situation. This stirs resentment rather than fostering an ethic of care for our waterways, for our special places and for each other" (Sinner, 2021).

Without careful consideration and implementation, Freshwater Farm Plans could be seen as strict and inflexible regulatory tools that do not provide for sufficient flexibility for the farming context. This could especially be the case if guidance materials created a set of practice or minimum input-based standards by stealth.

Multiple policy and implementation approaches must be combined to ensure success. This includes the utilisation of collaborative governance, and more specifically catchment collective and planning approaches, to ensure sustainable uptake not just of the plans, but of the actions within them.

Catchment community groups are an effective way to achieve larger scale environmental outcomes. Catchment programmes can support the adoption of active farm plans and the delivery of community aspirations for the sustainable management of their natural resources, including freshwater objectives. At a catchment scale and driven through farm plans and catchment groups, farmer practice change can be linked to changes in water quality outcomes (Scarsbrook, 2011). For example, Holmes et al. (2016) found that habitat quality improved in stream areas where there was a collective effort by farmers in a community led catchment group to put in riparian stock exclusion and management. Sediment reductions showed the strongest response.

Certified Freshwater Farm Planning and catchment planning (not just catchment context as noted in the discussion document) must be integrated. At the farm level, farm plans will contain prioritised actions suitable to that business and landscape. Catchment actions by comparison may be a collective of farm-based actions or involve collective and coordinated investment in, for example, constructed wetlands, managing drainage networks to reduce contaminant loss, landscape scale species restoration or predator control. These larger-than-farm-scale interventions may be required in certain catchments to achieve catchment freshwater health and quality aims and the sole use of Certified Freshwater Farm Plans cannot deliver this change effectively.

As proposed within Plan Change 1 Hurunui and Waiau River Regional Plan and Plan Change 7 to the Hawke's Bay Regional Resource Management Plan, farm planning and catchment management approaches can be combined. Specifically, catchment, industry, and irrigation collectives can be enabled to work together to achieve mutually beneficial environmental outcomes. Recognising farmers' and communities' contributions to achieving environmental outcomes and giving landowners the opportunity to continue to grow and develop 'ground up' approaches both individually and collectively can result in exponential social and ecological benefits.

We acknowledge this community-based approach is not necessarily a true replacement for other resource management approaches. Regulatory oversight is required to ensure bottom lines and trigger thresholds that

are non-negotiable are maintained in at-risk or declining catchments. Significant land use change in these catchments may be required to meet freshwater health objectives. In these places, “catchment groups could find it difficult to agree on an action plan to achieve the long-term objectives” (Sinner, 2021). However, there is still strong evidence that even in these very challenging circumstances, a collective management approach (given the right conditions) can lead to sustained and suitable outcomes (Ostrom, 1990).

Farm Planning approaches need to recognise that people are critical to maintaining and enhancing freshwater ecological health regardless of the policy mechanism chosen. Putting farmers ‘first’ acknowledges the importance of respecting and fostering the contribution of landowners as custodians and kaitiaki to their catchments. Supporting the adoption and assessment of ‘pro-environmental’ practices requires a holistic approach (Damton and Evans, 2013). Care needs to be especially given to the social expectations of what is ‘good practice’ (Hart 2017; Legett 2017) and how this matches, or not, with understandings of what it means to be a ‘good farmer’ (Burton, 2004; Hall, 2016).

The ability to work collectively suits the biophysical characteristics of non-point source discharges. We must provide for a variety of ways to complete freshwater farm plan obligations that have a wider focus than purely individual responsibility. This is because the behaviour shifts required to adopt ‘pro-environmental’ on-farm management actions are arguably ill-suited to a purely linear view of farmers’ decision making processes purely driven by rational desires to reduce costs or gain financial rewards (Hall, 2016).

A collective approach can suit a diverse range of farmers and growers and their drivers. They could be especially helpful for farmers who are enthusiastic innovators, or eager to highlight their efforts. They can also be used to help support others who may not be as engaged from the beginning (Knook, 2020).

Farmers can be upskilled via catchment programmes to be more reflective and cognisant of farm practice and management impacts they are having and document this in a farm plan without the required reliance on an external certifier or auditor. Learning and growing as a community can better support shifts not just in farm practices but also in expectations of what it means to be a ‘good farmer’ (Burton, 2004, Burton and Paragahawewa, 2011, Mills et al. 2017). Regardless of their current attitude towards change, farmers need to have ‘ownership’ of the process, know when change is coming, what is expected of them now and in the future, be able to innovate along the way, and have a clear understanding what contribution their actions will make. It must also allow for innovation and adaptation (Stokes et. al. 2021; Knook, 2020).

Using catchment communities and collectives can provide a way to kickstart positive change. B+LNZ submits that in addition to the ‘industry assurance’ programmes, catchment communities should be enabled to meet requirements as a group. This in theory would provide for group learning, reduced costs, peer accountability, and collective governance approaches including group auditing. This would mean that a certifier would not have to ‘walk-every-farm’ but can support farmers build their understanding of what is expected of them in group setting and provide one-on-one guidance as needed.

Certified freshwater farm plans should be able to note catchment, community, and individual values that are different, and in addition to the values and visions identified via the NPS-FW processes. This is because farmers, and communities, may have different aspirations than what is agreed by a wider community. Providing for these differences and additions ensures that farmers are able to own their own story and context when delivering actions on-farm. There is a significant risk of farmer disempowerment if they would be required to give effect to NPS-FW developed catchment vision or values that they do not feel reflect their farm or community’s vision or values. It will be important for catchment communities to understand the value their actions are making towards freshwater health and wellbeing.

By providing further scope for catchment community groups to operate as a group to develop freshwater farm plans, there is also the opportunity to build additional connections with other ‘environmental’ domains such as climate change and biodiversity. This approach would provide not just more ‘integrated’ farm plans but a more holistic understanding by communities about what solutions are available to them to get bigger bang for buck.

In order to succeed, there are a number of social, as well as practical, considerations that need to be considered. Experience in New Zealand has focused on either significant one-on-one resourcing or support for a catchment-scale approach to date. We have the experience and insights to know how and why these approaches work well, or don’t (Knook, 2020; Sinner, 2021; Powell & Health, 2018).

B+LNZ seeks that implementation support must be put in place to better incentivise, enable, and support, catchment and sub-catchment approaches to sustainable land and water management, and adoption of edge-of-field mitigation actions where required. The adoption of a diverse range of pathways to complete a farm plan is both practical and prudent. As part of implementation, there is a need to ensure that farmers are able to invest more into environmental management activities rather than administrative costs (or time).

To support this, we encourage the roll-out of a 'trial' process, where certain catchment communities could be encouraged to trial approaches with their regional council, industry groups, and the (to-be created) national body. This ability to 'opt-in' would provide for greater farmer leadership and ownership of the implementation process and for key lessons learned to be adequately documented before formal implementation (Q45).

Some situations may suit a more risk-based start point, such as intensive winter grazing where current regulation allows the option of a tailored approach in a freshwater farm plan. Focusing on the development of certified freshwater farm plans where Intensive Winter Grazing occurs and there are a range of developed, and developing catchment communities, could provide testing grounds to assess the suitability of the proposed processes to manage an activity that is already a key focus of the industry (Q44). This approach would align with the preferred option, which we support, to implement FW-FP at a catchment scale but also allow for targeting of on-farm practices. Note however, that these communities will need significant support and empathy given their potential status as 'guinea pigs' for the rest of the country.

If there is a need to implement the process within the first half of 2022, then B+LNZ contends that the most experienced farmers, councils, and Farm Plan developers be given sufficient time and resources to prioritise this. Based on current workload challenges across industry bodies and regional councils (due to limited experienced staff available) this will be extremely challenging and essentially impossible in parts of the country without existing infrastructure used to support, review, and monitor farm plans for a 'regulatory' purpose.

The development of quality guidance will be key to this. Technical expertise, outside of central government, is required to develop robust, quality, and actionable guidance. We request to work with officials on the development of this guidance as well as the wider implementation framework.



2.10 B+LNZ views on the Freshwater Farm Planning proposals

Given the broad and extensive content within the Discussion Document, B+LNZ has not yet answered every single question individually. To aid farmers' understanding of our views and to aid officials' understanding of our positions, we have created the below list which clearly states what we oppose, support, and want to see noted.

Proposed timing for the introduction of Regulations

Oppose the introduction of FW-FP in the first half of 2022. This does not provide enough time for councils, certifiers, and farmers to understand their regulated obligations prior to implementation. This is not a situation where trying to build the plane while flying it will work.

Note that depending on the adoption of adjusted timeframes for the implementation of the Intensive Winter Grazing permitted activity conditions, FW-FP certification pathways would need to be available by March 2023

How the freshwater farm plan system fits with the regional council planning processes

Support farmers' access to the best available information to develop the content in their FW-FP, especially prior to Regional Plan development, on catchment context.

Note that farmers may have different and additional values for their catchment than those established through the regional planning processes and these should be able to be recognised within their individual FW-FP.

Support the information considered as part of FW-FP connections within the regional council planning processes.

Note that in-addition to the stated information (Q1), B+LNZ seeks that additional information required includes the role and responsibility of catchment community groups in addition to industry assurance programmes and individual farm operator certification pathways.

Note we also seek additional information on role that FW-FP are intended to play within the permitted activity/consented activity planning framework (Q1).

Note that we do not have confidence in, or agree with, the statement "The legislation sets out that all farmers and growers (above a set threshold) will be required to have a freshwater farm plan in place (pg 5)."

Note that do not support requiring all farmers to have a certified freshwater farm plan. This is because we do not believe that the requirement of a certified freshwater farm plan for every farm, in every catchment, reflects the risk-based principles embedded within the RMA. *Role of tangata whenua in the freshwater farm plan system*

Support the need for FW-FP to reflect the principles and obligations of Te Mana o Te Wai.

Support the proposed system where individual farmers and growers would not be required to identify and engage relevant tangata whenua about their freshwater farm plan. We agree that councils and tangata

whenua can develop guidance and/or strategy material at a more local level, become service providers, and seek to better understand how the FW-FP system might create particular issues for farms owned by multiple Māori landowners.

Note that MfE should consider the capacity constraints that any requirements within the FW-FP system may place on tangata whenua and provide ways and means to manage this effectively.

A role for industry assurance programmes and other farm plan initiatives in delivering freshwater farm plans

Support the proposal for a system where industry programmes and possibly council programmes can be assessed and recognised as being appropriate to deliver a FW-FP that meets the requirements of the RMA.

Note that the regulation development will need to consider the roles and responsibility of the industry programmes, and the flexibility required to accommodate them. We also note that these programmes will need to work in partnership with officials, Central Government, and regional councils to ensure effective implementation.

Note that B+LNZ believes that farmers should be able to complete their FW-FP at least cost by completing 'FW-FP development workshops' with certified facilitators. We have used these workshops in the past to implement farm planning requirements across the country. We request the opportunity to discuss how the delivery of these workshops, and the certified freshwater farm plans coming from them, can be best enabled.

Note that certification of equivalent FW-FP programmes (templates and processes) should be enabled so that farmers could choose to use a certified programme rather than independently complete a certified freshwater farm plan. In this situation, a farm operator within an approved industry or catchment-based process would retain responsibility for assessing their risks and selection of on-farm actions to manage. They would be provided support and expertise to develop their Certified Freshwater Farm Plan but not require an independent certifier to approve their bespoke farm plan. Instead, quality assurance reviews of the programme would occur and consider how well the regulated actions and content is being achieved. This assurance programme can also provide insights/audit of how implementation on-farm is occurring based on the actions stated.

Note that different certification approaches and requirements could be applied based on the risks posed by different farming operations in different locations. For example, a farm operator could have their farm plan 'certified' as part of their attendance at a 'workshop' and their certification obligations could change depending on farming activities or location,

Note that is very challenging to estimate the likely cost implications of the proposed approach given the lack of detail provided within the discussion document on the content requirements etc. However, BakerAg has estimated that a minimum cost for a FW-FP would be \$2,000 if a workshop delivery mechanism was utilised.

How freshwater farm plans fit with Integrated Farm Planning

Support the inclusion of FW-FP requirements within wider integrated farm planning approaches, noting most of the integrated farm planning is voluntary and therefore only the specific freshwater aspects should be certified and contained in any aspects potentially submitted to councils (noting B+LNZ recommend, as above, there is no need for a certified freshwater farm plan to be submitted to the council, only the actions stated).

Note that integrated farm planning approaches could cross multiple entities including industry groups or meat processors.

Support the alignment of data recorded, captured, used and interpreted for freshwater farm plans to be applied to other uses such as greenhouse gas reporting where advantageous to the farm operator or catchment community. Ultimately it is the farmers' data and a farmer should have the choice on where else they submit it. It is the responsibility of regulators to ensure their requirements does not stifle the farmers ability to utilise such data for other purposes and for there to be inter-operability between farm data sources and destinations.

Transition to a fully implemented freshwater farm plan system

Support the transitional introduction of FW-FP with the first set of plans using the best local information and catchment context available at the time (Q5).

Support the transitional adoption of geospatial and digitised farm plans (Q5).

Note the need to provide time and resource to ensure effective adoption of digitised farm plans. A diverse range of providers must remain available to farmers amongst the various commercial mapping related providers. In addition, data assurances must be put in place to protect farmers privacy (Q5).

Note that the detail and sophistication of mapping resources used and documented within a Certified Freshwater Farm Plan should be matched to the magnitude of the risks/impacts being considered and fit for purpose.

Oppose the introduction of FW-FP in the first half of 2022. This does not provide sufficient time to build the infrastructure required to deliver these effectively (Q5).

Note that the management of high-risk activities and/or high-risk catchments must be done in a coordinated manner across Aotearoa New Zealand. This will require building capacity across all regions which could be challenge to implement effectively, but is critical to ensure future capacity is dispersed across the country, and not centralised in priority catchments (Q5).

Seek that the 'roll-out' of FW-FP requirements is at least 6 months after the regulations are finalised. This is the minimum time required to prepare the wider infrastructure to become operational.

Request that the detailed set of regulations are put out for consultation prior to being agreed by Cabinet.

Regulated Outcomes

Support the stated regulated outcomes covering catchment values and context, ecosystem health, and farm practice (Q6).

Support Option 1 for providing regulated outcomes in FW-FP within regulations with additional guidance (Q6).

Oppose Option 2 for providing regulated outcomes in FW-FP within regulations.

Note that guidance will need to be clear that 'consideration' given to the list of areas that farm practices need to respond to based on environmental need does not mean addressing each of these areas regardless of the farm operation or ecological context (Q6).

Note that additional objectives for improving freshwater ecosystem health could be included based on the farm operators understanding of their local stream context (Q10).

Note that the focus within the regulations should be on the outcomes required with limited reference to 'guidance.' If Option 2 (Q6) is chosen, this creates a significant risk that the legislation unintentionally becomes unworkable in practice and stifles innovation or practical adaptation to achieve the goal and intent. For example, the detail to be specified in regulation on soil management as currently written could be interpreted as preventing any cultivation, significantly impacting the vegetable and arable sectors in New Zealand. Furthermore, it risks focusing the attention on the specific legislated details and not the local context, potentially detracting focus from the actual needs of a local catchment.

Note that clear legal clarification of the status of any guidance material is required (Q6).

Note that we are unable to comment on the likely impacts and cost implications of the preferred approach given the limited detail provided (Q7).

Note that further information is required on how FW-FP can be used to meet consenting or permitted activity requirements. This is especially the case for situations where a FW-FP is able to be used for permitted activities if the listed criteria cannot be met.

Farm Planning: Regulated Base Information

Support (tentatively) the material outlined in Appendix 1. The scale and scope of content requirements, as well as how content requirements would adjust based on the risks present, will determine our future views.

Note that the scale of maps or other data sources as part of draft base information to be required by all farming operations will greatly influence the costs of their development. This will particularly be the case for soils and slope assessments and could disproportionately affect lower risk farming activities

Note that the identification of mahinga kai sites or locations of other taonga could require significant time and regional council support. Discretion will need to be given by the Certifier and regional council to ensure undue pressure and burden is not placed on farm operators or tangata or mana whenua to identify these areas too quickly and at scale.

Note that it is extremely challenging to determine the impacts and costs of the proposed requirements for Base Information. See attached report from BakerAg for more context (Q9).

Farm Planning: risk/impact assessment

Support Option 1 for incorporating the proposed identification of actions in regulations.

Oppose the complete adoption of Option 2 as guidance material. We request further discussions with officials and other technical experts on the suitability of the detailed outcomes description (Q10).

Support Option 1 (Q10) to utilise a risk/impact assessment specified by minimum general requirements to identify any adverse effects of activities carried out on the farm on freshwater and freshwater ecosystems.

Note that the minimum general requirements for a risk/impact assessment must focus on the inherent, practice based, and manageable risks and impacts. It must place the emphasis on the particular farm and its most relevant on-farm activities and align with existing assurance programmes (Q11).

Note that specifying a required methodology (Option 2) will limit the ability of a farmer/grower to tailor the risk assessment to their land and catchment. It will either overly complicate the process by identifying all possible risks, or miss key risks for a specific catchment that are not significant for the majority of land and therefore excluded from the template. It is unclear to us based on the content provided whether a more flexible approach would be more cost-effective (Q12).

Note that it is extremely challenging to determine the impacts and costs of the proposed requirements for risk/impact assessment. See attached report from BakerAg for more context (Q12).

Farm Planning: identifying actions to avoid, remedy or mitigate risks/impacts

Support Option 1 (Q13) for how to identify actions to avoid, remedy, or mitigate risks/impacts via certifier's discretion and professional judgement.

Note that the most effective farm plans are farmer-centric, farmer developed and focus on outcomes rather than practices. Empowering farmers to identify actions that most effectively address the risks of their environment and activities will achieve the greatest environmental impact. Actions must be tailored to the farm-specific risks/impacts and the process support the adoption of new technologies and farming techniques that reduce negative impacts on freshwater.

Recommend that the regulations focus on high-level factors to determine whether appropriate actions have been identified, then rely on the certifier's professional judgment to determine the appropriateness of specific actions.

Note that a robust dispute resolution process is required to ensure that the professional judgement of the certifier can be adequately tested and that guidance can be provided to further inform when discretion is unwarranted.

Oppose Option 2 and 3 for how to identify actions to avoid, remedy, or mitigate risks/impacts via prescribed practice standards.

Note that including a high level of detail in the regulation and prescribed lists of actions does not allow a tailored approach that considers the farm's unique circumstances. Further, as the Practice Standards are not available it is impossible to accurately comment on how appropriate (or not) the prescribed actions are nor how much flexibility there may be in regard to implementing any particular actions (Q14).

Note that prescribed actions for farm management do not provide sufficient flexibility to suit the catchment or farm context.

Disagree that Option 3 for identifying actions to avoid, remedy, or mitigate the risks/impacts allows for the most innovation and suggest instead that it will hinder innovation and practice change. All the risks and

downsides of option 2 will be carried through to option 3 for the activities likely to have the most environmental impact and therefore needing the most innovation (Q13).

Note that request to co-develop guidance on Option 1 that can address the need to ensure there is targeted application of actions to address the known highest risks.

Farm Planning: determining timeframes to implement the actions identified in the freshwater farm plan

Support the use of a general test of 'reasonableness' to determine the timeframes to implement the actions identified in the freshwater farm plan. Note that there could be a mismatch between longer-term goals and shorter-term actions which guidance will need to provide insights on (Q15).

Support the use of a quality assurance/moderation process to ensure robust decisions are made and seek further information and the opportunity to co-develop this (Q15).

Certification: process for accrediting and appointing certifiers in the freshwater farm plan system

Support Option 1 (Q16) for accrediting and appointing certifiers in the freshwater farm plan system.

Note that primary sector organisations along with regional councils will need to be highly involved in the development and review of skills/characteristics/credentials of to-be-approved certifiers and auditors (Q17).

Note that a consistent approach across New Zealand via national accreditation and regional appointment will provide the greatest flexibility and aid implementation by enabling nationally appointed certifiers to more easily work across regions (Q17).

Ensure farmers are able to opt-in to having a certified FWFP prior to it being mandatory for their farm.

Oppose Option 2 for 'certification' via regional accreditation and appointment of certifiers (without nationally set standards). There is no substantive benefit identified for this option and a high probability of duplication of effort and cost therefore this option is not supported (Q16).

Certification: more detail around the role of the certifier

Oppose the assumption that in most circumstances a certifier will need to 'walk the farm.' Rather, someone other than the farmer should be able to 'walk the farm' with them. This could be a neighbour aligned with a catchment collective or an advisor connected to a certifier. The certifier can also rely on other tools such as satellite imagery and choose the not walk the farm where the farm risk, activities, and catchment context support this (Q18).

Support the assumption that certifiers can call on expert advice for matters outside their areas of expertise. Note however that the costs of doing so are likely to end up with the farmer, rather than the certifier. Guidance to the national body, and councils, will need to be clear what expertise will be required as a base level of knowledge for all certifiers (Q18).

Support Option 1 (Q19) for the certifier's involvement in the development of the certified FW-FP. The risk of 'client capture' is not limited to Option 1 and therefore is not a valid reason to discard this option.

Oppose Option 2 for the 'role of the certifier' to restrict their involvement only to the certification, rather than development of the FW-FP (Q19).

Note that Option 2 for the 'role of the certifier' is not practical as there are insufficient people to easily support separate development and certification and will direct investment from mitigation activities into higher costs of compliance (Q19).

Note that enabling the Certifier to also contribute to the development of the plan increases the probability the proposed actions and timeframe will realistically fit the business and thus provide more robust audit outcomes (Q19).

Note that we are agnostic to the choice on whether a certifier could be able to re-certify the same farm plan but look forward to seeing further information to inform our view (Q20).

Certification: engaging and paying for certifier

Oppose the farm operator directly paying for the services of a certifier (Q22).

Note we require assurances that costs can be effectively managed and farmers' consumer rights are protected before we can support farmers paying for these services

Note that flexibility must be provided for farm operators working within a catchment collective or industry approach where the farm operator would not be directly paying the certifier.

Note the cost implications (likely to range from \$2000 to greater than \$12,000 per farm) for a farmer engaging and paying for a certifier are included within the BakerAg report attached to this submission.

Certification: regular review and re-certification

Oppose Option 1 and 2 (Q24) for the timing of regular review and re-certification. Propose alternative timeframe as a minimum of 5 years and only more frequently if required as part of regional council planning processes (with fair and one-year warning). Recertification should not be timebound, but risk based – required whenever a material change occurs in the farming system, key personnel on farm, or to address any regional council changes.

Note that if Freshwater Farm Plans were re-certified every 3 years, this would be an unnecessary cost and administrative burden on farm operators (Q25). Please refer to BakerAg appended report.

Certification: when a farm would need a new freshwater farm plan

Support the need for a new freshwater farm plan if there is a major change in farming system, change in land use, or change in landownership or farm operator and the new owner/operator does not take over from the previous holder. All of these changes have a relatively large impact on the risks within the farming operation or the farm operator's comfort with actions to take.

Note that guidance will need to clarify what constitutes as a 'land use change,' especially its scale within a farming operation or if the 'change' is completed as part of implementation of the certified freshwater farm plan actions.

Certification: when an addendum would be needed

Support the need for an addendum system and support the proposed triggers which include additions to the farm area, such as leasing additional land and new activities (such as adding an area of horticultural production) within an otherwise largely unchanged farming system (Q26).

Note that guidance will need to clarify when an addition of an area of land constitutes a change in land use (which would trigger the need for a new freshwater farm plan).

Support the proposed triggers for requiring an amendment of details (Q26).

Certification: dispute resolution

Support the proposed dispute resolution process but seek further information on the mediation and potential arbitration process (Q28).

Certification: complaints process

Support the need for a complaints process and require further information on this (Q30 and Q31).

Certification: removal of a certifier's accreditation

Support the preferred approach for the removal of a certifier's accreditation and seek further information on the professional and ethical standards as well as technical competence requirements and how these will be assessed and adjusted over time (Q32).

Note that quality assurance measures will need to be put in place to ensure the advice provided and contents within certified freshwater farm plans remain standardised and meeting expectations.

Audit: overview of the audit process

Support the auditor's role as the assessor of actions completed as part of the compliance with the Freshwater Farm Plan. This is limited to the auditing the farm for compliance with the freshwater farm plan (i.e. have the actions listed been completed).

Note that we also believe that farmers should have the ability to complete a certified template that is then 'audited' for completeness. This 'audit' process would ideally be completed by a certifier who can provide advice on the content in the plan, rather than just assess whether actions stated were completed.

Support the ability for a certifier to also be an auditor.

Support Option 1 for auditor appointment process. This option can utilise existing accreditation bodies and can align auditing of other farm processes (eg NZGAP / NZFAP/FAP+) with the FW-FP audit, thus reducing travel related costs and administrative burden for the farmer (Q34).

Certification: determining audit frequency

Oppose the requirement to treat every farm plan as 'high risk' and thus requiring audit within 12 months of creation. Note that we seek that either audit or re-certification should not be more frequent than either once in every 2 years unless a failed audit triggers a more frequent review.

Note that industry assurance programmes and regional councils could require more frequent audits than those agreed to within the FW-FP regulations.

Certification: engaging and paying for an auditor

Oppose the proposal for a farmer to directly engage an auditor.

Note we require assurances that costs can be effectively managed and farmers' consumer rights are protected before we can support farmers paying for these services

Note that flexibility must be provided for farm operators working within a catchment collective or industry approach where the farm operator would not be directly engaging or paying for the auditor.

Quality assurance of freshwater farm plans

Support the need for a quality assurance programme and support that this is completed by a national body. Note that regional councils, tangata whenua and other interested parties will need to be consulted and engaged as part of this process (Q40).

Note that a trigger for a quality assurance programme could be the implementation of Regional Plan requirements under the NPS-FW 2020, a regularly scheduled review, or significant evidence that the quality or implementation of certified freshwater farm plans are not going as planned (Q41).

Enforcement mechanisms: role of auditors

Support the need for an auditor to report significant non-compliance.

Enforcement mechanisms: role of regional councils

Support regional council discretion to decide whether to impose an infringement fee for non-compliance on a farm operator.

Enforcement mechanisms: proposed offences

Support proposed infringement fee structure based on the significance of the offence (Q43).

Note that fees for not having a certified farm plan within the specified timeframe will need to be at the regional council's discretion given the supply and demand of certifiers within the region.

Note that proposed daily offences will need to be aligned with existing charge structures within councils given the scale of the offence.

Note that we are assuming that the charge for not having a certified FW-FP or audited FW-FP would be on a daily rate.

Note that to ensure compliance, a wider approach to implementation (where fee imposition is one part of this) will need to be designed.

Implementation options: phasing and staging

Support the implementation of Option 1 – catchment-by-catchment roll out over time (Q44) and

Support the implementation of Option 2 to roll out of FWFPs by farm characteristic and risk (Q44).

Note that a hybrid option where priority catchments may be identified, but councils retain discretion over timeframes for implementation by farm type/intensity can be used.

Note that under the proposed changes to the Intensive Winter Grazing rules, a hybrid option where farm operators using Intensive Winter Grazing can choose to use a FW-FP to meet permitted activity conditions would require the ability for farmers to 'opt-in' to the FW-FP scheme regardless of their catchment context or for all Intensive Winter Grazing activities to be considered 'high-risk'.

Note that further feedback on the utilisation of a FW-FP as part of meeting the Intensive Winter Grazing will be included in our submission on the proposed Intensive Winter Grazing rule changes.

Implementation options: understanding catchment values and context

Support regional council collation of the best available information on the catchment context and make it accessible for farm operators and certifiers.

Note that other ways to support farmers and growers to understand and incorporate their catchment values and context includes support to better incentivise, enable, and support, catchment and sub-catchment approaches to sustainable land and water management, and adoption of mitigation actions where required (Q47).

Note that there can be significant time-lags between when an on-farm management action is taken and the freshwater health benefit realised. Thus, any requested refinement, or additional, actions will need to be grounded in this understanding (Q47).

Reporting and review

Note that reporting on FW-FP should not just include the content included within the plans, but also an assessment of the implementation of these tools in a regulatory context. Council reporting on FWFP should not include any direct farm plan content but focus on the range of actions identified – and the timeframes for these actions.

Support the proposal to have a review of the FW-FP system in 5 years from implementation.

Note that a review may be required earlier if there is strong indication that FW-FP systems may need to be adjusted in light of the NPS-FW implementation by regional councils.

Reporting and review: collection of data from freshwater farm plans

Support the ability to gather information in actions and timeframes from FW-FPs but must ensure that farm operator's private information is protected.

Support the need for further work on identifying how precisely proposed FW-FP indicators (or others) can be specified (Q48).

Note that robust acknowledgement of the lag-time between on-farm actions and environmental changes is required when assessing the 'success' of on-farm actions.

Support the possible priority areas to be regulated for reporting nationally but note that depending on the catchment context, different indicators may provide a better estimate of on-farm risk and action management. This context must be considered as part of any evaluation and review.

Note that reporting on the number of FW-FP completed does not indicate the hectares within a catchment that are now being managed via a FW-FP. This information could be helpful to assess the coverage of FW-FP over the extent of the catchment or, for example, over certain highly erodible areas of the catchment. This information will be key to highlight the good works done by farm operators and their advisors but will also need to carefully consider the anonymity assurances of the data presented.

Note our proposed nationally reported data in section 2.6

Note that reporting on the number of FW-FP completed does not indicate the hectares within a catchment that are now being managed via a FW-FP. This information could be helpful to assess the coverage of FW-FP over the extent of the catchment or, for example, over certain highly erodible areas of the catchment.

This information will be key to highlight the good works done by farm operators and their advisors but will also need to carefully consider the anonymity assurances of the data presented.

Note that information gathered from Certified Freshwater Farm Plans should not be more than what is absolutely necessary to ensure critical compliance within the catchment context. While the Local Government Official Information Management Act contains some protections there is limited mention of this in the discussion document or what guidance would be provided to councils on this – it should not be able to be interpreted differently across regions (Q49).

Note that reporting on the ‘implementation and evaluation of on-farm actions’ will require clear safeguards in place to protect farmers’ private information. In addition, engagement with interested parties is required ahead of this evaluation to ensure the right questions are being considered.

Reporting and review: what regional councils report publicly

Support for regional council reporting of select information to show progress of the freshwater farm plan system (Q51).

Require guidance and standards for councils, Crown Agencies, certifiers, and farmers on how existing laws (such as the Official Information Act and the Local Government Official Information Management Act) will be used throughout the journey of a FW-FP development, (potential) submission, and review (Q51).

Note that information that is especially sensitive and should not be shared publicly includes crop type and rotations, water reticulation approaches, and other aspects of farm management that could be considered ‘intellectual property’ and thus form part of a farm’s domestic or international competitive advantage. (Q52).

Note that it could be very challenging to ensure administratively simple reporting requirements at the start of FW-FP implementation and prior to the digitisation of FW-FP. We look forward to working with officials and councils on the best ways to manage this.



3. Stock exclusion proposals

B+LNZ supports the intent of the proposed s360 Regulations to prioritise stock exclusion on land where stock are more intensively farmed, and where fencing provides an efficient and effective method to prevent the direct deposition of pathogens, and damage to the bed and banks of waterbodies.

B+LNZ notes that exclusion of intensively farmed cattle from waterbodies has been supported by individual farmers for many years and reinforced through primary industries initiatives over the last 16 years such as the Dairy and Clean Streams Accord (2003), and later the Sustainable Dairy Water Accord (July 2013).

However, the use of the s360 regulation tool as a means of implementing stock exclusion requirements means there is no ability to consider some of the key factors that are relevant to environmental risk – such as stocking rates, stock-specific stock management and alternative mitigation measures. The use of the ‘low slope’ map as a tool within these regulations is a blunt instrument that will result in undesirable or ineffective outcomes. At the end of 2020, B+LNZ and other industry groups asked farmers to provide MfE feedback on the anomalies identified in the low slope map, after the Government asked for examples of where the map wasn’t working. We appreciate the Ministry’s acceptance of the input of many sheep and beef farmers during this process and the proposals to the low slope map as a result.

We maintain there are more effective ways of achieving the same, or even better, environmental outcomes.

A regionally-based approach to stock exclusion is consistent with the adoption of stock exclusion rules, including a slope-trigger at paddock scale in Hawke’s Bay and the recent introduction of similar rules in the Waikato. These approaches take into account how paddocks are farmed and provide farmers with an alternative pathway to demonstrate the measures they are taking to mitigate potential impacts on waterways. These rules are specific enough for the regional council to take action on breaches, but flexible enough to ensure that good environmental outcomes are the driving force.

We submit that the proposals to change the low slope map do not go far enough to ensure effective and efficient risk-based management of stock access to waterways. Our recommendation is for the low slope map to be deleted and for guidance to be developed for regional councils as part of assessing the risks and required actions in certified Freshwater Farm Plans where this is important for managing freshwater health. This can assess risk to water quality and health in any block of land (land management unit) or group of paddocks as affected by stocking rates, slope and soil characteristics, feasibility of fencing or other exclusion measures and alternative mitigations (e.g. strategically placed sediment traps, wetlands and riparian zones).

The diversity and complexity of New Zealand’s hill and high country and extensive farming operations mean that nationwide and unconditional stock exclusion can be highly impracticable in a large number of situations. The Government’s original low slope map misidentified thousands of hectares of steep land as ‘low slope’ and while we appreciate efforts to address this, analysis of the recently released alternative map

identifies there are still many areas either incorrectly included in the 'low slope' area, or excluded from the map but less than five degrees. Thus, even with the proposed adjustments, the map is still not meeting the policy intent to accurately identify all areas of 'low slope' land.

3.1 Detailed submission

The proposed changes to the low slope map are a significant improvement. The changes fix some of the inaccuracies that were created with the existing map. The new rules include provisions for more extensive systems in hill country and better reflects land contours.

B+LNZ considers that the proposed changes to the 'low slope' map definition provide more appropriate criteria for determining where stock are required to be excluded from waterbodies. In particular, B+LNZ supports the separation between 'low slope' land (five degree slope or less as mapped nationally), 5-10 degree slope, and non low slope' land. We also support the distinction made between land above 500m as well as depleted and/or tall tussock grassland.

B+LNZ submit that these standards and proposals provide an improved distinction of where exclusion is required, are more workable on the ground, and adjust the cost implications of fencing on the former incorrectly assessed 'low slope' land.

While these changes are positive, given the regulatory mechanism chosen there will always be challenges to achieve the policy intent. To truly reflect the nuances of our landscape and farming operations, regional councils must be given discretion when implementing these rules.

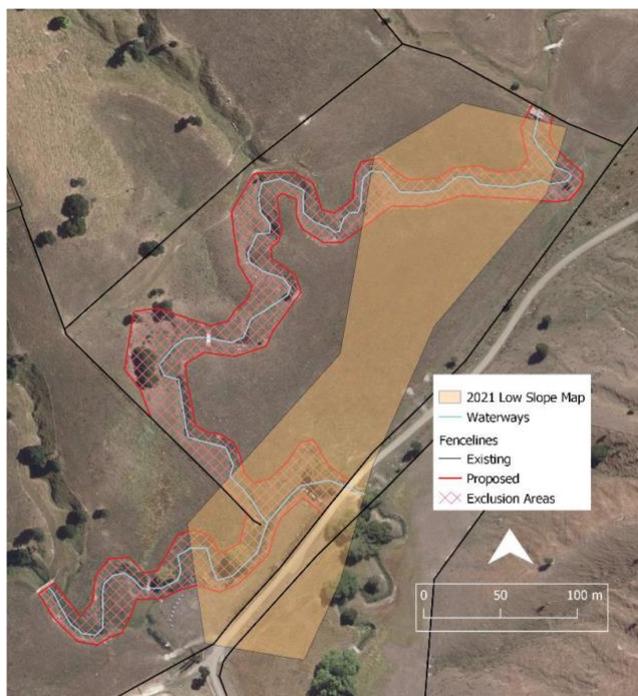
3.1.1 Analysis of the new 'low slope' map

Farmer feedback has again identified numerous cases where the recently amended 'low slope' map is inaccurate. From assessing this in detail, this difference can be substantial. This could be due to the size of the data cell as well as the polygon edges not accounting for smaller scale contours when describing the 'low slope' area.

B+LNZ commissioned BakerAg to investigate the change in coverage of the low slope map and the costs for fencing associated with this. As part of their work (see Appendix 1), the authors took an in-depth look at the implications for four different sheep and beef operations in the North Island. These were the same four case studies used when B+LNZ initially assessed the costs of the Essential Freshwater Proposals for these properties (Beetham & Garland, 2019).

The farms are on a range of landscapes and some have existing infrastructure present to exclude stock from waterways. In their analysis, BakerAg found that only fencing waterways where they intersected a low slope area identified in the 2021 map could be impractical. This is because the boundaries of the low slope area polygons did not always follow the best fenceline and as a result, more land around waterways was captured in their assessment to ensure that the fencelines were established in the most practical, least expensive, and least environmentally degrading ways. As a result, the most practical fence line used for the analysis was typically greater than the 3m required setback and outside of the 'low slope map' area. See Image 1 as an example of this:

Image 1: Map of Case A Showing Size of Exclusion Areas. Pg 11.



In addition to this, in three of the four case study farms, the area identified with the new 'low slope' and 5-10 degree slope maps was greater than that identified using the original 2020 slope map. This is partially because the original map did not identify clearly 'low slope' areas on one of the case study farms in the original review. When comparing the previous (2020) 'low slope map' and the 2021 'low slope map', the area now included in the four case study farms increases from 27 percent of the total farm area to 43 percent.

The estimated cost of the additional fencing required for these case study farms, using the most logical fence placement, has risen from \$54,284 in 2020 to \$196,733 for the 2021 0-5 degree low slope map. Note that logical fence placement meant that land outside of the 0-5 degree mapped area was also fenced off from stock access.

In addition, when estimating the costs associating with excluding stock from waterways on 5-10 degree slopes for case study farm A, the 2021 (5-10 degree) low slope map "represented an increase of \$192,460 (or 632 percent) over and above the fencing costs identified under the 2021 (0-5 degree) low slope map to fence waterways within the low slope land area" (pg 19). This is equivalent to \$358/ha or nearly 1.5 times annual average profit for this class of land.

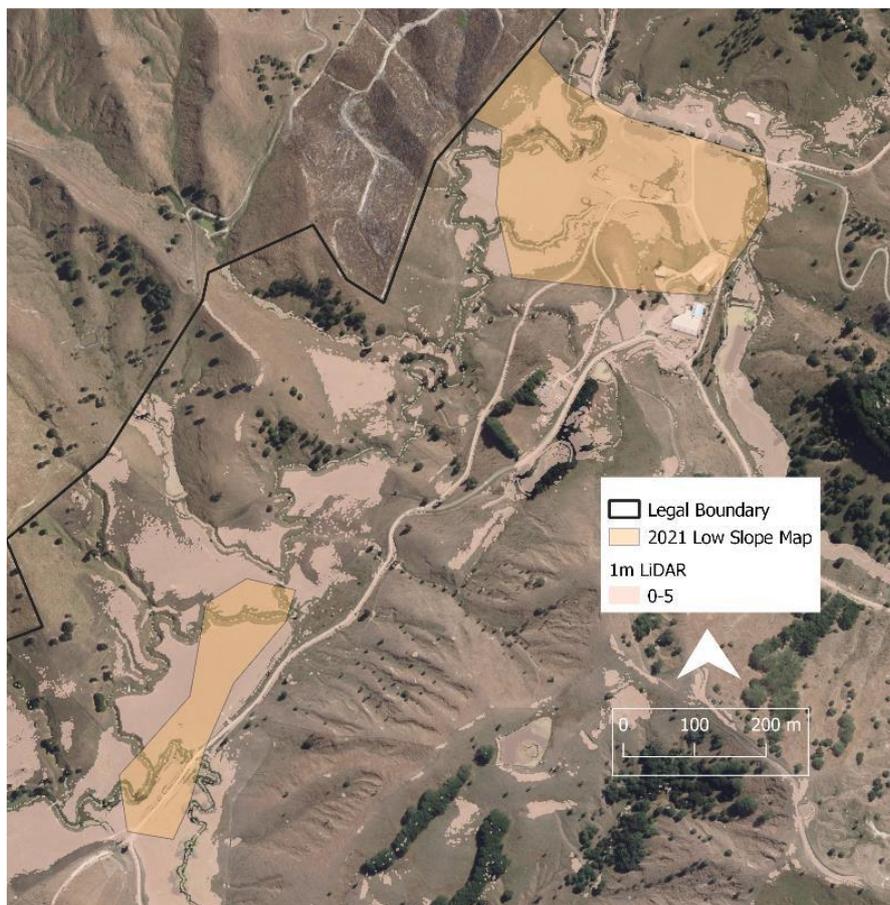
However, these costs were not directly correlated to length of waterways on the property. For example, "despite Case A having less than half the length of [0-5 degree] waterways that Case D has, the total cost to Case A of fencing waterways is only \$22,922 (26 percent) less than Case D when waterways are logically fenced" (pg 17). These costs are not taking into account the catchment context and thus need to exclude stock from all eligible waterways or not. These costs also mean that farmers' ability to adopt a wide range of farm management tools to support freshwater health outcomes would likely be more limited.

At a regional level, BakerAg compared the likely fencing costs of waterways as per the 2020 low slope map with the costs of fencing waterways as per the updated 2021 (0-5 degree) low slope map. Although BakerAg were unable to ensure that the waterways captured met the 1m wide definition, they found that the total length of fencing required declined from 772km to 538km. This is a change similar to the difference in driving distance between Wellington and Whangarei versus Wellington and Hamilton. The distance of fencing required equated to \$113 million just for the Wellington region. In addition, the 2020 low slope map captured (in theory) land between 0-10 degrees in slope whereas the new 2021 low slope map, only (in theory) captures land 0-5 degrees. As a result, the costs associated with the combination of the 2021 0-5 degree map and the 2021 5-10 degree map will be much greater.

To ground-truth the revised low slope map its accuracy was compared to 1m LiDAR mapping available on one of the case study farms. Overall there is a significant difference as shown below, with the 'low slope map' capturing areas that were not identified to be 0-5 degrees according to the LiDAR mapping (pg 21),

while also missing large areas of 0-5 degree slopes. This highlights the inability of the 'low slope map' to accurately identify areas of land intended to have stock excluded from. See this in Image 2 below:

Image 2: the results of the 1m LiDAR analysis undertaken as part of this study compared to the 2021 (0-5 degree) LSL map within Case A. pg 20.



Based on this analysis, the new low slope map likely captures more land area than the previous version but is not aligned with the true contours of the land, and thus farmers' inherent understanding of their landscapes. There is also a significant increase in costs associated with fencing for stock exclusion that does not assess the 'benefits' of this action as compared to other environmental management actions. For this reason, B+LNZ recommends removing the low slope map and empowering councils to achieve the freshwater outcomes sought via appropriate stock exclusion as managed via farm plans or regional rules.

3.1.2 A better approach

Regional councils are better able to assess the effects of allowing stock access to areas and the benefits that this would provide to the catchment freshwater health needs. For example, where it can be demonstrated that the area has been misidentified in the map, that restricting stock access would be inefficient or ineffective given the waterway or catchment characteristics, or that resources could be better spent on other mitigation activities that would have a greater effect, regional councils should be given the discretion to allow a divergence from the 'low slope map' or any other assessment used to tie slope of land to potential environmental effect.³ This is key relevant information that needs to be considered when framing the issue presented in the discussion document.

In addition to the objectives and criteria set out within the discussion document, we submit that these objectives should also consider the impacts and costs associated with preferred options as well as the

³ This approach has been utilised in the Tukituki Catchment for Plan Change 6. In this plan, all stock (other than sheep) must be excluded from waterways on land with a slope less than 15 degrees. If the waterway flows through land that is greater than 15 degrees slope, then stock (not sheep) located in priority catchments *and* stocked at greater than 18su/ha/paddock must be excluded. If the waterway is not in a priority catchment and it is not reasonably practical to exclude stock (farmed at more than 18su/ha) from the waterway, then additional measures must be noted within the farm operator's farm environmental management plan. Special consideration will need to be given for rotational grazing practices which means stock could be farmed at over 18su/ha/paddock.

perceived sense of certainty. In addition, in order to be effective, requirements must be commensurate with the risk and impact of the particular activity, farming system, or land use. In addition, a sub-objective needs to be added that assesses where the policy framework or options assessed will empower and incentivise the behaviour changes required. This is key to the regulations being effective.

If the s360 regulations are to remain in place, we agree that slopes between 5-10 degrees and land above 500m should be managed in a complementary manner via certified freshwater farm plans. The ability for farmers to work with their advisor or certifier to assess what is the best management approach to these areas is welcomed. However, based on our initial analysis the difference in actions between managing stock access to waterways on 0-5 degree land vs 5-10 degree land could be minimal depending on the landscape (pg 19).

Riparian margins used for mitigating the loss of particulate contaminants have different efficacies according to the land-use, slope, vegetative cover, seasonality, intensity and volume of rainfall, and soil drainage properties. Annual and seasonal variations in rainfall, and slope, affect both the amount and timing of surface runoff and mobilised particulate material, and hence the efficacy of buffer strips. In addition, there are many forms and functions for a buffer strip or setback area and the efficacy of these areas will be determined by what 'problem' is being addressed. For example, planting in setback areas can be used to reduce contaminant inputs via overland or subsurface flow, decrease light exposure and stabilise water-body temperatures, increase freshwater ecosystem health, improve channel and bank stability, manage flood events, and provide for recreation, cultural, aesthetic, and landscape values (Fenemor and Samarasinghe (2020). The choices made on how much setback, or where setbacks or buffers are best suited depends on the hydrological factors assessed when seeking environmental outcomes, the management of existing riparian vegetation, and the connection between riparian management and other farm management decisions (Fenemor and Samarasinghe 2020, pg 11). Grass buffer strips can be effective solutions depending on the contaminant risk and management approach. However, these areas need to be managed effectively to ensure weeds do not become a nuisance.⁴

Although attempts have been made to determine the buffer strip width according to the slope (Barling & Moore, 1994) of the surrounding area, "in reality, riparian setback distances should vary across a landscape in response to land cover, and geographical, climatic and hydrological factors, alongside policy objectives and land-user preferences and priorities" (pg 12, Fenemor and Samarasinghe, 2020). This means that "setback distances need to be made on a catchment-by-catchment basis aimed at achieving agreed riparian functional objectives" (pg 37, Fenemor and Samarasinghe, 2020) and not arbitrary measurements.

Riparian buffer zones are more appropriately established through bespoke policy approaches or methods which sit outside of nationwide standards. An example of an alternative method is tailored Environmental Management Plans which take into account the geology of the landscape, the activity being undertaken, and the sensitivity of receiving environments. A blanket setback will not be effective at addressing environmental concerns especially in more diverse landscapes.

In addition to this, the utilisation of farm plans as part of a wider catchment approach is the most effective way to manage in-stream health impacts. As Fenemor and Samarasinghe (2020) note:

"The effectiveness of riparian management is maximised when a whole-catchment or landscape approach is taken, because upstream land-use and management practices contribute to downstream outcomes. Where a whole-catchment approach is not possible, riparian management planning should be carried out at the scale of a river reach for rivers and streams, and at a segment scale for lakes and wetlands (i.e. zones in which the problems are similar)" (pg 7).

Guidance within the certified freshwater farm planning framework to inform decisions on where eligible livestock should be excluded from slopes 5-10 degrees will need to consider the nuanced nature of the landscape, farming system, and freshwater ecosystems/receiving body. The guidance should also provide for situations where an alternative to stock exclusion or fencing is required on slopes 0-5 degrees. The focus should remain on identifying critical source areas and progressively addressing them – wide-ranging

⁴ To manage stock access to a buffer zone in order to control weeds/pests, time limitations can be put in place to ensure that this grazing does not occur during high-risk periods. In addition, a limit on the total days animals can be grazed in these areas can be established.

assumptions and a broad-brush approach is impossible to apply sensibly when farm systems, types, and risk factors vary so widely even within a region let alone a catchment.

Providing the ability for regional councils to choose the mechanism to address stock exclusion requirements based on the land, farming system, freshwater ecosystem health, and climate is required. This aligns with B+LNZ's view that any environmental management requirements must be commensurate with the impact of the particular activity, farming system, or land use. The management actions must also consider what the trade-offs of stock exclusion could be. For example, in order to ensure an entire stream within a low slope area is protected, it is likely that a bulldozer is needed on some areas to establish a fenceline. This will result in sediment loading which could be a greater influence on catchment values and ecological health than E. coli or other pathogens managed by excluding stock from waterways.

There will always be situations where stock exclusion is clearly impractical given the costs and potential benefits. This is especially the case for the exclusion of cattle on extensive areas of the West Coast of the South Island. In these areas, cattle are managed at very low stocking rates and rivers are highly mobile and prone to flooding. The establishment of fencing infrastructure on these areas where animals are extensively farmed meets many of the same criteria used to support providing an exemption for 'high country' even though the land is not above 500m and is not classified as degraded grassland or tussock.

3.2 Suggested changes

B+LNZ proposes two amendments to the proposals if the s360 regulations are not removed entirely. First, an amendment to the 'low slope' map definition and the second to the 'wide river' definition. We seek to ensure that the intent of the proposals are clear within the policy, that the policy is implementable, and effects-based.

An alternative to providing broader discretion for regional councils and the Freshwater Farm Planning process is to adjust the definition of the 'low slope' map boundaries. This could include the exclusion of certain river classes within the bounds of the 'low slope' map or the exclusion of certain types of land parcels. Land parcels owned/managed by the Department of Conservation or Land Information New Zealand could be identified and low slope land on these parcels excluded. This would provide for the dynamic nature of these landscapes as well as provide discretion to the entities to adjust the lease agreements to suit.

From B+LNZ's understanding, this change to the 'low slope' map boundaries would address the concerns raised by those on the West Coast of the South Island and in the Mackenzie Country. In their situations, farmers manage stock on DOC and LINZ land as a weed and pest management tool. In both cases, stock are farmed at very low stocking rates and in some cases there is road access. The river systems in these areas are highly mobile and subject to flooding multiple times a year.

These agreements could account for the geology of the landscape, the activity being undertaken, and the sensitivity of receiving environments. A blanket setback as proposed through the Essential Freshwater proposals will not be effective at addressing environmental concerns especially in these more diverse landscapes. Further analysis will need to be undertaken to assess the ability of these suggestions to manage the example highlighted. We request to work with officials on this.

The adjustment of the scope of the 'low slope' map to reflect different land ownership by the Crown or its agents better provides for the required flexibility needed.

B+LNZ seeks a second change to the proposals outlined within the Discussion Document. The definition of 'wide river' within the Glossary notes that a waterbody needs to be assessed as meeting the definition of a 'waterway' within an entire land parcel, not just within the defined 'low slope' area. This definition will be challenging to assess and implement on the ground and arguably is an interpretation fixed to the previous unworkable map.

We do not agree that "requirements may apply to a river with a bed less than 1 metre wide in the low slope map, if the bed of that river is *wider than 1 metre within the land parcel* (pg 26)." Rather, stock exclusion should only apply to waterways that are 1m or wider on flat land (0-5 degrees).

Depending on the extent of the land parcel and the waterway, there can be significant variance along a waterway. In theory, a waterway could be 1m (or more) in width on one part of the title, and a trickle at the other end. Although a waterway will tend to expand in size as it travels down the catchment, there are some

geological features which could restrict this. Thus, a waterway could be 1m or wider on a high-slope part of a land parcel but smaller than 1m once on low sloping land.

To ensure the intent of the policy is delivered, B+LNZ submits that the definition of a wide river should be assessed within the extent of the low slope map area rather than at the land title scale. Fencing of these waterways will likely go beyond the boundaries of the 'low slope map' given the need to protect the length of the waterway within a paddock and the practical choices associated with fence line placement.

Although not included within the consultation document, we have heard from farmers that the definition of a 'wetland' is a significant issue. The stock exclusion rules mean that excluding stock from wetlands must occur by 2023 regardless of the scope of work required. The costs or scope of these exclusion activities are not considered (much less labour availability) nor the priority which a council might place on different types and ecological values of wetlands. We look forward to submitting our views as part of the consultation on the 'wetland definition' currently under way.



4. Conclusion

Freshwater policy must provide a foundation that will empower New Zealand's sheep and beef sector to continue to build diverse, resilient, productive landscapes for the benefit of all New Zealand and maintain vibrant thriving communities.

B+LNZ submits that any policy and management approaches must take into account the relative environmental impacts of land uses and discharges, be sensitive to farm systems and provide for land use flexibility within boundaries. B+LNZ submits that this approach will efficiently and effectively provide for the integrated management of natural resource management, achieve the purpose of the Act, and give effect to the National Policy Statement for Freshwater Management.

To implement these requirements, a multitude of regulatory and non-regulatory approaches is required. The proposals put forth are heavily weighted towards adjustments to regulatory proposals and do not consider the practical implementation needs of these. This is not to say that strong 'bottom-lines' and standards to not have a place, but rather they must not be considered in isolation.

Freshwater farm plans have traditionally been used as a means to support farmer decision making within their business and environmental context. To ensure an effective transition from their current predominantly voluntary status, industry-led farm plan approaches must be utilised. This can help ensure that regulatory Freshwater Farm Plans are practical, outcomes-based, not input-based, and ensure the privacy of farmers' data.

Farmers also need to retain control and ownership of their farm plan and the information it contains. They need to be able to decide what information to share, who to share it with and when it is shared. The implementation of regulatory requirements, including Freshwater Farm Plans will need to be carefully considered and planned to ensure the most effective and efficient uptake to ensure freshwater health outcomes. Farm planning is one tool that can deliver on a range of expectations but with many farmers already feeling overwhelmed by the pace of regulatory change, the risk is that regulatory farm planning approaches could end up being a barrier to farmers achieving environmental goals they actually support.

To best deliver for farmers and the natural environment, a practical and implementable suite of policy approaches is essential to build trust and deliver on long-term outcomes. With the appropriate support and guidance, farmers and communities will continue to effectively manage the natural resources in their area. We will be looking to ensure that the detail and prescription is at the right level to not just become a tick-box exercise that is excessive, inhibits innovation, or prevents risk-based management.

Based on the content provided in these consultations, we have significant reservations that these changes will be implemented in a way that is reflective of a risk-based approach or practically work on the ground. We do not think that the timeframes proposed to the implementation of Certified Freshwater Farm Plan requirements are fair or reasonable.

We have been unable to make a proper assessment on the proposals and will be unable to do so until we see the detailed drafted regulations. This includes an understanding of how regulations governing certified freshwater farm plans will protect farmers' private information and information on how price and quality controls will be put in place. We also do not have enough understanding of how the proposed regulations will (mis)align with existing industry assurance programmes or catchment community activities. We request that Government takes a co-design approach with industry in formulating the proposed regulations/guidelines governing the Freshwater Farm Plan processes prior to public consultation.

With regards to stock exclusion, we appreciate the efforts made to adjust the 'low slope' map to better reflect what is within the landscape. We also appreciate the efforts made to provide exemptions for some 'extensive' farming operations via the introduction of an altitude threshold and grassland cover assessment. However, we do not think that these changes go far enough and instead seek that the s360 regulations are removed and replaced with provisions which provide greater flexibility for regional council discretion. If these regulations are not replaced, we have provided some suggested changes that could address some of our concerns.

We request to work with officials, and others, to further ground some of our perspectives and co-develop guidance.

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APPENDIX 1: BakerAg report

Freshwater Discussion Document Analysis

20th August 2021

BakerAg

Grace Crook & Cameron Walker



Client Report

Comparison of the 2020 Low Slope Map with the Proposed 2021 Low Slope Map for stock exclusion and costs associated with the proposed preferred option for freshwater farm plans.

Client: Beef + Lamb New Zealand (B+LNZ)

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EXECUTIVE SUMMARY

The first objective of this study was to investigate changes between the 2020 Low Slope Map and the Proposed 2021 Low Slope Map. This study aimed to quantify changes regarding the quantum of area classified as low slope land, the length of waterways captured by the low slope maps, the length of fencing required to exclude stock from identified waterways and quantifying the amount of pastoral land lost. We investigated the changes within four case study farms and the Wellington Region.

The second objective of this study was to investigate the costs associated with the Governments preferred method for implementing Freshwater Farm Plans. This report outlines the range of costs associated with completing a Freshwater Farm Plan to meet certification standards, depending on the approach used and complexity of the farm system.

Within the four case study farms, 808 ha of land was classified as being low slope land by the 2020 LSL map. In contrast, the 2021 (0-5 degree) LSL map identified a total of 751 ha within the four case study farms, and the 2021 (5-10 degree) LSL map identified a further 520.1 ha, totalling 1,271.1 ha combined for both 2021 LSL maps. The fencing costs associated with ensuring cattle exclusion from the four case study farms under the 2020 LSL map totalled \$54,284 and for the 2021 (0-5 degree) LSL map they totalled \$196,733. For the combined 2021 (0-10 degree) LSL maps within Case A, fencing costs totalled \$222,929 compared to there being no cost under the 2020 LSL map.

At the Wellington Region level, the 2021 (0-5 degree) LSL map identified 136,386 ha as being low slope land compared to the 2020 LSL map, which identified 173,490 ha. The 2021 (0-5 degree) LSL map required 2,659 km of waterways to be fenced for livestock exclusion, compared to the 2020 LSL map, which identified 3,807 km of waterways. We have not been able to assess the 2021 (5-10 degree) LSL map at the regional level but based on results from the four case study farms it is likely that the area identified as low slope land will increase.

The comparison of the 2021 (0-5 degree) LSL map and the 2021 (5-10 degree) LSL map against an analysis of 1m LiDAR data for Case A found that there were disparities between the low slope land identified by the proposed maps. However, further analysis will be required to provide a more accurate assessment of this disparity.

The estimated costs for a sheep and beef farmer to complete a Freshwater Farm Environment Plan (FW-FP) is estimated to be within the range of \$3,200 (DIY Version) - \$12,500 depending on the method used to compile the FW-FP, the complexity of the farm operation, what data the landowner already has and number of natural ecosystems on the property.

A certifier will be required to have extensive knowledge of national regulations, regional policy, specific catchment values and goals, nutrient management, farm systems and be able to recognise cultural and ecological sensitivities and feasibility of outcomes. Greater liability will be placed on the certifier and their fees will reflect this i.e. \$2,000.

An auditor is likely to be responsible for checking that the farmer meets the outcomes listed in the FW-FP and we expect their cost to be consistent with the rate that auditors are currently charging i.e. \$850-\$2,500.

Until farmers and growers complete a FW-FP and go through the certification and auditing process, we can only give a broad range of cost relating to the variables mentioned above.

1. INTRODUCTION

1.1. Freshwater Regulations

The Government has released two discussion documents for feedback: stock exclusion regulations relating to the proposed changes to the low slope map and Freshwater farm plan regulations. Changes are being proposed to the low slope map which identifies where beef cattle and deer will need to be excluded from access to waterways from 1 July 2025. The government is also seeking input on the preferred process for the implementation of Freshwater Farm Plans.

This report looks at the changes in fencing costs for four case study farms between the 2020 low slope map and the 2021 low slope map at 0-5 degrees and specifically for one case study farm at 5-10 degrees. Additionally, in-depth analysis is carried out on that case study farm to show comparisons between the 2021 low slope map and terrain analysis from 1m LiDAR data. Finally, at a regional level, a comparison is made between the length of waterways required to be fenced between the 2020 low slope map and the 2021 low slope map at 0-5°.

This report also looks at the cost involved with the proposed preferred option for Freshwater Farm Plans and summarises likely variance in costs between farm businesses.

1.2. What is Proposed?

There are two discussion documents that would change the way land and freshwater is managed.

- The first is proposed amendments to the current 2020 low slope map. Many farmers and industry bodies raised concerns around the accuracy of the low slope map. The current map (Figure 1) captured many areas of high slope land and failed to capture areas of low slope land based on the unit title mapping approach used. Proposed changes to the “new” 2021 low slope map (Figure 2) include changes to the mapping approach to use ‘local terrain averaging’, applying an altitude threshold of 500 metres and removing depleted grassland and tall tussock country from the map.
- The second proposal is around the preferred method for implementing Freshwater Farm Plans. Farmers will be required to meet certified Freshwater Farm Plan standards as well as ensure these plans are certified, audited and kept active under the proposed preferred method.

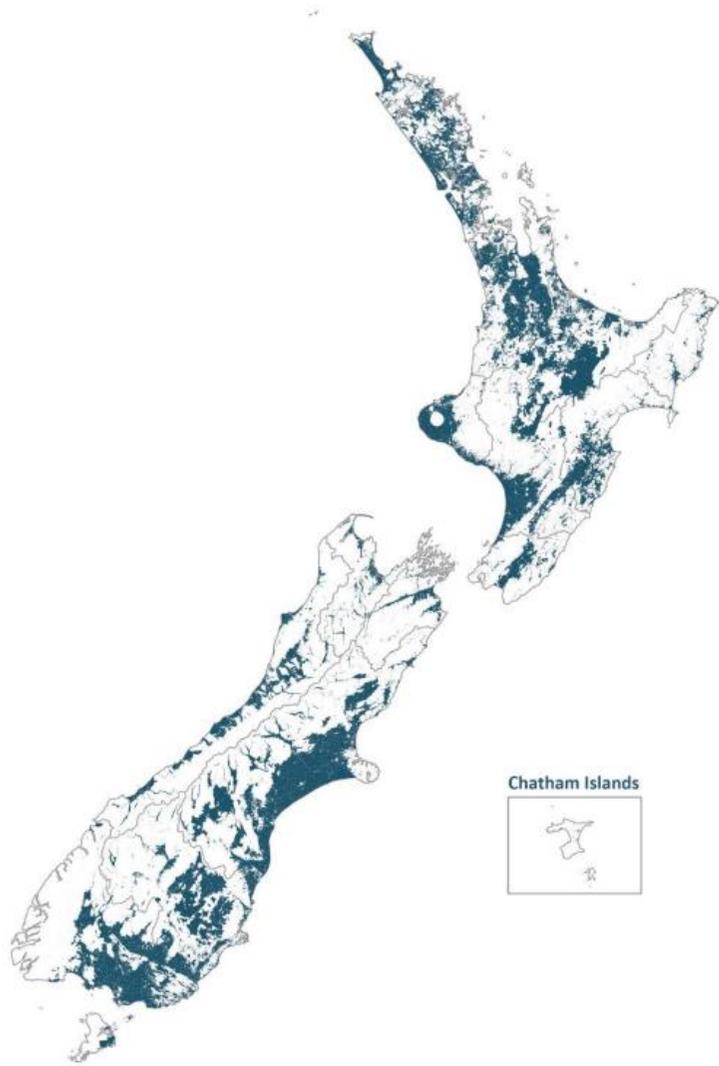


Figure 1: Current Low Slope Map Highlighting Areas of Low Slope

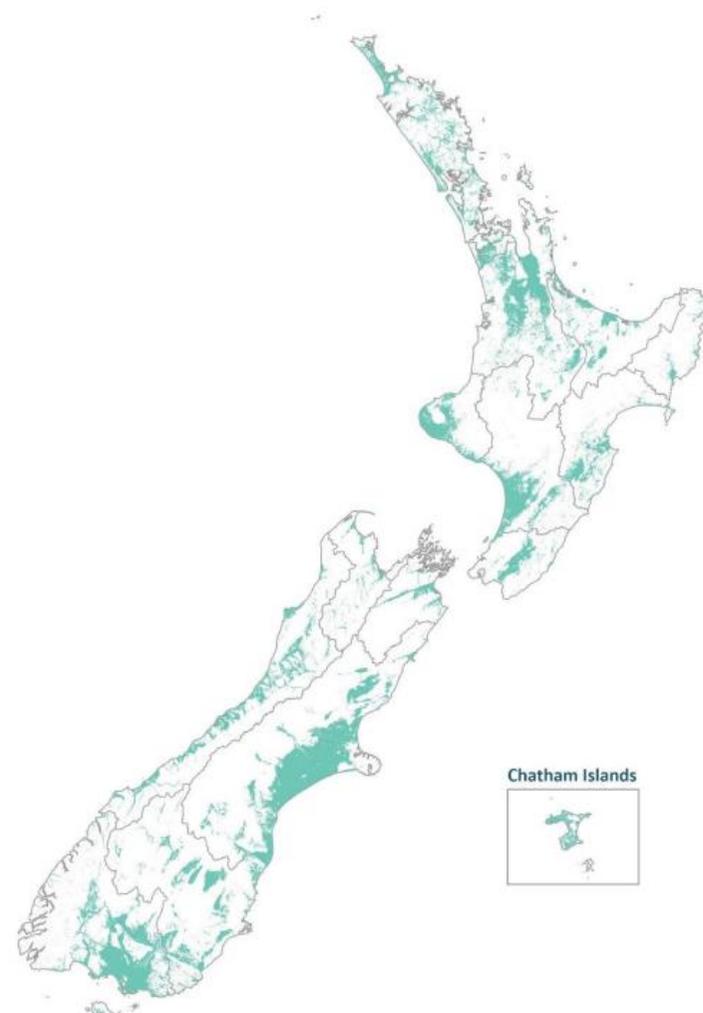


Figure 2: Proposed Low Slope Map Highlighting Areas of Low Slope

2. METHODOLOGY

2.1 Farm Selection

With the tight time frame available to make submissions the authors have chosen to use the same case study farms used to produce the report, “Economic Evaluation of the Government’s Proposed “Action for Healthy Waterways” Policy Package” produced by BakerAg in 2019. These farms were selected in 2019 because they had adequate data including farm maps that made the analysis more efficient. The farms chosen in 2019 gave a good representation of the B+LNZ farm classes in the North Island, including Farm Class 3, 4 and 5 as shown in Table 1. The case study farms, only farm sheep and beef therefore, fencing of waterways has been to exclude cattle.

Table 1: Case Study farms used for Comparison of the 2020 and 2021 Low Slope Land Map

Farm	Effective Ha	Farm type	Location	B+LNZ Farm Class
A	622	Hill country sheep & beef breeding and finishing	Eastern Wairarapa	3
B	819	Hill country sheep & beef breeding and finishing	Tararua	4
C	655	Mixed cropping, bull and lamb finishing	Hawkes Bay	5
D	900	Hill country sheep & beef breeding and finishing	Central Waikato	4

2.2 GIS Mapping

Quantum Geographic Information System (QGIS) mapping software was used to analyse the impacts of both the ‘Stock Exclusion Low Slope Land 2020’ and ‘Stock Exclusion Low Slope Land 2021 Proposal’ shapefiles on the four case study farms and the Wellington Region. We analysed the length of waterways captured, length of fencing required to exclude stock, and pastoral farming area retired because of fencing waterways.

2.3 GIS Case Study Analysis

Each case study farm was analysed in QGIS under three low slope maps, listed below:

- 1) Stock Exclusion Low Slope Land 2020
- 2) Stock Exclusion Low Slope Land 2021 Proposal NZ
- 3) Stock Exclusion Low Slope Land 2021 Proposal NZ – 5 to 10 degrees

The 2020 low slope land (LSL) map has identified land that has an average slope of less than or equal to 10 degrees across a land parcel that is used for grazing. This slope analysis has been based on

an elevation model created by Manaaki Whenua – Landcare Research, which is the ‘15m resolution Digital Elevation Model (DEM)’ that has been derived from LINZ 20 m contour data.

It is assumed that the methodology for assessing low slope land within the 2021 (0-5 degree) LSL map and the 2021 (5-10 degree) LSL map is similar to that outlined for the 2020 LSL map. The key differences being that firstly; low slope land of 0-5 degrees and 5-10 degrees have been split into two different datasets, and secondly; that the average slope of the land parcel is not considered, only the slope of identified areas. Therefore, the new 2021 LSL maps are likely to be more reflective of slope as they are not averaged across the entirety of a land parcel.

The 2020 LSL map and 2021 (0-5 degree) LSL map data was imported from the Ministry for the Environment data service website as shapefile layers, as this is publicly available. In contrast, the 2021 (0-5 degree) LSL data was sourced from an online webpage (‘Stock Exclusion Map Viewer’) as this data was not available for importation from the data service. To import the 2021 (5-10 degree) LSL map data into QGIS, a screenshot of the map areas for each case study was taken from the Stock Exclusion Map Viewer webpage, this image was then georeferenced in QGIS and manually vectorised. It is likely that this process has resulted in small errors as to the boundaries of the 2021 (5-10 degree) LSL map, however, we do not believe these to be significant.

2.3.1 Low Slope Map Areas

The shapefiles imported/created as outlined in the previous section were ‘clipped’ to the legal boundaries of each of the four case studies. The clipping process restricts data from one shapefile to the data of another layer, in this case, it restricted the area of the low slope maps to the legal boundaries of the four case study farms.

This process allowed for a comparison of the quantum of low slope land identified within each case study farm based on the three varying maps.

2.3.2 Identification of Waterways

With the low slope areas for each case study farm quantified, waterways that were contained within these low slope areas could then be identified.

Waterways are defined as per the Resource Management Act:

“river means a continually or intermittently flowing body of fresh water; and includes a stream and modified watercourse; but does not include any artificial watercourse (including an irrigation canal, water supply race, canal for the supply of water for electricity power generation, and farm drainage canal”

The stock exclusion regulations define a wide river as a “river with a bed that is wider than 1m anywhere in the land parcel”.

We interpreted from these definitions that the intention is for beef cattle grazing on low slope areas to be excluded from waterways that are greater than 1m wide from bank to bank, anywhere in the land parcel.

Identification of waterways greater than 1m in width was based on existing knowledge of the case study property, as well as aerial imagery. Given the short time frame, the case study properties were not able to be reinspected to ‘ground-proof’ the assessment of waterways that were greater than 1m wide.

Initially, only waterways that fell within the low slope areas were identified. However, it soon became apparent that only fencing waterways where they intersected a low slope area would be impractical in places. Therefore, waterways that were greater than 1m wide but were not contained within low slope areas were also identified where it would be sensible to fence them off as they were connected to/were waterways that then flowed through low slope areas. Figure 3 provides an example of this.

As can be seen in Figure 3, it would be impractical to exclude stock only from the waterway where it intersects the low slope area on account of the contour of the surrounding land and the associated costs of overcoming this challenge when fencing the waterway. Furthermore, it is likely that by fencing the waterway strictly to the boundary of the low slope land, there would be negative environmental outcomes due to sedimentation of waterways associated with earthworks. Therefore, given the position of existing fence lines and contour of the land surrounding the waterway, it would be more practical to fence additional waterway as per Figure 3.

Figure 3: Map of Case A Showing Waterway and Proposed Fence Line Outside of LSL Map Area



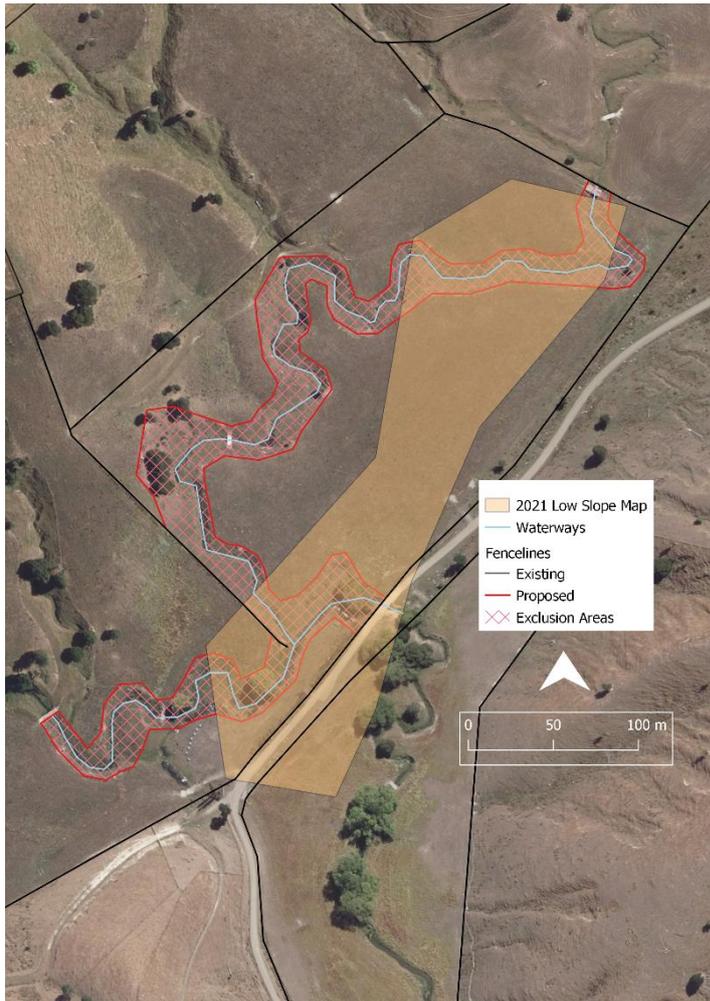
We have only been asked to analyse differences in waterways captured within the varying low slope maps and have made no allowance for fencing requirements of wetlands.

2.3.3 Assessment of Fence Lines Required

As we have identified waterways that are outside of the low slope maps but should practically be fenced off, we have differentiated between fence lines that are required to fence waterways that are within low slope areas and fence lines required to make cattle exclusion practical.

Under the proposed regulations, there is a minimum setback requirement from waterway banks of 3m for new fencing. However, in many cases it is not economically, physically, or environmentally practical/feasible to simply set back fence lines 3m from waterways. Therefore, we have given consideration as to the most practical fence line, which is often greater than a 3m setback. Figure 4 shows an example of this.

Figure 4: Map of Case A Showing Size of Exclusion Areas



As seen in Figure 4, for Case A it is infeasible for this identified waterway to be fenced with a 3m setback. This has resulted in quite a large area being identified as a cattle exclusion zone, in which cattle will not be permitted to graze.

Where there are existing fence lines that can be used to form part of the cattle exclusion fencing, we have acknowledged these so as not to overestimate the lengths of new fencing required to ensure that cattle are excluded from identified waterways.

2.3.4 Assessment of Quantum of Retired Area

Based upon identified waterways and the fence lines required to exclude cattle from them, we have been able to estimate the quantum of land that will need to be retired from pastoral farming to meet the requirements of these regulations.

As with the waterways and fence lines, we have differentiated between retirement areas within the low slope map areas, and those outside of the low slope map areas but that would practically need to be fenced.

2.3.5 Assessment of Fence line Costs

Fencing labour and material has been priced at \$13/linear metre for flat to easy land, using 4-wire electric. Fencing labour and materials on hill country has been priced at \$21/linear metre due to the greater requirement for angles, foots, and stays, which require more labour and materials, as well as the general increased difficulty associated with working on steeper contour. These figures were based on pricing from BakerAg records. Where an existing permanent fence already effectively excludes stock from the bed of the lake or wide river it is assumed that the permanent fence is either a post and batten fence with driven/dug fence posts or an electric fence with at least 2 electrified wires or a deer fence to meet the current regulations relating to set-back.

2.3.6 Summary of Process

The process detailed in the several preceding paragraphs is summarised below:

- 1) Import 2021 LSL map and 2021 (0-5 degree) LSL map shapefiles from MfE data service.
 - a. Clip these datasets to legal boundary of case study farms.
- 2) Import screenshots of 2021 (5-10 degree) LSL map from webpage for each case study farm.
 - a. Geo-reference these images.
 - b. Manually vectorise the data to ascertain low slope areas within case study farm legal boundaries.
- 3) Manually identify and map waterways that will be required to be fenced for cattle exclusion within case study farms.
 - a. Differentiate between those waterways within and those outside the low slope map areas.
- 4) Manually identify and map existing fence lines that can be utilised for cattle exclusion.
- 5) Map new fence lines that will be required to be erected for cattle exclusion from waterways.
 - a. Differentiate between those fence lines within and those outside the low slope map areas.
- 6) Calculate retirement areas based upon placement of new fence lines and position of existing fence lines.

Due to time constraints and the unavailability of the 2021 (5-10 degree) LSL map shapefile, we have restricted the analysis of the waterways, fence lines, and retirement areas required under the 2021 (5-10 degree) LSL map to Case A.

2.4 LiDAR Analysis

As previously outlined, the low slope maps have been derived from a DEM (a raster file containing elevation data) created from LINZ 20m contour data. To check the accuracy of the maps we have created a DEM from 1m LiDAR data captured within the Wellington Region from 2013-2014, which has been sourced from LINZ Data Service website.

We have vectorised the terrain analysis of the LiDAR image and clipped it to the legal boundary of Case study A. Features have then been grouped into '0-5 degree' and '6-10 degree' slope categories, with all other features being removed from the shapefile. Due to time constraints, we have not been able to fully analyse the resulting shapefile to produce a final shapefile layer that is consistent with the processes undertaken to generate the 2020 and 2021 LSL maps.

The result of this analysis is a shapefile layer for Case Study A that categorises slope class between 0-5 degrees and 6-10 degrees.

2.5 GIS Wellington Region Analysis

To quantify the differences between the 2020 LSL map and the 2021 (0-5 degree) LSL map at a larger scale, we have analysed the Wellington Region. As the shapefile for the 2021 (5-10 degree) LSL map was unavailable at the time of this study, we were not able to incorporate this map into our analysis.

Instead of manually identifying and mapping waterways as we did at the case study level, we have imported the 'NZ River Centrelines (Topo, 1:50k)' shapefile from the LINZ Data Service website and clipped this data set to both the 2021 and 2021 (0-5 degree) LSL maps. The 'NZ Topo – object class river_cl' description of a waterway in the 1:50k shapefile is:

“a water course where water can or does flow. Only those rivers significant by their size and location are held in the data and shown on the printed maps.”

Therefore, the above definition of a waterway does not match that within the freshwater regulations. As a result, it is likely that waterways that are less than 1m wide are included within this shapefile, which will not be required to be fenced under the proposed regulations. However, in the absence of a more suitable source of waterway data, we have adopted the shapefile outlined here and acknowledge the potential for inaccuracies.

As this analysis was done at a large scale, we have not been able to identify waterways that have already been fenced as we have with the individual case study farms. Therefore, it is likely that we have overestimated the total length of fencing required of waterways as there will likely already be some degree of cattle exclusion fencing existing.

Lastly, to estimate the length of fencing required to exclude cattle from waterways, and to estimate the area of land that will be required to be retired from cattle grazing, we have 'buffered' the clipped waterways shapefile. The buffer applied has been 4m, which allows for a 1m wide river from bank to bank and a 3m fence setback from either side of the river centreline. This approach is likely to create further inaccuracies as it was found within the four case study farms that it was not always possible to simply setback the stock exclusion fence 3m from the riverbank, which was largely on account of contour.

Despite the inaccuracies likely to arise from this analysis, it will be useful in identifying the total area of land classified as low slope land under the two maps, as well as the change in length of waterways identified.

2.6 Freshwater Farm Plan Costs

We have engaged with several regional councils and rural advisors across New Zealand to determine the average price for delivering a Farm Environment Plan (FEP) and audit. More intensive engagement was carried out in regions where FEP's and audits are mandatory or regularly used for compliance (i.e. Canterbury, Hawkes Bay and Waikato).

There is a significant range in costs for preparing a FEP depending on whether a farmer completes most of the work themselves or engages with an advisor to have one completed. If an advisor is chosen to prepare a FEP the price can also range significantly depending on the complexity of the farm, system and size of the property. It is understood that the current available FEP's wouldn't meet certification and therefore additional work would need to be carried out to ensure they meet the freshwater components.

3. RESULTS OF GIS ANALYSIS

3.1. Case Study Analysis

3.1.1. Stock Exclusion Areas

Table 2 shows the results from the analysis of clipping the LSL maps to the case study legal boundaries.

Table 2: Comparison of Land Area (Ha) that Falls Within the 2020 and 2021 LSL Map for the Case Study Farms.

	Area (ha) Contained Within Low Slope Map			
	2020	2021 (0-5 degrees)	2021 (5-10 degrees)	Total 2021
<u>Farm</u>				
A	-	12.1	73.8	85.9
B	161.2	78.7	310.8	389.6
C	589.7	580.4	4.9	585.2
D	57.6	79.8	130.6	210.4
Total	808.4	751.0	520.1	1,271.1

As can be seen, the 2021 (0-5 degrees) LSL map identifies a smaller area of low slope land compared to the 2020 LSL map, which is expected as the 2020 LSL map encompasses land with an equal to or less than 10-degree slope, whereas the 2021 (0-5 degrees) LSL map only identifies land with a slope equal to or less than 5 degrees.

However, when the results from the 2021 (5-10 degree) LSL map are added to those of the 2021 (0-5 degrees) LSL map, the total area within the case study farms increases to 1,271 ha, which is a 462.7 ha (or 57.2%) increase from the 2020 LSL map.

Some key points to note are that Case A had no low slope land identified within the 2020 LSL map but has 12.1 ha of LSL identified under the 2021 (0-5 degrees) and 73.8 ha under the 2021 (5-10 degrees) LSL maps, respectively. Furthermore, in three of the case study farms, the area identified within the 2021 (5-10 degree) LSL map comprised a larger area than that identified within the 2020 LSL map.

3.1.2. Waterways Identified

Table 3 shows the results from the analysis of manually identifying waterways from which cattle are to be excluded from within the case study farm as per the 2020 and 2021 (0-5 degrees) LSL maps. Table 3 also shows the apportionment of the total length of waterways identified between those that are in the low slope land area, and those that are not.

Table 3: Length of Waterways Identified in the 2020 and 2021 LSL Maps

In LSL?	Length (m) of Waterways from which Cattle to be Excluded					
	2020			2021 (0-5 degrees)		
	Yes	No	Total	Yes	No	Total
<i>Farm</i>						
A	-	-	-	1,219	997	2,217
B	1,496	-	1,496	659	625	1,284
C	2,354	-	2,354	2,227	127	2,354
D	1,223	-	1,223	4,115	823	4,938
Total	5,073	-	5,073	8,219	2,573	10,792

Based on the 2020 LSL map, Case C has the greatest length of waterways required to be fenced of all four case study farms. Furthermore, for all case study farms, the 2020 LSL map encompasses all identified waterways that are required to be fenced. In contrast, there are 10,792m of waterways identified to be fenced based on the 2021 (0-5 degree) LSL map, with 8,219m being captured within the low slope area, and the balance 2,573m being outside the low slope area, but deemed to be logical to fence off.

Case A would face a large increase in the length of waterways required to be fenced off, going from none to a total of 2,217m for the 2021 (0-5 degree) LSL map. Interestingly, Case B experienced a decline in the length of waterways that were required to be fenced. This is due to the 2021 (0-5 degree) LSL map incorporating less low slope land than the 2020 LSL map for Case B, and this having the effect of excluding a waterway from the low slope land area in the 2021 (0-5 degree) LSL map that was previously included within the low slope land area under the 2020 LSL map. Case C saw no change to the total length of waterways required to be fenced off as nearly the entirety of the property was classified as low slope land within all three maps.

As with Case A, Case D would face a large increase in the length of waterways that needed to be fenced off. This was largely due to the re-mapping of low slope land seeing an increase of low slope land areas within this case study. While the 2021 (0-5 degree) LSL map worked in the favour of Case B, it did the opposite for Cases A and D.

3.1.3. New Fence Lines Required

Table 4 summarises the length of new fencing required to be erected for all of those identified waterways to be fully fenced to ensure cattle exclusion. Table 4 also shows the apportionment of the total length of fence lines identified between those that are in the low slope land area, and those that are not.

Note: this table excludes lengths of permanent fencing already in existence that can be used for cattle exclusion with the addition of new fence lines.

Table 4: Length of New Fencing Required Between the 2020 and 2021 LSL Maps

In LSL?	Length (m) of Fencing Required					
	2020			2021 (0-5 degrees)		
	Yes	No	Total	Yes	No	Total
<i>Farm</i>						
A	-	-	-	1,451	1,664	3,115
B	2,558	-	2,558	1,384	947	2,330
C	975	-	975	975	-	975
D	643	-	643	5,679	1,117	6,796
Total	4,176	-	4,176	9,489	3,728	13,216

The total length of fencing required increased from 4,176m under the 2020 LSL map to 13,216m under the 2021 (0-5 degree) LSL map. The main differences are seen in Case A, which had no low slope land as per the 2020 LSL map, and Case D, which has a significantly greater area of the property classified as low slope land by the 2021 (0-5 degree) LSL map.

Although Case C has the largest area classified as low slope land under both the 2020 and 2021 (0-5 degree) LSL maps (refer Table 2), and the second greatest length of waterways requiring fencing under the 2021 (0-5 degree) LSL map (refer Table 3), it has the lowest requirement for new fencing to exclude cattle from waterways. This is because most waterways on this farm are already fenced.

Based on the lengths of new fencing required as summarised in Table 4, the total fencing costs for cattle exclusion for the 2020 LSL map and 2021 (0-5 degree) LSL map have been calculated and are presented in Table 5.

The fencing costs have been adopted as previously outlined, being \$13/linear metre for flat land, and \$21/linear metre where fencing is impractical around waterways and must follow the contour of the land, requiring more angles and stays.

Table 5: Comparison of Fencing Costs Between the 2020 and 2021 LSL Maps

In LSL?	Cost (\$) of Required Fencing					
	2020			2021 (0-5 degrees)		
	Yes	No	Total	Yes	No	Total
<i>Farm</i>						
A	\$0	\$0	\$0	\$30,469	\$34,952	\$65,420
B	\$33,248	\$0	\$33,248	\$17,991	\$12,305	\$30,295
C	\$12,675	\$0	\$12,675	\$12,675	\$0	\$12,675
D	\$8,361	\$0	\$8,361	\$73,825	\$14,517	\$88,342
Total	\$54,284	\$0	\$54,284	\$134,959	\$61,774	\$196,733

The farm facing the largest liability for fencing costs based on the 2021 (0-5 degree) LSL map is Case D, at a total cost of \$88,342 when waterways are fenced logically. When only waterways within the identified low slope areas are fenced, this liability reduces to \$73,825.

Despite Case A having less than half the length of waterways that Case D has, the total cost to Case A of fencing waterways is \$22,922 less than Case D when waterways are logically fenced.

This is due to the higher cost associated with hill country fencing within Case A, compared to Case D, which is mainly flat land so can be fenced at a lower cost. As expected, Case C has the lowest liability as most waterways required to be fenced for cattle exclusion within this property already have been.

In terms of cost increases from the 2020 LSL map to the 2021 (0-5 degree) LSL map, when only the waterways within the low slope areas were fenced, total fencing costs for the four case study farms increased by \$80,674 (or 149%). In contrast, when waterways were logically fenced as per the 2021 (0-5 degree) LSL map, total fencing costs for the four case study farms increased by \$142,448 (or 262%) above those for the 2020 LSL map.

3.1.4. Quantum of Pastoral Land Retired

Table 6 summarises the area of pastoral land that has been retired from cattle within each of the four case study farms based upon the 2020 and 2021 (5-10 degree) LSL maps. It will be at the discretion of each farmer as to whether they choose to only exclude cattle or exclude all livestock from entering the retired area.

Table 6: Comparison of Land Retired due to Waterway Fencing Between the 2020 and 2021 LSL Map

In LSL?	Area (ha) of Land Retirement Required					
	2020			2021 (0-5 degrees)		
	Yes	No	Total	Yes	No	Total
<i>Farm</i>						
A	-	-	-	2.3	2.3	4.6
B	4.8	-	4.8	1.2	1.8	3.0
C	5.6	-	5.6	5.4	0.2	5.6
D	3.7	-	3.7	5.1	2.0	7.1
Total	14.2	-	14.2	14.0	6.3	20.3

It can be seen that for the 2020 LSL map and 2021 (5-10 degrees) LSL map the area retired from pastoral farming remains relatively constant when waterways are fenced strictly to the low slope areas. However, when waterways are fence logically as per the 2021 (0-5 degree) LSL map, the area retired increases to 20.3 ha, which is an increase of 6.2 ha (or 43.6%).

3.2. Case A: Analysis of 2021 (5-10 Degree) LSL Map

Table 7 summarises the analysis of the 2021 (5-10 degree) LSL map for Case A. The rows of the table summarise the length (m) or area (ha) of identified waterways, fence lines, or retirement areas with delineation between waterways, fence lines, and retired areas that are/are not contained within low slope areas. The columns of the table summarise the length or area of waterways, fence lines, or retirement areas that have been identified as per the 2021 (5-10 degree) LSL map and delineate between those areas that were already fenced under the 2021 (0-5 degree) LSL map as being 'logical', and those areas that have not been previously identified. Therefore, the 'No' column represents new areas of waterways, fence lines, and retirement areas that had not been previously identified, and the 'total' column represents the grand total of all waterways, fence lines, and retirement areas that are captured by the 2021 (5-10 degree) LSL map. This total column provides delineation between areas that are contained within the 2021 (5-10 degree) LSL map, and those that lie outside it but are logical to be included given physical parameters.

Note: the areas in Table 7 below are in addition to the 2021 (0-5 degree) LSL map metrics that were contained strictly within the low slope areas. Therefore, please refer to Table 8 for a summary of all waterways, fence lines, and retirement areas identified within Case A for both the 2021 (0-5 degree) and 2021 (5-10 degree) LSL maps.

Table 7: Metrics for Case A - 2021 (5-10 degree) LSL Map

	In LSL?	Fenced 2021 (0-5 Degrees)		
		Yes	No	Total
Waterways (m)	Yes	998	3,922	4,920
	No		591	591
	<i>Total</i>	<i>998</i>	<i>4,514</i>	<i>5,511</i>
Fence Lines (m)	Yes	1,586	6,269	7,854
	No	13	1,297	1,310
	<i>Total</i>	<i>1,599</i>	<i>7,566</i>	<i>9,165</i>
Retired (ha)	Yes	2.2	10.2	12.4
	No	0.1	2.9	3.0
	<i>Total</i>	<i>2.3</i>	<i>13.1</i>	<i>15.4</i>

For all metrics (waterways, fence lines, and retirement areas) a portion of the total had already been captured within the ‘logical’ 2021 (0-5 degree) LSL map assessment. However, the majority of metrics are newly captured under the 2021 (5-10 degree) LSL map, as represented by the ‘No’ column. Furthermore, for the 2021 (5-10 degree) LSL map, the majority of metrics were contained within the identified low slope areas (as represented by the ‘Yes’ row), and only a small proportion of the metrics were included as being logical additions. Therefore, there are only small savings able to be made by strictly fencing to the low slope land areas.

Table 8: Summary of Metrics for Case A 2021 (0-10 degree) LSL Maps

In LSL?	2020 LSL Map				Total
	0-5 degree		5-10 degree		
	Yes	No	Yes	No	
Waterways (m)	1,219	-	4,920	591	6,730
Fence Lines (m)	1,451	-	7,854	1,310	10,616
Retired (ha)	2.3	-	12.4	3.0	17.7

In total, for the 2021 (0-10 degree) LSL maps, there are 6,730m of waterways contained within low slope areas that should logically be fenced off, which comprises 6,139m of waterways that are required to be fenced off. There is a total of 10,616m of fence lines contained within low slope areas that should logically be erected, which comprises 9,305m of fence lines that are required to be erected. Lastly, there is a total of 17.7ha of pastoral land contained within low slope areas that should logically be retired, including a total of 14.7ha of pastoral land is required to be retired.

Based on the above lengths of required fencing, and a fencing cost of \$21/linear metre, the total cost of fencing low slope land identified within the combined 2021 (0-10 degree) LSL map for Case A is \$222,929. Fencing costs for the 2021 (5-10 degree) LSL map are an increase of \$192,460 (or 632%) over and above the fencing costs identified under the 2021 (0-5 degree) LSL map to fence waterways within the low slope land area. Furthermore, considering Case A was initially not included within the 2020 LSL map, this fencing cost is significant.

3.3. LiDAR Analysis of Slope

Figure 5 shows the results of the 1m LiDAR analysis undertaken as part of this study compared to the 2021 (0-5 degree) LSL map within Case A.

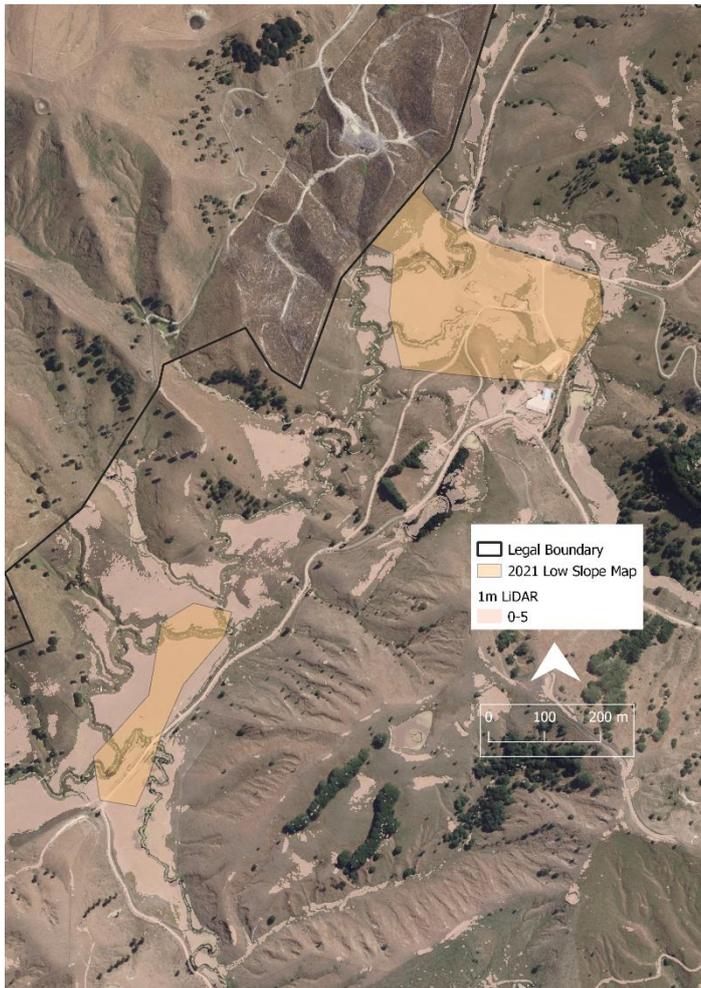


Figure 5: LiDAR Analysis of 0-5 Degree Slope of Case A

It can be seen that the majority of land that has been classified as low slope land by the 2021 (0-5 degree) LSL map is classified as 0-5 degree slope land as per the 1m LiDAR. However, it can be seen that there are significant other areas of 0-5 degree low slope land identified by the 1m LiDAR analysis that form contiguous areas. These areas are often bordering the low slope land areas identified by the 2021 (0-5 degree) LSL map, and therefore, should have been included.

Figure 6 shows the results of the 1m LiDAR analysis undertaken as part of this study compared to the 2021 (5-10 degree) LSL map. Note: this figure does not show all 5-10 degree low slope land as per the 2021 (5-10 degree) LSL map within Case A, rather just an example.

Please refer to Appendix B and Appendix C for maps of the entirety of Case A, which show the extent of differences between the 2021 (0-5 degree) and 2021 (5-10 degree) LSL maps compared to the 1m LiDAR analysis.

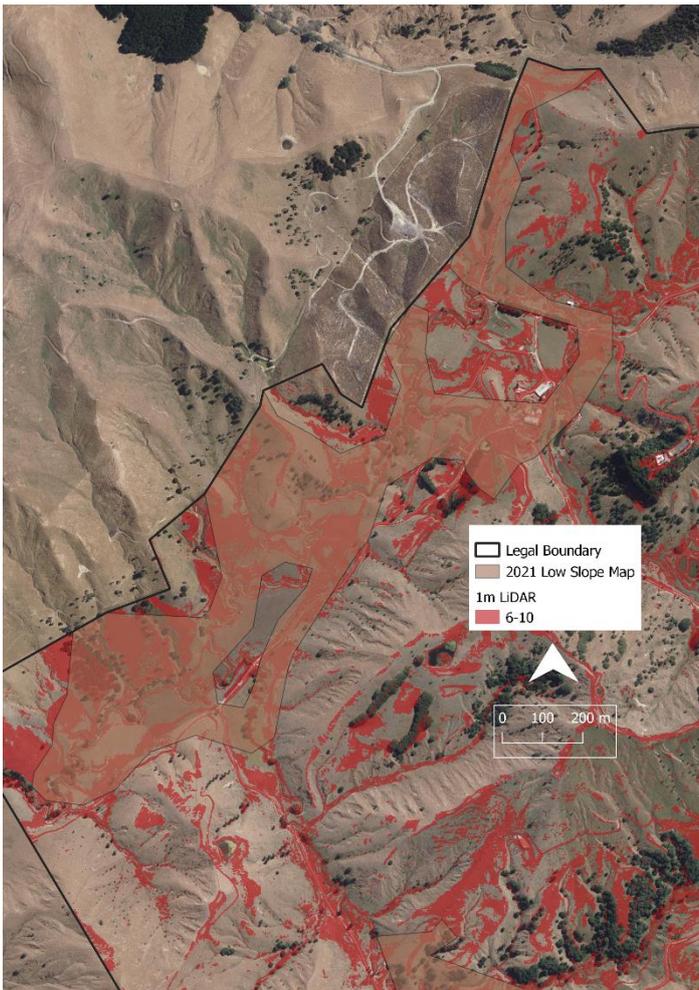


Figure 6: LiDAR Analysis of 5-10 Degree Slope

It can be seen that only approximately 50% of the area identified as 5-10 degree low slope land by the 2021 (5-10 degree) LSL map has been classified as 6-10 degree slope by the 1m LiDAR analysis. The majority of the balance of the area that falls within the 2021 (5-10 degree) LSL map is made up of 0-5 degree slope (approximately 1/3), with the remaining 2/3 comprising land with a slope classification greater than 11 degrees.

In summary, the LiDAR analysis of 0-5 degree slope land supports the identification of land made by the 2021 (0-5 degree) LSL map but suggests that there are additional areas of 0-5 degree slope land that has been missed by the 2021 (0-5 degree) LSL map. Therefore, based on the analysis of Case A, it would appear that the 2021 (0-5 degree) LSL map is understating the quantum of 0-5 degree low slope land. In contrast, the 2021 (5-10 degree) LSL map is inaccurate both in that it has included land that is not 5-10 degree slope, and it has also not picked up large areas of Case A that the 1m LiDAR analysis has classified as being 5-10 degree slope.

3.4. Regional Analysis

Table 9 shows the results of the regional analysis of the 2020 LSL map and the 2021 (0-5 degree) LSL map.

Table 9: Regional Analysis Showing Comparisons Between Land and Waterways Captured in the 2020 and 2021 LSL Map.

	2020	2021 (0-5 Degrees)
Wellington Region Area (ha)	811,720	811,720
Low Slope Area (ha)	173,490	136,386
% of Region Classified as Low Slope	21.4%	16.8%
Waterways (km)	3,807	2,659
Retirement area (ha)	3,069	2,141
% of Region Retired	0.38%	0.26%
Fence Lines length (km)	7,729	5,383
Fence Line Cost (@ \$21/linear m)	\$162,299,087	\$113,041,634

It was found that the 2021 (0-5 degree) LSL map comprised a smaller percentage of the Wellington Region (16.8% vs 21.4%), contained a smaller length of waterways (2,659 km vs 3,807 km), and resulted in a smaller retirement area of the Wellington Region (2,141 ha vs 3,069 ha) as compared to the 2020 LSL map. This result is expected given the 2021 (0-5 degree) LSL map only includes land with an equal to or lesser slope of five degrees, whereas the 2020 LSL map includes land parcels with an average slope equal to or lesser than 10 degrees.

Most importantly, the 2021 (0-5 degree) LSL map required fewer fence lines to ensure cattle exclusion from waterways, which came at a smaller cost than what was required under the 2020 LSL map. However, this analysis does not include waterways contained within the 2021 (5-10 degree) LSL map, and it was proven in the case study analysis that the combined 2021 (0-10 degree) LSL map areas were greater than the 2020 LSL map area. Therefore, it is likely that the costs associated with the combined 2021 (0-10 degree) LSL maps would be greater than for the 2020 LSL map.

4. FRESHWATER FARM PLANS

4.1. Role of Freshwater Farm Plans

Freshwater Farm Plans (FW-FP) are set to incorporate national standards, regional plans, as well as standards to protect and enhance freshwater. Overtime it is expected that freshwater farm plans will be increasingly instrumental, reducing the need for consents and grandparenting rules. The opportunity to use Freshwater Farm Plans as an alternative to consents was first introduced through the 2020 amendments to the Resource Management Act (RMA).

The legislation sets out that farmers and growers (above a certain threshold) will be required to have a FW-FP. Regulations will determine the content within a FW-FP, how the plans will be certified and audited and the approach for implementation.

Freshwater Farm Plans will have the following content to better control the adverse effects of farming on freshwater and freshwater ecosystems:

1. Identify any adverse effects from farm activities on freshwater and freshwater ecosystems.
2. Specify requirements (i.e., actions the farmer will undertake) that:
 - a) are appropriate to avoid, remedy, or mitigate the adverse effects of those activities; and,
 - b) are clear and measurable.
3. Demonstrate how any outcomes prescribed in regulations are to be achieved.
4. Meet any other requirements in regulations, such as farm details and maps relating to the farm operation.
5. Comply with a rule that, in effect, means if something in a council plan or rule, a resource consent or in national regulation is more stringent than what would otherwise be in a freshwater farm plan, then the more stringent provision applies.

Furthermore FW-FP will include a risk assessment of catchment values, ecosystem health and farm practices that will be used to determine physical works, practice changes, procedure changes and/or staff training to effectively reduce the identified risks.

4.2. Government's Preferred Approach to Freshwater Farm Plans

The Government's preferred approach as stated within the FW-FP discussion document is the subject of this report. The preferred approach is:

Initial Development

- I. An advisor writes some or all of the FW-FP for the farm operation, alternatively; the farmer writes their own FW-FP or engages with a programme or catchment initiative.
- II. Freshwater Farm Plans are certified once completed and the regional council is notified.

- III. Freshwater Farm Plans are audited within 18-months of the FW-FP being certified and the regional council is notified.

Ongoing certification and auditing

- I. Freshwater Farm Plans are re-certified every three years or as needed
- II. Thereafter, FW-FP are audited every three years if the initial audit is passed or as necessary to meet compliance.

4.3. Costs Associated with Freshwater Farm Plans

The cost to complete a FW-FP will be dependent on the 'base information' already held by the farm operation, this includes any mapping and written environmental plans. It is unlikely that any of the current farm environment plans that are used within New Zealand will meet the certification standard for FW-FP. This will mean that any existing farm environment plan will need to be updated to meet the certification standards and this is likely to vary across regions, depending on how active farmers have been in developing and keeping active farm environment plans and the complexity of the farm and farm system.

The initial FW-FP development as referred to above, could cost up to \$12,500 per farm operation depending on the amount of support/advice sought from an advisor and depending on the number of complexities on the property (Appendix A).

Alternatively, if a farmer were to create their own FW-FP they could do this through a workshop or catchment initiative. Depending on the number of farmers involved with the workshop this would come at a cost of \$550-\$850/per farm, plus a considerable amount of the farmer's time, which has a high opportunity cost.

Initial costs would also include certification once the FW-FP is completed. A certifier will need to have extensive knowledge of national regulations, regional policy, specific catchment values and goals, nutrient management, farm systems and be able to recognise cultural and ecological sensitivities and feasibility of outcomes. Certifiers will require a high degree of competency due to the liability they will uphold when working with numerous farm operations to ensure actions chosen are appropriate for addressing the relevant risks. As there are currently no certifiers working in this space, we expect there will be upskilling required to meet the expected knowledge of a qualified certifier. Therefore, it is likely that certifiers will be in demand within each region and will have rates that reflect their extensive knowledge. We expect their rate to be within the vicinity of \$2,000 for the initial certification.

Using the Government's preferred approach an audit will be completed within 18-months of the FW-FP being certified. Auditors are currently used within the Canterbury region and prices have ranged between \$850 to \$2,500 depending on the location, complexity and size of the farm operation. It is expected that future auditors will cost within this range.

Annual ongoing costs are estimated at \$2,000, this includes re-certification and auditing every 3 years and the farmer allowing time for record keeping of environmental works. This annual ongoing cost does not incorporate additional costs for re-certification or additional audits if the farm operation does not comply at the initial stages or there are changes required to the FW-FP.

It is not yet clear to the industry exactly what the specifications of the certification and auditing processes will be, and how it will be set up, therefore our costings can only be used as an estimate.

4.4. Cost Contributors and Variance Between Farm Operations

Until farmers and growers make a start on completing a FW-FP and going through the certification and auditing process we can only give a broad range of costs and variances between farm operations. Costs will be better defined once the industry has exact specifications of FW-FP, certification, and auditing.

There is a broad range of factors contributing to the cost of a FW-FP and variance between farm operations. These include:

- Whether there is an active catchment group or any recorded monitoring taking place in a catchment that can be readily used by the farm operation. Or whether data will need to be sourced to ensure the farm can demonstrate their connection to catchment values and context.
- If the farm operation already has an assessment of risks or table of actions that can be modified to ensure risks and farming practices are addressed to meet catchment goals.
- If the farm operation has active records of work already completed on farm.
- Whether modelling of the farm system is required to identify risk areas and risk types and location of farming practices that cause excessive nutrient losses. Furthermore, engagement with an advisor may be required to help remedy or mitigate the loss of contaminants/nutrients and emissions.
- Whether the feasibility of the farm system co-exists with the nutrient and emissions modelling or whether further modification is required to the system.
- The complexity of the farm: intensive system – cropping, irrigation, arable and effluent, extensive waterways, numerous soil properties, number of land management units, fragile land units, varying topography, rainfall, and farm systems that are dependent on intensive winter grazing.
- Where farm plans extend to replace the requirement for resource consents, it is likely that the cost will increase to meet resource consent expectations.

An example of variations in costs for different methods of designing a FW-FP can be found in Table 10. These costs are based on the price to complete an environmental plan, including the farmer's time spent away from the core business. These prices are dependent on how readily available information is to the farmer and advisor to complete a FW-FP. In addition to the farmers' time spent collecting information for methods A, B and C in Table 10, the availability of data from Regional Council's and catchments for mapping purposes will increase costs if farmers need to engage with additional contractors to secure the information to support their FW-FP. In some cases, farmers and growers will need to engage with tangata whenua and the wider community and this could also affect costs associated with preparing a FW-FP.

Table 10: Estimated Costs Based on Method Used to Create a Freshwater Farm Plan

Comparison of Methods used to Create a Freshwater Farm Plan			
	A	B	C
Use of Workshop to develop FW-FP	✓		
Farmer completing FW-FP	✓		
Use of an advisor to support development of FW-FP		✓	
Farmer supporting the completion of the FW-FP		✓	✓
Use of an advisor to develop FW-FP			✓
Farm Details			✓
Farm System and Practices			✓
Mapping		✓	✓
Land Management Units			✓
Catchment Goals and Vision		✓	✓
Regional Rules		✓	✓
Freshwater		✓	✓
Stock Exclusion		✓	✓
Soils		✓	✓
Biodiversity		✓	✓
Intensive Winter Grazing		✓	✓
Emissions Profile		✓	✓
Risk Assessment		✓	✓
Action Plan			✓
Nutrient Modelling			✓
Farm System Feasibility			✓
	\$3,200	\$5,800	\$8,500
FW-FP Certified	✓	✓	✓
FW-FP Audited	✓	✓	✓
Up-front Capital Costs	\$3,550	\$8,800	\$11,500
FW-FP Certified	✓	✓	✓
FW-FP Audited	✓	✓	✓
Farm Admin/Recording	✓	✓	✓
Ongoing Annual Costs	\$1,999	\$1,999	\$1,999
<p><i>Farm A</i> is a straightforward 600 to 800 hectare sheep and beef property with base data and an "average" set of environmental features and relatively simple stocking rate. The farmer has some National and Regional regulatory knowledge and will use their involvement with a catchment group to make their FW-FP in a workshop and at home. <i>Farm B</i> is also a straightforward 600 to 800 hectare sheep and beef property with base data and an "average" set of environmental features and relatively simple stocking rate. They are engaging with an advisor in areas where they do not have the capability to develop their FW-FP. <i>Farm C</i> is a complex 600 to 800 hectare sheep and beef farm property with intensive cropping, irrigation and nutrient limitations. They do not have any 'base' information or maps available. The property wishes to engage with an advisor to develop their FW-FP and ensure the feasibility of their farm system.</p>			

5. REFERENCES

Ministry for the Environment and Ministry for Primary Industries. 2021. *Freshwater farm plan regulations: Initial regulatory impact analysis of the proposed options*. Wellington: Ministry for the Environment.

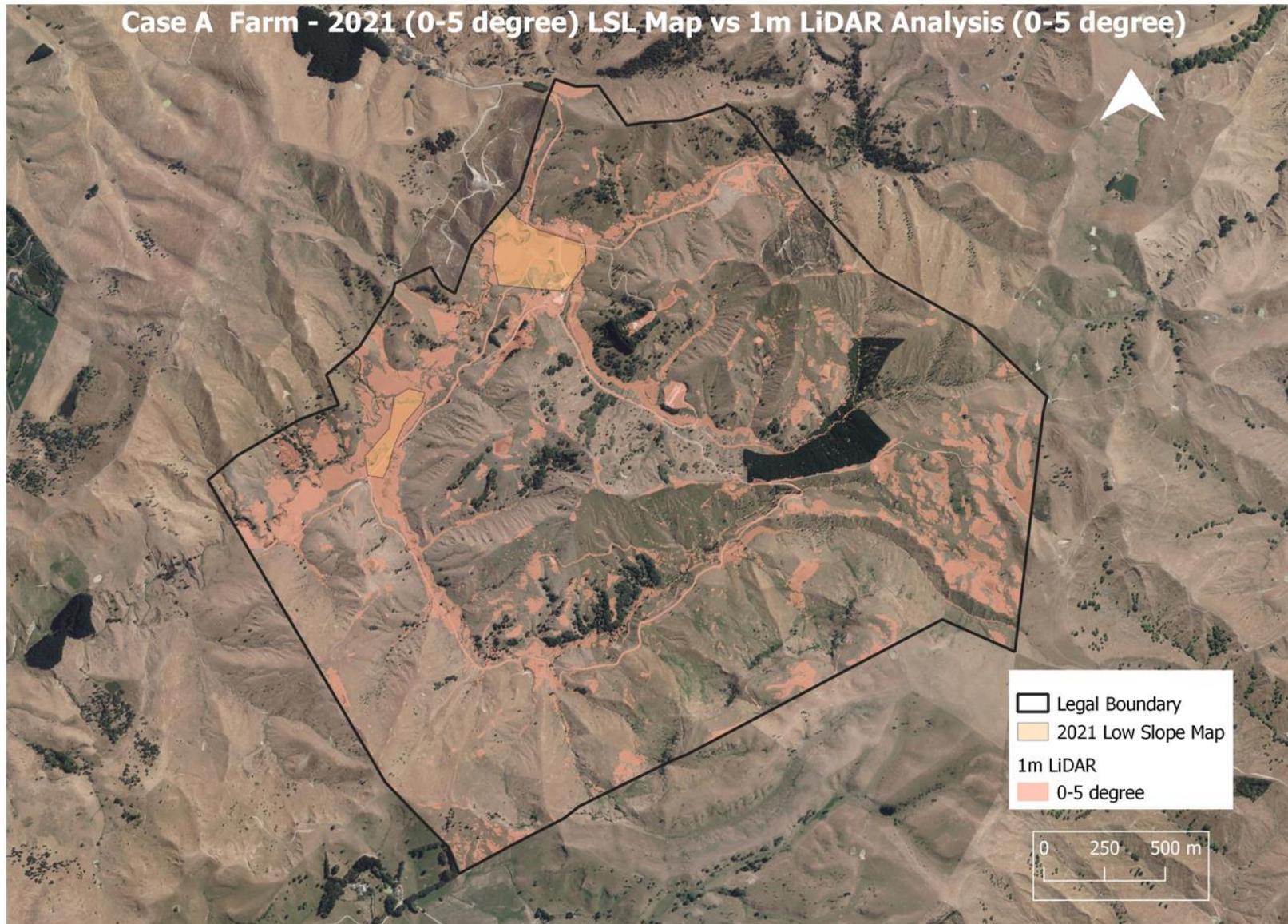
Ministry for the Environment and Ministry for Primary Industries. 2021. *Stock exclusion regulations: Proposed changes to the low slope map*. Wellington: Ministry for the Environment

6. APPENDICES

Appendix A – Costs Associated with Completing the Preferred Approach for Freshwater Farm Plans

Upfront capital costs to comply with the preferred approach for Freshwater Farm Planning			
Certified Farm Plan (FP) with a Freshwater (FW) module (FW-FP)			
	Hrs	\$/Hr	
Develop a certified FW-FP	0	\$0	\$8,500
FW-FP to be signed off by a certified freshwater planner and the council notified	8	\$250	\$2,000
FW-FP to be audited within 18-months of the freshwater farm plan being certified (audited by an approved auditor). Report to council	5	\$200	\$1,000
			\$11,500
<p><i>Note: The estimated cost of preparing a certified farm plan depends on if the farmer has a base plan, farm maps and the complexity of the farm; the farm size, farm system and regional rules. A range of businesses were canvassed regarding the cost of farm plans and the costs ranged from \$550 to \$12,500. The average price for an advisor to complete a FW-FP was \$8,500 if the farm had no plan in place and no base information available.</i></p>			
Ongoing annual costs to comply with the preferred approach for Freshwater Farm Planning			
Regular review of the FW-FP and re-certification by an approved certifier			
Re-certification and review of FW-FP is conducted every 3-years.			
Assumed farm needs certification every 3-years (\$2000 for audit/3 years = \$666/pa)			\$666
Compliance with the FW-FP audited by an approved auditor			
An audit of the certified FW-FP is conducted every 3-years. Unless the farm has significant but no serious non-conformities (re-audited within 12 months) or the farm fails the audit with serious non-compliance (re-audited within 6 months).			
Assumed farm needs audit every 3-years (\$1600 for audit/3 years = \$533/pa)			\$533
Additional administration			
Monitoring, record keeping, reporting and gathering information to demonstrate compliance with the freshwater farm plan			
	Hrs	\$/Hr	
	20	\$40	\$800
Total annual costs to meet regulations			\$1,999

Appendix B – Case A Farm – 2021 (0-5 Degree) LSL Map Vs 1m LiDAR Analysis (0-5 degree)



Appendix C – Case A Farm – 2021 (5-10 Degree) LSL Map vs 1m LiDAR Analysis (6-10 Degree)

