Strategy and Planning Committee Agenda
13 April 2022

Meeting will be held in the Council Chamber at Level 2, Philip Laing House
144 Rattray Street, Dunedin - Councillors
ORC YouTube Livestream - Members of the Public

Members:

Cr Gretchen Robertson, Co-Chair	Cr Carmen Hope
Cr Kate Wilson, Co-Chair	Cr Gary Kelliher
Cr Hilary Calvert	Cr Michael Laws
Dr Lyn Carter	Cr Kevin Malcolm
Cr Michael Deaker	Cr Andrew Noone
Mr Edward Ellison	Cr Bryan Scott
Cr Alexa Forbes	

Senior Officer: Sarah Gardner, Chief Executive

Meeting Support: Dianne Railton, Governance Support

13 April 2022 01:00 PM

Agenda Topic — Page

Minutes of a meeting of the Strategy and Planning Committee held electronically on Wednesday 9 February 2022 at 10:00am

Membership

Cr Gretchen Robertson	*(Co-Chair)*
Cr Kate Wilson	*(Co-Chair)*
Cr Hilary Calvert	
Dr Lyn Carter	
Cr Michael Deaker	
Mr Edward Ellison	
Cr Alexa Forbes	
Cr Carmen Hope	
Cr Gary Kelliher	
Cr Michael Laws	
Cr Kevin Malcolm	
Cr Andrew Noone	
Cr Bryan Scott	

Welcome

Chairperson Robertson welcomed Councillors, members of the public and staff to the meeting at 10:00am. Staff present included Sarah Gardner (Chief Executive), Nick Donnelly (GM Corporate Services), Gwyneth Elsum (GM Strategy, Policy and Science), Gavin Palmer (GM Operations), Amanda Vercoe (GM Governance, Culture and Customer), Dianne Railton (Governance Support), and Simon Wilson (Manager Regulatory Data and Compliance) and Eike Breitbarth (Manager Environmental Monitoring).

Chairperson Robertson acknowledged Ms Gwyneth Elsum's resignation from ORC, and as this would be Ms Elsum's last Strategy and Planning Committee meeting, wished her well for the future.

1. APOLOGIES
No apologies were received.

2. PUBLIC FORUM
No public forum was held.

3. CONFIRMATION OF AGENDA
The agenda was confirmed as published.

4. CONFLICT OF INTEREST
No conflicts of interest were advised.

5. CONFIRMATION OF MINUTES
Resolution: Cr Wilson Moved, Cr Noone Seconded
That the minutes of the meeting held on 11 November 2021 be received and confirmed as a true and accurate record.
MOTION CARRIED

6. ACTIONS
The status report on the resolutions of the Strategy and Planning Committee was reviewed.

7. MATTERS FOR CONSIDERATION
7.1. Real Time Data
The paper informed Council about the on-line measurement technology and its use in the environmental monitoring network operated by the ORC Environmental Monitoring team. The paper provided an insight into future prospects for using on-line measurement technology. Eike Breitbarth (Manager Environmental Monitoring) and Gwyneth Elsum (GM Strategy, Policy and Science) were present to speak to the report and respond to questions. Ms Elsum advised that the paper was provided following a resolution as part of Long-term Plan deliberations, asking to consider the potential of Real Time Data and Citizen Science input when upgrading any Audit and Risk assets, and whether this requires funding when purchasing for these areas. She explained the Real Time Data and Citizen Science have been split for topics and papers, and a Citizen Science paper will be provided to a future meeting. Mr Breitbarth provided an overview of the technical systems the Environmental Monitoring Team have in place.

Resolution SP22-101: Cr Hope Moved, Cr Wilson Seconded
That the Committee:

*1) **Notes** this report.*
MOTION CARRIED

7.2. TAG Update
Cr Kelliher sat back from the table for this item due to a possible conflict of interest.

The paper was provided for TAG to report to Strategy and Planning Committee on progress towards finalising the required science for the Manuherekia catchment. Gwyneth Elsum (GM Strategy, Policy and Science) was present to speak to the report and respond to questions. Ms Elsum provided an update of the November and December 2021 TAG meetings, advising that in November 2021, TAG reviewed the drift study and reviewed the inventory (99 lines long) of known studies for Manuherekia. She advised that in December 2021, TAG completed and

agreed the inventories, and status of the work including which items have been peer reviewed and which ones need to be. Ms Elsum said next steps are waiting on peer review of hydrology, then there will be an assessment of that process.

Resolution SP22-102: Cr Robertson Moved, Cr Wilson Seconded
That the Committee:

1) ***Notes*** *this report.*

MOTION CARRIED

Cr Kelliher returned to the table.

7.3. LWRPGG Verbal Update

Mr Ellison provided a verbal update of work undertaken by the LWRP Governance Group.

9. CLOSURE

There was no further business and Chairperson Robertson declared the meeting closed at 11:25am.

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Chairperson Date

STRATEGY AND PLANNING COMMITTEE – OPEN ACTIONS OF RESOLUTIONS AS AT 13 APRIL 2022

Meeting Date	Item	Status	Action Required	Assignee/s	Action Taken	Due Date
10/11/2021	SPS2162 Otago Lakes Strategic Plan – Scope	In Progress	Procure the services of a consultant to carry out the scoping study – Stage 1. **Res SP21-122**	Amanda Vercoe, Anne Duncan	**5/04/2022** Project scope due to go out to tender soon. This has been delayed by other work priorities. Scope review expected to be underway by end of financial year, with probable completion by September 2022.	30/06/2022

7.1. Update on the South Dunedin Future Programme

Prepared for:	Strategy and Planning Committee
Report No.	OPS2215
Activity:	Governance Report
Author:	Jonathan Rowe, Programme Manager, South Dunedin Future
Endorsed by:	Gavin Palmer, General Manager Operations
Date:	13 April 2022

PURPOSE

[1] This report provides an interim update on the South Dunedin Future (SDF) programme. The programme will provide a framework for developing climate change adaptation options for South Dunedin (and Harbourside).

EXECUTIVE SUMMARY

[2] This report provides an interim update on the SDF programme. It outlines activities planned or underway, and describes the steps involved in developing the SDF programme plan by June 2022. The programme is progressing through a definition phase. A range of activities are progressing to provide additional information on the strategic intent of the programme, the scope and range of projects it is comprised of, and the partners and stakeholders that will be involved in design and delivery.

[3] The SDF programme will provide a framework for developing climate change adaptation options for South Dunedin (and Harbourside). This will require coordinating detailed technical work and extensive engagement with mana whenua, affected communities, and other stakeholders, over a number of years. The aim is to co-develop and deliver an adaptation strategy for South Dunedin (and Harbourside) that is viable, affordable, and endorsed by partners and stakeholders.

[4] Since the report to Councils in November 2021, efforts have been made to better define the programme, outline its purpose and key processes, and collate information in resources to support engagement with a range of internal and external stakeholders.

[5] This work has identified close linkages with, and dependencies on, a number of elements within the Government's extensive legislative change agenda. This includes the Urban Growth Agenda, and reform to the Resource Management Act, Local Government Act, and Three Waters area, all of which could have a material impact on the SDF programme.

[6] Two specific areas of these reforms that will influence the SDF programme in the current long term plan cycle (2021-24) include creation of a Future Development Strategy (FDS) for Dunedin and passage of the Climate Change Adaptation Act. These are discussed in more detail below. Others are being assessed and will be explored more fully in the programme plan in June 2022.

RECOMMENDATION

That the Strategy and Planning Committee:

1) ***Notes** the South Dunedin Future – Interim Update report.*

2) ***Notes** that Councillors will have an opportunity to discuss development of the South Dunedin Future programme plan during a workshop in May 2022.*

3) ***Notes** that a further update report, and draft South Dunedin Future programme plan, will be submitted to Councils for consideration and approval in June 2022.*

BACKGROUND

[7] In November 2021, Councillors considered a report titled South Dunedin Future – Programme Update, which briefed Councils on the status of the South Dunedin Future (SDF) programme[1], following the appointment of a dedicated Programme Manager in August 2021.

[8] The report also presented the findings of an initial assessment of climate change-related challenges facing South Dunedin and outlined the proposed programme, structure, logic, activities, and next steps. Councillors noted the findings of the report, including that a detailed programme plan would be provided for approval in mid-2022.

[9] This report provides an interim update on progress and signals upcoming SDF programme activities between now and June 2022, which will inform development of the programme plan. This core programme work is occurring against a wider backdrop of ongoing work by both councils in many areas of relevance to the SDF programme. For example, work continues on hazards monitoring and assessment, 3 Waters modelling and planning for flood alleviation, as well as projects related to the SDF programme such as the St Clair / St Kilda Coastal Plan and South Dunedin Library and Community Complex. As the programme progresses, various related strands of work will be woven together, forming an increasingly complex but coherent collection of work. As this process is undertaken by the programme, work continues in parallel.

DISCUSSION

[10] The SDF programme is currently in a definition phase. This definition work seeks to provide the basis for moving forward with the programme and outline the way in which that would occur. It involves a range of related activities to do the following:

i. establish governance and management arrangements;
ii. identify, analyse and engage key partners and stakeholders;
iii. refine the strategic intent (including objectives, outcomes, outputs, etc);
iv. confirm and validate the benefits of the programme;
v. determine the scope, interdependencies, and exclusions;
vi. identify risks and issues to be managed;
vii. design the projects and activities that will comprise the programme; and
viii. develop a programme plan.

[1] *South Dunedin Future - Programme Update*, Report HAZ2109, Report to 24 November 2021 meeting of the Otago Regional Council

[11] The sections below provide a summary update on the work that has been undertaken, is underway, or is planned in relation to the eight points above.

Governance and Management Arrangements

[12] The SDF programme operates under established governance and management arrangements, with close collaboration at staff levels, and parallel reporting to Council Committees and Dunedin City and Otago Regional Councils respectively. This includes a Programme Management Team, comprising the Programme Manager and staff from DCC and ORC, working with Business Change Managers to integrate the programme work with business-as-usual functions of each Council, and reporting to a Steering Group made up of General Managers from both Councils. All standard budget and decision-making responsibilities are retained within respective groups and departments in each Council.

[13] The programme governance and management arrangements are illustrated in Figure 1 below:

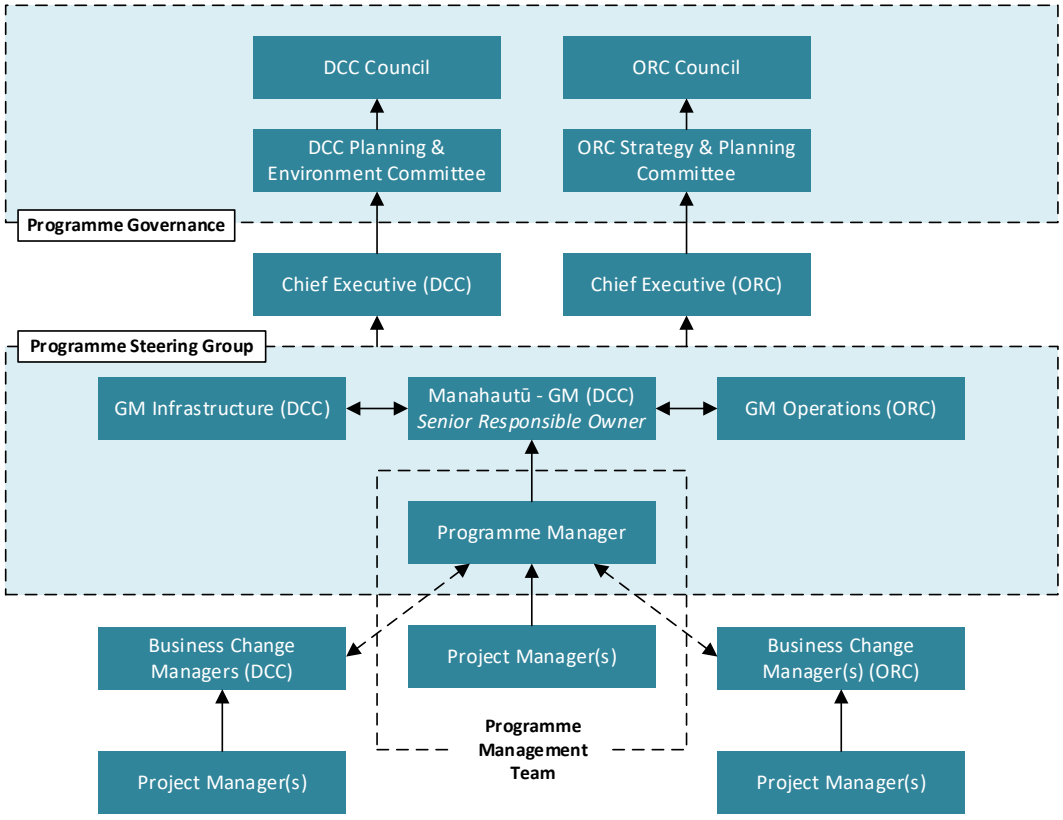


Figure 1: South Dunedin Future programme governance and management structure

Engagement with Partners and Stakeholders

[14] The central component of the SDF programme is engagement with partners and stakeholders. Critical to this will be ensuring that the Treaty of Waitangi, and Crown's partnership with Māori, is accurately represented and integrated into the programme. This is currently envisaged to include agreeing appropriate governance arrangements, seeking to align strategic objectives with Te Ao Māori and mana whenua aspirations; providing meaningful opportunities for all Māori to input their views and values; and

identifying and agreeing Māori-specific programme outputs (e.g. cultural impact assessment, values assessment, or narrative). Initial conversations have been had with mana whenua and Aukaha with further work planned.

[15] Engagement, including with mana whenua, affected communities, and other stakeholders, will traverse a wide range of issues and areas. This will include identifying partners and stakeholders, working with them to determine their views, values and objectives, and then supporting them through a process of considering a range of risks, issues, and options for adaptation.

[16] Building on the last two years of community engagement activities, which were primarily focussed on relationship management, current engagement efforts aim to calibrate what we have heard to date, get an initial sense of stakeholder values and objectives, and co-design the more substantive engagement processes to come in subsequent phases.

[17] This work has included an initial engagement meeting with mana whenua representatives, as well as a series of approximately 12 workshops with umbrella groups representing a range of stakeholders (e.g. South Dunedin Community Network, Business South, South Dunedin Church Ministers Group). Initial findings from this work will be presented to Councillors in the strategy workshop in May 2022. The information will also inform a range of other programme activities and feed directly into development of the programme plan.

Strategic Intent of the Programme

[18] The previous SDF programme report to Councils in November 2021 noted work was needed to further identify and refine the operational and strategic objectives of the programme.

[19] The current working assumption is that the primary operational objective of the SDF programme is to lead and coordinate development of a climate change adaptation strategy ("adaptation strategy") for South Dunedin and Harbourside. It is envisaged that this adaptation strategy would then guide DCC and ORC corporate processes to ensure (to the greatest extent possible) council policy, planning, budgeting, and operations are aligned to the direction set in the strategy.

[20] In short, the SDF programme will be the vehicle through which an adaptation strategy is co-developed, then councils (and other stakeholders) will implement the strategy they have co-developed by integrating it into their business-as-usual functions.

[21] Secondary operational objectives include:

i. ensuring widespread **engagement**, including with mana whenua, communities, and other stakeholders, in development of the adaptation strategy and high levels of community buy-in to the end product;
ii. ensuring **alignment** between the adaptation strategy, the organisational strategies of each council, the projects and activities that constitute the programme; and
iii. **integration** of programme activities and outputs into the business-as-usual operations of councils throughout the life of the programme.

[22] The current state assessment process in late 2021 identified an indicative strategic objective of the SDF programme, to be delivered via the adaptation strategy, is to ***"enhance community resilience and wellbeing through sustainable urban regeneration of South Dunedin"***. Achieving this objective would likely require extensive social, economic, and environmental change over an extended period (e.g. decades).

[23] The paper further noted that indicative outcomes include: (i) reduced risk from natural hazards; (ii) reduced frequency and impact of flooding; (iii) reshaping urban form of South Dunedin; (iv) climate change adaptation impacts are equitable; and (v) increased community resilience.

[24] Further work is required to refine the strategic objectives and outcomes, which will take some time and several iterations, given the complexity and uncertainties associated with the programme. During the definition phase, several activities are planned that will contribute to firming up the strategic intent, including summarising natural hazards information, initial engagements with stakeholders, engagements with mana whenua, and a strategy workshop with Councillors. These activities are described further in Figure 3, below.

Benefits of the Programme

[25] Delivering the objectives and outcomes of the programme should provide a range of benefits for Councils, partners and stakeholders. A benefit is a measured improvement that results from the programme. It should be perceived as an advantage by one or more stakeholders and contribute towards organisational objectives.

[26] For example, a SDF programme output may be improved knowledge of natural hazards affecting South Dunedin, which may lead to increased capability of councils to plan for and adapt to these hazards, thereby leading to an outcome of reduced exposure to and risk from natural hazards. This outcome could have many benefits, such as, enabling the design of targeted infrastructure to better avoid/mitigate known hazards (value), cost savings from adjusting expenditure decisions to account for natural hazard risk (financial), or reduced impact on residents from flood hazards (stakeholder).

[27] Conversely, a disbenefit is a measured decline resulting from the programme. It is normally perceived as negative by one or more stakeholders, which detracts from an organisational objective(s). A disbenefit could also be a side effect or unintended consequence of programme outputs or outcomes.

[28] Understanding the relationship between programme outputs, outcomes and benefits is critical to programme success – specifically, in maximising benefits and minimising disbenefits over different timeframes. This is a key focus of the programme in the current definition phase, and the strategy workshop with Councillors in May 2022 will explore programme benefits.

[29] At this early stage, the indicative benefits the programme is expected to deliver include:

- **Confidence** – The primary output of the programme is an adaptation strategy for South Dunedin. Production of this strategy should have the broader benefits of reducing uncertainty and enhancing quality in decision-making. This should

increase confidence across all stakeholders that decisions made are the best or right ones in the circumstances.

- **Stakeholder** – Engagement, with mana whenua, affected communities, and other stakeholders will be central to the programme. This engagement should ensure that, on balance, programme outputs and outcomes reflect what partners and stakeholders actually want and value. This should help ensure buy-in to final decisions.
- **Reduced risk** – Identifying natural hazard risks, acting to both mitigate current risk and manage or avoid future risk, should have the benefit of significantly reducing the overall risk profile for South Dunedin (including against the backdrop of increasing natural hazard risk due to climate change).
- **Effectiveness** – Improved knowledge of natural hazards, coupled with development of a collective vision for the future of South Dunedin, will enable more informed planning and more targeted investment. This new knowledge and capability should enable Councils, partners, and stakeholders to make better quality investment decisions.
- **Efficiency** – A primary focus of the programme is coordination across a range of functions within DCC and ORC councils. This enhanced coordination, across strategy, planning and operational functions should reduce duplication of effort, help resolve previously intractable issues, and enable a range of efficiencies in terms of staff time, operating and capital expenditure.

Programme Scope, Dependencies, and Exclusions

[30] Developing an adaptation strategy that will "enhance community resilience and wellbeing through sustainable urban regeneration of South Dunedin", is a significant undertaking. Achieving this would likely require extensive social, economic, and environmental change over an extended period (e.g. decades). The focus of the programme therefore needs to be strategic, societal, and long term. The programme will also need to adopt a systems focus, to account for this complexity.

[31] The impact of these many complex, interrelated, and long-term processes are not necessarily controllable or predictable. As such, the programme will likely be characterised by a high level of complexity, uncertainty, and risk (to property, people, and relationships). To account for this, a flexible and nuanced scope will need to be adopted for the programme.

[32] It may not be possible (nor necessarily advisable) to delineate a clear scope for the programme based on factors such as absolute geographic boundaries, specific teams, functions, or projects. For example, natural hazards, land use planning, and three waters infrastructure in South Dunedin are interdependent parts of a complex system, are influenced by multiple internal and external factors, independently and collectively influence risk and vulnerability, and are managed by different parts of different organisations.

[33] Nonetheless, there is value in seeking to define a scope for the programme. This scope will need to be monitored regularly, and adjusted as ambiguities are clarified, or as the results of various programme activities (and external factors) become known over time. The scope will therefore need to be flexible to remain fit for purpose.

[34] At this stage of the work, where much of the programme is still being defined, the proposed approach is to adopt a graduated scope, where relevant programme components are assigned to one of four layers:

- core programme
- inside the programme
- outside but programme-related or
- outside the programme

and grouped in the following three segments:

- sector/team
- organisation//partner/stakeholder or
- geography

[35] This graduated scope can also be used as a framework for grouping, organising, and coordinating activities that have (or are perceived to have) some form of association with the programme, whether direct or indirect. The proposed graduated scope of the programme, using this framework, is outlined in the Figure 2 below.

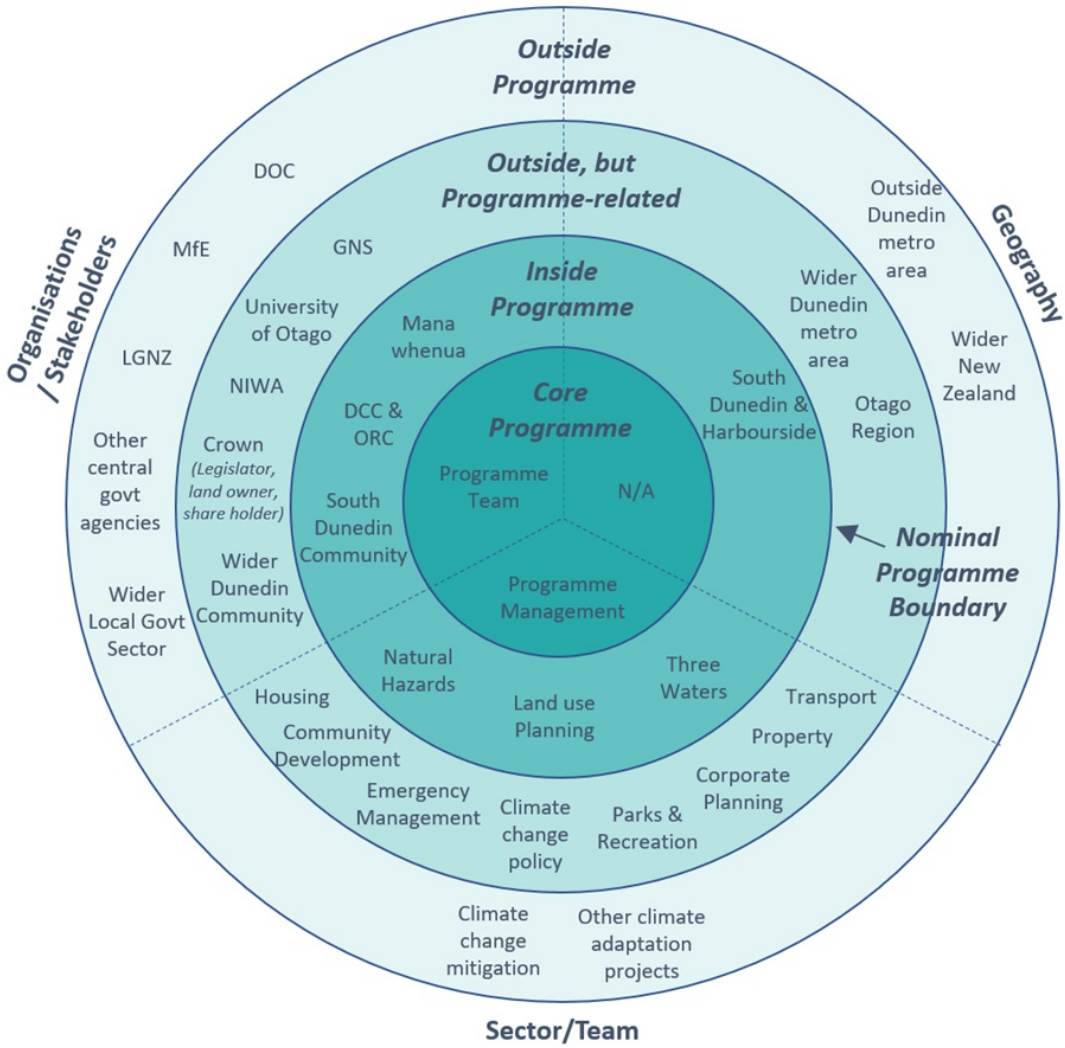


Figure 2: South Dunedin Future programme scope

Programme Dependencies

[36] The complex scope of the SDF programme generates a wide range of dependencies, meaning many programme activities, outputs or decisions will be pre- or co-requisites for delivering other aspects of the programme. Dependencies can be internal (within the programme), intra (between two programmes), or external (outside the programme or organisation).

[37] Further work will be undertaken on SDF programme dependencies as part of the programme definition phase. As noted above, the Government's Urban Growth Agenda and extensive legislative reform work across the Resource Management Act (RMA), Local Government Act (LGA), and 3 Waters area, could have a material impact on the SDF programme.

[38] There remains a large degree of uncertainty about the passage of these reforms, the resulting legislation, and therefore the eventual impact on the SDF programme. This is expected. The long-term nature of the SDF programme means it will traverse the many policy, legislative and regulatory changes that typically accompany political cycles in New Zealand. These processes are outside the control of the SDF programme but will need to be monitored in order to manage the associated risks and opportunities. The intent will be to ensure the SDF programme is, to the greatest extent possible, responsive and resilient to these changes.

[39] Initial work developing the SDF programme matrix (see Figure 3) has identified two particular dependencies within this wider change agenda that are worth noting at this stage as they are likely to have shorter term influence on the programme. These include:

a. Future Development Strategy (FDS) - The National Policy Statement for Urban Development (NPS-UD) requires DCC and ORC to jointly prepare an FDS for Dunedin by mid-2024. The purpose of the FDS to ensuring there is enough housing and business land capacity available, that the necessary infrastructure to support growth is planned, funded, and integrated with growth; and that growth delivers a 'well-functioning urban environment', and that any constraints on development are spatially identified.
b. Climate Change Adaptation Act (CAA) - This proposed Act will be one of three new pieces of legislation to replace the current Resource Management Act 1991 (RMA) and will support New Zealand's response to the effects of climate change. It is intended to address the complex legal and technical issues associated with managed retreat and funding and financing adaptation.

[40] The FDS will develop a high-level, 30-year strategic spatial plan for the whole of Dunedin intended to inform land use, infrastructure, and transport planning. The FDS process will include work that is either complementary, or very similar to, much of what is planned under the SDF programme. For example, assessing the development capacity of South Dunedin, development constraints and natural hazard risk, land availability for housing and business, infrastructure requirements, and strategic development objectives over multiple time horizons (3-30 years). Coordinating work across the FDS and SDF programmes should provide several benefits, including terms of strategic coherence, operating efficiencies like staff time and resources, and community engagement. It may also be appropriate for the SDF programme to initially focus on the same time horizon as the FDS (i.e., developing adaptation options up to 30 years).

[41] The latest information indicates the Climate Change Adaption Bill could be passed into law in late 2023 or early 2024, either shortly before or after the next general election. This legislation is expected to provide a national policy framework and associated guidance for managing climate adaption issues, including managed retreat (though it remains to be seen how detailed this guidance will be). A precursor to the legislation is development of a National Adaptation Plan (NAP), which is expected to go to public consultation later in 2022 and should provide a steer on the Government's intentions. It is anticipated that a national framework and associated guidance on managed retreat will be a critical element to discussions with partners and stakeholders about a range of adaptation options, particularly in consideration of very long-term adaptation options (>30 years).

[42] The Programme Team is currently assessing these dependencies, including the potential impact on key elements of the SDF programme. For example, how the coordination with the FDS process could provide a number of efficiencies; whether a collaboration would influence the initial focus of the SDF programme (>30 years versus <30 years); what would be the impact of a the creation of a Water Services Entity; and to what extent would legislative clarity on climate change adaptation be required in order to develop or refine long term adaption options (i.e. how far can this progress without knowing who might pay for what under various scenarios?).

Risks and issues

[43] The SDF programme is characterised by a large degree of uncertainty, including in terms of the natural hazards and their impacts, how these will be affected by climate change, the options available for adapting, how partners and stakeholders will respond to these options, and the capability and capacity of councils (and others) to deliver equitable outcomes. These factors rest against the backdrop of extensive Government reform, including RMA, 3 Waters, and Local Government reform, the impacts of which remain uncertain at this stage.

[44] All of this, in various ways, presents risk for the programme. A risk being an uncertain event(s) which, should it occur, will have an impact on achievement of programme objectives. A risk, when it occurs, becomes an issue to be managed. It will not be possible to control all risks and issues– indeed many, such as global emissions and sea level rise, are outside of our control.

[45] During the current definition phase, a process will be developed to identify and manage programme risks and issues, which will be incorporated into the programme plan. The intention is to support better decision making, by improving collective understanding of risks, issues and their potential impact on the programme and its objectives.

Programme Approach

[46] The programme will be implemented using a Dynamic Adaptive Pathways Planning (DAPP) approach, a best practice methodology for making decisions to respond to the deep uncertainty of climate change impacts and responding to the challenges and opportunities in South Dunedin.

[47] It is anticipated that this process will involve five interdependent phases, which will seek to:

i. identify the context and hazards facing South Dunedin;
ii. determine community values and objectives (and risks posed by climate change);
iii. develop options for adaptation and potential pathways to get there;
iv. formulate an implementation plan for the preferred option(s) and pathway(s); and
v. monitor, review and adjust the plan to account for new information.

[48] These phases align to the key questions and steps of the DAPP process (see Attachment 1).

[49] A one-page overview of the SDF programme has been developed using this DAPP process and framework. This overview provides a summary of the five phases of the programme, the key questions that will be asked and answered, the activities and actions that are planned, the type of community engagement involved, and an indicative high-level timeline. The overview will be used primarily for stakeholder engagement with both internal and external audiences (see Attachment 2).

Projects and Activities that will comprise the Programme

[50] The table in Figure 3 shows the planned high-level work breakdown for the programme, including the activities and projects to be undertaken. The table structures the work against the five phases and 10 steps of the DAPP approach, includes a summary explanation of what needs to be done in each work package, and notes what known activities this will involve (others will be added as the programme progresses). The table also includes key decision points, at which point Council endorsement would be sought for the work undertaken to date, and approval sought to move to the next phase of work. Indicative timeframes are included.

[51] This high-level breakdown will be refined and further developed to include additional projects and activities as required as the programme progresses. More detail is provided for the initial stages, reflecting the greater certainty. Additional detail will be added in subsequent phases, as objectives, parameters and approaches are developed or better understood (i.e. we do not have all of the answers now, but will need to work through a process to get them).

Phase *(DAPP Steps)*	What are we trying to do?	What will this involve? (Activities)
What is happening? ***1. Preparation and context*** ***2. Hazard and Sea-level Rise Assessments*** ***(Jan 2021 – Mar 2023)***	Understand programme context / outline approach	Current State Assessment and Council Paper [Completed November 2021]
	Identify / understand stakeholders	Stakeholder analysis and profiles
	Identify / collate existing information (reports, research, decisions)	Report repository
	Identify existing programme-related Council activity and dependencies	Programme matrix/map
	Understand and quantify natural hazard scape	Summary natural hazard product

	Establish baselines so we can monitor progress	Develop programme monitoring and evaluation framework
	Integrate climate adaptation research and best practice into the programme	Climate change adaptation research partnership and mainstreaming
What matters most?	Understand stakeholder engagement expectations	Community Pre-Engagement Plan
3. Objectives & Values	Integrate the Treaty of Waitangi into programme design and delivery	Mana whenua and maatawaka engagement / Māori specific outputs
4. Vulnerability & Risk	Explore and capture community values and vision	Community Engagement Plan
(Apr 2022 – Dec 2023)	Better define programme vision, objectives, outcomes and benefits	Strategy workshops with agencies, partners and stakeholders.
	Better understand vulnerability and risk	Dunedin climate change risk assessment (first pass)
	- Decision Gate - Seek approval for proposed programme plan / approach	Programme Plan and Council Paper(s)
What can we do about it?	Identify and agree strategic objectives of partners and stakeholders	Stakeholder engagement meetings and workshops
5. Identify Options & Pathways	Develop more detailed understanding of vulnerability and risk (including hot spots)	Dunedin climate change risk assessment (detailed)
6. Options Evaluation	Understand what adaptation options are possible	Develop long-list of adaptation options; Future Development Strategy (FDS) workshops; stakeholder engagements
(Jan 2023 – Dec 2024)	Understand what adaptation pathways are possible	Develop long-list of adaptation pathways and triggers
	- Decision Gate - Seek approval for long-list adaptation option(s)/pathway(s)	Updated Programme Plan and Council paper(s)
	Investigate and narrow down list of adaptation option(s)	Short-listing of preferred adaptation option(s)
	Investigate and narrow down list of adaptation pathway(s)	Short-listing of preferred adaptation pathway(s) and triggers
	- Decision Gate - Seek approval for short-list adaptation option(s)/pathway(s)	Updated Programme Plan and Council paper(s)
	Identify preferred adaptation option(s) / pathway(s)	Final selection from short-listed option(s), pathway(s) and triggers
	- Decision Gate - Seek approval for preferred adaptation option / pathway	Updated Programme Plan and Council paper(s)

How can we implement the strategy?	Develop signals and triggers for changing option(s) / pathway(s)	Multi-disciplinary design and planning process to confirm signals/triggers
7. Adaptive Planning Strategy (with triggers)	Develop overall adaptive planning approach	South Dunedin Climate Change Adaptation Strategy
	- Decision Gate - Seek approval of adaptive planning strategy	Updated Programme Plan and Council paper(s)
8. Implementation Plan	Determine how adaptive planning strategy will be delivered	South Dunedin Climate Change Adaptation Strategy – Implementation Plan
(Jul 2024 – Jun 2025)	**- Decision Gate -** Seek approval of strategy implementation plan	Updated Programme Plan and Council paper(s)
How is it working?	Monitor changing hazards, risks, and programme impact	Monitoring plan
9. Monitor	Review overall performance of programme	Programme review and evaluation
10. Review & Adjust	Closing programme	Programme transition plan (shifting programme functions to BAU)
(Apr 2025 – Ongoing)	**- Decision Gate –** Seek approval to transition the programme to BAU	Programme Report and Council paper(s)

Figure 3: High level work break down

OPTIONS

[52] Not applicable.

CONSIDERATIONS

Strategic Framework and Policy Considerations

[53] The approach to develop the South Dunedin Future Programme discussed in this paper reflects Council's Strategic Directions where our vision states: communities that are resilient in the face of natural hazards, climate change and other risks.

Financial Considerations

[54] ORC's component of the programme is provided for in the 2021-31 Long Term Plan.

Significance and Engagement Considerations

[55] Not applicable.

Legislative and Risk Considerations

[56] The reforms of the Resource Management Act, strengthening of provisions to do with local authority leadership for climate change adaptation, and Three Waters reform, are noted.

Climate Change Considerations

[57] Climate change considerations will be a central component of the SDF Programme as it seeks to develop climate change adaptation options for South Dunedin/Harbourside.

Communications Considerations

[58] These are described in the paper.

NEXT STEPS

[59] The next steps for the programme include the following planned activities:

Month	Programme Activity
April	• Interim Update Report to Council Committees • Produce natural hazards summary product(s) • Further engagement with mana whenua • Pre-engagement workshops with partners and stakeholders • Establish climate change adaptation research partnership
May	• Strategy workshop with Councillors • Develop monitoring and evaluation framework • Develop community engagement plan
June	• Commence Dunedin climate change risk assessment • Update Report to Councils • Produce programme plan

ATTACHMENTS

1. South Dunedin Future Programme Overview [**7.1.1** - 1 page]
2. DAPP Cycle [**7.1.2** - 1 page]

SOUTH DUNEDIN FUTURE PROGRAMME - OVERVIEW

Version 1.0
April 2022

The South Dunedin Future programme provides a framework for developing climate change adaptation options for South Dunedin (and Harbourside). This will require coordinating detailed technical work and extensive engagement with mana whenua, affected communities, and other stakeholders, over a number of years. Options will appear gradually and issues may need to be revisited as new information appears. The aim is to develop and deliver an adaptation strategy for South Dunedin (and Harbourside) that is viable, affordable, and endorsed by partners and stakeholders.

Phase	What is happening?	What matters most?	What can we do?	Make it happen	How is it working?
Key Questions	• What are the natural hazards (and what are the impacts)? • Who is affected? • What information do we have and where are the gaps?	• What do communities value, who values it and where is it? • What of value is vulnerable (incl. assets and people)? • What are the objectives of partners and stakeholders?	• What are our options for adapting to climate change? • Which options best address the risks while also meeting our objectives?	• When and how would we switch between adaptation options? • What events or signals would trigger a switch?	• Are we managing climate change risks and achieving our adaptation objectives? • If not, why not; and what do we need to change?
Programme Actions	• Monitor natural hazards and identify associated risks • Identify and establish connections with mana whenua, affected communities, and other stakeholders • Gather available information and identify any gaps that need filling	• Communicate natural hazard risks to all partners and stakeholders • Work with all partners and stakeholders to identify values and objectives • Undertake a climate change risk assessment for South Dunedin	• Develop a set of climate change adaptation options (e.g. accommodate, protect, retreat, or avoid hazards) • Develop potential pathways that allow us to adapt, while meeting stakeholder values and objectives • Identify preferred adaptation options and pathways	• Develop a set of signals and triggers for moving between adaptation options/pathways • Capture everything in an Adaptation Strategy for South Dunedin • Implement the Strategy in partnership with councils, mana whenua, communities, and other stakeholders.	• Develop systems and processes for monitoring and reporting on progress (and performance) • Periodically review the adaptation strategy and adjust if necessary (based on changing climate risks or community objectives)
Community Engagement	• Community group meetings and hui discussing what we know about natural hazards, who is affected and how • Public information campaign about natural hazards affecting South Dunedin (e.g. meetings, online, and print media)	• Workshops, creative processes, and surveys with mana whenua, affected communities, and other stakeholders to identify views, values, and objectives • Work with mana whenua to ensure Treaty alignment	• A series of community engagements to: ○ co-develop a long-list of adaptation options; ○ short-list and identify a preferred option(s); and ○ identify preferred pathways to get there	• A series of community engagements to: ○ identify preferred signals and triggers; and ○ co-develop the adaptation strategy and implementation plan	• Periodic community engagements to: ○ monitor progress; ○ report results; and ○ discuss any changes to the programme

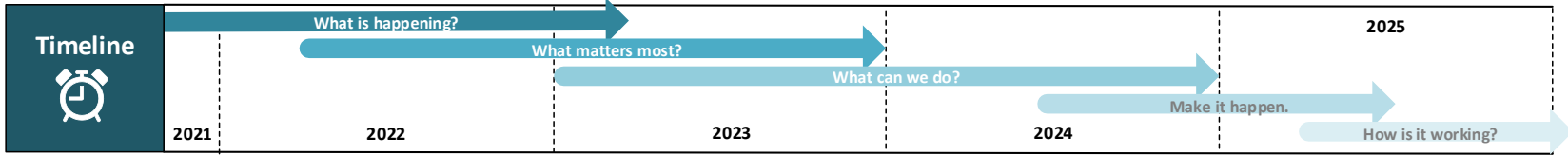
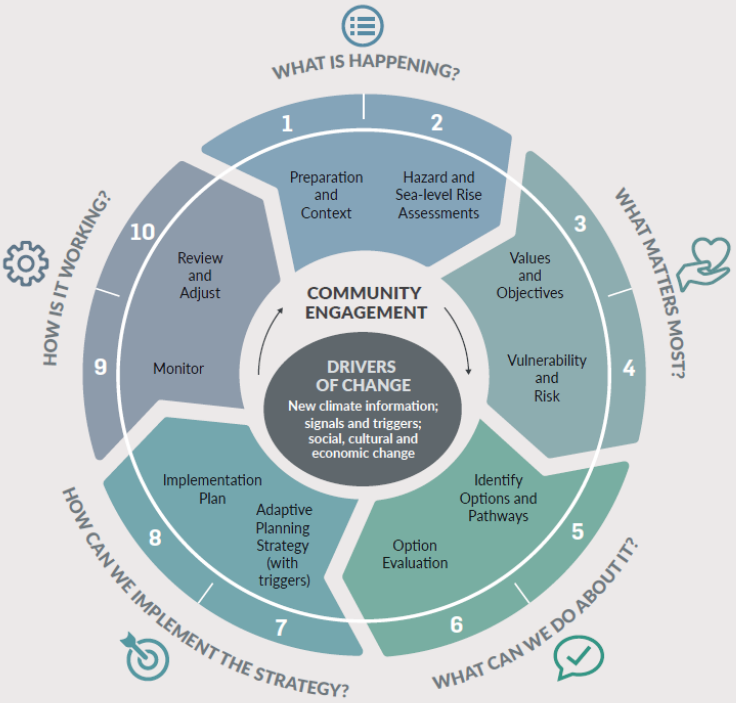


Figure 3: The 10-step decision cycle, grouped around five questions



Source: Adapted from Max Oulton (University of Waikato), and UN-Habitat (2014)

Source: Preparing for coastal change: A summary of coastal hazards and climate change guidance for local government, Ministry for the Environment Manatū Mō Te Taiao, December 2017.

7.2. Otago Active Faults: Planning Options

Prepared for:	Strategy and Planning Committee
Report No.	HAZ2201
Activity:	Safety & Hazards: Natural Hazards
Author:	Jean-Luc Payan, Manager Natural Hazards Anita Dawe, Acting General Manager Policy and Science Sharon Hornblow, Natural Hazards Analyst
Endorsed by:	Gavin Palmer, General Manager Operations
Date:	13 April 2022

PURPOSE

[1] To inform the Committee of options for incorporating information on active faults held by ORC into planning frameworks across Otago and to seek endorsement of an approach to fault zone management across the region.

EXECUTIVE SUMMARY

[2] ORC has statutory functions under the Resource Management Act 1991 (RMA)[1] to manage the risks from natural hazards and control land use for the purpose of avoiding or mitigating natural hazards.

[3] Surface fault rupture is a hazard causing damage to land and buildings situated in the vicinity of an active fault scarp. This ground deformation hazard cannot be mitigated by any known means other than through avoidance of the area.

[4] In 2021, ORC completed mapping of active faults and folds across the region to a 1:250,000 scale[2]. Following the presentation of this data to the Data and Information Committee in June 2021, the Committee resolved "*that a report on options for incorporating fault information held by ORC into planning frameworks across Otago be presented to the Strategy and Planning Committee*".

[5] Although not sufficient for use in zoning at a property boundary level, the data are in an immediately useable spatial format which can be used by Territorial Authorities (TAs) to aid in land-use planning, help risk reduction, and hazard zoning prioritisation relating to active faults.

[6] The Ministry for the Environment (2003) "*Guidelines for Development of Land on or Close to Active Faults*" aids land-use planning, and risk management related to surface fault rupture hazard. It outlines a risk-based approach to planning for structures and activities on active faults and folds in New Zealand. The guidelines recommend the identification of Fault Avoidance Zones (FAZ) for faults with the highest likelihood of rupture.

[1] S6(h) and s30(1)(c)(iv) of the RMA
[2] Presented to the Data and Information Committee in June 2021 (report No. HAZ2106)

[7] Further to this, Environment Canterbury (ECan) and GNS Science have promoted the use of wide buffer zones known as Fault Awareness[3]. Much of the Otago and Canterbury regions are similar in that the low probability of rupture on most faults means they do not trigger MfE-recommended avoidance for most categories of new buildings, and therefore compelling landowners to avoid building near them entirely would be difficult to justify.

[8] ORC is currently working with the Otago TAs to identify areas where more detailed mapping and site-specific fault avoidance zonation should be considered.

[9] Further to avoidance zones on Otago's most active identified faults, this report recommends 'Fault Awareness Areas (FAAs) be created around all active faults and monocline folds in the region. The aim of these hazard features is to inform the public and landowners of potential fault rupture hazard areas which coincide with their land parcel, to help with risk-based decision-making.

[10] The adoption of a tiered approach to fault zone management – with Fault Avoidance Zones (FAZ) and Fault Awareness Areas (FAA), would have implications for future land uses, including potential changes to District Plans, and more detailed information for Land Information Memoranda (LIM).

RECOMMENDATION

That the Strategy and Planning Committee:

1) ***Notes** this report.*
2) ***Endorses** the tiered approach to fault zone management in Otago – with Fault Avoidance Zones (FAZ) and Fault Awareness Areas (FAA) – as described in this report.*
3) ***Notes** the collaborative work being undertaken with the Otago territorial authorities.*
4) ***Directs** that a report be provided to the relevant Council Committee by January 2023 on a recommended option and implementation plan, developed in collaboration with Territorial Authorities, for incorporating the tiered approach into planning frameworks across Otago.*

BACKGROUND

[11] ORC has completed a systematic review of active faults across Otago. Faults in the Queenstown Lakes District and Central Otago were assessed in 2019[4] by GNS Science and faults in the Waitaki District were assessed with Environment Canterbury in a 2016 study[5]. The report 'Faults and Folds in the Dunedin City and Clutha districts' presented to the Data and Information Committee in June 2021 brought this work programme to completion[6,7].

[12] The delineation of active faults identifies potential fault rupture areas in various parts of Otago. Fault rupture is a hazard causing damage to land and buildings situated in the

[3] Barrell, D. J. A.; Jack, H.; Gadsby, M. 2015. Guidelines for using regional-scale earthquake fault information in Canterbury, GNS Science Consultancy Report 2014/211. 30 p.
[4] Barrell 2019
[5] Barrell 2016
[6] Barrell 2021
[7] Report No. HAZ2106

vicinity of an active fault scarp. This ground deformation hazard cannot be mitigated by any known means other than through avoidance of the area.

[13] The type and extent of damage associated with surface fault rupture were demonstrated during the 2016 Kaikōura earthquake (Figure 1).

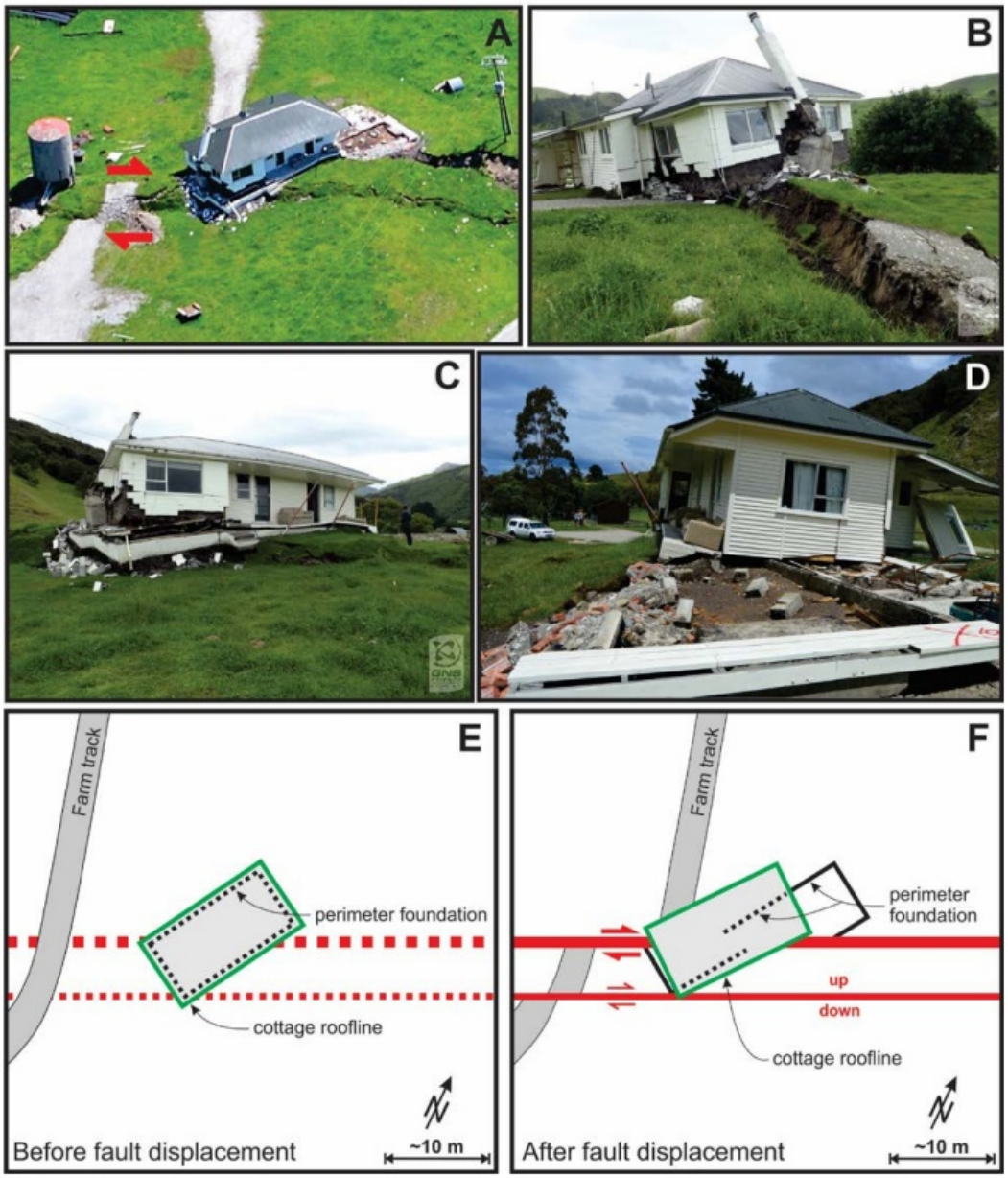


Figure 1. A,B,C,D: Bluff Cottage and Kekerengu Fault surface rupture. Red arrows show the sense of slip of the Kekerengu Fault that generated ~10 m of right-lateral surface rupture displacement at this locality. Photos by Dougal Townsend, Nicola Litchfield, and Robert Zinke. E, F: Schematic map of Bluff Cottage and farm track before and after surface rupture of the Kekerengu Fault. Figure from Van Dissen et al., 2019.

[14] The Data and Information Committee resolved in June 2021 "*that a report on options for incorporating fault information held by ORC into planning frameworks across Otago be*

presented to the Strategy and Planning Committee". This is the purpose of this report. This report also seeks endorsement of an approach to fault zone management across Otago prior to further discussion with the TAs.

DISCUSSION

[15] The MfE (2003) "*Guidelines for Development of Land on or Close to Active Faults*" aids land-use planning, and risk management related to surface fault rupture hazard. It outlines a risk-based approach to planning for structures and activities on active faults and folds in New Zealand.

[16] Recurrence Interval (RI) class tabled against Building Importance Category (BIC) forms the basis of MfE's risk-based approach to mitigating fault rupture hazard.

[17] Where the location of an active fault or fold is well-defined, avoidance of the fault rupture hazard is important as no existing technology can prevent damage to buildings sited across a fault, even if the Building Code is complied with.

[18] MfE recommend the mapping of Fault Avoidance Zones (FAZ) or otherwise identifying fault rupture hazard areas for high-hazard faults. Since it is not feasible to map all faults to a property boundary scale, MfE recommend priority should be given to those faults with RI class 1-3, (<5,000 years) which trigger restrictions on some building categories.

[19] Now that active faults have been identified in all Otago's districts, ORC is working with the TAs to help define hazard areas around each fault or fold.

[20] The most hazardous faults in the district need to be accurately located, surveyed, and mapped in enough detail to supply accuracy at property boundary level (a scale of 1: 5,000 to 1: 10,000). This enables the development of objectives, policies, and methods.

[21] BIC can be considered with RI class to provide guidelines for a risk-based method for planning for the development of land on or close to active faults.

[22] Within Otago few active faults fall within the highest-hazard RI classes which, based on MfE guidelines, would require site-specific investigation of the potential rupture hazard if resource consent is needed.

[23] The Akatore and Settlement faults in Dunedin and Clutha districts are class I (RI <2,000 years) and fall into the highest-hazard RI class. There are no faults in class II or III up to a RI of 5,000 years. The Northwest Cardrona Fault which crosses through Wanaka has a RI of 5,500 years (Class IV).

Recommended Fault Avoidance Zones

[24] The Akatore Fault runs offshore from just south of Dunedin City and comes onshore north of Taieri Mouth settlement (Figure 1 in Attachment 1). This fault is regarded as being in a state of heightened activity compared to its long-term average slip rate and has ruptured twice in the past ~1300 years[8]. A rupture of this fault can produce earthquakes with moment magnitudes of 6.8-7.4[9].

[8]Tayla-Silva et al., 2020
[9]Tayla-Silva, 2017

[25] The Settlement fault lies just south of Owaka in the Catlins (Figure 2 in Attachment 1). Although in a rural zone, this fault has a similar recurrence interval to the Akatore Fault.

[26] In accordance with the MfE guidelines, it is recommended to define Fault Avoidance Zones (FAZ) for the Akatore and Settlement faults (Class I faults).

[27] The Northwest Cardrona Fault and associated monocline fold crosses through Wanaka (Figure 3 in Attachment 1). The feature has a RI of 5,500 years (Class IV).

[28] The Northwest Cardrona Fault just falls outside of a class III fault and does not trigger the requirement for a FAZ. However, it would be prudent for land use planning (e.g., land subdivision or higher BIC structures) to specifically consider and assess the surface fault rupture hazard associated with the Northwest Cardrona Fault.

[29] ORC is currently working with the TAs to identify areas where more detailed mapping and site-specific fault avoidance zonation associated with the Akatore and Settlement faults should be considered.

Fault Awareness Areas:

[30] It is recommended that ORC, in consultation with GNS Science, develops Fault Awareness Areas (FAAs) for all active faults and monocline faults shown on the Otago Natural Hazards Database. The purpose of this approach is to do as much as possible with the existing 1:250,000 scale dataset, which although not sufficient for property-scale zones, can go a long way to identify areas at increased risk from fault rupture hazard.

[31] This is the approach taken by Environment Canterbury (ECan) and the Canterbury TAs and is considered appropriate for Otago too given the geological setting and hazard of many of Otago's active faults, and the land-use and population density of the region (See Barrell & others, 2015).

[32] These mapped areas would take the form of buffer zones up to 500 metres wide, centred on the 1:250,000 scale mapped fault and fold lines already viewable on the Otago Natural Hazards Database. Metadata would include surface expression of the fault mapped certainty, and recurrence interval. With this information presented in an easily accessible format, a risk-based approach can then be followed after MfE guidance. TAs could also adopt planning rules for different fault RI classes and expression, with a view to reducing risk from development of subdivisions in areas coinciding with a FAA, for example. FAAs have been discussed with planners from Otago's TAs, with general agreement these would be helpful in defining relative risk.

[33] An example of the approach followed by ECan is displayed in Table 1 below. This is the leading approach for dealing with lower-seismicity faults and is likely to remain the best approach nationally.

<table>
<tr><th rowspan="2">Proposed Activity</th><th colspan="3">Recommended Actions</th></tr>
<tr><td>For FAA categories:
definite (well expressed)
definite (mod expressed)
likely (well expressed)
likely (mod expressed)
with RI < 5,000 years</td><td>For FAA categories:
definite (well expressed)
definite (mod expressed)
likely (well expressed)
likely (mod expressed)
with RI > 5,000 years</td><td>For all other FAA categories:
definite (not expressed)
likely (not expressed)
possible</td></tr>
<tr><td>Single residential dwelling
(BIC 2a and 2b in part)</td><td colspan="3">Information in District Plans and on LIMs and PIMs</td></tr>
<tr><td>Normal structures and structures not in other categories (BIC 2b, apart from single dwellings)</td><td>Consideration of the surface fault rupture hazard should be a specific assessment matter if resource consent for a new structure is required.
Site-specific investigation including detailed fault mapping at 1:35,000 or better and appropriate mitigation measures for the accurately mapped fault (e.g. set back or engineering measures).</td><td colspan="2">Information in District Plans and on LIMs and PIMs</td></tr>
<tr><td>Important or critical structures
(BIC 3 and 4)</td><td colspan="3">Consideration of the surface fault rupture hazard should be a specific assessment matter if resource consent for a new structure is required.
Site-specific investigation including detailed fault mapping at 1:35,000 or better and appropriate mitigation measures determined for the accurately mapped fault (e.g. set back or engineering measures).</td></tr>
<tr><td>New subdivision (excluding minor boundary adjustments)</td><td colspan="2">Consideration of the surface fault rupture hazard should be a specific assessment matter.
Site-specific investigation including detailed fault mapping at 1:35,000 or better and appropriate mitigation measures for the accurately mapped fault (e.g. set back or engineering measures).</td><td>Information in District Plans and on LIMs and PIMs</td></tr>
<tr><td>Plan Changes</td><td colspan="3">Consideration of the surface fault rupture hazard should be a specific assessment matter.
Site-specific investigation including detailed fault mapping at 1:35,000 or better and appropriate mitigation measures for the accurately mapped fault (e.g. set back or engineering measures.</td></tr>
</table>

Table 1. Recommended actions for different proposed activities within FAAs, considering recurrence interval (RI) for a surface-rupturing movement on an earthquake fault, and the significance of proposed building activities, expressed as Building Importance Category (BIC). From Barrell et al., 2015.

[34] The mapped areas also make it more straightforward to show which properties have a heightened fault rupture damage hazard and provide TAs with defined spatial areas within which fault information could be included in LIMs. The areas could also have other uses when applied to the Regional Policy Statement (RPS) such as avoiding storage of hazardous substances within a certain distance of highly active faults.

[35] Without spatial representation of active faults and folds beyond the current, linear, dataset, it is challenging to prepare a LIM for properties through which a fault passes or is in proximity to. For example, using just the line of the mapped fault and attaching

fault information to one property's file which the line crosses the corner of, but not doing this for a property 10 m from a highly active fault. Buffer zones for faults would incorporate all the likely positions a fault or fold may be present and could pose a ground rupture hazard, and these are likely to be 125 m either side of the fault for definite and likely faults that are moderately-well defined, 250 m for the less-definite faults. The FAAs would encompass the full range of plausible locations of the feature and provide an area of focus, amounting to a very small portion of total land area in each district. This approach allows TAs to target fault rupture hazard information to certain properties and show whether they are subject to building or development restrictions, rather than supplying a generic note on possible fault hazard across the whole district.

Policy Implications

[36] Given ORC's functions under the RMA, it is important to utilise the fault mapping information in the most thorough manner possible. Replicating the two-tiered approach for understanding faults (FAZ and FAA) is recommended in MfE guidance and has been practically implemented by Environment Canterbury (ECan), in relation to the Ashley Fault in the Waimakariri District.

[37] ECan's Regional Policy Statement sets out relevant provisions, including methods as follows:

Policy 11.3.3 Earthquake hazards

New subdivision, use and development of land on or close to an active earthquake fault trace, or in areas susceptible to liquefaction and lateral spreading, shall be managed to avoid or mitigate the adverse effects of fault rupture, liquefaction, and lateral spreading.

Methods

The Canterbury Regional Council will:

1. *Assist territorial authorities to delineate fault avoidance zones along known active fault traces.*
2. *Assist territorial authorities to delineate areas susceptible to liquefaction and lateral spreading.*
3. *Make available, upon request, any information that it holds about natural hazards.*

Territorial authorities will:

4. *Set out objectives and policies and may include methods in district plans to manage new subdivision, use and development of land in areas on or adjacent to a known active earthquake fault trace.*
5. *Set out objectives and policies and may include methods in district plans to manage new subdivision, use and development of land in areas known to be potentially susceptible to liquefaction and lateral spreading.*
6. *Ensure that the risk of earthquake fault rupture, liquefaction and lateral spreading hazards are assessed before any new areas are zoned or identified, in a district plan, in ways that enable intensification of use, or where development is likely to be damaged and/or cause adverse effects on the environment.*

Should:

7. *Supply information to the Regional Council captured at time of subdivision in relation to active earthquake fault trace, areas susceptible to liquefaction and lateral spreading*.

[38] This has recently been implemented in the Waimakariri District Plan (WDP), through the proposed District Plan[10], which provides for a range of policies and rules that manage activities in the area subject to the Ashley Fault Zone. The WDP includes a Fault Avoidance Zone, which has the most stringent rules, and a Fault Awareness Area which has slightly less stringent rules.

NH- **Risk from natural hazards**

New subdivision, land use and development:

1. manages natural hazard risk, including coastal hazards, in the existing urban environment to ensure that any increased risk to people and property is low;
2. is avoided in the Ashley Fault Avoidance Overlay and high hazard areas for flooding outside of the urban environment where the risk to life and property are unacceptable; and
3. outside of the urban environment, is undertaken to ensure natural hazard risk, including coastal hazard risk, to people and property is avoided or mitigated and the ability of communities to recover from natural hazard events is not reduced

NH- **Activities within the Fault Awareness Overlay and Ashley Fault Avoidance Overlay**

For activities within fault overlays:

1. **only allow subdivision, use and development for natural hazard sensitive activities in the Ashley Fault Avoidance Overlay where the risk to life or property is low; and**
2. **manage subdivision in the Fault Awareness Overlay so that the risk to life and property is low.**

NH- **New infrastructure and upgrading of infrastructure within fault overlays**

Within the fault overlays:

1. **provide for new and upgrading of existing not critical infrastructure below and above ground in the Ashley Fault Avoidance Overlay where:**

[10] Submissions on the WDP closed in November 2021. A hearing has not yet been scheduled.

a. it does not increase the risk to life or property from a natural hazard event; and
b. it does not result in a reduction in the ability of people and communities to recover from a natural hazard event;

2. avoid new and upgrading of existing critical infrastructure below and above ground in the Ashley Fault Avoidance Overlay unless there is no reasonable alternative, in which case the infrastructure must be designed to:
a. maintain, as far as practicable, its integrity and ongoing operation during and after natural hazard events; or
b. be able to be reinstated in a timely manner;

3. enable small scale critical infrastructure and other infrastructure in the Fault Awareness Overlay, while ensuring that larger critical infrastructure does not increase the risk to life or property from natural hazard events unless:
a. there is no reasonable alternative, in which case the infrastructure must be designed to maintain, as far as practicable, its integrity and ongoing operation during and after natural hazard events; or
b. be able to be reinstated in a timely manner.

[39] The adoption of a tiered approach to fault zone management – with Fault Avoidance Zones (FAZ) and Fault Awareness Areas (FAA), would have implications for future land use, including potential changes to District Plans, and more detailed information for Land Information Memoranda (LIM)[11].

[40] ORC has a level of discretion on how directive to be with the TAs to require the incorporation of the tiered approach into planning frameworks and therefore has the following options:

[41] **Option A**: provide the mapped FAA and FAZ and their descriptions to the TAs and let each TA decide on the approach for incorporating the tiered approach into their planning framework.

[42] **Option B**: provide the mapped FAA and FAZ and their descriptions to the TAs but direct TAs on an approach for incorporating the tiered approach into their planning framework. This option is similar to the approach adopted by ECan and the Waimakariri District Council described in the previous section.

[11] It is noted that in November 2021, Cabinet approved a proposed package of reforms to improve the disclosure of natural hazard information in the LIM system. It is expected that a bill to amend the Local Government and Official Information Meetings Act 1987 will be introduced in November 2022. https://www.dia.govt.nz/diawebsite.nsf/Files/Local-Government-2022/$file/Proposals-for-changes-to-the-land-information-memo-system_Redacted_watermark.pdf

[43] In practice, subject to additional technical information being required, Option B would mean ORC would be looking for the Dunedin City, and Clutha District Councils to amend their District Plans to adopt a policy and rule framework similar to the above.

[44] The proposed RPS 21 already provides a suitable policy framework that would allow the TAs to manage the fault hazards in this way. It would require both Councils to initiate a plan change or variation to their Plans to include the fault mapping and rule framework.

[45] To progress the selection of an option, staff suggest a formal approach to the TAs to outline the issue, the likely timeframes and consequences. For this purpose, it is suggested that a recommended option and an implementation plan for incorporating the tiered approach into planning frameworks across Otago is developed, in collaboration with TAs. It is recommended that, once developed, the preferred option and associated implementation plan are presented to a relevant Council committee for consideration.

[46] In addition to this, staff recommend that FAA and FAZ are shown on the natural hazards database, subject to any further technical refinement required. This would be a minimum, irrespective of the option selected.

OPTIONS

[47] At this stage staff are seeking Council endorsement of the approach, not a decision on which of the two planning options described above should be selected. The decision on which particular planning option to choose will be sought from Council at a later date following further discussion with the TAs. On that basis the Committee has two options for progressing the work from this point:

1. Option 1 - endorse the tiered approach to fault zone management in Otago – with Fault Avoidance Zones (FAZ) and Fault Awareness Areas (FAA) – as described in this report
2. Option 2 – Not endorse the tiered approach.

[48] Staff recommend Option 1.

CONSIDERATIONS

Strategic Framework and Policy Considerations

[49] The information presented and discussed in this report contributes to inform Council's Strategic Directions where our vision states: communities that are resilient in the face of natural hazards, climate change and other risks.

Financial Considerations

[50] The further work described in this paper is provided for in the 2021/31 Long Term Plan but is dependent on Council decisions on the Draft 2022/23 Annual Plan.

Significance and Engagement Considerations

[51] Not applicable.

Legislative and Risk Considerations

[52] Providing the information presented in this paper helps the community and interested stakeholders and organisations understand and manage the seismic risks

Climate Change Considerations

[53] Not applicable.

Communications Considerations

[54] Refer to the next section.

NEXT STEPS

[55] ORC will map Fault Awareness Areas (FAAs) in consultation with GNS Science. These will be shown on Otago's Natural Hazards Database and information on how to use the areas and suggested wording provided to TAs, for inclusion on LIMs of properties falling within these areas.

[56] Continue discussion with TAs on fault avoidance zoning for those faults of highest hazard and near populated areas, beginning with the Akatore Fault.

ATTACHMENTS

1. Active Faults [**7.2.1** - 5 pages]

Appendix 1: Location of the Akatore, Settlement and Northwest Cardrona faults

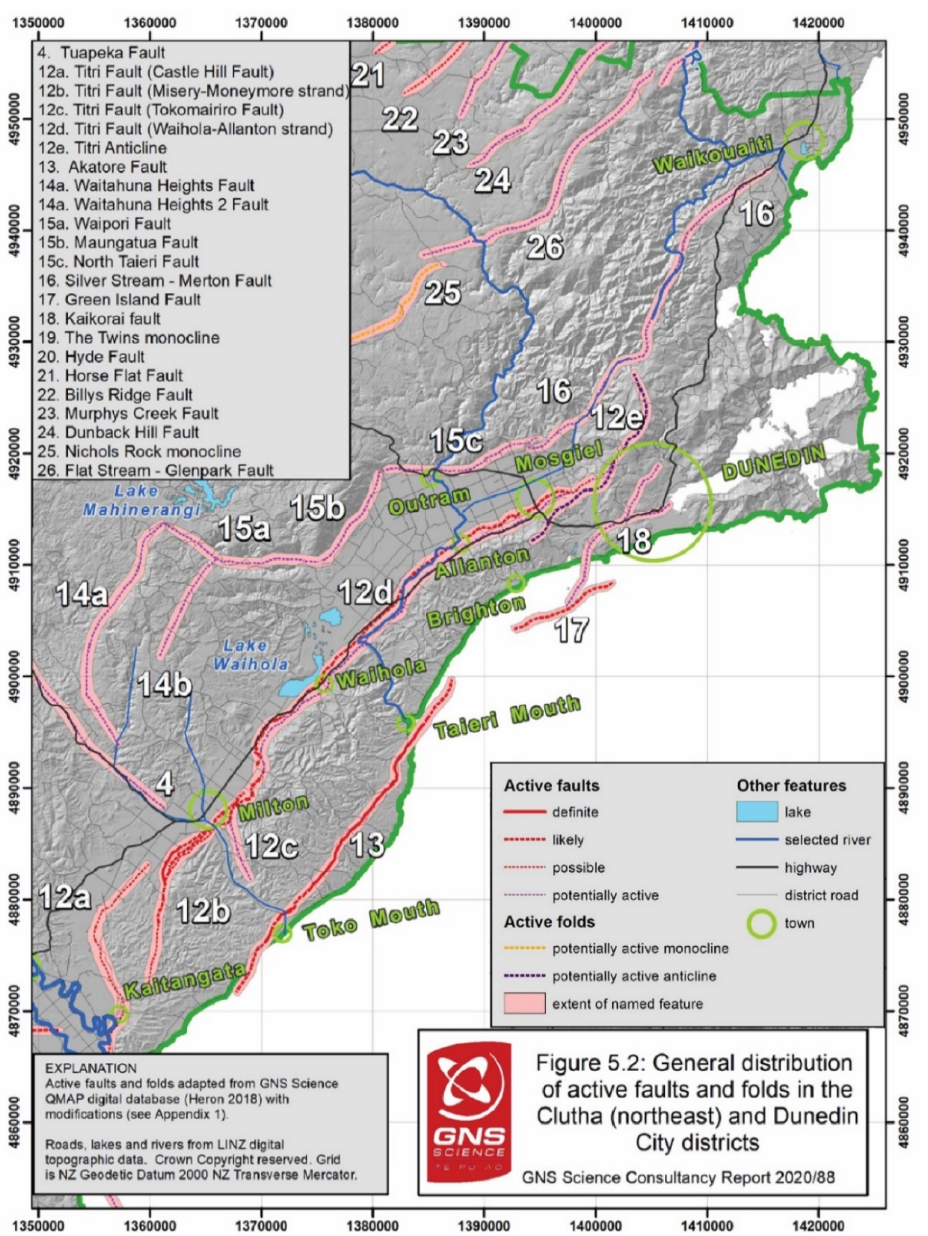


Figure 1. General distribution of active faults and folds in the eastern part of the Clutha District and the Dunedin City district. The Akatore Fault is labelled 13. (Barrell, 2020).

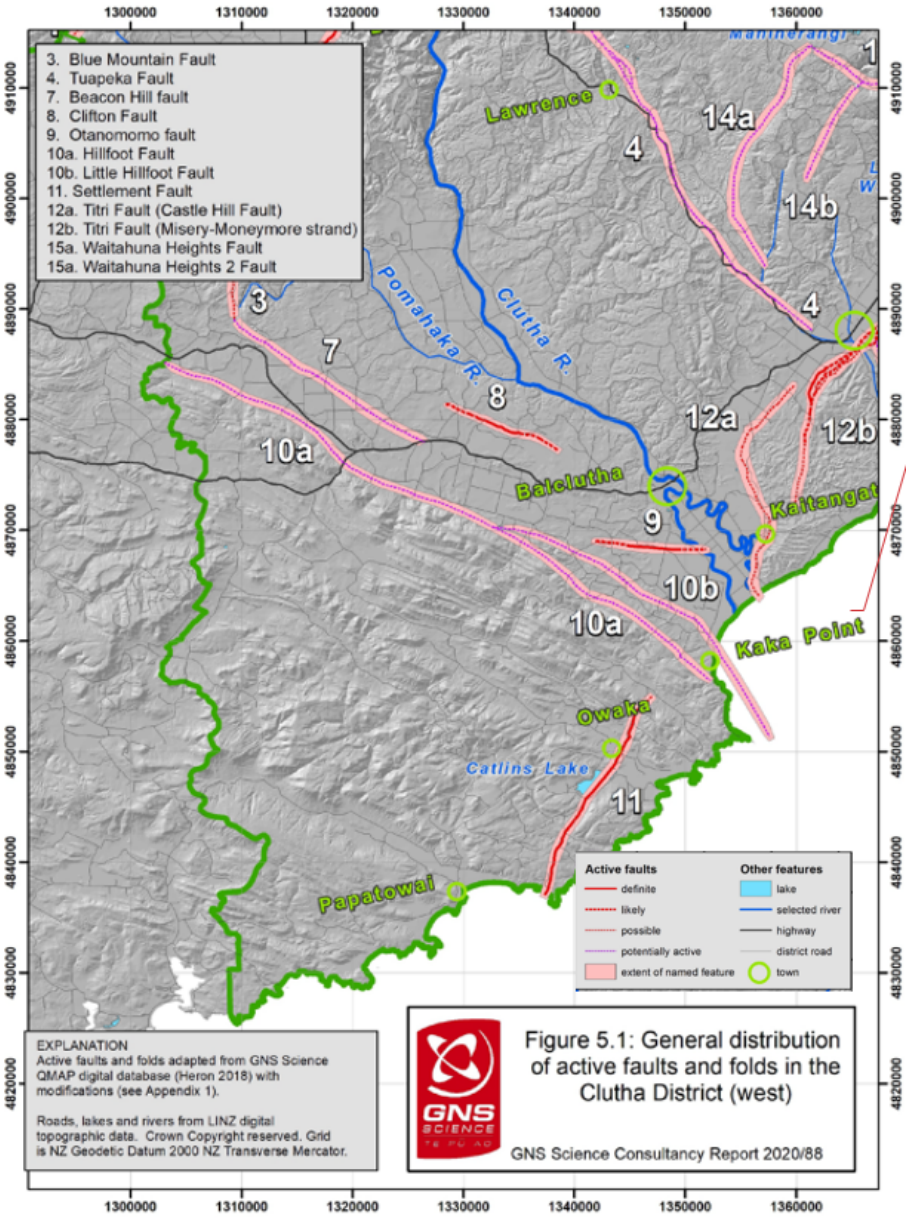


Figure 2. General distribution of active faults and folds in the western part of the Clutha District. The Settlement Fault is labelled 11 (Barrell, 2020).

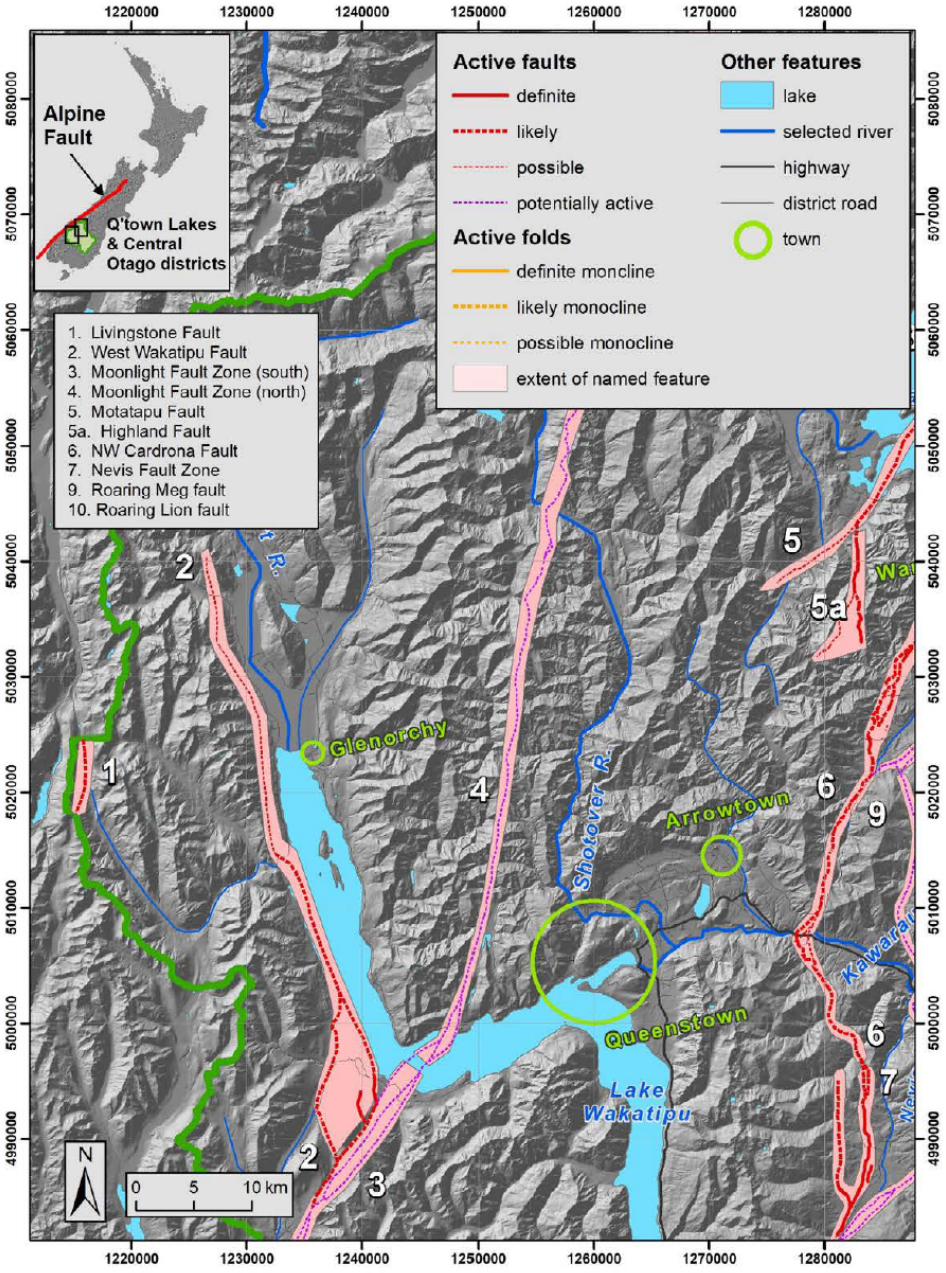


Figure 3a. General distribution of active faults and folds in the Queenstown Lakes and Central Otago districts. The Northwest Cardrona Fault is labelled 6 (Barrell, 2019).

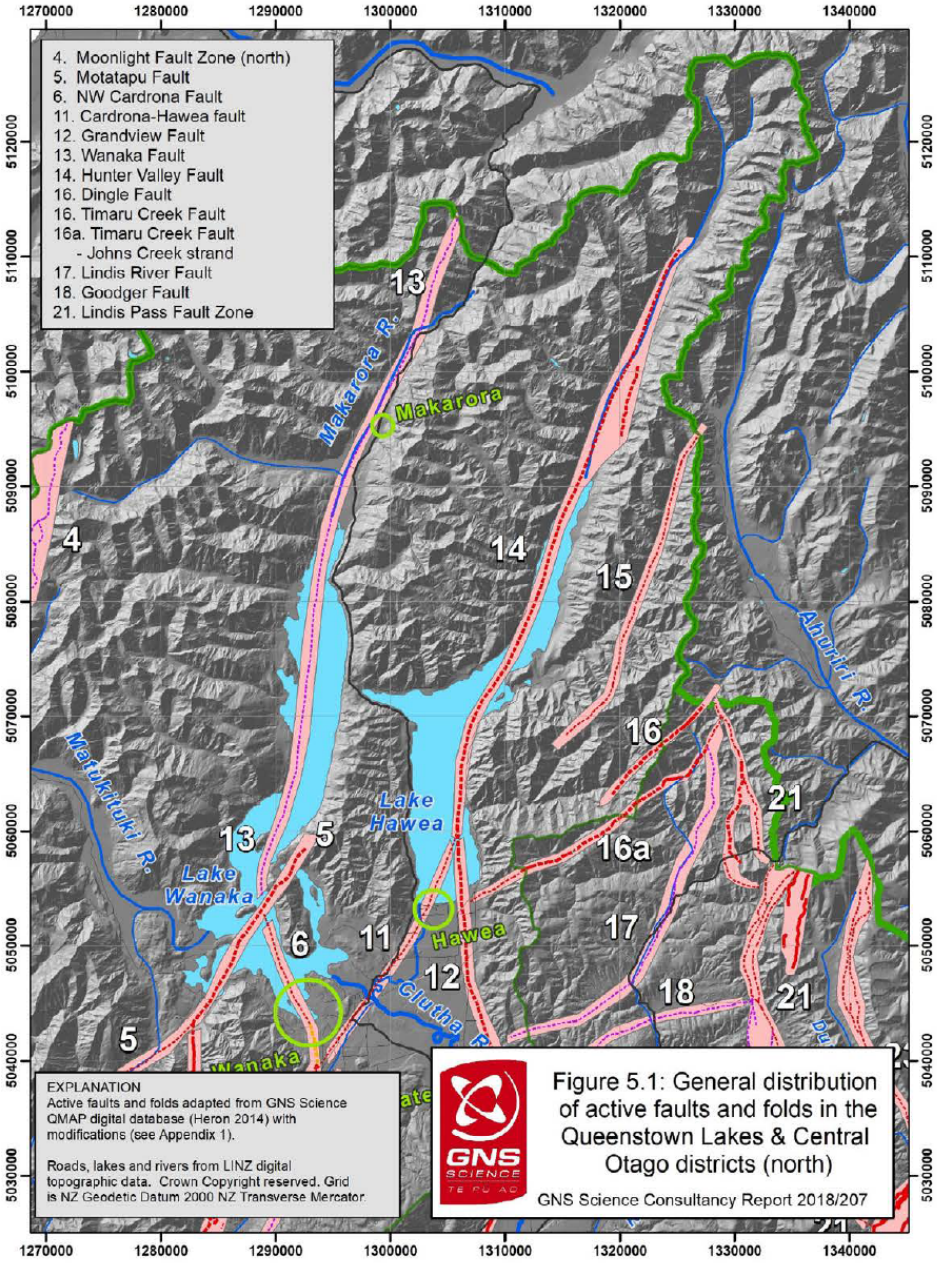


Figure 3b. General distribution of active faults and folds in the Queenstown Lakes and Central Otago districts. The Northwest Cardrona Fault is labelled 6 (Barrell, 2019).

7.3. Shaping Future Dunedin Transport Fares and Frequency Business Case

Prepared for:	Strategy and Planning Committee
Report No.	PPT2116
Activity:	Transport - Public Passenger Transport
Author:	Garry Maloney, Principal Advisor – Transport Planning
Endorsed by:	Gavin Palmer, General Manager Operations
Date:	13 April 2022

PURPOSE

[1] The purpose of this report is to seek approval of the Shaping Future Dunedin Transport Fares and Frequency Single Stage Business Case scoping report.

EXECUTIVE SUMMARY

[2] In December 2020, Council resolved to include its Shaping Future Dunedin Transport (SFDT) Programme Business Case (PBC) actions in its draft 2021-31 Long Term Plan. One of those was to prepare a Fares and Frequency Single Stage Business Case (FFBC) in Year 1 (2021/22).

[3] The delivery of improved bus services and construction of Super Stops in Year 3 onwards, will be dependent on the outcomes of the FFBC and subsequent decisions by Council (ORC) and Waka Kotahi NZ Transport Agency (WKNZTA).

[4] Council staff have prepared a proposed FFBC Scoping Report, for Council approval. It has been developed in full collaboration with Officers of Connecting Dunedin[1] (CD) partners.

[5] Council's Long-term Plan (LTP) provides for the FFBC to be completed in Year 1, but that will not be the case and Council will need to carry-over some of the cost of the project into Year 2.

[6] The reasons for this primarily relate to the time it has taken for WKNZTA to approve both the SFDTPBC and funding, the time it has taken to fully scope the FFBC and the WKNZTA approval processes it fits within.

RECOMMENDATION

That the Strategy and Planning Committee:

1) ***Notes*** *this report.*

2) ***Approves*** *the scope of the Shaping Future Dunedin Transport Fares and Frequency Single Stage Business Case as described in the appended Shaping Future Dunedin Transport Fares and Frequency Single Stage Business Case Scoping Report.*

[1] The Connecting Dunedin Partnership comprises Dunedin City Council, Otago Regional Council and Waka Kotahi NZ Transport Agency. Councillors Noone, Deaker and Forbes and the Council's Chief Executive are members of the Governance Group.

*3) **Notes** that the business case will not consider a real time service as such a system became operative in April 2021 in Dunedin and Queenstown.*

BACKGROUND

[7] The December 2020 Council meeting received a report on the SFDTPBC. Council resolved to approve:

- *"the inclusion of the Otago Regional Council projects in the Shaping Future Dunedin Transport Programme (as outlined in this report) within the Draft 2021-2031 Long Term Plan";* and
- *"for inclusion in the business case development of the projects outlined in the report including consideration of a real time service."*

[8] The SFDT Programme is a set of integrated and complementary projects that have been developed for the CD partnership and component projects are expected to be delivered by each partnership agency (an image of the Preferred Programme is appended).

[9] The SFDTPBC was approved by WKNZTA in late-2021 and as part of that approval, the Agency requested a review of governance arrangements.

[10] A key output of the SFDT Programme is the mode shift programme made up of aspects of the base programme including bus services improvements, parking strategy and assessment of off-street options, pedestrian package of works, cycleway package of works and a behaviour change programme.

[11] For public transport, the aspiration of the mode shift programme contained in the CD partner-endorsed/approved SFDTPBC is to increase journey to work by bus from 3.4% in 2018 to 8% in 2030.

[12] Council's contribution to the potential benefits of the SFDT programme are in further investigation (fares and frequency business case) and delivery of improved bus services and infrastructure to achieve increased mode share for public transport.

[13] The delivery of improved bus services and construction of Super Stops[2] will be dependent on the outcomes of the business case and subsequent decisions by Council and Waka Kotahi.

[14] The image of a Super Stop included in the 9 December 2020 Council paper is again shown below for illustrative purposes.

[2] Super stops were described in the 9 December 2020 Council report as having a "*higher level of service than general bus stops in the city. It is envisaged that these super stops will have support from nearby facilities to enable the provision of full network maps and timetables, seating and shelter, nearby toilet facilities, bike stands and/or lockers*". These were envisaged to be constructed at Mosgiel, Green Island, Cargills Corner, the University and the Gardens/North Road.

Figure 1: Super Stop imagery

[15] When Council considered budgeting for its Shaping Future Dunedin Transport activities in December 2020, Council staff indicated that before progressing the business case they would put the scope to a subsequent meeting of Council for approval (the purpose of this report). On the day there was no Council decision to this effect.

DISCUSSION

[16] Appended to this report is a draft FFBC Scoping Report, comprising:

- Purpose and scope, noting items that are in and out of scope;
- Deliverables aligned to business case requirements; and
- Work programme.

[17] The proposed purpose of the FFBC is:

- "*to develop a plan to primarily grow Dunedin bus journey to work/education mode share that reduces carbon emissions from single occupant vehicles, is realistic, fundable, aligned to the SFDT PBC and the ORC RPTP and agreeable to the Connecting Dunedin partners.*"

[18] The key questions to achieve the FFBC purpose are:

- What changes need to be made to the current timetabled services to better accommodate work/school start and finish times, remove gaps and standardise frequencies?
- Which routes would grow their peak patronage the most as a result of making them more frequent and how should those changes be staged?
- What fare structure should apply?
- What is the appropriate level of infrastructure that should be provided at stops where multiple services converge (called "Super Stops") and where are they needed?
- Are there additional revenue sources that could be accessed to support public transport service provision?

[19] It is proposed the FFBC will be a five-month work programme for the consultant procured to deliver it. Final outcomes will need to be agreed by the partners by the end

of 2022 so information can be fed into future Annual Plans (and most likely LTPs and the RLTP).

[20] The delay in progressing the FFBC to date has already resulted in Council agreeing to postpone its Year 2 bus service improvement to Year 3 of the LTP.

[21] The Scoping Report has been developed in full collaboration with Officers of CD partners through:

- A workshop on 11 February 2022 (draft Scoping Report issued for the workshop);
- Second version issued to partners for feedback on 3 March 2022; and
- Feedback provided back to partners on how the matters raised were addressed.

[22] One of the key objectives of ORC staff has been to focus the scope of the FFBC project to work within the budget.

[23] The ORC staff considered all the input and feedback received and most was accepted and incorporated.

[24] The more significant areas where there were differences were:

- Span of service – the proposed FFBC Scope initially focussed on growing peak journey to work patronage. Both Dunedin City Council (DCC) and WKNZTA Officers suggested it should not be restricted to those time periods and should include journey to school/tertiary education.
- One of the key problems identified in the SFDTPBC was peak congestion as a result of traffic from the south. As the FFBC is giving effect to the SFDTPBC and taking in to account the feedback, ORC staff have amended the purpose statement to focus on peak (but not exclusively) and include peak education trips.
- Stops – feedback was received from DCC officers that the FFBC should address the type of infrastructure to be provided at each type of bus stop. While this is valid, the FFBC's infrastructure focus is on Super Stops, not all stops. The national Public Transport Design Guidelines are the relevant reference source for other stops.

[25] As referenced earlier in the report, the 9 December 2020 Council meeting decision was to include consideration of a real time service in the FFBC.

[26] While staff have retained a reference to technology requirements in regard to Super Stops, they are proposing that including a wider consideration of a real time passenger information system be excluded from the FFBC.

[27] At the time of the December 2020 Council meeting, the Dunedin public did not have access to a real time passenger information system – in fact, it was only operating as a trial service in Queenstown and only via the ORBUS website.

[28] This matter was addressed in April 2021 when the Queenstown trial was extended to Dunedin and made accessible to the public of both centres through the Transit application. Thus, the decision has been given effect to in April 2021 and as such, removed from the scope of the FFBC.

OPTIONS

[29] In considering this report and its attachment, the Council has two options as follows:

- Option 1: approve the proposed Scope; or
- Option 2: not approve the proposed Scope.

[30] The recommended option is Option 1, especially given both CD Partners have been actively involved in developing the FFBC Scope and it the action is consistent with what Council has agreed with its CD partners.

[31] Although Council and WKNZTA have approved funding for the Business Case to be progressed, Council staff indicated in December 2020 that before progressing the business case they would put the scope to a subsequent meeting of Council for approval. As such, Option 2 would further delay commencement of the project.

[32] Failure to progress the FFBC would:

- Delay the implementation of Council's LTP programmed bus service and infrastructure improvements in Year 3 onwards, as the objective of the FFBC is to demonstrate that an investment in these is worthwhile;
- Make it much more challenging to secure WKNZTA co-investment in those improvements, or its support for fare changes for the reason outlined above; and
- Result in reputational damage, particularly with CD partners and to a lesser extent, the community in general.

[33] It is for the reasons above that Option 1 is recommended.

CONSIDERATIONS

Strategic Framework and Policy Considerations

[34] The Otago Regional Council's 2021/31 Long-term Plan (LTP) outlines how activities undertaken by Council will help to achieve community outcomes. One of the Community Outcomes that ORC aims to achieve is sustainable, safe, and inclusive transport. Council investing in the proposed SFDTPBC interventions will help deliver this outcome.

[35] The Regional Land Transport Plan 2021-2031 (RLTP) aligns with the strategic priorities of the Government Policy Statement on Land Transport Funding (Safety, Better Travel Options, Improving Freight Connections and Climate Change).

[36] The RLTP included the FFBC as an activity in the Programme and WKNZTA included the activity in the 2021-24 National Land Transport Programme with a probable funding status.[3]

[37] The proposed purpose of the FFBC states that it will align with the Regional Public Transport Plan and the document itself outlines the key policies in the Plan "*as carbon reduction, integrated network, adaptability, and resilience, high-quality, accessible, safe and affordable.*"

[3] New activities that are expected to proceed during this NLTP period, subject to a successful business case and funding being available when the application is received.

Financial Considerations

[38] The FFBC is a budgeted activity in Year 1 of Council's 2021-31 LTP and WKNZTA has approved its co-investment. The total cost of the FFBC is $400,000. The Council share is $196,000 and the WKNZTA share, $204,000.

[39] The LTP 2021-31 budgets for the FFBC to be completed in Year 1, but that will not be the case and Council will need to carry-over the bulk of the cost of the project into Year 2.

[40] The reasons for this are given above.

[41] In terms of the WKNZTA co-investment, the carry-over of its share is actioned through a simple and standard cost-scope adjustment process to move the funds from Year 1 to Year 2 of the National Land Transport Programme.

Significance and Engagement Considerations

[42] The attached FFBC scope has been developed in consultation with Connecting Dunedin partners, at an Officer level.

Legislative and Risk Considerations

[43] There are no legislative considerations regarding the proposed decisions sought in this paper.

Climate Change Considerations

[44] The proposed FFBC purpose statement includes a reference to reducing carbon emissions and the 'Evaluation Approach' references quantifying the carbon reduction that the FFBC will deliver.

Communications Considerations

[45] There are no communications considerations regarding the proposed decisions sought in this paper.

NEXT STEPS

[46] The next steps in the process are to:

- Prepare the procurement plan for delivery of the FFBC;
- Prepare the FFBC requests for proposals; and
- Procure the FFBC.

ATTACHMENTS

1. Preferred Programme [**7.3.1** - 1 page]
2. SFDT Fares and Frequency SSBC Scoping Plan for Council [**7.3.2** - 17 pages]

Shaping Future Dunedin Transport **Partner Preferred Programme**

1 State Highway Works
- 1a SH1 Safety Improvements (WAKA KOTAHI)
- 1b SH1 Speed Management
- 1c Relocate SH88 to Frederick Street
- 1d Pine Hill Intersection Upgrade
- 1e Additional Access and Safety Improvements
- 1f Queens Gardens to Oval Cycleway

2 Harbour Arterial Upgrade
- 2a Directional Signage and Wayfinding (DCC)
- 2b Major and Minor Intersection Upgrades
- 2c Corridor Improvements
- 2d Ward Street Overbridge Upgrade

3 Public Transport Improvements
- 3a Central Bus Hub and Superstop Upgrades (ORC, DCC)
- 3b Frequency and Fare Review
- 3c Southern Bus Priority

4 Parking Management Improvements
- 4a Develop Parking Management Policy (DCC)
- 4b Introduce Parking Wayfinding System
- 4c Upgrade Parking Technology
- 4d Improve Data Collection and Reporting

5 Park and Ride
- 5a Mosgiel Park and Ride (DCC)
- 5b Burnside Park and Ride

6 Active Mode Improvements
- 6a Slow Speed Zone (DCC)
- 6b Princes Street Improvements
- 6c Albany Street Cycleway
- 6d St Andrew Street Improvements
- 6e George and Bank Streets Safer Streets Upgrade
- 6f Bicycle Hubs and Parking Facilities

7 Behaviour Change Programme
- 7a Travel planning with major employers (ORC, DCC)
- 7b Demand management (MOH)

Delivery partners
- WAKA KOTAHI *Waka Kotahi NZ Transport Agency*
- DCC *Dunedin City Council*
- ORC *Otago Regional Council*
- MOH *Ministry of Health*

Otago Regional Council

Shaping Future Dunedin Transport

Fares and Frequency Single Stage Business Case

SCOPING REPORT

DRAFT V2.5

11 March 2022

Contents

Glossary of Terms

Term	Description
CD	Connecting Dunedin
DCC	Dunedin City Council
FFBC	Dunedin Fares and Frequency Single Stage Business Case
NLTP	National Land Transport Programme
ORC	Otago Regional Council
RLTP	Regional Land Transport Plan
RPTP	Regional Public Transport Plan
SFDT PBC	Shaping Future Dunedin Transport Programme Business Case
SSBC	Single Stage Business Case
TDM	Travel Demand Management
WKNZTA	Waka Kotahi NZ Transport Agency

1 Introduction

1.1 Report Purpose

On 9 December 2020, ORC resolved to:

"2) Approves the inclusion of the Otago Regional Council projects in the Shaping Future Dunedin Transport Programme (as outlined in this report) within the Draft 2021-2031 Long Term Plan.

3) Approves for inclusion in the business case development of the projects outlined in this report including consideration of a real time service."

This document outlines the scope of the FFBC and sets out:

- purpose and scope, noting items that are in and out of scope;
- deliverables aligned to business case requirements;
- work programme;
- governance, including key roles and responsibilities;
- quality assurance and quality success factors; and
- risk management plan.

1.2 Background

Dunedin is the second largest city in the South Island. It is considered one of the four main cities of NZ for historic, cultural and geographic reasons. Population growth means Dunedin is a 'medium growth' city. Dunedin has a diverse economy, with significant tertiary education and health sectors. The city is home to around 25,000 tertiary students and staff, and Dunedin hosts the primary hospital for the Southern Region; a teaching hospital with strong links to the University.

In 2018 the government announced the location for the $1.4B New Dunedin Hospital (NDH). Ministry of Health (MOH) then asked Waka Kotahi and DCC to look at a change to the roads to improve access and integration between the hospital and the city, including considering a change to the configuration of SH1 through Dunedin. This was the catalyst to progress work DCC started in 2013, looking at the benefits a change to the configuration of SH1, including making it a two-way system, could bring. A business case completed in 2018 confirmed the scope should be broadened to include access to the city by all transport modes and that's the approach taken by the SFDT PBC (from which the FFBC stems).

Transport in Dunedin is predominantly car based. People driving their own, or company, vehicles make up 74.4% of the total.

Dunedin has an extensive bus network and a central bus hub which provides a legible system for visitors, new users, and those who need to change services. Patronage has been growing over the last three years but at the time of the 2018 Census 3.4% of people used public transport to get to work/education (the New Zealand average was 4.2%).

Dunedin's cycle network is growing and in 2018, cyclists accounted for 2.1% of the journey to work/education (about the same as the New Zealand average). Walking is a viable transport option for many residents due to

the compact nature of the city, and medium density housing close to the central city. In 2018, about 10% of residents recorded their main means of travel to work/education as walk/jog, compared to 5.2% nationally.

Each weekday, 32,727 people travel into the combined Dunedin Central, Harbourside and Campus South areas for work or education. An additional 3,174 also live in these areas and go to work or school there. People arrive from 73 different parts of the city, but the majority of journeys are from surrounding suburbs and are relatively short, around 5-6km in length.

The Dunedin strategic transport model shows 11,800 vehicles per day entering the one-way system from the north and travelling south. Of these, 20% use SH1 as a through route to the south, 65% use it to access the CBD, University and waterfront areas with the remainder travelling to hill suburbs or South Dunedin.

Almost three times the number of vehicles enter the network from the south, with a total of 29,100 per day via SH1 (15,400) and Wharf Street (13,700). Only 10% use SH1 as a through route to the north. 80% of those on SH1 are accessing the CBD, University and Harbourside.

The SFDT PBC outlines the case for investment in a suite of multi-modal transport interventions to improve multi-modal access to/within central Dunedin (including better access to the New Dunedin Hospital), to improve connectivity, safety, place quality, attractiveness and environmental outcomes.

The SFDT PBC was narrowed down to a short list of two options, with a 'sub' Programme common to both of travel demand and mode shift interventions, that would better balance place and movement through central Dunedin. A key part of this mode shift 'sub' Programme was:

- public transport improvements - improve services, frequencies and fares to provide a more attractive public transport network;
- parking management;
- park and ride;
- cycle and pedestrian networks; and
- behaviour change.

Each of the 'sub' Programme elements works with and builds on the others to provide a much broader range of non-car transport choices to the citizens of Dunedin.

The estimated combined impact of the mode shift 'sub' Programme is that by 2030, the journey to work mode share for public transport, active modes and working from home will be 40%. Should the combined mode shift 'sub' Programme be delivered, it is estimated that public transport's share of the 40% will be 8% (up from 3.4% in 2018).

ORC is responsible for delivering the SSBC as it is the role of regional council to plan and procure service delivery of public transport services.

This Scoping Report will be agreed by DCC and WKNZTA. Both have an essential role in achieving the outcomes of the SFDT PBC in terms of infrastructure delivery and achieving travel behaviour change away from reliance on the private car.

2 Purpose and Scope

2.1 Purpose

The FFBC purpose is:

"To develop a plan to primarily grow Dunedin bus journey to work/education mode share that reduces carbon emissions from single occupant vehicles, is realistic, fundable, aligned to the SFDT PBC and the ORC RPTP and agreeable to the Connecting Dunedin partners."

2.2 Key Questions

The key questions to achieve the FFBC purpose are:

- **what changes need to be made to the current timetabled services to better accommodate work/school start and finish times, remove gaps and standardise frequencies?**

  The current timetabled Dunedin bus service offers a range of headways and service start and finish times depending on service type. The SFDT PBC suggested the span of service was acceptable, but there were some gaps such as some first services not reaching the city centre in time for 7:00 am work starts (particularly at Dunedin Hospital). Other routes such as 77 Mosgiel, have very limited late evening service with up to three-hour gaps between trips, while some other services have uneven 20/40-minute frequencies.

  Tables 9 and 15 in the RPTP (pages 48 and 74, respectively), specify public transport service types and target service levels for frequency and hours of operation (appended).

- **Which routes would grow their peak patronage the most as a result of making them more frequent and how should those changes be staged?**

  The SFDT PBC proposed 15-minute peak services for the Mosgiel, Port Chalmers and Portobello services; a new Mosgiel peak express service and a new peak Green Island to Bus Hub via South Dunedin service to address the issue of traffic entering the City from the south. There may also be other services in the network that would be as good, or better candidates to grow peak patronage.

  As noted below, ORC has already given effect to changes to the Mosgiel bus service consistent with the SFDT PBC.

- **What fare structure should apply?**

  This could include flat fares, discounts for frequent travel (e.g. weekly and/or monthly fare capping), workplace/organisation bulk purchasing of travel and an inner-city free fare zone.

  In September 2020, to coincide with the introduction of the Bee Card electronic ticketing system and on an interim basis, ORC replaced its zonal fares with a flat $2.00 Adult Bee Card fare ($1.20 for youth), a $3.00 cash fare for all and removed all but a single Youth (up to and including 18 years of age) concession and the SuperGold Card off-peak concession.

- **What is the appropriate level of infrastructure that should be provided at stops where multiple services converge (called "Super Stops") and where are they needed?**

  The 2014 RPTP signaled the need for Super Stops and this has been flagged in the SFDT PBC. These were envisaged to be constructed at Mosgiel, Green Island, Cargills Corner, the University and the

Gardens/North Road. A Park and Ride is proposed to be built in Mosgiel and that may negate the need for a Super Stop, as to the work that DCC is progressing for Albany Street. There may also be some locations not currently referenced deserving of a super stop.

The RPTP does not provide any detail on what level of infrastructure should be provided at those stops. The FFBC will do this.

- **Are there additional revenue sources that could be accessed to support public transport service provision?**

  Public transport in Dunedin has historically been funded by ORC Dunedin ratepayers, bus users and WKNZTA. There may be other sources of revenue that could also be used to purchase public transport services/trips.

It should be noted that:

- The geographical area of the SSBC will align to the area currently serviced by the Dunedin bus service.
- ORC adopted a new RPTP in June 2021. The RPTP contains the following objectives that should be taken into account (as should relevant policies):
  - 1. "*Contribute to carbon emission reduction and improved air quality through increased public transport mode share and sustainable fleet options.*"
  - 2. "*Deliver an integrated Otago public transport network of infrastructure, services and land use that increases choice, improves network connectivity and contributes to social and economic prosperity.*"
  - 3. "*Develop a public transport system that is adaptable.*"
  - 4. "*Establish a public transport system that is safe, accessible, provides a high-quality experience that retains existing customers, attracts new customers and achieves high levels of satisfaction.*"
  - 5. "*Deliver fares that are affordable for both users and communities.*"
- The outcome(s) from this SSBC may require ORC to subsequently revisit parts of its RPTP.
- ORC will implement improvements to Mosgiel bus services (introduce 15-minute peak services and a new express service) in 2022 year. These improvements were flagged in the SFDT PBC and the outcomes from their implementation need to be taken in to account in terms of this SSBC.
- There are interdependencies/connections between some DCC SFDT interventions and this project (e.g. park and ride, Princes Street bus priority and parking management). It will be important to ensure those complementary projects do not double-count their benefits and costs.
- Dunedin has a four-stage transport (CUBE) model. The base model was originally developed in 2017 and updated in 2020. The model has been used to develop forecast trips by all modes, primarily to inform tests carried out using a more detailed PARAMICS traffic model. Flow Transportation Specialists LTD manage/oversee all tests that are carried out (either in CUBE or PARAMICS), on behalf of CD partners.

- Waka Kotahi has released its draft fare policy and it is expected that it will soon ratify it. The policy should be taken into account and it will likely require regions to set out how their fare policy will deliver and balance the following key strategic objectives:
    - financial sustainability;
    - transport system efficiency; and
    - greater equity.

  Furthermore, there must remain a strong focus on fare revenue management and cost recovery.

2.3 Items in scope

The FFBC will investigate:

- **Patronage** - forecast the annual patronage that needs to be achieved by public transport considering population and land use changes to achieve a journey to work mode share of 8% by 2030.

  Obtaining robust data will be critical to underpin and provide credibility to the analysis. Access to existing bus patronage and origin-destination data will be provided by ORC from the Bee Card ticketing system.

- **Public Transport Service Levels:**
    - Review RPTP Table 9 target frequency and target hours of operation and in terms of best practice, identify appropriate headways and service commencement and finish times to improve timetable clarity.
    - Review RPTP Table 15 and identify changes needed to best align each route with the appropriate service type.
    - Identify which service improvements will generate the greatest contribution to attaining the 2030 public transport mode share target, especially in regard to services entering the City from the South. That must take in to account the programmed Mosgiel bus service improvements and at a minimum test peak service improvements for routes 14 and 18 and a new weekday peak service from Green Island to the central City via South Dunedin.

- **Fares:**
    - Establish "willingness to pay" by surveying the community to robustly establish the optimal Adult and Youth Bee Card fare price point for a bus trip from the "inner City" (e.g. Northeast Valley, St Clair, etc), from Mosgiel and from Palmerston.
    - The RPTP set's out ORC's aspiration that fares are affordable for bus users and ratepayers. The FFBC will propose fare pricing options to achieve that objective.

- **Super Stops –** identify the need, location, desirable attributes (including consideration of charging of EV buses) and preliminary design.

- **Additional revenue sources** – identify other sources of revenue that could be used by local government to purchase public transport services/trips.

- **Evaluation Approach** – apply a rigorous evaluation approach to quantify the impact of the changes proposed above in terms of patronage, revenue and expenditure estimates. This must be used to

understand and quantify the impact that the public transport changes will have on traffic volumes, congestion and carbon reduction.

2.4 Items out of scope

- Accessing detailed patronage and fare revenue data prior to August 2020 (the introduction of the Bee Card). Pre-August 2020 patronage and revenue data can be made available by ORC, but it will not have the level of granularity that the Bee Card system provides.
- Development of new timetables.
- Consideration of bus size and motive power.
- Development of a new strategic public transport model.
- Real Time Passenger Information System.

  At the time of the 9 December 2020 Council meeting, the Dunedin public did not access to a real time passenger information system. This matter was addressed in April 2021 when a real time system for Dunedin and Queenstown public transport was made available to the public. This is the primary reason for excluding it from the FFBC.
- On-demand public transport solutions.
- The appropriate level of infrastructure that should be provided at stops other than Super Stops.
- The requirements for park-and-ride (as this will be addressed by DCC).
- The requirements for public transport priority measures (as this will be addressed by DCC for Princes Street).
- Development of a TDM implementation plan.

3 Deliverables

A list of key deliverables are presented in Figure 1.

Figure 1: Key FFBC Outputs

Description	Minimum reporting
Willingness to Pay	Prepare a report which can be easily followed which should include but not be limited to: • perceptions of bus fares by users and non-users; • preferences for fare reductions for sections of the community versus rewarding frequent travel; • optimal pricing; and • demographic profile of respondents.

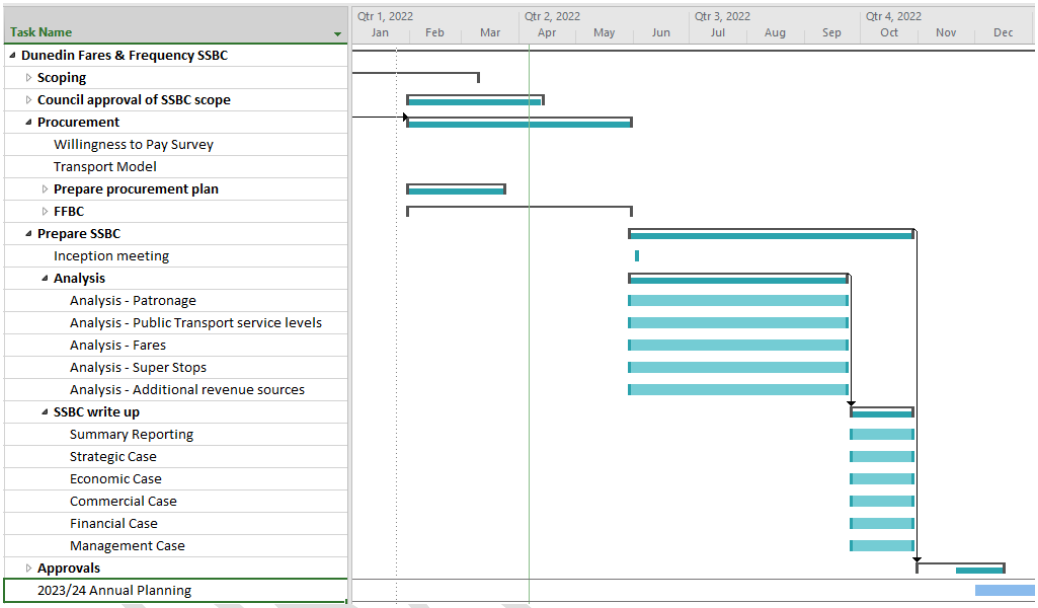
A Business Case that is fit-for-purpose for the next stage of funding approval and meets Waka Kotahi NZ Transport Agency requirements.	• Executive Summary.
	• Strategic case, which will summarise the need for investment. The strategic case only needs to be reviewed, confirmed and, if any, briefly outline any significant changes that may have occurred since any earlier business case.
	• Economic case, which will identify a preferred option that best solves the problem/takes advantage of the opportunity.
	• Financial case, which outlines the costs and funding requirements for the preferred option and provides assurance that the preferred option is affordable.
	• Commercial case, which outlines the proposed procurement arrangements for the preferred option.
	• Management case, which will describe the arrangements that will be put in place for the successful delivery of the preferred option, both to ensure successful delivery and to manage programme risks.
	• Technical notes to support the conclusions and recommendations of the FFBC including on model assumptions and outputs and:
	  ○ Super Stops - preliminary location, priority, design drawings, details of any land acquisition and technology requirements and costings;
	  ○ Additional revenue sources – stand-a-lone paper outlining opportunities and constraints/limitations to their implementation.

4 Work programme

4.1 Programme

This will be a five-month work programme for the consultant procured to deliver the FFBC. Final outcomes will need to be agreed by the partners by the end of 2022 so information can be interpreted to feed into future Annual Plans (and most likely LTPs and the RLTP). An indicative programme is presented in Figure 2.

Figure 2: Indicative programme of works

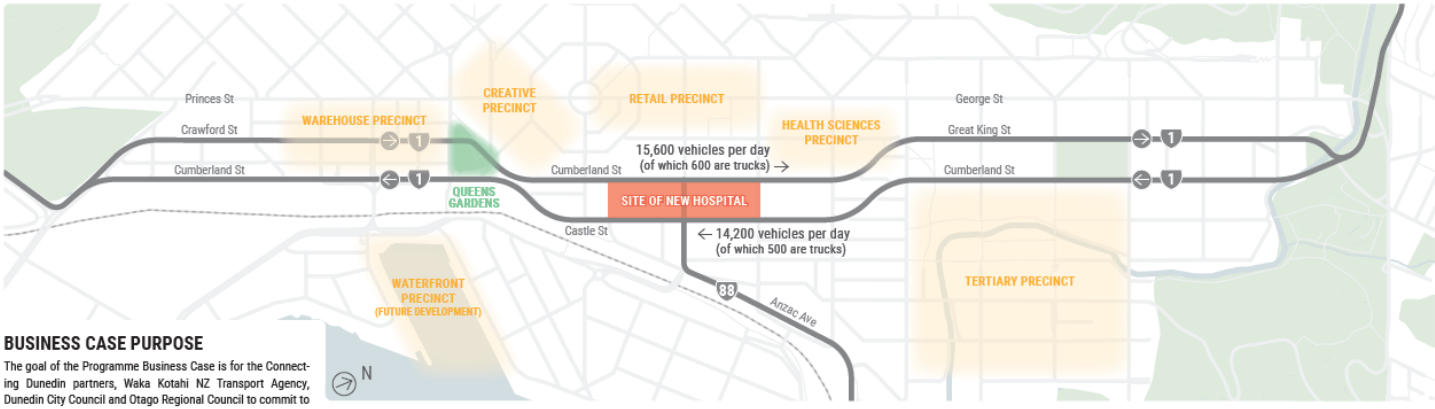


Appendix A: Summary of Shaping Future Dunedin Transport Programme Business Case

Shaping Future Dunedin Transport **Context and Background**

CENTRAL CITY CONNECTIVITY

The SH1 one-way system and SH88 are nationally important transport routes, providing key north-south connections and the route to Port Otago. However, high traffic volumes and dominant north-south traffic flows along the SH1 one way system divide the geographically constrained city centre, leading to reduced pedestrian connectivity and poor amenity issues (air and noise pollution). The New Dunedin Hospital site has six of the proposed seven road frontages on the state highway network, which will exacerbate these issues.



BUSINESS CASE PURPOSE

The goal of the Programme Business Case is for the Connecting Dunedin partners, Waka Kotahi NZ Transport Agency, Dunedin City Council and Otago Regional Council to commit to the best long-term transport and urban mobility system for Dunedin that will:

- Enable integration of the new hospital with the city
- Stimulate economic growth and regeneration
- Provide for safe and accessible people friendly streets
- Improve city liveability

CONTEXT

Dunedin is the second largest city in the South Island. It is considered one of the four main cities of NZ for historic, cultural and geographic reasons. Population growth means Dunedin is a 'medium growth' city. Dunedin has a diverse economy, with significant tertiary education and health sectors. The city is home to around 25,000 tertiary students and staff, and Dunedin hosts the primary hospital for the Southern Region; a teaching hospital with strong links to the University.

In 2018 the government announced the location for the $1.4B New Dunedin Hospital (NDH). MOH then asked Waka Kotahi and DCC to look at a change to the roads to improve access and integration between the hospital and the city, including considering a change to the configuration of SH1 through Dunedin. This was the catalyst to progress work DCC started in 2013, looking at the benefits a change to the configuration of SH1, including making it a two-way system, could bring. A business case completed in 2018 confirmed the scope should be broadened to include access the city by all transport modes.

PROBLEM STATEMENTS

1) The NDH site fronts the busiest roads in the central city which will create a barrier to safe and easy pedestrian access to the building and result in poor integration and interaction with the city.
2) The design, use and management of central city routes means many roads operate in a similar way resulting in dispersal of traffic and severance between key city precincts, creating safety and amenity issues and suppressing walking and cycling.

WHY INVEST?

- **Construction of the new hospital will start in 2022.** Traffic management will cause disruption and delays for people driving and cycling on SH1. Travel choices are needed to keep the city moving.
- **Severance impact caused by the SH1 one-way system and the railway is recognised** in DCC's Central City Plan and the University Masterplan documents. This severance reduces amenity and pedestrian freedom of movement between city precincts.
- **St Andrew Street between the two new hospital sites is part of SH88,** the primary connection between SH1 and Port Otago. This road needs work to allow the hospital to operate safely and provide a suitable pedestrian environment for patients, visitors and staff.
- **The Climate Change Response Ammendment Act 2019 commits NZ to be net zero carbon by 2050.** Changing how people travel is one of the main ways to achieve this target.
- **Car trips make up 74% of the journey to work** (2018), which reduces efficiency, amenity, the potential to achieve carbon reduction targets, and parking availability.
- **There is High Collective Crash Risk on key routes** including sections of SH1 northbound and southbound, and Princes Street.

OUTCOMES SOUGHT

- Improve safety
- Improve multi-modal access to central city
- Improve place quality and walking environment in the central city
- Improve attractiveness of city as place to invest, live, work and play
- Enhance connectivity between key destinations for active modes
- Improve environmental outcomes to meet carbon reduction targets

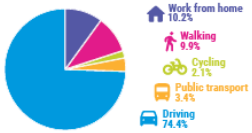
PEDESTRIAN RATING SCORES

Low amenity city streets around the NDH site are creating a barrier to pedestrian movements and enjoyment of place.

POOR GOOD

MODE SHARE

There is significant opportunity to achieve improved mode share across sustainable modes.



2018 census, journey to work or education

PROGRAMME PARTNERS

This work has been completed under the Connecting Dunedin partnership between Waka Kotahi, DCC and ORC.

CONNECTING dunedin

WAKA KOTAHI NZ Transport Agency | Otago Regional Council | DUNEDIN CITY COUNCIL | kaunihera o-rohe o Otepoti

Shaping Future Dunedin Transport **Programme Development**

HOW WE GOT TO WHERE WE ARE

2019

- Develop longlist of potential programmes
- Identify shortlist
- Stakeholder workshop

2020

- Assess and refine shortlisted programmes into two options: *Programme 1* and *Programme 2*
- Public engagement on shortlisted programmes
  There was strong support for investment in public transport and the harbour arterial, and concerns about congestion and parking. There was mixed feedback on cycling and amenity improvements.
- Further develop programmes to address themes raised from consultation and ongoing assessments.
  Various lane layouts of Programme 2 are tested, with the final option being known as *Programme 2v3*

2021

- Technical assessment of shortlisted programmes, and analysis of risk and affordability

NOW

- Update public on preferred programme
- Stakeholder check-ins
- Connecting Dunedin partners implement their projects in the partner preferred programme
- Once triggers are met, decide on SH1 system layout
- Potential SH1 works

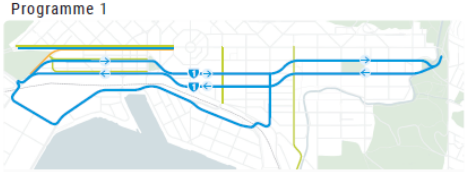
Develop assessment framework

Apply technical assessment tools to inform programme analysis

SHORTLIST

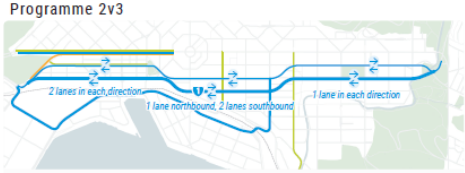
Both shortlisted programmes featured a selection of common projects focused on improving the level of service for public transport and active travel such as walking and cycling, in addition to the harbour arterial project. The major differences between programmes were in the layout of existing one-way arterial roads, shown below.

Programme 1



- Retains the one-way system in an upgraded form:
  - SH1 speed limit is reviewed
  - Extends the existing separated cycle facilities south to the Oval
- Maintains existing parking along the one-way system
- Targeted amenity improvements on the one-way system around Queens Gardens, the NDH, and the University

Programme 2v3



- Consolidates SH1 onto a single two-way arterial road (the existing southbound one-way), with:
  - two lanes in each direction south of Queens Gardens
  - one lane northbound and two lanes southbound between Queens Gardens and Albany Street
  - one lane in each direction north of Albany Street
- 50kph speed limit on SH1 is retained
- Transforms the existing northbound one-way into a two-way local road with slow speeds and a focus on amenity
- Relocates the existing separated cycle facilities from SH1 arterial to the new local road and extends them south to the Oval
- Relocates most parking from SH1 to the new local road

PROGRAMME ANALYSIS

Engagement

A stakeholder workshop in November 2019 was attended by representatives from 40 organisations. There was support for a focus on public transport and mode shift, and attendees requested these interventions be included in all programme options. There was interest in the opportunities offered by a two-way option, but differing views on whether one-way or two-way would serve Dunedin best.

Public engagement in mid-2020 showed strong support for investment in public transport and the harbour arterial, and concerns about congestion with a two lane, two-way arterial.

Projected Mode Shift

	2018	P1	P2v3
Work from home	10.2%	13%	16%
Walking	9.9%	14%	16%
Cycling	2.1%	5%	8%
Public transport	3.4%	8%	10%
Driving	74.4%	60%	50%

Multi-Criteria Analysis

	Do Minimum	P1	P2v3
Livability	–	▲	▲
Place	–	▲	▲
Mode Shift	▼	▲	▲
Active Mode Connectivity	▼	▲	▲
Reliable Vehicle Journey Times	▲	▲	▼
Safety	–	▲	▲
Zero Carbon	▼	▲	▲
Potential Affordability	–	▼	▼
Technical Challenge	▲	▲	▼

How the programme contributes to the criteria: ADVERSELY ▼▼▼ – ▲▲▲ POSITIVELY

Health Impact Assessment

Programmes were assigned scores between -3 and 3 for how they are expected to impact on different health measures, through research and discussion with hard to reach groups.

-3 | -1.25 (Do Minimum) | 0 | +0.75 (P1) | +2.25 (P2v3) | +3

Benefit-Cost Analysis

		P1	P2v3
Benefits		$282m	$288m
NON-WEBS	*Travel Time*	$38m	($46m)
NON-WEBS	*Vehicle Emissions*	$3m	$3m
NON-WEBS	*Reduced Crashes*	$95m	$79m
NON-WEBS	*Active Modes*	$36m	$39m
WEBS	*Valuing Urban Realm Toolkit*	$16m	$20m
WEBS	*Improved Wellbeing*	$112m	$230m
Costs		$103m	$127m
Benefit/Cost Ratio		**3.2**	**2.7**
Benefit/Cost Ratio (excl. WEBs)		2.0	0.7

WEBs: Wider Economic Benefits

ANALYSIS OUTCOMES

Programme 1 provides some improvements in connectivity, place quality/amenity, mode shift and carbon reduction. It provides more reliable journey times for drivers on key transport routes and is lower cost, less technically challenging and lower risk. Benefits primarily relate to improving access and encouraging use of a wider range of transport types. Pedestrian connections across the SH1 one-way pair to the NDH will be improved with enhanced crossing provision and reduced traffic speeds, and there will be some investment in amenity on SH1 adjacent to the NDH site.

Programme 2v3 provides transformational change by reconfiguring the heart of the city by consolidating arterial traffic on a single, two-way route. This allows the existing SH1 northbound road to become a people-focused local road. This enhances the pedestrian environment, provides an opportunity for changes in land use to higher density/residential, makes walking and cycling more attractive, and leads to economic growth and carbon reductions. However, journey times are less reliable for drivers, and it is more technically challenging, with greater cost and risk.

PREFERRED PROGRAMME

Following all the assessments, the partners concluded that, due to the comparative economic benefits of each programme combined with the additional complexity, risk and costs associated with P2v3, it was not possible to progress the full state highway component of P2v3 at this time. Whilst P2v3 anticipated increased mode shift and other benefits, this resulted in additional delays for vehicles across the network. As a result, an amended P1 programme was developed. This retained significant investments in access and mode shift alongside focused interventions on SH1 to achieve a safer route and better pedestrian connections. The partner preferred programme also includes a specific focus on managing disruption during the new hospital build.

Changes to the one-way system in the short–medium term will be provided by the Waka Kotahi speed management and safety programmes, and a business case in 2024–27 to determine any further improvements to hospital access and amenity around the NDH.

Changes to the one-way system are possible in the long term subject to triggers:

- Outcome focussed reviews, e.g., if P1 mode shift targets are not met alternative solutions could be explored
- Changes in Government direction or law changes
- Land use change through refresh of the Spatial Plan or 2GP
- Safety trends
- Effectiveness and satisfaction with pedestrian levels of service

Shaping Future Dunedin Transport **Partner Preferred Programme**

1 State Highway Works
- 1a SH1 Safety Improvements (WAKA KOTAHI)
- 1b SH1 Speed Management
- 1c Relocate SH88 to Frederick Street
- 1d Pine Hill Intersection Upgrade
- 1e Additional Access and Safety Improvements
- 1f Queens Gardens to Oval Cycleway

2 Harbour Arterial Upgrade
- 2a Directional Signage and Wayfinding (DCC)
- 2b Major and Minor Intersection Upgrades
- 2c Corridor Improvements
- 2d Ward Street Overbridge Upgrade

3 Public Transport Improvements
- 3a Central Bus Hub and Superstop Upgrades (ORC, DCC)
- 3b Frequency and Fare Review
- 3c Southern Bus Priority

4 Parking Management Improvements
- 4a Develop Parking Management Policy (DCC)
- 4b Introduce Parking Wayfinding System
- 4c Upgrade Parking Technology
- 4d Improve Data Collection and Reporting

5 Park and Ride
- 5a Mosgiel Park and Ride (DCC)
- 5b Burnside Park and Ride

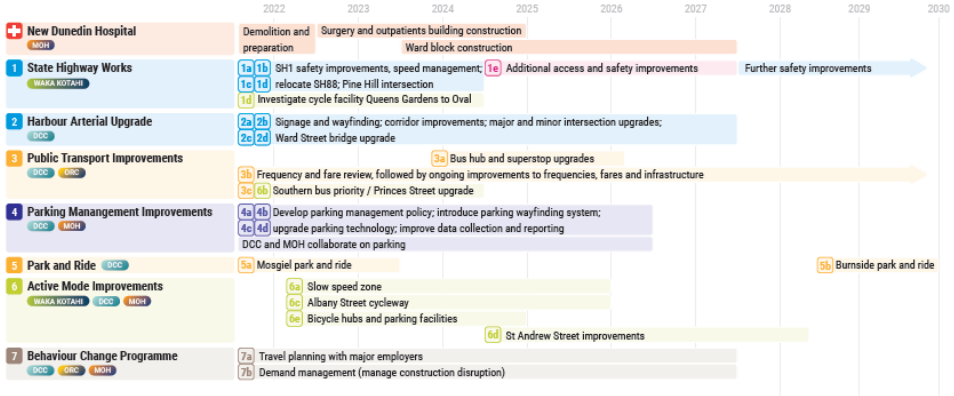
6 Active Mode Improvements
- 6a Slow Speed Zone (DCC)
- 6b Princes Street Improvements
- 6c Albany Street Cycleway
- 6d St Andrew Street Improvements
- 6e George and Bank Streets Safer Streets Upgrade
- 6f Bicycle Hubs and Parking Facilities

7 Behaviour Change Programme
- 7a Travel planning with major employers (ORC, DCC, MOH)
- 7b Demand management

Delivery partners
- WAKA KOTAHI — *Waka Kotahi NZ Transport Agency*
- DCC — *Dunedin City Council*
- ORC — *Otago Regional Council*
- MOH — *Ministry of Health*

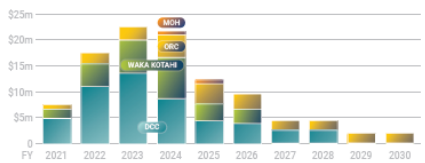
Shaping Future Dunedin Transport **Next Steps**

IMPLEMENTATION TIMELINE

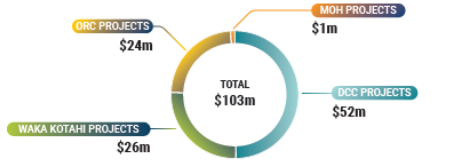


FUNDING

Profile over time



Total funding provisions



DCC and ORC provisions include Waka Kotahi financial assistance contribution

PROGRAMME OUTCOMES (EXPECTED OVER 10 YEARS)

Better east-west active mode connections and improved pedestrian access to New Dunedin Hospital following SH88 relocation

Behaviour change triggered by disruption, improvements, incentives, and information campaigns

Public transport improvements attracting a ***35% increase in bus users***

Disruption minimised and access maintained during hospital build

Upgraded cycling and walking facilities attracting ***5000 new people walking or cycling***

$60m added to GDP over the usable lifetime of the improvements

Harbour Arterial improvements delivering ***30% reduction in travel time***

A large shift to walking, cycling and public transport resulting in fewer people driving and a ***lower carbon footprint for Dunedin***

1154 new job years in the first 10 years

RISKS

Speed management may be challenging to achieve on SH1 without some or all of the following: signal phasing to slow traffic and prevent green wave, raised platforms, or speed cameras to enforce the speed limit. Safety outcomes may take longer to achieve and travel times may increase as a result.

Slowing the speed on northbound and southbound SH1 routes through the city may result in a greater than expected increase in traffic on the Harbour Arterial or other local roads, and the proposed Harbour Arterial improvements may not be sufficient to manage the additional traffic.

If implementation of public transport and Harbour Arterial improvements cannot be commenced by early 2022, disruption and loss of access caused by hospital construction will be more significant than currently anticipated.

Multi-partner programmes can be challenging to co-ordinate and deliver, and there is a constrained funding environment. The programme must compete for funding nationally against other projects which may be of an equal or higher priority.

Achieving public transport, walking and cycling targets may be difficult and may result in increased disruption and delay on the network and put the DCC's Zero Carbon 2030 target at risk. Parking changes may be needed to help achieve the targets.

NEXT STEPS

DCC	ORC	Waka Kotahi
Partners include funding for projects in Long Term Plan or equivalent		
Partners develop Programme Plan of action for delivering projects		
Partners develop traffic management strategy for construction of new hospital, including an aligned travel change campaign to manage access to the city during construction, promoting public transport as main alternative.		
Commence Princes Street Bus Priority and Corridor Safety Plan Single Stage Business Case and low-cost works, to improve levels of service.	Commence Public Transport Fares and Frequency Review Single Stage Business Case, with initial changes implemented early 2022 to provide continued access during hospital construction.	Board considered Programme Business Case November 2021
Commence Harbour Arterial Improvements Single Stage Business Case and low-cost works, so the route can provide an alternative route once new hospital build disruption starts on SH1 one way system.		Commence the SH88 Single Stage Business Case, relocating SH88 from St Andrew Street to Frederick Street.
Review of DCC Parking Management Policy and collaborate with the New Dunedin Hospital team on parking.		Advance speed management to trial different layouts on St Andrew Street and on SH1 in front of the new hospital. Trials may be able to be linked to the temporary traffic management required for the hospital build.
Establish a park and ride side in Mosgiel		

7.4. Manuherekia Interim Work Programme

Prepared for:	Strategy and Planning Committee
Report No.	ENV2202
Activity:	Environmental: Water
Author:	Andrea Howard, Manager Environmental Implementation
Endorsed by:	Gavin Palmer, General Manager Operations
Date:	13 April 2022

PURPOSE

[1] This paper outlines Otago Regional Council's (ORC's) approach to developing a work programme specific to the Manuherekia rohe to enable:

i. Capacity building / education on water management
ii. Catchment groups
iii. Riparian works.

EXECUTIVE SUMMARY

[2] A resolution from the August 2021 Council meeting directed staff to develop a work programme of non-regulatory actions for Manuherekia rohe.

[3] An interim work programme has been developed to outline what can be done through core business and what actions can be further developed with the community and stakeholders.

[4] A more detailed work programme can be developed as a part of the integrated catchment management approach being implemented by Council.

RECOMMENDATION

That the Strategy and Planning Committee:

1) ***Notes*** *this report.*

2) ***Approves*** *that a more detailed strategic and work programme will be developed as a part of catchment action planning for the Manuherekia, either through the ORC Integrated Catchment Management (ICM) process and with connection to the Ministry for the Environment's Manuherekia Exemplar Catchment Programme.*

3) ***Approves*** *the interim work programme which outlines which actions can be delivered through business-as-usual work.*

4) ***Notes*** *that further discussion with the community and stakeholders in the Manuherekia rohe will occur to inform a specific action plan for potential riparian/critical source area works.*

5) ***Requests*** *Council nominate an elective representative for the Ministry for the Environment's Manuherekia Exemplar Catchment Programme Governance Group.*

BACKGROUND

[5] On 25 August 2021, a report was provided to Council seeking direction on potential initiatives in the Manuherekia rohe that would complement the regulatory water management regime being proposed for the new Land and Water Plan.

[6] A resolution (CM 21-143) arising from this paper was, that the Council:

Directs staff to work with stakeholders and the community to develop work programmes specific to the Manuherekia [rohe] to enable:

a. Capacity building/education on water management
b. Catchment groups
c. *Riparian works.*

[7] A draft high-level interim work programme has been created to fulfil this resolution (Attachment 1).

DISCUSSION

Non-Regulatory Support for Manuherekia Rohe

[8] The Land and Water Regional Plan (LWRP) process is developing outcomes for community-based values (e.g. mahika kai, threatened species, water quality). The LWRP process will then establish rules or limits to achieve those outcomes. As well as rules, action plans are to be developed (which include non-regulatory actions) to achieve the outcomes.

[9] The actions required to achieve outcomes will be developed in collaboration with iwi and the community and incorporated into Catchment Action Plans (CAPs) – the delivery mechanism for integrated catchment management. CAPs are in the early stages of development.

[10] Developing a work programme for the Manuherekia rohe to enable several non-regulatory actions prior to the development of a strategic catchment action plan risks that work being done in isolation and without the benefit of the broader direction provided by integrated catchment planning or the LWRP.

[11] Therefore, at this stage the interim work programme (Attachment 1) has been developed without further input from the community and stakeholders. However, the interim work programme draws on options and initiatives identified through the LWRP consultation processes and the Environmental Implementation Team's core responsibilities. The interim programme outlines how the non-regulatory actions from resolution CM21-143 will be implemented through existing and business as usual work where relevant.

[12] The interim work programme also outlines an approach for collaboration with the community and stakeholders to develop a key site for riparian works or enhanced management of critical source areas. Some broader decisions will need to be made by Council (and the Manuherekia community) to guide the riparian works programme so that this work aligns with, and supports, the final LWRP outcomes.

Manuherekia Exemplar Catchment Programme Governance Group

[13] The Manuherekia Exemplar Catchment was selected as an exemplar by Minister Parker and Minister O'Connor as part of the At-Risk Catchments (ARC) Programme within the Essential Freshwater Package. Up to $12 million in funding is allocated to the ARC Programme, with a portion of this funding available for work within the Manuherekia.

[14] The key objective of Manuherekia Exemplar Catchment work for the Ministry for the Environment is to deliver on one of the 2020 Essential Freshwater reforms' three main objectives:

a. Stopping further degradation and loss by taking action now to improve the state of our freshwater resources, waterways and ecosystems, and to start making immediate improvements so that water quality is materially improving within five years.
b. This is to be achieved by way of strategic, targeted investment in the catchment in a way that recognises Māori and community aspirations.
c. This work will complement and support other work and partnerships already under way across government, industry and communities that addresses issues and challenges within the Manuherekia catchment.

[15] A Manuherekia Exemplar Catchment Governance Group has been established to provide stewardship of the establishment of a Manuherekia Exemplar Catchment work programme to assist meeting the Manuherekia rohe vision in accordance with the Essential Freshwater Objectives, and to provide ongoing oversight and governance for the delivery of this work programme. Further detail, including the draft Terms of Reference for this Group, and delegated functions are outlined in Attachment 2.

[16] The Ministry for the Environment has requested Council nominate an elective representative for the Manuherekia Exemplar Catchment Programme Governance Group, in addition to the Council's currently representative, the Chief Executive.

CONSIDERATIONS

Strategic Framework and Policy Considerations

[17] This paper does not trigger Strategic Framework or Policy Considerations.

Financial Considerations

[18] $500,000 in 2022/2023 should be available from the 2021-2031 Long Term Plan funding to support non-regulatory 'on the ground' action across Otago's ten Fresh Water Management Units. This funding is across a number of work programmes including initiatives that promote good land management practice, the delivery of non-regulatory actions that support the regulatory FMU process (such as those described above) and implementation of restoration projects (not including Lake Tuakitoto, Tomahawk Lagoon and Lake Hayes). It is noted that this funding depends on Council decisions on the Draft 2022/23 Annual Plan.

[19] The interim work programme has been developed to align with 'business-as-usual' resources for the capacity building and catchment groups activities and should be supported by the Council's large funding contribution to Otago Catchment Communities.

[20] Additional funding would be required for any "riparian works" as this is not covered in existing 2021-2031 Long Term Plan budgets. The amount for this is unknown until a more detailed work programme is developed in collaboration with the community and stakeholders. The budget for riparian works will be included in the appropriate Annual Plan when determined. Contestable funding would be available through Council's new 'for native planting for water quality outcomes' fund. There is $70,000 in this fund to support projects across the entire region in 2022/2023, subject to Council decisions on the Draft 2022/23 Annual Plan.

Significance and Engagement Considerations

[21] This paper does not trigger ORC's policy on Significance and Engagement.

[22] The community will be engaged (collaborated) with in the further development of actions for the Manuherekia rohe.

Legislative and Risk Considerations

[23] This paper does not trigger any legislative and risk considerations.

Climate Change Considerations

[24] This paper does not trigger any climate change considerations.

Communications Considerations

[25] There are no communication considerations at this stage.

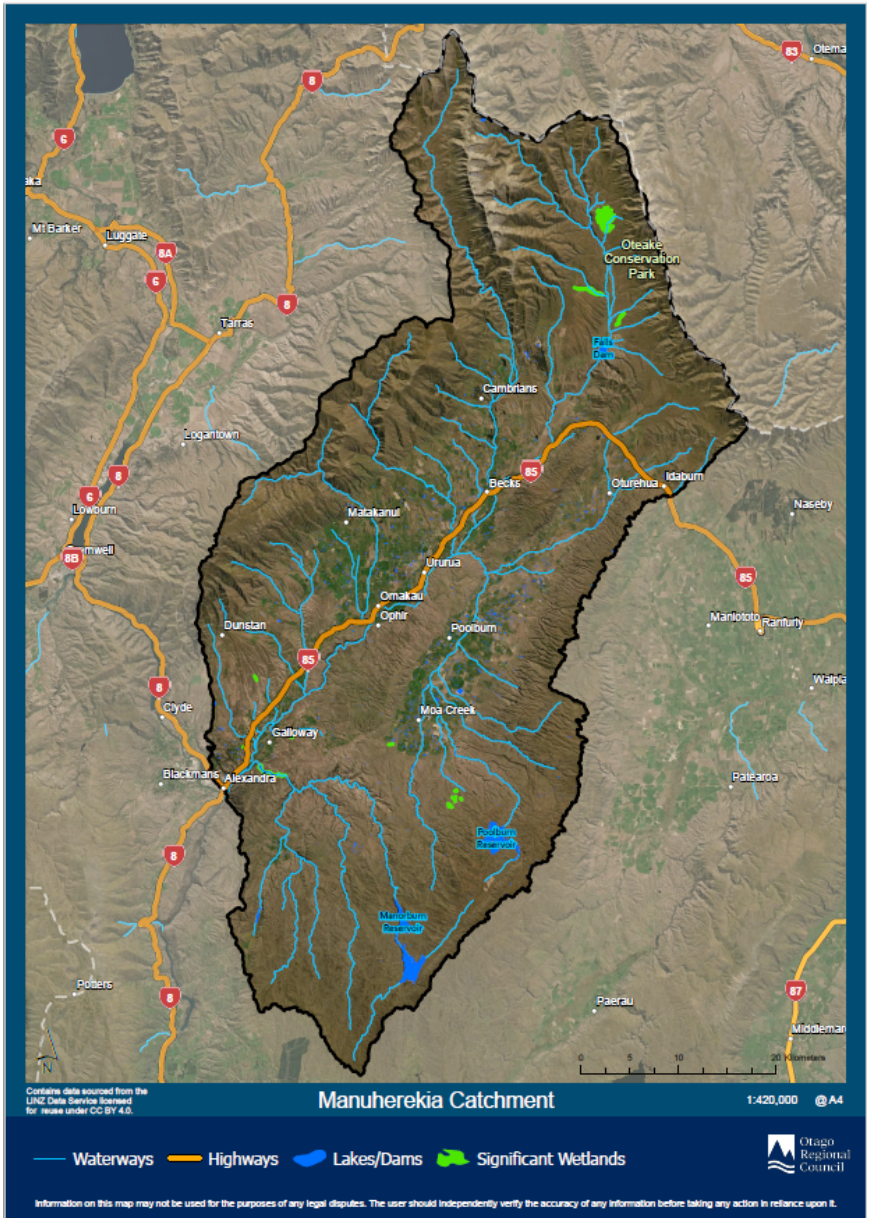
NEXT STEPS

[26] The Environmental Implementation Team will implement the business-as-usual components of the interim work programme and seek input from community and stakeholders on the riparian works component.

ATTACHMENTS

1. Manuherekia Interim work programme draft [**7.4.1** - 2 pages]
2. Terms of Reference Manuherekia Exemplar Catchment Programme [**7.4.2** - 7 pages]

DRAFT Interim Work Programme: Manuherekia Non-Regulatory Actions			
Driver for project	Council resolution CM21-143	**Timeframe:**	2022 - 23
Links to LTP	Nil		
Lead Team	Environmental Implementation	**Lead(s):**	Team Leader
Budget	$500,000 available for implementation projects across Otago – no specific budget for Manuherekia		
Location	Manuherekia rohe		



DRAFT Interim Work Programme: Manuherekia Non-Regulatory Actions				
Focus Area 1	**Capacity building / education on water management**			
Expected outcome	Landowners have more capacity and knowledge regarding implementing water efficiency measures on their property			
Measure of success	Number of landowners aware of water efficiency opportunities			
Action Type	**Details**	**Who**	**When**	**Cost**
Advice	Share intra-catchment water efficiency best practice information with landowners (possible case study)	Catchment Advisors	Ongoing	Nil
Best management practice (BMP)	Develop and distribute water efficiency guide aimed at lifestyle blocks	EI Team	2022-23	$10,000
Best management practice (BMP)	Develop and distribute information about improving water race management to reduce losses to air and ground	EI Team	2022-23	$10,000
Performance Measure	Number of actions implemented	EI Team	2022-23	Nil
Focus Area 2	**Enable catchment groups**			
Expected outcome	Catchment groups with Manuherekia rohe are supported in formation, development, and sustainability			
Measure of success	Number of catchment groups supported			
Action Type	**Details**	**Who**	**When**	**Cost**
Outsourced	Fund Otago Catchment Committee (OCC) to connect and support catchment groups	ORC	2022 – 2024	Already budgeted ($315,000)
Advice	Support catchment groups and provide workshop opportunities including use of SHMAK water quality test kits, seed propagation, intensive winter grazing, native planting etc	Catchment Advisors	Ongoing	Nil
Advice	One-on-one catchment advice to landowners including water quality, water management and environmental enhancement	Catchment Advisors	Ongoing	Nil
Incentives	Inform groups of the ECO Fund opportunities and support applications	Catchment Advisors	Ongoing	Nil
Performance measure	Collate report from OCC and Catchment Advisors contact reporting	Performance Analyst	Ongoing	Nil
Focus Area 3	**Riparian Works/Critical Source Areas**			
Expected outcome	Riparian areas (TBD) are stable and vegetated with native plants contributing to water quality improvement			
Measure(s) of success	Area of riparian zone/critical source areas vegetated with natives Water quality (phosphorus and sediment) is improved			
Action Type	**Details**	**Who**	**When**	**Cost**
Planning	Identify up to 5 key sites for potential riparian/critical source areas works	EI Team	July 2022	Nil
Collaboration	Discuss key sites with catchment groups / landowners to feasibility and interest	Catchment Advisors	Aug – October 2022	Nil
Planning	Develop 1 key site project plan for implementation – including a monitoring, evaluation and reporting plan	Project delivery specialist	Nov – Dec 2022	Nil
Implementation	Implement key site project as per plan	Catchment group	Jan – Dec 2023	$50,000 +

Terms of Reference: Manuherekia Exemplar Catchment Governance Group

Purpose of the document

This document defines the Terms of Reference (ToR) for the Manuherekia Exemplar Catchment Governance Group (the Group); gives a background of the Manuherekia catchment and the objective of the Exemplar Catchment work; sets out purpose of the Group, membership, and roles and responsibilities, including confirming the lead agency for projects put forward to be supported.

Project Background

Manuherekia Exemplar Catchment

The Manuherekia is a large catchment (3035 km2) located near Alexandra, Central Otago. It has a long, storied history and is significant for its cultural, ecological, social and economic values. More recently, growing concerns over water quantity and to a lesser degree water quality in the catchment have prompted a range of actions to facilitate a collective approach to address these concerns, including regulatory and non-regulatory responses.

The Manuherekia Exemplar Catchment was selected as an exemplar by Minister Parker and Minister O'Connor as part of the At-Risk Catchments (ARC) Programme within the Essential Freshwater Package. Up to $12 million in funding is allocated to the ARC Programme, with a portion of this funding available for work within the Manuherekia.

The Manuherekia catchment boundary is for the purpose of the Exemplar Catchment work, aligned with that of the Freshwater Management Unit (FMU) Manuherekia Rohe boundary developed by ORC and Aukaha, underpinned by the concept of ki uta ki tai.

Objective of the Manuherekia Exemplar Catchment work

The key objective of Manuherekia Exemplar Catchment work for the Ministry for the Environment is to deliver on one of the 2020 Essential Freshwater reforms' three main objectives:

Stopping further degradation and loss by taking action now to improve the state of our freshwater resources, waterways and ecosystems, and to start making immediate improvements so that water quality is materially improving within five years.

This is to be achieved by way of strategic, targeted investment in the catchment in a way that recognises Māori and community aspirations.

This work will complement and support other work and partnerships already under way across government, industry and communities that addresses issues and challenges within the Manuherekia catchment.

Vision for Clutha Mata-au FMU and Manuherekia rohe, as identified in the proposed Regional Policy Statement 2021

i. Management of the FMU recognises that:
    a. the Clutha River / Mata-au is a single connected system ki uta ki tai, and
    b. the source of the wai is pure, coming directly from Tawhirimatea to the top of the mauka and into the awa,
ii. freshwater is managed in accordance with the [Te Mana o te Wai] objectives and policies;
iii. the ongoing relationship of Kāi Tahu with wāhi tūpuna is sustained;
iv. water bodies support thriving mahika kai and Kāi Tahu whānui have access to mahika kai;
v. indigenous species migrate easily and as naturally as possible along and within the river system; and
vi. the national significance of the Clutha hydro-electricity generation scheme is recognised.

By 2050, in the Manuherekia rohe,

i. flows in water bodies sustain and, wherever possible, restore the natural form and function of main stems and tributaries to support Kāi Tahu values and practices;
ii. innovative and sustainable land and water management practices support food production in the area and reduce discharges of nutrients and other contaminants to water bodies so that they are safe for human contact; and
iii. sustainable abstraction occurs from main stems or groundwater in preference to tributaries.

Purpose of the Manuherekia Exemplar Catchment Governance Group

The purpose of the Group is to provide stewardship of the establishment of a Manuherekia Exemplar Catchment work programme to assist meeting the Manuherekia rohe vision in accordance with the Essential Freshwater Objectives, and to provide ongoing oversight and governance for the delivery of this work programme.

Membership

The Group will be made up of representatives from:

- Ministry for the Environment (MfE) – Lead Agency/Official (observer capacity only)
- Kāi Tahu rūnaka - Co-Chair (TBC)
- Manuherekia Catchment Group - Co-Chair (TBC)
- Otago Regional Council
- Department of Conservation
- Independent community representative
- Fish and Game
- Forest and Bird
- Irrigation representative

Delegated functions of the Manuherekia Exemplar Catchment Governance Group

The Group will:

i. provide stewardship for the establishment of a Manuherekia Exemplar Catchment work programme, including identifying individual projects, according to the Exemplar Catchment Objective and the above (proposed) vision for the catchment;

ii. provide governance, strategic oversight and assurance of the overall programme and spending, including Crown funding, co-funding, and any in-kind contributions, through reporting to the Ministry for the Environment;

iii. assist project partners in the consideration of funding arrangements with the Crown and/or other parties as may be required to enable delivery of the Manuherekia Exemplar Catchment work programme;

iv. provide strategic direction on the external communications of the Projects as part of the Exemplar work, to ensure they are cohesive and tell a story about the wider Exemplar project;

v. ensure decision-making is reached through consensus;

vi. Commission the Lead Offical/Secretariat (TBC) and Technical Project Team (TBC) to provide papers, advice and other material to inform recommendations;

vii. identify and manage strategic issues and risks and remove barriers where possible for the Projects.

The Group will not:

i. approve individual projects for funding within the Exemplar Catchment work programme, noting project approvals will be delegated to accountable agencies;

ii. hold decision-making powers on government policy/decisions/funding. Decisions will remain with Ministers or Chief Executives as appropriate.

Roles and Responsibilities

The Governance Group will have two Co-Chairs representative of Kāi Tahu runaka and Manuherekia Catchment Group.

The Co-Chairs will:

i. Set meeting agendas, with the assistance of the Lead Official/Secretariat, and approve meeting minutes;

ii. Co-Chair and facilitate meetings, encouraging and modelling open communication where all members contribute effectively;

iii. Consider using the Independent Facilitator for meetings or decisions where there may be contention between Governance Group members, to assist in ensuring the above where necessary

iv. Determine, with assistance from the Lead Official/Secretariat, what action is appropriate if a member has a potential conflict of interest;

v. Represent the Governance Group in any meetings with the Minister for the Environment, MfE or other stakeholders, as required;

vi. Represent the group and advocate for Manuherekia Exemplar Catchment work in both

their own agency/organisation and a range of other forums; and

vii. If a single Co-Chair is absent from a meeting, the alternate Co-Chair will acting Chair for that meeting.

The Independent Facilitator (If required) will:

i. Be answerable to the Co-Chairs and attend those Governance Group meetings which the Co-chairs require; and

ii. Provide independent facilitation expertise to ensure that open communication where all members contribute effectively is achieved.

Governance Group members will:

i. Make every effort to attend each meeting and report anticipated absences to the Lead Official/Secretariat;

ii. Prepare adequately prior to each meeting and participate actively in meetings, contributing to actions when agreed;

iii. Advocate and seek approval for funding within their representative organisations as appropriate for projects within the programme;

iv. Report back to and provide feedback from their representative organisations;

v. Bring matters of significance to the attention of the Governance Group and use professional perspectives to undertake analysis or prepare advice as required;

vi. Maintain a broad knowledge of the issues and interests that relate to the operations of the Governance Group;

vii. Work collaboratively with other Group members to find consensus.

The Lead Official will:

i. Represent the interests of the Ministry for the Environment and that of the Crown;

ii. Take the lead in progressing or facilitating discussions required at a Central Government level.

The Secretariat (TBC) will:

i. Assist the Co-Chairs and Lead Official to prepare meeting agendas;

ii. Record meeting minutes and action points from Governance Group meetings;

iii. Circulate meeting packs (agenda, minutes and any papers required);

iv. Create or commission papers for the Governance Group meetings as required;

v. Book travel, accommodation, catering and venues as required; and

vi. Administer expenditure requests, member remuneration and reimbursement as required.

Quorum Requirements

A minimum of XX Governance group members is required for an authorised meeting to take place.

Governance Structure

A proposed governance structure TBC

Meetings

The Group will determine its meeting calendar, including the frequency location and type (face to face or teleconference).

Minutes

The Lead Official/Secretariat is responsible for formally recording discussions and distributing minutes to Governance group members within 3 working days after the completion of the meeting.

The minutes of each Governance group meeting will be maintained by the Lead Official (TBC)

Agenda Items and Meeting Packs

- All Governance Group agenda items must be forwarded to the Lead Official/Secretariat by C.O.B. 3 working days prior to the next scheduled meeting.
- The Governance Group agenda, with attached meeting papers will be distributed by the Lead Official/Secretariat at least 2 working days prior to the next scheduled meeting. The Lead Official/Secretariat will do all it can to ensure late papers are tabled for discussion or approval at the meeting.

Health & Safety

The Group's responsibility with regard to promoting health and safety is in its influencing role. The Group should ensure health and safety information is discussed and acted on at meetings. The Group's primary influence and direction is through reporting received from the Lead Official/Secretariat.

Media

All media enquiries are to be referred to the communications lead in the Lead Official/Secretariat who will manage the enquiry and work with the Chair on an appropriate response.

A Member may only participate in a media interview or public statement about the business of the Governance group if they have obtained the prior written approval of Chair and the Minister for the Environment.

Conflict of Interest

A conflict of interest will occur when a member's or an observer's private or professional interest interferes, or appears to interfere, with an issue that faces the Governance Group. A conflict of

interest will also occur when there is a possibility that a benefit may apply to a sector, industry or organisation that they represent. A conflict of interest may be real or perceived. Any situation that involves or may be expected to involve any real or potential conflict of interest must be declared immediately to the Chair, as soon as the conflict arises. A register of all known and perceived conflicts of interests of the members shall be kept and updated at each meeting.

At the discretion of the Chair, members may participate in discussions about issues in which they have declared a conflict of interest.

Confidentiality

- The Governance group members may be privy to confidential information provided from many sources. Members must keep such information confidential, unless release of information is explicitly agreed by the group.
- The parties to this agreement confirm the following principles around confidentiality.
    a. Agencies with members on the Group are subject to the Official Information Act 1983 and/or Local Government Official Information and Meetings Act 1987 and, as a result, most information the group has can be accessed via their agencies under this legislation.
    b. Details of discussions held within the Group will not be disclosed to outside parties without the Group's consent unless otherwise required by law. However, it is recognised that members of the Group are able to discuss issues within their own agency or group as required to ensure ongoing support for the development of the programme.
    c. Members must at all times comply with the requirements of the Privacy Act 1993 and keep information about identifiable individuals confidential.

Dispute Resolution

Members will treat each other and the opinions of others with respect at all times. Members will not take unfair advantage of anyone through manipulation, concealment, abuse of privileged information, misrepresentation of material facts or any other unfair dealing practices.

In the event of any dispute arising from the terms of this document the Parties agree to meet at the earliest opportunity in order to resolve the dispute and agree that discussions aimed at dispute resolution will be undertaken by senior management representatives of each Party.

Corporate opportunities

Members must not exploit any opportunity that is discovered through access to information within the Governance Group for their own personal gain or that of any industry, sector or organisation that they represent.

Remuneration and expenses

Costs (including time and travel) for participation on the Group will be borne by each representative's employer. Where a member of the Group is not representing an employer,

alternative arrangements to cover travel and reimbursement costs will be agreed on a case-by-case basis. As a Member of the Governance Group your primary role will be to support and advise Ministers in having oversight of the whole Manuherekia Exemplar Catchment Project work programme – it is not a decision making role and does not change existing Ministerial and agency accountabilities for funding and delivery of the programme

7.5. Summary of key points from Environment Court Decision No. [2022] NZEnvC 25 and implications for identifying wetlands under the NPSFM 2020

Prepared for:	Strategy and Planning Committee
Report No.	SPS2214
Activity:	Governance Report
Author:	Sam Walton, Policy Analyst - Freshwater and Land; Tom De Pelsemaeker, Team Leader Freshwater and Land
Endorsed by:	Anita Dawe, Acting General Manager Policy and Science
Date:	13 April 2022

PURPOSE

[1] The purpose of this paper is to provide the Otago Regional Council (Council or ORC) with a summary of key points from the Environment Court Decision *Greater Wellington Regional Council v S L Adams & others* [2022] NZEnvC 25 and an overview of key implications of this decision for the Council's various functions.

EXECUTIVE SUMMARY

[2] Environment Court Decision No. [2022] NZEnvC 25 provides authority and guidance on aspects of the National Policy Statement for Freshwater Management 2020 (NPS-FM) that relate to the identification and mapping of natural inland wetlands. This task is of direct relevance to ORC as the identification and mapping of natural inland wetlands is a requirement set under the NPS-FM.

[3] The outcome of this decision, and commentary on multiple matters in this decision, is likely to have some direct and indirect implications across multiple aspects of the ORC work, particularly in respect to the ORC's science team wetland mapping and monitoring programme, but also in respect to the ORC's wider role in plan development and implementation (i.e. consent decision-making, enforcement) processes.

RECOMMENDATION

That the Strategy and Planning Committee:

*1) **Notes** this report.*

BACKGROUND

[4] The NPS-FM contains policies to avoid the reduction of the extent of natural inland wetlands, protect their values and promote their restoration.[1] The NPS-FM further requires that every regional council must identify and map all natural inland wetlands within each freshwater management unit (FMU) in the region that are:

a. 0.05 hectares or greater in extent; or
b. Of a type that is naturally less than 0.05 hectares in extent (such as an ephemeral wetland) and known to contain threatened species. [2]

[1] NPS-FM, Part 2, Cl 2.2, Policy 6.
[2] NPS-FM, Part 3, Subpart 2, Cl 3.8 & Cl 3.23.

[5] The mapping of natural inland wetlands must be completed within 10 years of the date on which the NPS-FM came into force (3 September 2020).[3]

[6] The NPS-FM defines a *natural inland wetland* as 'a *natural wetland* that is not in the coastal marine area'. The NPS-FM further defines *natural wetland* as 'a wetland (as defined in the Act) that is not: [4, 5, 6]

a. A wetland constructed by artificial means (unless it was constructed to offset impacts on, or restore, an existing or former natural wetland); or
b. A geothermal wetland; or
c. Any area of improved pasture that, at the commencement date [3 September 2020], is dominated by (that is more than 50% of) exotic pasture species and is subject to temporary rain-derived water pooling.

[7] To give effect to requirements of the NPS-FM ORC's Science team has commenced a wetland mapping project consisting of three phases.

[8] ORC commenced phase I of the wetland mapping project by beginning mapping and delineation of the wetlands in the Upper Taieri Scroll Plain wetland complexes. Working alongside the landowners and community groups, this task is expected to be completed by the end of 2022. The completion of phase I involves various process steps, including the mapping of wetland boundaries, consultation with landholders on the wetland boundaries and, where necessary, dispute resolution on the presence of wetlands or boundary accuracy using the Ministry for the Environment's suggested Wetlands Delineation Protocols.

[9] Phase II consists of mapping and delineating the Regionally Significant Wetlands currently listed in schedule 9 of the Regional Plan: Water for Otago. This phase will also be completed in 2022 and will be carried out in accordance with the process steps outlined above in [8] for phase I.

[10] Phase III involves the mapping of all natural wetlands in Otago and will prioritise those at risk, followed by those identified in areas under development.[7]

[11] The wetlands identified and mapped in phases I and II will be included in the proposed Land and Water Regional Plan (LWRP) that is scheduled to be notified by 31 December 2023. As the work in phase III is planned to be completed after 2023, any wetlands identified and mapped under this phase will be included in the LWRP by means of a variation to the proposed LWRP or a plan change process.

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[3] NPS-FM, Part 3, Subpart 2, Cl 3.23(4).
[4] NPS-FM, Part 3, Subpart 2, Cl 3.21(1)(c).
[5] Section 2 of the Resource Management Act 1991 defines wetland as follows: *Wetland includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.*
[6] Part 3, Subpart 2, Cl 3.21(1)(c) of the NPSFM defines 'improved pasture' as follows: *An area of land where exotic pasture species have been deliberately sown or maintained for the purpose of pasture production, and species composition and growth has been modified and is being managed for livestock grazing*.
[7] The prioritisation in the mapping of natural inland wetlands is provided for in Cl 3.23(4) of the NPS-FM.

[12] The NPS-FM requires that in the case of uncertainty or dispute about the existence or extent of a natural inland wetland, a regional council must have regard to the Wetland Delineation Protocols.[8]

[13] The Wetland Delineation Protocols are incorporated by reference in the NPS-FM and provide methods for delineating wetlands based on the United States delineation system. The protocols use three criteria for identifying and delineating natural wetlands i.e., vegetation, soils, and hydrology. All three criteria have been adapted to New Zealand conditions.[9]

[14] The Environment Court has recently issued a decision in *Greater Wellington Regional Council v S L Adams & others*[10] which addressed the application of the Wetlands Delineation Protocols and what the court referred to as the 'improved pasture exclusion provision' contained within the definition of 'natural wetlands' in the NPS-FM.[11]

[15] The main issue determined in the proceeding was whether or not the delineated natural wetlands identified by the Greater Wellington Regional Council actually constituted natural wetlands as defined in the proposed Natural Resources Plan for the Wellington Region (pNRP) or the NPS-FM.[12] A brief summary of the background and key facts relating to this case is attached to this report as Attachment 1.

[16] In reaching its decision, the Court discussed (among other matters) the following:

- Relevant provisions of the RMA;
- Onus;
- Order of Consideration;
- Application and interpretation of plan provisions;
- The NPS-FM definition of natural wetlands;
- Status of guidance documents for implementing the NPS-FM;
- Wetland delineation protocol;
- The improved pasture exclusion provisions in the NPS-FM.

DISCUSSION

[17] The following paragraphs provide:

- An overview of the key findings of the Court in relation to the matters outlined in paragraph 16 above; and
- Where appropriate, a brief discussion of the likely implications of the Court's findings for ORC's work programme and activities of various ORC teams.

Relevant provisions of the RMA

[18] The Court discussed the relevance of the definition of a wetland in section 2 of the RMA and noted that this is an inclusive definition and that further refinements of, or extensions to, this definition in planning instruments are not precluded. The Court found that the definitions of a natural wetland contained in the NPS-FM (and the definition of a wetland

[8] NPS-FM, Part 3, Subpart 2, Cl 3.23(3).

[9] The Wetland Delineation Protocols are available on https://environment.govt.nz/acts-and-regulations/national-policy-statements/national-policy-statement-freshwater-management/

[10] *Greater Wellington Regional Council v S L Adams & others* [2022] NZEnvC 25.

[11] Definition of natural wetland, NPS-FM, Part 3, Subpart 2, Cl 3.21(1).

[12] Decision at [14].

in the pNRP) adopt, but also extend the RMA definition and create various exceptions to those definitions (i.e. improved pasture).[13]

[19] This aspect of the Court's decision provides some context to the development of the LWRP, and in particular to the development of policy in relation to natural wetlands that is in addition to the NPS-FM and National Environmental Standard for Freshwater (NES-F), whilst still giving effect to this planning instrument and being consistent with these regulations.

	Relevant consideration for…			
Team	Science team	Policy team	Compliance team	Consents Team
Activity	✓ Technical input in the development of LWRP provisions	✓ Development of LWRP		

Onus

[20] The Court strongly emphasised that in this case the onus and burden of proof lay with the regulator (GWRC) to establish that the areas claimed to be natural wetlands were in fact natural wetlands and were not to be excluded under the NPS-FM improved pasture (or pNRP pasture) exclusion provision. This was particularly so given that the regulator sought enforcement proceedings that would impose significant retrospective restrictions and controls on the use of the site. [14]

[21] Whilst the Court's findings were in the context of enforcement order proceedings, this aspect of the Court's decision highlights the need for ORC to be able to justify its position with respect to the identification, mapping, and delineation of wetlands. It illustrates the requirement for ORC to undertake the necessary assessments and have a sound technical and scientific evidence basis, particularly in situations where the wetland assessment is being challenged by landholders, where it is being used in consent applications or when pursuing enforcement proceedings.

	Relevant consideration for…			
Team	Science team	Policy team	Compliance team	Consents Team
Activity	✓ Wetland delineation and mapping programme Technical input in resource consent processes Technical input in compliance action		✓ Compliance monitoring and enforcement of NES Freshwater and regional plan	✓ Determination of resource consent applications

Order of consideration

[22] In the proceedings GWRC argued that the order of consideration was important and that the assessment of whether the site was a natural wetland (using the Wetlands Delineation Protocols) was required first (by the developer), before undergoing an

[13] Decision at [34].
[14] Decision at [43].

assessment on whether the pasture/improved pasture exclusion provisions applied. The Court rejected this assertion and held that there is no rule in terms of the order of analysis.[15]

[23] The Court did consider that the history of an area is relevant. Specifically in this case, the Court found that the long history of the site being used for pastoral farming (and the developer's report clearly showing the prevalence of pasture on the site) put the issue as to whether or not the areas delineated as natural wetlands was pasture or improved pasture front and centre from the outset.[16]

[24] This aspect of the Court's ruling is likely to have the following implications for ORC:

- In areas with a history of pastoral farming or high prevalence of pasture it may be appropriate to first assess whether the improved pasture exclusion applies. If it can be established by evidence that the improved pasture exclusion applies, a full investigation using the Wetland Delineation Protocols may no longer be necessary.[17]
- Landholders may also be able to establish through sufficient evidence and technical assessments that the improved pasture exclusion applies to a site without undergoing a full wetland assessment of the site's vegetation, soil, and hydrology as per the Wetland Delineation Protocols.

	Relevant consideration for…			
Team	Science team	Policy team	Compliance team	Consents Team
Activity	✓ Wetland delineation and mapping programme Technical input in resource consent processes Technical input in compliance action		✓ Compliance monitoring and enforcement of NES Freshwater and regional plan	✓ Determination of resource consent applications

The drafting, implementation and interpretation of plan provisions

[25] The Court, in its decision, also provided an analysis of the application of specific pasture exclusion provisions under the pNRP. The pNRP stipulates that the pasture exclusion provision applies to 'wetted pasture, or pasture with patches of rushes'. However, the Court commented that the pNRP does not provide a clear definition of pasture and that staff in this case demonstrated a lack of understanding of how this provision (and others) within the plan were to be interpreted.[18]

[26] The Court's comments are of relevance to ORC in a more general sense as they:

- Illustrate the need for regional councils to include clear provisions, including definitions, in their plans; and
- Highlight the need for staff to understand the interpretation and application of plan provisions; and

[15] Decision at [47].
[16] Decision at [47].
[17] Decision at [46].
[18] Decision at [55].

- Emphasise that a 'binding' test for interpreting a particular term or provision within a plan cannot be imported into this plan without undertaking the plan development process set out in the First Schedule of the RMA.

	Relevant consideration for…			
Team	Science team	Policy team	Compliance team	Consents Team
Activity		✓ Development of LWRP	✓ Interpretation and understanding of plan provisions	✓ Interpretation and understanding of plan provisions

NPS-FM's definition of natural wetland

[27] The Court commented on the definition of natural wetland contained in the NPS-FM and what it describes as the improved pasture exclusion provision.[19] In the Courts view the effect of the exclusion in the NPS-FM is that even if a given area otherwise meets the definition of a natural wetland, if that area comprises improved pasture dominated (more than 50%) by exotic pasture species and is subject to temporary rain-derived water pooling it is excluded from the natural wetland classification.

[28] There are two aspects to this exclusion:[20]

a. Firstly, what the Court described as a 'bright line test', where 50 % or more of an exotic pasture in an area makes the exotic pasture the dominant species, and;
b. Secondly, the site being subject to 'temporary rain- derived water pooling'.

[29] While the NPS-FM does not provide a definition of 'temporary rain-derived water pooling', the Court's view was that on its face the temporary rain-derived water pooling requirement is quite simple in its application. It requires that any area under consideration is subject to only temporary pooling from water derived from rain as compared to a situation where the area is permanently under water derived from rain or any other source such as underlying ground water.[21]

Status of guidance documents for implementing the NPS-FM

[30] The Court rejected the argument that 'temporary rain-derived water pooling' should be defined as 'an absence of wetland hydrology' as per the Ministry for the Environment's September 2021 Guidance document titled "Defining 'natural wetlands' and 'natural inland wetlands'"[22] (Guidance Document) and the Wetland delineation hydrology tool for Aotearoa New Zealand (Hydrology Tool)[23], which classes an area as having wetland hydrology when it is:[24]

[19] NPS-FM, Part 3, Subpart 2, Cl 3.21(1)(c).
[20] Decision at [120].
[21] Decision at [135].
[22] Defining 'natural wetlands' and 'natural inland wetlands': Guidance to support the interpretation of the National Policy Statement for Freshwater Management 2020 and the Resource Management (National Environmental Standards for Freshwater) Regulations 2020.
This document is publicly available on:
https://environment.govt.nz/publications/defining-natural-wetlands-and-natural-inland-wetlands/
[23] The Wetland delineation hydrology tool for Aotearoa New Zealand is publicly available on:
https://environment.govt.nz/publications/wetland-delineation-hydrology-tool-for-aotearoa-new-zealand/
[24] Decision at [35]-[142].

- Inundated for at least seven consecutive days during the growing season in most years (50% probability of recurrence); or
- Saturated at or near the surface for at least 14 consecutive days during the growing season in most years (50% probability of recurrence. For example, five years in ten). Soils may be considered saturated if the water table is within 15 cm of the surface for sands and 30 cm of the surface for all other soils.

[31] The Court held concerns regarding the legal aspect of the use of the "absence of wetland hydrology" test. The Court noted that the NPS-FM is a statutory instrument which can only be changed in accordance with s 53 of the RMA and the Court had extreme difficulty with the legal proposition the NPS-FM might be altered in some way or its application affected by operation of non-statutory instruments such as the Guidance Document and Hydrology Tool.[25] The Court stated clearly that Guidance Document appears to be just that, "guidance".[26]

[32] The Court further expressed real concern with applying the test in practice, as the inundation/saturation of a site requires an assessment of most years, and to undertake such an assessment to determine the hydrological status of the site requires a substantial amount of data.

[33] The Court's approach to the second aspect of the exclusion may not be as simple in practice as proposed, given that determining whether the source of water pooling is derived solely from rainfall, as opposed to other sources may not necessarily be so clear cut and is itself uncertain. This approach reflects the many issues that have been raised with the current definition of 'natural wetland' and the Government is proposing to amend the definition to clarify cl 3.21(1)(c), and this will have the practical effect of making the exclusion simpler to apply, for example by removing the second aspect.[27]

[34] The Court's comments are of direct relevance to ORC as they provide guidance and authority on the application of the 'improved pasture exclusion' provision and definition of a natural wetland in the NPS-FM.

	Relevant consideration for…			
Team	Science team	Policy team	Compliance team	Consents Team
Activity	✓ Wetland delineation and mapping programme		✓ Compliance monitoring and enforcement of NES Freshwater and regional plan	✓ Determination of resource consent applications

Wetland delineation protocol

[35] Notwithstanding the Court's findings that the site met the improved pasture exclusion the Court went on to consider whether or not GWRC had established that the areas would

[25] Decision at [136].
[26] Decision at [136].
[27] See 'Managing our wetlands, A discussion document on proposed changes to the wetland regulations. Ministry for the Environment.' This document is available on: https://environment.govt.nz/assets/publications/managing-our-wetlands-discussion-document.pdf

have actually constituted a natural wetland for the purposes of the NPS-FM if they were not subject to the pasture/improved pasture exclusion provisions.

[36] The Court stated that the assessment of an area as to its wetland status using the Wetland Delineation Protocols involves consideration of all three tools (vegetation, soils, hydrology) on an integrated basis and that looking at any one of the tools in isolation does not provide an answer to the wetland status of a site.[28] This finding is somewhat inconsistent with the hierarchical nature in which the protocols were designed to work, and it highlights that, in a dispute over the mapping and delineation of natural wetlands, a full assessment is required.

[37] The Court further agreed with the proposition that the assessment of wetlands is " ... determined by their particular vegetation, soils and hydrology" and "is a matter of technical expertise and scientific methodology…".[29] This is consistent with the approach taken by ORC, although this commentary much like the MfE guidelines does not provide an exact method to be applied when conducting a full natural wetland assessment.

	Relevant consideration for…			
Team	Science team	Policy team	Compliance team	Consents Team
Activity	✓ Wetland delineation and mapping programme		✓ Compliance monitoring and enforcement of NES Freshwater and regional plan	✓ Determination of resource consent applications

The pasture/improved pasture exclusion provisions

[38] The Court made it clear that the Wetland Delineation Protocols provide a method for delineating wetlands, not for determining whether or not the improved pasture exclusion provision in the NPS-FM definition of a natural wetland apply.[30]

	Relevant consideration for…			
Team	Science team	Policy team	Compliance team	Consents Team
Activity	✓ Wetland delineation and mapping programme		✓ Compliance and enforcement of NES Freshwater and regional plan	✓ Determination of resource consent applications

OPTIONS

[39] This paper is provided or information only. There are no options relevant to the paper.

CONSIDERATIONS

Strategic Framework and Policy Considerations

[40] The New Zealand Government's Essential Freshwater reforms introduced new responsibilities and obligations on regional council in terms of the management of natural inland wetlands.

[28] Decision at [177]
[29] Decision at [145]
[30] At [41].

[41] The NPS-FM requires regional councils to amend their plans to give effect to NPS-FM policies that seek to avoid the loss of extent of natural inland wetlands, protect their values and promote their restoration. In addition, the NPS-FM also requires regional councils to identify, map, and monitor those natural inland wetlands that are larger than 0.5 ha or that contain threatened species (if less than 0.5ha, excluding those located on public conservation lands or waters.

[42] The new regulations in the NES-FM place restrictions on damaging activities in and near natural wetlands, while the Resource Management (Stock Exclusion) Regulations 2020 mandate that certain stock must be excluded from specified wetlands. Regional Councils are responsible for the implementation of these regulations.

[43] The information provided in this report supports ORC's Strategic Directions. In particular, it promotes active resource stewardship through:

- the use of a robust process and sound evidence base of contextual information; and
- the effective enforcement of rules and regulations.

Financial Considerations

[44] There are no financial considerations. Wetlands mapping and delineation is a budgeted activity, as is the development of the Land and Water Regional Plan.

Significance and Engagement Considerations

[45] As this is a report for noting, consideration of He Mahi Rau Rika: Otago Regional Council Significance, Engagement and Māori Participation Policy is not required.

Legislative and Risk Considerations

[46] Better understanding of the various process and technical information requirements for identifying and mapping wetlands under the NPS-FM requirements is likely to reduce the legal and reputational risk for council by:

- Improving Council's ability to give effect to the requirements of the NPS-FM in a timely and efficient manner; and
- Improving Council's effectiveness in implementing NES-FM and the stock exclusion regulations; and
- Resulting in a more efficient resource consent processes (hence reducing the costs for parties involved).

Climate Change Considerations

[47] There are no direct climate change considerations relevant to this report.

Communications Considerations

[48] There are no communications considerations.

NEXT STEPS

[49] There are no relevant next steps.

ATTACHMENTS

1. Summary of key facts - Environment Court Decision [**7.5.1** - 2 pages]

ATTACHMENT 1

Summary of key facts
Environment Court Decision
***Greater Wellington Regional Council v S L Adams & others* [2022] NZEnvC 25**

1. Greater Wellington Regional Council (GWRC) sought enforcement orders under the Resource Management Act 1991[1] against numerous parties (which included the developers and subsequent landowners) in relation to a rural-residential subdivision in the Upper Hutt's Whiteman's valley. The 12-lot development had been approved by the Upper Hutt City Council with conditions and restrictions for the protection of Wetlands identified on the site. Following the approval, most of the 12-lots in the development were sold, freehold titles issued, and some lots had been built on.

2. GWRC argued that the approval and consent for the subdivision granted by the city council was based on inaccurate information, namely the extent of the natural wetlands on the site. GWRC claimed the true extent of the natural wetlands on the site was significantly more extensive and that stronger conditions and restrictions were required on the consent for the protection and restoration of the claimed natural wetlands. GWRC identified and delineated a considerably larger area of natural wetlands on the site.

3. The respondents in this case argued that the 'pasture exclusion provision' contained in the proposed Natural Resources Plan for the Wellington Region (pNRP) applied to the Site at 28 February 2020 when the original assessment was undertaken and that the 'improved pasture exclusion provision' contained in the NPS-FM definition of wetland applied to the Site at 21 May 2021 when the enforcement proceeding were issued by GWRC.

4. The conditions/restriction sought by GWRC would impose significant retrospective restrictions on the site and the activities that could occur. For example, the extent of the natural wetlands on the site as claimed would mean that 2 lots were entirely natural wetland and no building would be allowed, and for many other lots there would be significant limitations on the area available to build and significant impact on the use of the property such as necessary setbacks as well as requiring more extensive wetland restoration[2].

5. GWRC claimed that works carried out on the Site by the developer during the course of development of the site, created what GWRC described as 'atypical' conditions which influenced vegetation growth so that the assessment of pasture on the site was profoundly inaccurate.

6. The main issue determined in the Environment Court proceeding was whether or not the delineated natural wetlands identified by the GWRC actually constituted natural wetlands as defined in the pNRP or the NPS-FM.[3]

7. GWRC's application for enforcement orders against the respondents was dismissed by the Court.

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[1] Section 314(1)(e) of the Resource Management Act enables the Court to exercise power to change or cancel a subdivision consent if '*… in the opinion of the court, the information made available to the consent authority by the applicant contained inaccuracies relevant to the enforcement order sought which materially influenced the decision to grant the consent*'.
[2] Decision at [13].
[3] Decision at [14].

8. The Court held that the original assessment and report on the pasture status of the site was accurate and the pasture/Improved pasture exclusion provisions applied to the site. In addition to that finding GWRC failed to establish (by a massive margin) that the area it delineated as natural wetlands on the site was a natural wetland under the pNRP or NPSFM.

7.6. Proposed ORC submission to MPI consultation on changes to the NZ ETS for managing exotic forestry incentives

Prepared for: Strategy and Planning Committee

Report No. POL2201

Activity: Governance Report

Author: Warren Hanley, Senior Resource Planner Liaison

Endorsed by: Anita Dawe, Acting General Manager Policy and Science

Date: 13 April 2022

PURPOSE

[1] To advise Councillors on the Ministry for Primary Industries' (the Ministry) current consultation: ***"Managing exotic afforestation incentives: A discussion document on proposals to change forestry settings in the New Zealand Emissions Trading Scheme.'*** (the consultation).

EXECUTIVE SUMMARY

[2] The New Zealand Emissions Trading Scheme (NZ ETS) is a significant economic tool in New Zealand's approach to reducing the impacts of climate change by pricing the costs of emissions across most of the economy. The NZ ETS rewards activities which absorb carbon – such as Forestry.

[3] In 2020, a new classification of forestry was added to the NZ ETS enabling the planting of exotic forests, without any limit on land area. However, the Government has identified and raised concerns about the potential unintended consequences this category could create both economically and environmentally.

[4] These concerns are relevant to Otago given the importance of our primary land use sector, our indigenous biodiversity, and our renowned landscapes. While ORC does not have a function that requires implementation of the NZ ETS, unintended land use changes could have a significant impact on Otago's primary sector and tourism economies, and our environment, through potential adverse effects on dry catchment water yields, biodiversity, and wild conifer management.

[5] In response to the concerns raised above, the Government is proposing two possible solutions which would result in removing (either absolutely or providing for exceptions) the ability to register exotic species within the permanent forestry category of the NZ ETS. This solution would trade off some economic and environmental protection against reduced emission reduction performance by permanent forests established under the NZ ETS.

[6] Therefore, staff consider there is merit in lodging a submission that illustrates how the potential changes to the scheme will be seen at a regional level.

[7] It is important to note that the NZ ETS, while important, is not the only part of New Zealand's approach to reducing its emissions. There are other moving pieces, many of which will be the subject of reviews and consultations over the coming year, including changes to RMA land use planning frameworks. This is of particular relevance as ORC continues to develop its Land and Water Regional Plan. Staff will report on these future consultations to Council when relevant.

RECOMMENDATION

That the Committee:

1) ***Notes** this report.*

2) ***Notes** that staff will be lodging a submission on the Ministry for Primary Industries consultation document: "Managing exotic afforestation incentives: A discussion document on proposals to change forestry settings in the New Zealand Emissions Trading Scheme*.

3) ***Notes** that a copy of the submission will report back to a full Council meeting in May 2022.*

BACKGROUND

[8] Since the turn of the century, New Zealand's response to climate change has evolved. A relatively simple goal of reducing our greenhouse gas emissions, to contribute to limiting global temperature increases, has necessitated a relatively complex climate change response. The resulting framework of regulations and initiatives integrate for the objective of achieving New Zealand's emission reduction goals.

[9] This report does not go into detail of this climate change response framework, or the NZ ETS, but provides a brief overview of the reasons for the consultation and the options the Ministry is considering.

[10] The implementation of the Climate Change Response Act 2002 (CCRA) was a significant development for New Zealand when seeking to meet its global commitment to assist reducing global average temperature rise to 1.5 degrees C above pre-industrial levels. The CCRA role is to help meet New Zealand's emission targets and manage climate change effects by establishing a system of emissions budgets and reduction plans.

[11] Tree growth has always been widely accepted as one of the fastest methods to absorb carbon, and because forestry can be undertaken at significant scale, it has taken a primary role in New Zealand's efforts to absorb (or sequester) carbon.

[12] Prior to the NZ ETS' implementation, the Government developed the Permanent Forest Sink Initiative (PFSI). Its purpose was two-fold; to encourage, and support landowners to plant out marginal and/or erosion prone land with credit[1] earning Forestry, while also increasing New Zealand's forestry sink to absorb carbon.

[13] Soon after (in 2008), the NZ ETS was introduced as a key climate change policy tool to affect a reduction in greenhouse gas emissions. The workings of the NZ ETS are complex by nature and increasingly so with its continual evolution since being introduced.

[1] This credit system was prior to the NZETS NZUs system and was tradable on an international market.

[14] As an activity, forestry can be registered in the NZ ETS to generate and earn tradeable New Zealand Units (NZUs) which can then be sold to emitters of carbon that are registered in the NZ ETS scheme.

[15] In 2020, the Government amended the CCRA to introduce a 'permanent[2] post-1989 forestry category' that replaces the PFSI in order to refocus NZ's 2030 goal[3] of reducing its Nationally Determined contribution (NDC) to 50% below gross 2005 emissions. Under this new category, forests will earn NZUs and are able to be registered from 1 January 2023.

[16] One of the drivers of this consultation, is the Government's concern around the significant price rise of NZUs, tripling from approximately $35 in 2020 to a projected 2022 high of $110[4], invalidating the price control provisions in the NZETS. This increase in carbon price has significantly increased the return for permanent exotic forests relative to competing land uses and has the potential to over incentivise the conversion of traditional rural land use to forestry.

[17] Part of the Governments response is a proposal to remove the ability to establish exotic trees within the permanent forest category which would mean species such as Pinus radiata and other conifers were ineligible for carbon credits or NZU's.

[18] This change of position is driven by multi sector advice that exotic species are not as long-lived, and without ongoing management may not be as self-sustaining, as indigenous species.

[19] Widespread land use conversion to exotic permanent forestry can lead to adverse flow-on effects, including providing habitat for animal pests and diseases, increased wildfire risk and the spread of wilding conifers; socio economic impacts on rural and local communities; and risk that other emission reductions investments will be curtailed.

[20] ORC staff have reviewed the consultation document and given the concern of Councillors around carbon forestry in other fora, consider a submission in support of the proposal is warranted.

DISCUSSION

[21] Staff consider the key issues for the submission will include those outlined at paragraph 19 above, and in addition, the impacts of wide scale forestry on water quality and quantity, and the loss of productive rural land in perpetuity.

Forestry in Otago

[22] As of 1 April 2021,[5], Otago has the second largest volume of planted forest area in the South Island, at approximately 133,000 ha. Most of this afforestation is spread across the Dunedin (17,000 ha), Clutha (86,800 ha) and Waitaki (22,750ha) districts.

[2] Permanent in this new NZ ETS definition means they will not be clear-felled for at least 50 years after registration in the NZ ETS. The glossary

[3] A milestone to meet New Zealand's contribution to limiting global temperature increase to 1.5 degrees C

[4] Page 13 Managing exotic afforestation incentives consultation document

[5] https://www.mpi.govt.nz/dmsdocument/43540-2021-NEFD-report

[23] As evidenced above, the Clutha district is the primary area for forestry activity in Otago due to suitable conditions, infrastructure, land availability and primary sector investment.

[24] In 2021, forestry and logging contributed $122 million (or 0.8%) of Otago's GDP, below the pastoral farming sector but higher than horticulture and some parts of the food manufacturing sector. Forestry and logging also provide around 380 direct employment jobs (0.3%), which is lower than most other land use sectors. Forestry and logging contributed 9.9% of the export revenue in 2021, third behind meat and dairy.

[25] Otago' forestry is dominated by conifers, the majority being radiata pine, but with a significant population of Douglas-fir (50% of Central Otago's forests, and 25% of Otago's forestry compared to 6% nationally) due to Otago's suitable growing conditions. Douglas-fir provides additional value by attracting additional markets and products lines beyond radiata pine.

[26] Forestry has positive economic and environmental benefits to a region, including by providing an opportunity for more efficient use of marginal or unproductive land, providing diversification in farm income, shelter for stock and providing options to address issues of erosion and instability.

The Regulatory Planning Framework

[27] The National Environment Standard for Plantation Forestry (NES-PF) has a primary focus on commercially planted forestry which will be harvested. It has limited controls, and there are very few circumstances when a district or regional plan can be more stringent. It also does not apply to the permanent exotic forestry category. The Ministry has signalled a potential expansion of the environmental management scope of the NESPF so that permanent forestry is included as one of the future pieces of consultation work for later this year however as it stands, some of the controls around, for example, erosion control plans that are in the NES-PF, do not apply.

[28] The National Policy Statement for Freshwater Management (NPSFM), and National Environmental Standards for Freshwater (NES-F) are relatively new national directions to improve the management of New Zealand's freshwater resources. The NESPF can be overridden to implement the NPSFM, and more broadly, forestry activities and the effects associated with them would be included in the management frameworks of the NPSFM and the NES-F.

[29] At a regional level, both the partially operative and the proposed Regional Policy Statements contain policy direction for forestry.

[30] District plan zoning provisions can identify areas which are appropriate for forestry and manage effects on a range of values including landscapes, other land uses, and indigenous vegetation. Currently, staff understand that forestry can be considered permitted under many District Plans, as a type of farming.

[31] Dunedin City Council and Queenstown Lakes District Council have begun the implementation of their '2nd generation' district plans, and this has seen improvements in the approach to managing forestry activities. This includes things like landscape management provisions that acknowledge that exotics may otherwise have adverse effects, so their planting is restricted.

Economic Drivers and Impacts

[32] The incentives to convert land to permanent carbon forest, especially in this economic climate, are considerable.

[33] The consultation document identifies that one of the negative consequences of permanent forestry is job losses from traditional land uses which in turn can have wider economic effects. Local communities across Otago are already raising this as a concern in our region.

[34] There have been several large pastoral land blocks sold in the last 18 months, in the Clutha and Waitaki Districts predominantly, for conversion to permanent forests. This highlights that the implementation of the NZ ETS is a genuine issue across Otago.

Other Potential Risks and Outcomes

[35] It is highly probable that large tracts of rural land are being sold to multinational corporations, which, as well as losing productive land, reduces employment opportunities, fractures small rural communities, and potentially realises profits offshore.

[36] The removal of exotic species from permanent forestry category will mean that investors will need to reassess the costs and benefits, including the long-term investment return. Indigenous forests will be less commercially attractive to larger corporations due to the slower financial returns and different implementation and management approach they will require.

[37] Conversely, the financial return from converting marginal and/or at-risk land to indigenous forestry under the NZET, as part of an overall land management strategy could be expected to still be attractive to current land use practices, such as farming.

Environmental Concerns for Otago

Water Yield in Dry Catchments

[38] Any additional planting in catchments means a reduced water yield. The afforestation of pastoral land is no different, with impacts on groundwater yield, and potentially impacts on instream flows. The impact on water yield in catchment will increase as a forest matures.

[39] The impact of afforestation is dependent on the current land cover - any conversion from a lower water demand species to a higher demand species will impact water balance. In 2017, the ORC resource science unit reviewed a proposal for new forestry in the Waitaki district and expected that annual water yields would reduce by 25 – 50% based on a literature review, reduce peak flows by up to 50% as maturation, and reduce low flows out of the affected sub catchments.

Wilding Conifer Control, Wallabies and Indigenous Biodiversity

[40] The issue of wildings conifers is well known in Otago, with community led and ORC led work programmes and plans to actively manage wilding pines.

[41] In 2020 ORC, with the support of the Wakatipu Wilding Conifer Trust and Central Otago Wilding Conifer Control Group, secured funding from Biosecurity New Zealand which will

support a four-year programme to combat two of Otago's most pressing pest issues, wilding conifers and wallabies. A significant amount of the initial funding of $6 million will be directed at tackling wilding conifers in the Lakes and Central Otago districts.

[42] The wallaby threat to Otago originates from Canterbury. The detection of wallaby incursions across Otago's boundary could be hampered through any significant increase in the scale of afforestation as it would provide them excellent day cover and make their nocturnal movements difficult to track. Wallabies (and many other feral pests) are a threat to not only pasture, crops, fencing and indigenous biodiversity, but also plantation forestry activities.

[43] Concentrations of single species plantings poses a risk to connectivity of biodiversity.

Fire Risk

[44] Staff are aware of the risks of wildfire associated with carbon farming, and the need to ensure there are appropriate controls, such as fire breaks, and access to firefighting supplies, with any significant forestry activity.

OPTIONS

[45] The Ministry is considering the following three options in respond to the concerns it has identified:

a. Retain exotic permanent forestry as eligible for registration under the NZ ETS ('do nothing')
b. Prevent registration of exotic forestry under the NZ ETS
c. Prevent registration of exotic forestry under the NZ ETS, but retaining an ability for exemptions in special circumstances

[46] The Ministry's preferred options are b or c, as they consider both these options will manage the risk of large-scale conversion of land into permanent exotic forests and would improve the incentive for indigenous afforestation. Irrespective of the preference, the Ministry recognises that there is no clarity on how exceptions might be allowed, and the implementation and administrative framework and costs to enable this.

[47] In choosing either option b) or c) the Ministry is mindful of balancing the wider benefits and environment outcomes (including mitigating risks from exotics species) against overall administrative complexity and cost.

[48] Staff consider option c) may reflect a better balance for Otago as there is growth potential for exotic plantation forestry in Otago. Any absolute restriction of exotic forestry could result in the loss of forestry activity that could be otherwise sited appropriately, the environmental risks managed, and contribute to New Zealand's emission reduction goals.

[49] This option would also provide landowners with an option for utilising their marginal and/or unstable land by planting fast growing exotic trees. If that planting qualifies as permanent forestry under the CCRA and NZETS provisions, it would also let that plantation earn the landowner a financial return.

[50] Overall, option c) is likely to still provide a substantial brake for an undesirable level of land use conversion to permanent exotic afforestation, while enabling Otago to support a diversity of sectors and land uses and incentivise permanent indigenous forestry.

CONSIDERATIONS

Strategic Framework and Policy Considerations

[51] Our strategic directions require that we take leadership on issues of significance and importance to both our Otago communities and national direction.

[52] Our strategic directions include actions to give effective leadership including

a. *Promoting and enabling best practice land management for soil conservation, water quality and using water efficiently,*
b. *Protecting our land and water from inappropriate activities*
c. *Enabling climate change mitigation and meeting New Zealand's emission targets*
d. *Supporting our communities to adapt to the effects of climate change*
e. *Collaborate and deliver on biodiversity programmes and management*

[53] Staff consider submitting on the current consultation is consistent with the strategic directions.

Financial Considerations

[54] There are no specific financial considerations associated with this paper. Submitting on national consultations is a funded activity.

[55] Financial considerations of the actual consultation subject have been identified in this report.

Significance and Engagement Considerations

[56] The consideration of this consultation, and any subsequent submission is consistent with ORC's Significance, Engagement and Māori Participation policy.

Legislative and Risk Considerations

[57] Forestry and carbon farming are both managed within the existing legislative environment, and any changes to that context will result in changes to how forestry is managed going forward.

[58] Broadly, risks associated with carbon farming are outlined in the report. There is a risk that MPI will decide on the 'do nothing 'option and that would have the potential to realise the effects outlined. Given the consultation is to address the current situation, staff consider this risk is low.

[59] This report acknowledges the risks with potential large land use change, and the impacts on communities, and local, regional and national economics. ORC should also carefully consider the potential environmental risks associated with large scale exotic forestry conversions in the short and long term.

Climate Change Considerations

[60] Carbon farming is an important tool in managing emissions, but it should be about right tree, right place. It will be important that there is a balanced consideration for managing emissions and providing some limitations on where carbon farms can be established.

Plantation forestry, both indigenous and exotic, has an important role to play in climate change mitigation.

[61] Consideration of supporting the Ministry's option c) (restriction on exotic permanent afforestation with exceptions) would provide a pathway where, with the right checks and balances, permanent exotic forestry can provide support for progressing New Zealand's climate change goals.

Communications Considerations

[62] Any submission made by ORC would be publicly available via the Ministry, as well as ORC.

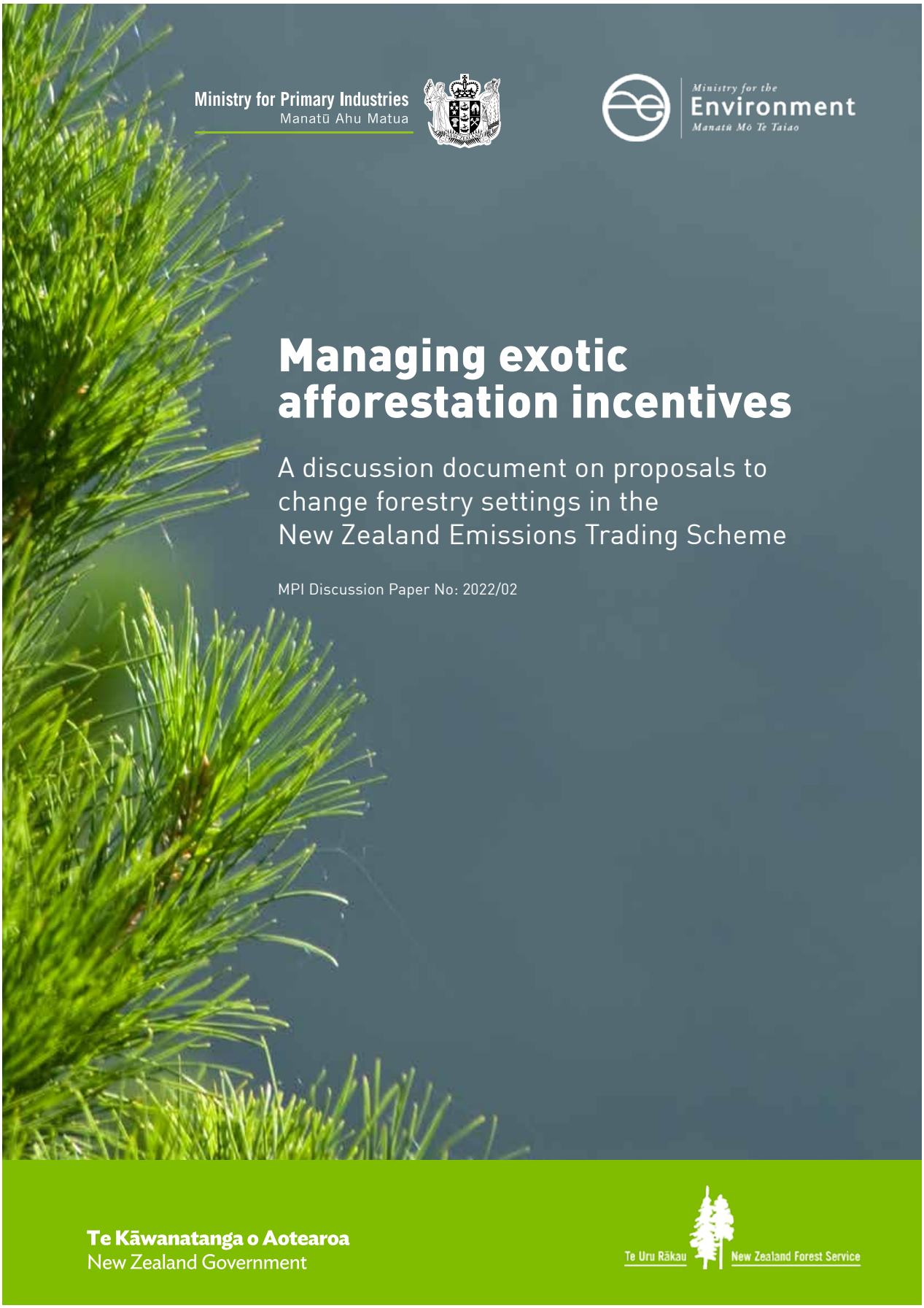
[63] ORC's communications team can consider if there is merit in making the submission more widely available, to communicate ORC's position to a wider audience.

NEXT STEPS

[64] ORC staff will draft and lodge a submission, and bring the submission to Council for noting, at the May 2022 meeting.

ATTACHMENTS

1. NZ ETS Managing Exotic Afforestation Incentives [**7.6.1** - 36 pages]


Ministry for Primary Industries
Manatū Ahu Matua
Ministry for the Environment
Manatū Mō Te Taiao
Managing exotic afforestation incentives
A discussion document on proposals to change forestry settings in the New Zealand Emissions Trading Scheme
MPI Discussion Paper No: 2022/02
Te Kāwanatanga o Aotearoa
New Zealand Government
Te Uru Rākau
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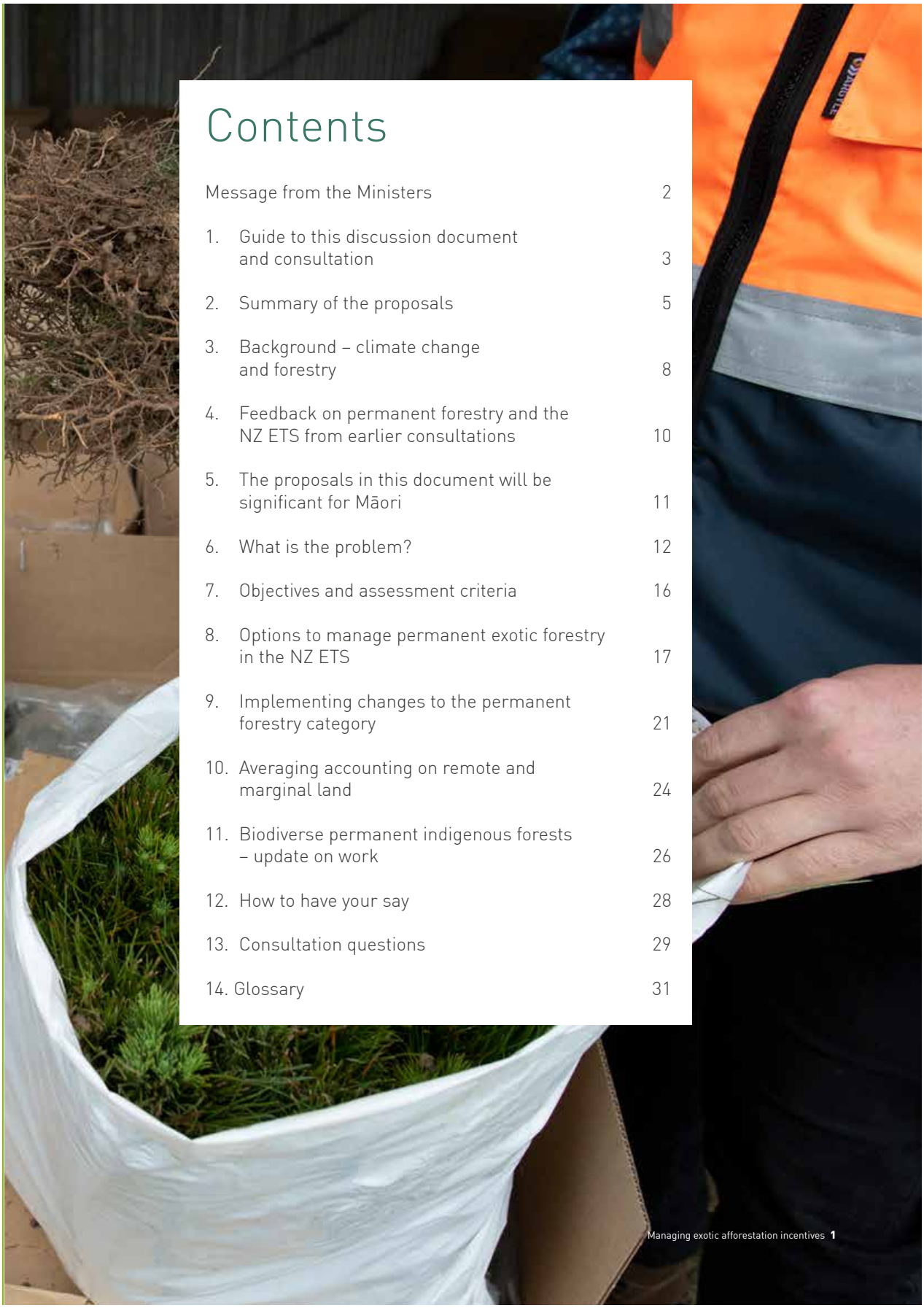


Contents

Message from the Ministers

Forests play a vital role in New Zealand's response to the climate emergency. They are also hugely significant to our economy and to Māori, both culturally and economically.

Forests are recognised for their carbon sequestration in the New Zealand Emissions Trading Scheme (NZ ETS), New Zealand's primary means of cutting down on the pollution that causes climate change.

The NZ ETS puts a price on emissions from most sectors of the New Zealand economy. This encourages investment in lower emissions technologies and practices, including the use of forestry as a carbon sink.

It is important the NZ ETS incentivises enough emissions reductions to meet our climate targets.

Although exotic forestry helps reduce our net emissions quickly and at low-cost, there are likely to be significant trade-offs for our economy and environment in the long-term. This includes changes in land use as landowners and investors seek higher returns by establishing permanent exotic forests as carbon prices increase.

On 1 January 2023, a new category will be introduced into the NZ ETS for permanent post-1989 forests which will not be clear-felled for a minimum of 50 years. It is anticipated that under current settings there will be a lot more permanent exotic forests (particularly Pinus radiata) planted under this category.

However, we have heard the concerns of rural communities and our Treaty partners and agree there is a risk of permanent exotic forests increasingly displacing other productive land uses. This includes production forests for harvest, as well as sheep and beef farming.

There is also a risk that oversupply of forest offsets in the ETS could reduce the incentive for emitters to reduce gross emissions. We need to ensure our land use incentives achieve the best outcomes for our environment, economy, and local communities, in the short, medium, and long term.

This discussion documents outlines proposals to mitigate these risks and protect the wider New Zealand economy, while still addressing the climate crisis and supporting biodiversity.

The Government is proposing to restrict exotic forests being registered in the new permanent forest category, prior to the new category becoming available in 2023. We are seeking your input on this proposal.

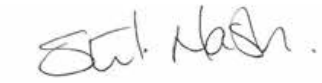
We also seek your feedback on an option in the NZ ETS to more precisely account for longer rotation production forests on remote and marginal to harvest land.

There is a role for permanent forests in New Zealand, particularly indigenous forestry. There may be some circumstances where exotics may be appropriate.

We want to hear your views on what circumstances permanent exotic forests may be beneficial. We also want to hear whether there should be exceptions to allow some exotic forests to be registered in the permanent category.

Finally, we are interested in how these proposals may affect you, your organisation, business, or community and how you think the options could work operationalised.

We encourage you to have your say during this consultation. Decisions we make now on permanent forestry will be critical for our future environmental sustainability, economic growth, and the well-being of our people and communities.



Stuart Nash
Minister of Forestry

James Shaw
Minister for Climate Change

1. Guide to this discussion document and consultation

We want to know your thoughts on proposals affecting forestry and the New Zealand Emissions Trading Scheme (NZ ETS). These proposals involve changes to the Climate Change Response Act 2002 (CCRA).

We are consulting on potential changes affecting forestry and the NZ ETS

The main topics are covered in this consultation:

- **Topic 1:** Proposals to change the forestry settings within the NZ ETS to remove the incentives for permanent exotic afforestation.
- **Topic 2:** An option to adjust how averaging accounting applies to remote and marginal land.
- **Topic 3:** Feedback on opportunities for improving incentives for indigenous afforestation.

This discussion document takes you through these topics, presents options for how we could implement these proposals, and provides relevant information that can help you write your submission.

Your feedback on the proposals will help us to gather information, ideas and evidence that we can use to shape the proposals further, consider alternative options, and understand what matters most to you.

If you're interested in the underlying evidence and analysis we've drawn on to shape the proposals, you can refer to MPI's interim Regulatory Impact Statement.[1]

Sending us your views

Submissions on these proposals will be received by the Ministry for Primary Industries (MPI) through to 5pm on 22 April 2022, by email to mpi.forestry@mpi.govt.nz or on the MPI website.

Dates for public webinars to hear more about the proposals and ask questions can be found on the MPI website.

You can find more information about how to send us feedback later in this document in the section on How to have your say [page 28].

Timeframes and other related work by the Government

This consultation will run from14 March 2022 until 22 April 2022. We expect to make final decisions in mid-2022. We anticipate that legislative change may be needed following this.

There are other propoals related to Government forestry and climate change policy in progress this year. We are not seeking feedback on these other policies through this consultation.

1. National direction for forests

Later this year, we will consult on changes to the land use planning system affecting forests, under the Resource Management Act 1991 (RMA). We will seek views on National Direction that will provide greater local control over the location and type of new forests.

This work will also consider expanding the scope of the existing National Environment Standards for Plantation Forestry to ensure the environmental effects of existing permanent exotic forests are managed. This may include the setting of national objectives and policies for land use and for forestry. Although the RMA is currently being reformed, the proposals we consult on will be designed to fit into the new system.

2. NZ ETS Yield Table Updates

For most forest species in the NZ ETS, tables and methods used to calculate carbon sequestration have not been updated since 2008. MPI is developing proposals to update these methods to ensure that carbon stored in NZ ETS forests is accurately accounted for. We expect to publicise these proposals in detail towards the middle of the year.

3. Emissions Reduction Plan (ERP) consultation

From October to November 2021, we heard feedback from the public on ideas for forestry. Some of this feedback has informed the proposals and analysis included in this document.

We also heard a range of feedback on opportunities for encouraging nature-based solutions and encouraging indigenous afforestation through the ERP consultation.

The Government's first ERP will be published in May 2022 and will include broader actions on forestry initiatives, as well as nature-based solutions more generally. A more detailed summary of feedback on forestry and the NZ ETS can be found in Section 3 on page 10.

1 If you're keen to engage further on technical aspects of the proposals during consultation, please get in touch at mpi.forestry@mpi.govt.nz. These proposals are being led by MPI's Climate Change and Forestry Policy team, with support from staff at the Ministry for the Environment.

4. Overseas Investment Act 2005 Forestry Review

The Government is pursuing changes to the Overseas Investment Act 2005 to remove forestry conversions from the streamlined special forestry test. The test was introduced to facilitate more overseas investment in plantation forestry. Forestry conversions would instead need to access the Benefit to New Zealand test pathway, which would require forestry conversions through the overseas investment screening regime to demonstrate benefits to New Zealand.

5. Forestry and Wood Processing Industry Transformation Plan

The Forestry and Wood Processing Industry Transformation Plan is in development, and it is anticipated the draft plan will be released later this year. It will outline a roadmap to add value to forest resources, increase domestic manufacturing, and replace emissions intensive fuels and materials using forest products. Transformation will require a resilient forest industry with a secure wood supply.

Overview of forestry and climate change policy work in 2022-23

Table 1: What's on for key forestry and climate change policy work in 2022-23?

		2022				2023
Proposed change	Policy instrument	Q1	Q2	Q3	Q4	First half
Removal of exotic forests from permanent post-1989 forest category	NZ ETS	Consultation	Cabinet decisions following public feedback	Window for primary legislation		Changes come into force Introduction of permanent forest category in NZ ETS
Adjusting how averaging applies to land that is remote and marginal for harvesting	NZ ETS	Consultation	Cabinet decisions following public feedback	Further regulatory and operational design of initiative if progressed. Possible introduction of a long rotation category via updated regulations after 2022.		
Other work and consultation related to forestry						
ERP: Opportunities to reduce barriers for indigenous forests	General	Ongoing feedback welcome	Emissions Reduction Plan initiatives • Forestry chapter • Pricing chapter • Nature based solutions chapter The ERP may lay out future work programmes to continue this work – which may eventually require changes to legislation or regulations.			
New national direction for forests	Resource management legislation	Announcement of policy direction	Consultation on options	Progress of national direction to provide greater local control over the location and type of new forests		

Why not consult on the range of new policies at the same time?

We understand that holding multiple consultations on similar topics throughout the year can be challenging for people with interests in forestry or climate change action.

We are consulting on proposed changes to the NZ ETS ahead of consultation on other forestry proposals to ensure that any changes to the CCRA can be passed by Parliament in time for the 1 Jan 2023 start date for the permanent post-1989 forest category. It is not possible to consult on changes to the resource management system on the same timelines as this.

2. Summary of the proposals

Successive governments have encouraged the planting of new forests to support improved environmental and economic outcomes for New Zealand over the decades. This includes through schemes such as the East Coast Forestry Project established in 1993 supporting landowners to establish forests on erosion-prone land.

These programmes have included support to landowners in establishing new permanent forests[2], contributing to the removal of carbon from the atmosphere, meeting our climate change targets and protecting vulnerable land through schemes such as the *Permanent Forest Sink Initiative (PFSI)*, established in 2006.[3]

Past policies encouraging permanent forests and forest cover continue to provide ongoing benefits to New Zealand. Forests planted as a result of past grant schemes will sequester around 46 million tonnes of carbon dioxide from 2022 to 2035 (roughly 5 percent of our anticipated gross emissions).[4]

The most recent of these initiatives has been the announcement of a new ***permanent post-1989 forest*** category within the *NZ ETS*, where landowners who plant a permanent forest can earn and then sell or use tradeable units (New Zealand Units or NZUs) within the scheme based on the amount of carbon their forest removes from the atmosphere (sometimes referred to as "sequestration" or "removals" or "abatement").

This new permanent forest category was introduced by the Climate Change (Emissions Trading Reform) Amendment Act in 2020 and is scheduled to open for registrations from 1 January 2023.

Currently, forests consisting of any tree species can be registered in the category (including those introduced to New Zealand such as *Pinus radiata* – referred to as "exotic" species), and there are no limits to the total area of land that can be registered under this category.

The Government has identified issues with this current approach for the introduction of the permanent forest category in the NZ ETS – due to the high, and rising price of carbon. The NZU price has more than doubled within the last year, from around $35 in late 2020 to upwards of $80 in early 2022.

Without changes, the introduction of this new category is likely to result in large areas of land nationwide (relative to historic trends) being planted in permanent forests consisting of exotic species which are not intended to be harvested (referred to as 'permanent exotic forests'[5] in this document). The most common exotic species being planted as permanent forest at present is *Pinus radiata*, due largely to its fast rate of growth and the ease of establishing it.

Over the long-term, this trend is likely to increasingly present issues for New Zealand:

- **Rural and local communities**
  Permanent forests can result in low long-term economic activity and job creation in the region directly surrounding that land relative to competing land uses (generally sheep and beef, deer, and production forestry). If cumulative land conversion occurs at scale or is concentrated in particular regions, this can work against the economic and social outcomes sought by those communities.
- **New Zealand's transition to a net-zero emissions economy**
  With permanent exotic forests being a highly profitable use of land at current carbon price levels, the resulting increase in the supply of NZUs to the NZ ETS from these forests is likely to dampen medium-term carbon prices in the NZ ETS. This risks curtailing investment and uptake of low-carbon technologies to reduce emissions. The Climate Change Commission also identified a clear role for indigenous afforestation which provides slower but sustained sequestration throughout this century.
- **Long-term environmental outcomes**
  Large areas of exotic planting with little ongoing management poses long-term risks of animal pests, disease, fire and wilding conifer spread.[6] Over time,

2 "Permanent forests" in this document refers to forests that are not intended to be clear-felled for at least 50 years, although they can be partially logged before then. While some planted forests may be intended to be truly permanent, this is not an NZ ETS requirement. These are different to the terms 'production' and 'plantation' forests, which generally refer to forests that are regularly harvested for the purpose of selling the wood/logs.

3 New Zealand Government. (2006). Ministers announce Permanent Forestry Sink Initiative. Link: www.beehive.govt.nz/release/ministers-announce-permanent-forestry-sink-initiative.

4 Based on the Climate Change Commissions recommended emissions budgets between 2022 and 2035. (Page 78 in https://ccc-production-media.s3.ap-southeast-2.amazonaws.com/public/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa.pdf)

5 Permanent exotic forests have often been colloquially referred to as 'carbon forestry' in New Zealand media in recent years, though usage of the term 'carbon forestry' can also refer to other forests earning carbon returns (e.g., indigenous forests). The term 'carbon forestry' is not used elsewhere in this document, as the meaning of this term can be ambiguous.

6 Though these risks exist, permanent forests – including those consisting of exotic species – also have environmental benefits beyond carbon relative to competing land uses (e.g., reduced erosion, reduced sediment and nutrient loss to waterways, shade and habitat for wildlife).

fast-growing, heavy forests planted on steep, erosion-prone land are also at risk of instability through heavy rain and windthrow, which can present long-term risks to downstream communities and for landowners.

Unlike many indigenous trees, few exotic species are long-lived in New Zealand (for example, *Pinus radiata* has an average lifespan of 80-90 years) and without ongoing management there is no certainty that a self-sustaining forest will develop or provide biodiversity or other benefits.

Acknowledging these risks, the Government does not consider it appropriate to provide incentives that could lead to a legacy of large areas of concentrated and permanent exotic forests. This will not provide a prosperous and sustainable footing for New Zealand in the long-term.

We also heard these concerns raised during consultation in late 2021 on the Emissions Reduction Plan (ERP), as well as more generally by some rural communities and land users. These risks were also acknowledged by the independent Climate Change Commission in their 2021 report, *Ināia tonu nei: a low emissions future for Aotearoa*.[7]

Given these risks, **we propose to remove the ability to register exotic species within the permanent forest category of the NZ ETS.** This would mean that forests that consist of exotic species (such as *Pinus radiata*, other conifers, or hardwoods) would not be eligible to be registered as a permanent forest.[8]

Questions 1 to 19 in the submission form relate to these proposals.

Long rotation averaging option

We also invite your views on whether a long rotation averaging accounting[9] forest category should be developed within the NZ ETS that could provide opportunities for forest owners whose land is poorly suited to harvesting *Pinus radiata* at typical harvest ages (e.g., due to difficult terrain, slow growth rates or distance from port).

The idea for this category follows feedback received from consultation on regulations for the introduction of averaging accounting, where submitters raised concerns that the chosen use of one "average" age for *Pinus radiata* would not recognise higher levels of carbon stored in *Pinus radiata* forests with longer rotation lengths.

Questions 20 to 25 in the submission form relate to this option.

Incentivising permanent indigenous afforestation – update

As well as removing the incentives for permanent exotic afforestation, we want to increase incentives to plant permanent indigenous forests. We present some of the feedback we received on this topic during the ERP consultation, and offer you the opportunity to make further comments.

Question 26 in the submission form relate to this option.

Where to next?

Pages 17-23 Proposals to remove permanent exotic forests from the NZ ETS.

Pages 24 to 25 Potential option for a long-term rotation forest category under averaging.

Pages 26 to 27 Incentivising permanent indigenous afforestation – update

Page 28 How to provide your submission.

7 Climate Change Commission. (2021). Page 314: https://ccc-production-media.s3.ap-southeast-2.amazonaws.com/public/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa.pdf

8 These changes would not affect landowners registered under the Permanent Forest Sink Initiative (PFSI) that are being transitioned to the NZ ETS. Registration in the PFSI is closed – but the landowners who are registered will remain eligible for earning units under the NZ ETS permanent forest category, including those with exotic tree species. More details can be found on PFSI covenants on pages 20 and 22.

9 Averaging accounting is the new carbon accounting method which will be used to determine how and when newly registered production forests will earn NZUs from 2023. In averaging accounting, forests earn NZUs up to the age at which they reach the average level of stored carbon for that forest over its lifetime. The current averaging accounting category within the NZ ETS sets an average age per forest type (for example, *Pinus radiata* can earn units for up to 16 years).


Managing exotic afforestation incentives 7

3. Background – climate change and forestry

Afforestation is an important part of New Zealand's approach to tackling climate change

New Zealand has committed to reducing our greenhouse gas emissions to limit the global average temperature rise to 1.5˚C above pre-industrial levels. The Government has set the following targets to help achieve this commitment:

- all greenhouse gases, other than biogenic methane, to reach net zero by 2050;
- emissions of biogenic methane to reduce to at least 10 percent below 2017 levels by 2030, and at least 24–47 percent below 2017 levels by 2050.

To help meet these targets and manage the impacts for all New Zealanders over time, the Climate Change Response Act 2002 (CCRA) establishes a system of emissions budgets and Emissions Reduction Plans. Emissions budgets set a limit on the amount of greenhouse gas emissions allowed across the budget periods. These budgets can be met using a combination of gross emissions reductions and net emissions removals.

New Zealand's Nationally Determined Contribution (NDC)[10] has set a target to reduce net emissions by 50 percent below gross 2005 emissions levels by 2030.

How the NZ ETS works

Established in 2008, the New Zealand Emissions Trading Scheme (NZ ETS) is a key climate change policy tool to reduce greenhouse gas emissions. The scheme aims to help New Zealand meet its emission reduction budgets, domestic targets and international climate obligations by pricing greenhouse gas emissions. This encourages investment in lower emissions technologies and practices, including forestry.

Box 2: Gross emissions versus net emissions

Gross emissions mean the total emissions New Zealand releases from sectors such as agriculture, transport, energy, industry and waste.

Net emissions mean the total of gross emissions, minus any removals (for example, from forests storing carbon as they grow).

New Zealand needs more afforestation to meet our climate targets

Forestry is needed to help New Zealand meet its climate change targets and emissions budgets by offsetting emissions. Forests can be both a carbon sink (while growing) or a source of emissions (for example, from harvesting or deforestation).

Figure 1: How the NZ ETS works

10 Under the Paris Agreement each country adopts an international target known as a Nationally Determined Contribution (NDC). This sets out the contribution the country will make towards the goals of the Paris Agreement.

The Climate Change Commission's pathways for meeting New Zealand's climate change targets include significant afforestation of both production and permanent forests. However, their report also specifically asked the Government to consider the role of permanent exotic forests in its climate change response.

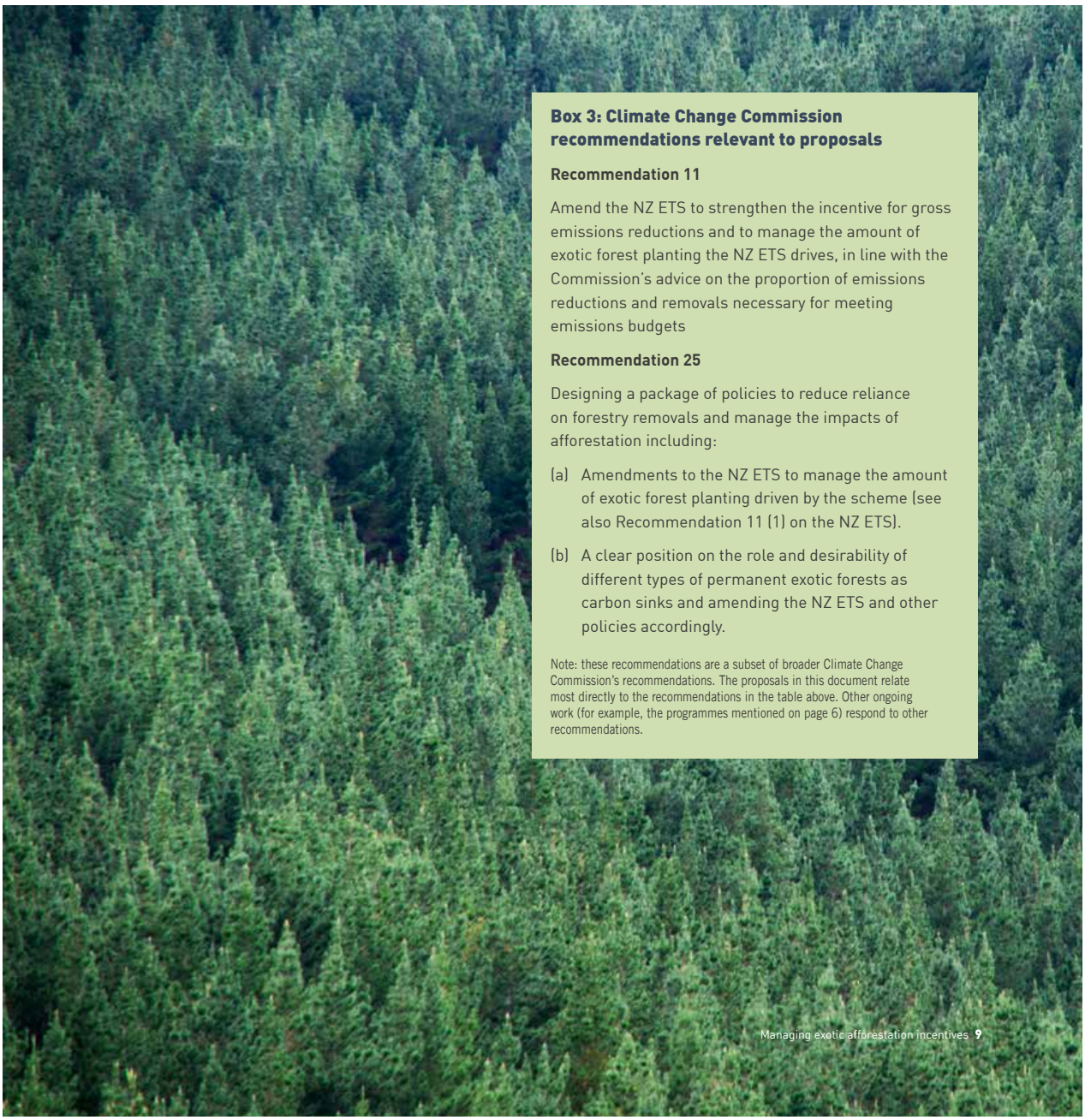
The CCRA was amended in 2020 – adding a new permanent forestry category to the NZ ETS, set to start from 2023

In 2020, the Government introduced major reforms for forestry in the NZ ETS through changes to the CCRA.

An important change was the introduction of a *permanent post-1989 forestry category* to replace the Permanent Forest Sinks Initiative (PFSI). This category will reward landowners for establishing forests – exotic or indigenous – that will not be clear-felled for at least 50 years after they are registered in the NZ ETS.

Forests in this category will earn NZUs for as long as the forest is in the ground and the carbon stock is increasing.

Landowners will currently be able to register their forests in the new permanent forestry category from 1 January 2023.



Box 3: Climate Change Commission recommendations relevant to proposals

Recommendation 11

Amend the NZ ETS to strengthen the incentive for gross emissions reductions and to manage the amount of exotic forest planting the NZ ETS drives, in line with the Commission's advice on the proportion of emissions reductions and removals necessary for meeting emissions budgets

Recommendation 25

Designing a package of policies to reduce reliance on forestry removals and manage the impacts of afforestation including:

(a) Amendments to the NZ ETS to manage the amount of exotic forest planting driven by the scheme (see also Recommendation 11 (1) on the NZ ETS).

(b) A clear position on the role and desirability of different types of permanent exotic forests as carbon sinks and amending the NZ ETS and other policies accordingly.

Note: these recommendations are a subset of broader Climate Change Commission's recommendations. The proposals in this document relate most directly to the recommendations in the table above. Other ongoing work (for example, the programmes mentioned on page 6) respond to other recommendations.

4. Feedback on permanent forestry and the NZ ETS from earlier consultations

This section summarises feedback we received on permanent forestry and the NZ ETS as part of consultation on the Emissions Reduction Plan (ERP) in 2021.

October – November 2021: we consulted on the ERP

The Government recently consulted on the ERP. The ERP sets the policies and strategies for New Zealand to meet our first emissions budget, helping us transition to a low-emissions future in an achievable and affordable way.

Our first ERP will be published in May 2022. We received 10,050 submissions.

The recent ERP consultation asked for feedback on the role of permanent exotic forests in New Zealand's climate change response. The feedback we received during that consultation has helped shape the proposals in this document.

Box 4: Feedback received on permanent exotic forest from the ERP consultation

Across stakeholder groups there was widespread support for indigenous afforestation. However, views on permanent exotic forests differed, with support for limits coming from the agriculture sector, and some disagreement from members of the forestry sector and Māori groups.

There was widespread support from individual submitters for limits on permanent exotic forests, their location or long-term management. The most common reasons for supporting limits were risks to food production and productive land, environmental risks (loss of biodiversity, and wilding, fire and pest risk) and the limited amount of time that exotic forests store carbon. There was also widespread support for incentives for indigenous forests and several submitters viewed that exotic to indigenous transition is a viable option.

Many agricultural industry groups expressed concern about the scale and speed of productive land being converted into exotic forests and the negative impacts this can have on rural communities where there is no intention to harvest. There was support for managing the amount of exotic forest planting that the NZ ETS drives and for the removal of policies that are affecting rural land markets and leading to exotic afforestation on sheep and beef farms.

Some submitters believed exotic forests need to be planted more rapidly and should not be limited until there is a significant buffer for meeting our emissions budgets and targets domestically. There were also some that disputed that exotic permanent forests would have a negative effect on rural communities or would result in the loss of productive farmland.

Some Māori submitters expressed concern about permanent exotic forest being considered a problem and disagree with proposals to limit these forests. They considered permanent forests to be an opportunity for Māori by providing the ability to establish forests in remote areas where harvest is not economically or environmentally feasible, and state limits on permanent exotic forestry will interfere with tino rangatiratanga over their land. Several submitters suggested that financially viable models are needed for indigenous afforestation before limits are placed on permanent exotic forests.

5. The proposals in this document will be significant for Māori

There is a fundamental tension between simple rules applied universally and ensuring rules are suitable for different land types and owner aspirations.

Māori have significant cultural, spiritual and economic interests in forests

Māori have significant interests in forests as rangatira, kaitiaki, land and forest owners, workers and business owners. Māori land[11] (both freehold and Treaty settlement) is also different from other land.

In 2018 Māori were estimated to own $4.3 billion of forestry assets and some 2,200 Māori were employed in the sector (40 percent of the forestry workforce).[12] Around 30 percent of New Zealand's 1.7 million hectares of plantation forestry is estimated to be on Māori land and this is expected to grow to 40 percent as Treaty settlements are completed. Most of this forest is on pre-1990 forest land.

Māori also hold proportionally high economic investment and employment in the broader primary industries. In 2018, the broader Māori economy was estimated at $68.7 billion worth of assets, with $23.4 billion within agriculture, fishing and forestry. Sheep and beef farming are the predominant concentration of Māori assets, at 37 percent of that asset base ($8.6 billion).[13] Forestry contributes 6 percent of the asset base.

We want to hear about the impact of the changes on Māori, and on different types of land.

Māori land is often well suited to permanent forest cover or long rotation forestry

Māori freehold land often has different characteristics to general title land which make it well suited to forestry. Māori freehold land has greater proportions of remote, less versatile land, and is held in smaller, fragmented titles rather than general title. This land also has more forest and shrubland than general title land, particularly indigenous forests established before 1990.

Around 230,000 hectares of Māori land has been identified as well suited to forests – and could qualify for registering in the NZ ETS. Of this, at least 146,000 hectares have been identified as marginal for typical production forestry as they are far from ports.[14] This land is well suited to permanent forestry (including some selective harvesting of high value timber), or long rotation forestry.

The proposals in this document will have impacts on Māori landowners

The proposals in this document affect two types of forestry which present economic opportunities on Māori-owned land – permanent forestry and long rotation forestry. We are seeking feedback from Māori on how these proposals might affect you.

With the proposed removal of the ability to register exotic species in the permanent forest category of the NZ ETS, we also welcome feedback on other opportunities for how the NZ ETS and other policy instruments operated by central government can provide opportunities for less productive land, including land held by Māori. We also welcome feedback on the scale and impacts of the proposed options.

- **Questions 1 to 19** invite feedback on criteria for whether and how exceptions should be provided for forests that consist of exotic species operated under certain conditions (e.g., forests established with exotic species, but managed over time with nearby indigenous seed sources to transition the forest to predominantly indigenous species).[15]
- **Questions 20 to 25** seek views on options for the potential introduction of a long-rotation averaging band.
- **Question 26** invites further ongoing feedback on opportunities to address barriers to indigenous afforestation.

11 Māori collectives hold land in freehold land and settlement land. We use the term Māori land to refer to both freehold and settlement land.
12 https://www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/Research/Te-Ohanga-Maori-Report-2018.pdf?revision=7eae6b2b-14d1-480e-95b8-fb57e6ba6e8e
13 https://www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/Research/Te-Ohanga-Maori-Report-2018.pdf?revision=7eae6b2b-14d1-480e-95b8-fb57e6ba6e8e
14 Based on the LUCAS NZ Land Use Map, analysis undertaken by Te Uru Rakau – Forestry New Zealand.
15 Examined in, Forbes Ecology. (2021). *Transitioning Exotic Plantations to Native Forest: A Report on the State of Knowledge.* Link: www.mpi.govt.nz/dmsdocument/47521-Transitioning-Exotic-Plantations-to-Native-Forest-A-Report-on-the-State-of-Knowledge-2021-22-

6. What is the problem?

On 1 January 2023 the 'permanent post-1989 forest' category (permanent forest) will be added to the NZ ETS.

Permanent forests registered in the NZ ETS will earn units in the scheme (NZUs) for as long as the forest continues to grow and store carbon. There are currently no limits on forest species which can be registered in the permanent forest category.

Rising prices in the NZ ETS are expected to drive large-scale permanent exotic afforestation

The NZ ETS incentivises afforestation by providing NZUs for carbon storage. Rising carbon prices mean afforestation is becoming increasingly profitable. The NZU price has more than doubled within the last year, from around $35 in late 2020 to upwards of $80 in early 2022.

Prices need to keep increasing over time to drive the decarbonisation of New Zealand's economy.[16]

Permanent exotic forests often provide the highest economic return

Under the NZ ETS settings which apply from 2023, the returns on investment are highest for permanent exotic forests (particularly *Pinus radiata*) relative to competing land uses.

This is because exotic forests sequester carbon quicker than indigenous species, are cheaper to establish than indigenous species, and permanent exotic forests earn NZUs for longer than production forests, which are only eligible to earn NZUs for a limited time (between 16 years for *Pinus radiata* and 26 years for Douglas fir).

Based on current NZU spot prices of around $70 to $80, investment returns for permanent exotic forests significantly outperform competing land uses, with an estimated investment return of ~$30,000 per hectare.[17] This compares with returns in the order of ~$4,500 per hectare for sheep and beef farming and ~$20,000 for production forestry.[18]

The profitability of permanent exotic forests in the NZ ETS relative to other productive land-uses will increase as the NZU price rises over time.

This is expected to lead to widespread permanent exotic afforestation

Under the emissions price pathways used by the Climate Change Commission last year, MPI estimates that the NZ ETS could drive upwards of 645,000 hectares of exotic afforestation over this decade.

As much as half of this new afforestation through to 2030 (around 350,000 hectares) is expected to consist of permanent exotic forests. This compares with 1.74 million hectares currently in production forestry in New Zealand and 9.6 million hectares in sheep and beef land.[19]

What direct benefits does widespread permanent exotic afforestation have?

Large scale permanent exotic afforestation would contribute to New Zealand meeting our emissions budgets and targets at low direct economic cost in the short term. Large scale permanent exotic afforestation could also reduce the amount of offshore carbon reductions that the Government may need to purchase to meet New Zealand's NDC for 2030 and subsequent NDCs.[20]

Relative to indigenous forests, a significantly smaller area of land would be required to offset New Zealand's gross emissions through to 2050 with exotic forests.

This fast sequestration rate also provides high direct economic returns for the participant when registered in the NZ ETS.

However, extensive permanent exotic afforestation might not produce the best long-term outcomes for New Zealand (particularly when considering the state of the land, indigenous biodiversity, and economy that we leave for future generations).

New Zealand needs to make trade-offs in considering the role of permanent exotic forests within its climate change response, and the extent to which these are actively incentivised by the Government.

16 Climate Change Commission. (2021) https://ccc-production-media.s3.ap-southeast-2.amazonaws.com/public/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa.pdf

17 Investment returns are expressed as Net Present Value (NPV) in this document. Estimates produced by MPI use current real NZU price and an 8 percent discount rate for forestry over a 50-year term. Sheep and beef returns are derived from Beef+Lamb farm economic data for North Island hard hill country. Production forest returns are estimated over one rotation. Area weighted FMA tables are used for forestry. Average rates are used, however, and the range of returns is wide.

18 Significant variation in investment returns for sheep and beef and production forestry occurs in practise throughout the country based on farm system, land capability and economic factors.

19 Production forestry land figure from https://www.mpi.govt.nz/dmsdocument/43540-2021-NEFD-report
Sheep and beef land figure from https://beeflambnz.com/sites/default/files/data/files/Compendium%202021_digital.pdf

20 The Climate Change Commission estimated that the amount of offshore mitigation needed under different Nationally Determined Contribution levels varied between 47-121Mt CO2e.

There are 3 key issues with widespread permanent exotic afforestation...

Issue 1: It will drive land use change and displace productive land uses that provide wider economic and employment benefits

The high NZU price means permanent exotic forests provide better economic returns than other rural land uses. This includes higher returns than other types of forestry – both production forests and indigenous forests, as well as significantly higher economic returns than sheep and beef farming. At a carbon price of $110[21] permanent exotic forest can become competitive with lower productivity dairy land.[22]

Due to these high economic returns, permanent exotic forests have started to displace other productive land-uses (such as sheep and beef farming and production forests) in some regions.

Permanent exotic afforestation contributes less export earnings and fewer jobs to the economy

Industries such as sheep and beef farming and production forestry provide important export earnings for the country. Sheep and beef farming and production forestry contributed $10.7 billion and $5.5 billion in export revenue in 2020 respectively. Returns from forestry in the NZ ETS do not generate export revenue. Therefore, if large areas of productive land are converted to permanent exotic forestry, export revenue will be reduced.

Permanent exotic forests also provide fewer direct jobs and less added value in the economy. A report from PricewaterhouseCoopers estimated that both plantation forestry and sheep and beef farming outperform permanent exotic forests in contribution to GDP and jobs per area of land. Impacts are expected to disproportionally affect regions with higher levels of permanent exotic afforestation.

Analysis by BakerAg (2019)[23] looking at direct spend and employment in the Wairoa district also found that permanent exotic forestry provided fewer jobs and contributed less direct spend than both production forestry and sheep and beef farming. Sheep and beef farming provided the highest direct spend and employment.

There are also risks for succession planning and wider land use flexibility from the status quo. Higher land prices (spurred by the returns of permanent exotic forestry) will make it more costly for other primary sector businesses to purchase new land.

Secondly, the high value of liabilities on permanent exotic forest land that has been registered in the NZ ETS for an extended period of time will make it highly costly for that land to be transitioned to any other uses. Where permanent exotic afforestation occurs at scale on more productive land use classes, this creates risks for New Zealand's long-term land use flexibility.

Land converted to permanent exotic forests can create issues for nearby communities in parts of the country. However, returns earned by landowners from NZ ETS forestry can also lead to higher profits (relative to competing land uses) being spent or invested within their local communities (for example, in renovations to houses in the area or financing capital investment in other economic activity). These benefits were highlighted by some submissions to the ERP, and feedback from Māori foresters during engagement through the ERP consultation in late 2021.

Widespread indigenous afforestation still present risks for land use change – but we think this a lower risk due to the lower financial returns from carbon storage in indigenous forests. We will consider ways to manage these risks when we consult on changes to the resource management system later this year.

Table 2: Annual contribution to GDP and full-time equivalent (FTEs) jobs per unit of area

Land-use	GDP per 1,000 hectares	FTEs per 1,000 hectares
Permanent exotic forests	$0.8 million	2
Production forestry[24]	$4.8 million	38
Sheep and beef farming[25]	$1.7 million	17

Source: PriceWaterhouseCoopers. (2020). *Economic Impact of Forestry in New Zealand.*

21 Reflecting the 2026 NZ ETS auction cost containment reserve trigger.
22 Based on MPI analysis in January 2022, using $110 NZU price real and financial information from Dairy NZ.
23 BakerAg (2019) Socio-economic impacts of large-scale afforestation on rural communities in the Wairoa District.
24 Production forestry relates to 1,000 hectares of forests at all age classes (including afforestation and harvest) and doesn't reflect the contribution to the economy of 1,000 hectares of new afforestation
25 Figures for sheep and beef farming represent national aggregates including extensive hill country stations. Sheep and beef farming's economic contribution per hectare will be greater when low-stocked extensive hill country farms are excluded from the figures.

We are interested in your experiences and evidence related to the benefits and risks of permanent exotic forests in your region or community as part of your submission. This will help us to gather a fuller understanding of how the proposed changes impact different rural communities in different ways.

Issue 2: It may make it harder to achieve our long-term climate change targets

While carbon sequestration is critical to meeting our emissions budgets and targets, unconstrained permanent exotic afforestation within the NZ ETS has risks for reducing incentives across the economy to reduce gross emissions in the longer-term.

Ongoing high levels of NZU supply for permanent exotic forests can create risks for the Government's ongoing management of levels of supply relative to demand in the NZ ETS. This has implications for our ability to drive gross emissions reductions.

Emitters may be able to secure ongoing supply of relatively low-cost NZUs for the lifetime of any new capital investment in emitting technologies (for example, through negotiating a futures agreement of ongoing sale of NZUs with a land owner). Where this occurs, emitters could be able to offset their emissions at relatively low cost, rather than finding ways to reduce them.

Other gross emitters may also anticipate a relatively lower cost trajectory for the NZ ETS price when making investment decisions (by assuming permanent exotic forests will provide relatively abundant NZU supply over the coming decades when forming their investment decisions).

MPI estimates the impacts of removing permanent exotic forests from the NZ ETS are likely to reduce the level of removals counted towards our second and third emissions budgets. This is shown in Table 3 below.

These changes may impact the Government's ability to meet the Commission's demonstration pathway in the third emissions budget period.

Under current policies and settings, removals from forestry are expected to become the largest source of supply in the NZ ETS by the early 2030s. Increasing abundance of NZUs from permanent exotic forests will reduce the impact of the Government's other levers affecting price and supply in the scheme.

Forests being planted over the next few years will lead to the high levels of NZU supply from forestry we expect to see in the 2030s and later decades. Because of this, choices today on permanent exotic forests will have ongoing long-term impacts on the NZ ETS.

The proposed changes are likely to have the opposite impact on gross emissions from agriculture in the short-term (as these are not currently required to surrender NZUs for their gross emissions in the NZ ETS). Relative to the status quo, removing permanent exotic forestry from the NZ ETS will lead to increased levels of gross emissions from agriculture due to a reduced area of agricultural land being converted to permanent forest.

Table 3: Carbon removals from forestry for the first three budget periods (millions of tonnes of carbon dioxide credited towards meeting budget)

Budget period	2022-2025	2026-2030	2031-2035
Commission's demonstration pathway *(2021 Commission projections)*	26	50	69
Status quo *(2022 carbon price pathway)*[26]	24	51	107
After exotic forests removed from permanent forest category *(2021 Government projections)*	24	48	66

Issue 3: widespread permanent exotic afforestation has environmental impacts

Permanent forests are an appropriate land use in some situations. For example, there is an estimated 840,000 hectares of land in the North Island that is deemed at risk of severe erosion and much of this may be suitable for permanent forest cover.[27]

The Government needs to consider the type of permanent forests it would like to incentivise through the NZ ETS factoring in long-term outcomes for New Zealand.

In general, well managed indigenous forests are likely to have better environmental and biodiversity outcomes over time than comparable exotic forests.

While permanent exotic forests have environmental benefits over and above some competing land uses (for example, lower sediment loss to waterways, shade and habitat for wildlife), if not well managed, these forests carry longer-term environmental risks.

26 Projections use an NZU price of $50 in 2022 (plus 10 percent annual increase). The Government projections used in this table were compiled in June 2021.
27 https://environment.govt.nz/assets/Publications/Files/Our-land-201-final.pdf

For example, wilding conifers could have an adverse impact on conservation forests and pastoral land uses, while fire and disease present significant risk to plantation forests. Over time, fast-growing, heavy forests planted on steep, erosion prone land are at risk of instability through heavy rain and windthrow, which can result in risks to communities and landowners.

Because of the short lifespan of most exotics (especially *Pinus radiata*), we also do not know how these forests will develop over time and the extent to which benefits they offer will be maintained.

The Government's parallel work programme to develop new national direction for forests under the resource management system will look to further address these environmental risks in concert with the changes proposed for the NZ ETS.

Why do we want to act now?

Current prevailing NZU prices in the NZ ETS are expected to drive large-scale permanent exotic afforestation, and prices are expected to increase over time to drive the decarbonisation of New Zealand's economy.

Financial returns for permanent exotic forests already significantly outperform competing land uses, and the relative profitability of these forests will increase as the NZU prices rise. In response to the increasing NZU price, the Government estimates the NZ ETS could drive around 350,000 hectares of new permanent exotic forest planting this decade.

The new permanent post-1989 forestry category in the NZ ETS will come into effect from 1 January 2023, so this issue needs to be considered prior to the category becoming available.

Questions – is this a fair description of the problem?

1. Do you agree with our description of the problem? Why/Why not?
2. Do you have evidence you can share that supports or contradicts this problem definition? Or that demonstrate other problems?

7. Objectives and assessment criteria

Afforestation is needed to meet our climate change emissions budgets and targets

Our forests will play a critical role in meeting our targets, while growing a productive source of renewable materials that can provide substitutes for emissions-intensive materials and fossil fuels and support regional economies. Forests can also provide benefits including erosion control, improved water quality, species habitats, and opportunities for cultural and recreational activities.

The Government's broader objectives for forestry include:

- **Sequestration:** forests help meet our climate change targets by offsetting emissions while gross emissions are actively reduced.
- **Substitution:** the forestry and wood processing sectors support the transition to a low-carbon bioeconomy by producing substitutes for emissions intensive products and energy sources
- **Economy and jobs:** forestry and wood processing sectors contribute to regional and economic development, and support the wellbeing of rural communities by providing high quality employment
- **Native biodiversity:** new and existing forests provide and support native biodiversity
- **Environment:** our forests support freshwater quality, soil conservation and resilience to climate change
- **Māori:** forests and forest products support the cultural, social, environmental, and economic aspirations of Māori whānau, hapū and iwi.

We want to ensure that afforestation driven by the NZ ETS achieves the best outcomes for New Zealand. This requires us to balance some complex trade-offs – for example, between meeting our emissions budgets and targets, and meeting wider objectives and outcomes for forests, land use, rural communities and economies, and biodiversity.

Assessment criteria

Options presented in this consultation document have been assessed using the following criteria. Our full analysis can be found in the interim Regulatory Impact Statement.

Question – assessment criteria?

3. Do you agree with our criteria for managing permanent exotic afforestation? If not, what would you change and why?

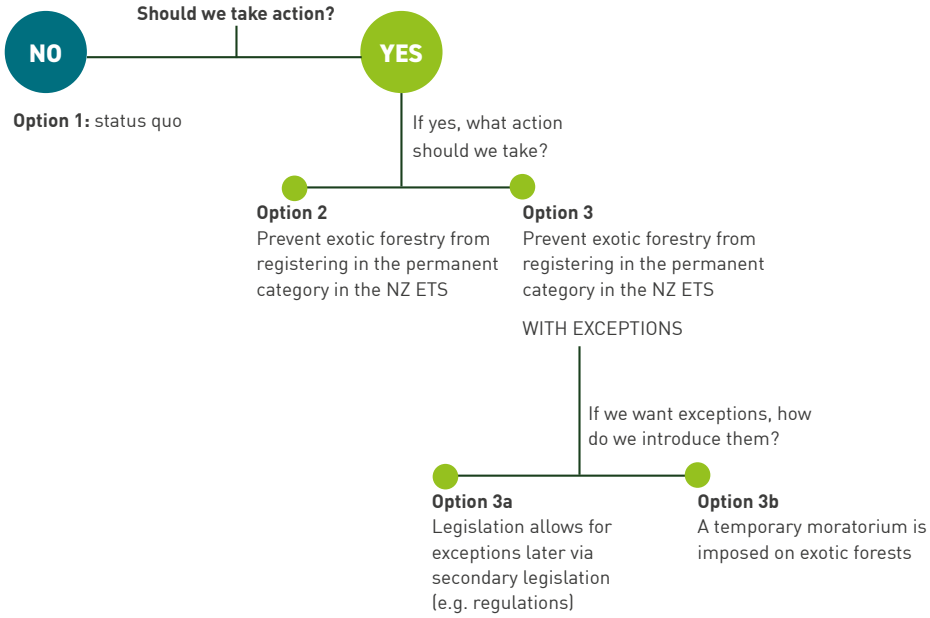
1. **Provides sequestration to meet emissions budgets and targets.**
   - Forests help meet New Zealand's emissions budgets and targets (NDCs) by offsetting emissions.
2. **Supports gross emissions reductions.**
   - Afforestation at a level to avoid reducing NZU prices and impacting gross emissions reductions.
3. **Provides substitutes for emissions intensive products and energy sources**
   - The forestry and wood processing sectors support the transition to a low-carbon bioeconomy by producing substitutes for emissions intensive products and energy sources.
4. **Supports regional economies and jobs**
   - Forestry and wood processing sectors contribute to regional and economic development and support the wellbeing of rural communities by providing high quality employment.
5. **Supports indigenous biodiversity**
   - New and existing indigenous forests provide and support indigenous biodiversity.
6. **Provides environment benefits**
   - Our forests support freshwater quality, soil conservation and resilience to climate change, and are not sources of pests.
7. **Supports Māori aspirations for their land**
   - Actively protect Māori interests and ability to make decisions regarding their land in line with aspirations. Forests and forest products support the cultural, social, environmental and economic aspirations of Māori whānau, hapū and iwi.
8. **Effective, practical and implemented quickly**
   - The option can be implemented quickly. It is operationally feasible, resilient to future changes and avoids unintended consequences. The option should also minimise administration and compliance costs, support the purpose and integrity of the NZ ETS and maintain regulatory certainty.

8. Options to manage permanent exotic forestry in the NZ ETS

There are two basic decisions we need to make around this issue.

- Should we take action?
- If yes, what action should we take?

Figure 2: Decision tree on whether and how to manage permanent exotic forestry



Option One: Status quo: allow unlimited exotic and indigenous registration in the post-1989 permanent forestry category

There are currently no restrictions on the types of forest that can be registered in the NZ ETS permanent post-1989 forest category, or upper limits on the total area.

To be registered an area of forest is required to meet the definition of forest land in the CCRA, be post-1989 forest land and meet the conditions set out in the CCRA.

Option Two: Prevent exotic forestry from registering in the permanent post-1989 category in the NZ ETS

When the permanent post-1989 category in the NZ ETS comes into effect on 1 January 2023, exotic forests will not be able to be registered. This option would restrict the permanent post-1989 category in the NZ ETS to indigenous forests.

Option two would make entering the permanent post-1989 category more complicated than the status quo, because forests will have to be checked to make sure they are not exotic. New rules will also be needed around when to reject or adjust applications with exotic forest.

Option Three: As for option two, but with exceptions for exotic species under certain conditions or criteria

Option three is the same as option two – but with the opportunity to introduce exceptions for special circumstances.

There may be benefits to creating exceptions to help realise some of the benefits of including exotic forests in the permanent post-1989 category.

We are aware that creating exceptions will introduce more complexity into the NZ ETS, and some could be costly to monitor and implement (for both the participant

and Te Uru Rākau – the New Zealand Forest Service as the administrator).

There may also be alternative ways to incentivise planting forests in the circumstances which exceptions could cover, other than through the permanent post-1989 category of the NZ ETS.

We'd like your feedback on whether we should consider exceptions, and if so, under what conditions and criteria should exceptions be provided?

Circumstances where exceptions could be relevant:

- Exotic planting for erosion control or small land parcels (for example, pole planting low stocked, space planted poplars or willows on erosion-prone land).
- Remote and marginal land (which can be well suited to permanent forestry).
- Certain species of exotic trees (for example, long-lived exotic species like redwoods for amenity purposes or sustainable harvest of high value timbers).
- Plantations transitioning from exotic to indigenous forests over time. (see box below).'

Box 5: Should there be exceptions for plantations transitioning from exotic to indigenous forests?

Some permanent exotic forests have been established with the stated intent of transitioning to indigenous forest over time. There are differing views in contemporary discussions of this forest model over whether this can be achieved cost-effectively at scale, in all environments and climatic conditions, to achieve an acceptable ecological outcome.[28]

There are also challenges to how such forests could be managed for both the participant and the administrator, if these were registered in the permanent forest category. For example, exceptions may need to make transitions time-bound to be enforceable (and ensure forests don't remain exotic). Transitioning forests would also be at risk of incurring significant liabilities in the NZ ETS, as replacing large exotic trees with smaller and slower growing regenerating indigenous species may result in a decrease in carbon stocks for an extended period of years.

The Government will need to consider the implications of this model of forestry, and assess this model against our broader objectives for managing afforestation in New Zealand. Another way to manage risks from this model of forestry could be through the Government's parallel work developing changes to the treatment of forestry under the resource management system (for example, through new or amended national direction).

Through this consultation, we're interested in your feedback on the benefits, trade-offs and risks that would come with exceptions for this type of forest being allowed to register in the NZ ETS permanent forest category.

Question – designing the options to manage permanent afforestation

Designing exceptions (option three)

4. Should we provide for exceptions allowing exotic species to register in the permanent forest category under certain conditions?
5. Are there particular circumstances that you support introducing exceptions for (for example, exceptions for certain species of exotics)? Why?
   - What are the likely impacts, risks and costs of allowing exceptions in these circumstances?
   - If we allow exceptions for exotic species under certain conditions, should we place additional conditions on the granting of this exception? What could these be?
6. Are there alternative ways we can recognise and encourage these forests, either within, or outside, the NZ ETS?

Preferred options

Options two and three are preferred. Both options would help manage the risk of large-scale conversion of land into permanent exotic forests, improve the relative incentive for indigenous forests on less productive land, and help meet our climate change targets by offsetting emissions while gross emissions are actively reduced.

Option three can provide benefits for NZ ETS and New Zealand (e.g., reduced erosion through greater uptake of pole planting registered in the NZ ETS). However, the level of benefits relative to costs are likely to vary depending on the types of exceptions allowed, and how these are implemented.

In determining whether to pursue option 2 (no exceptions) or option 3 (providing exceptions under certain criteria or conditions), there is a balance to be struck between driving wider benefits and environmental outcomes; compared with overall administrative complexity and cost, and mitigation of the key issues/risks identified with exotic species being registered in the permanent post-1989 forest category.

28 Forbes Ecology. (2021). *Transitioning Exotic Plantations to Native Forest: A Report on the State of Knowledge: Prepared for Te Uru Rākau – New Zealand Forestry Service.* https://www.mpi.govt.nz/dmsdocument/47521-Transitioning-Exotic-Plantations-to-Native-Forest-A-Report-on-the-State-of-Knowledge-2021-22-

We will use feedback gathered through consultation to determine whether and how to pursue exceptions. You can see our in-depth analysis of these options in the interim Regulatory Impact Statement.

Question – options to manage permanent afforestation

7. Of these options, what is your preferred approach? Why? Are there other options you prefer, that we haven't considered?

If we choose option 2 or 3 (and remove permanent exotic forests from the NZ ETS), we want to introduce this from 1 January 2023

The new permanent post-1989 forestry category in the NZ ETS will come into effect from 1 January 2023. If we choose option 2 or 3 (and remove permanent exotic forests from the NZ ETS) – we want this to come into effect from 1 January 2023.

We considered, but discarded, the option of introducing the changes at a later date (for example, 1 January 2025). Although this would give us more time to consider the issue and solutions (including introducing exceptions at the same time as the changes come into effect), we consider letting exotic forests register in the permanent category carries risks.

Offering a window of time for forests to register in the permanent exotic category is likely to lead to a surge of forests registering the NZ ETS in this category – exacerbating the issue.

This would result in the negative impacts we have identified (although on a smaller scale than the status quo), as well as make administering the NZ ETS system more complicated.

It would also create a permanent forest legacy which limits future governments' flexibility to take decisions affecting NZ ETS settings. Therefore, we want to act before 1 January 2023.

Question – Timeframes

8. Do you agree with our preferred approach (acting before 1 January 2023)? Why/why not? If not, what is your preference?

If we choose option 3 (introducing exceptions) ... there are two ways we could do this

There are two ways we could introduce exceptions (if we choose this option). We could either:

- **Option 3A** – add the ability to introduce exceptions to the restriction on permanent exotic forests registering the NZ ETS – via secondary legislation.
- **Option 3B** – introduce a moratorium now, preventing any permanent exotic forests registering in the NZ ETS while decisions on exceptions are worked through.

If we choose to introduce exceptions, we anticipate these would need to be introduced after 1 January 2023, to allow adequate time to work through their design (including operational changes).

We considered, but discarded, the option of having all exceptions in place before 1 January 2023. This option would not have allowed enough time to work through their design and consider the impacts of the exceptions.

Option 3A: add the ability to introduce exceptions via secondary legislation [Preferred]

This option would allow exceptions to be introduced through secondary legislation (for example, by regulations or Order in Council).

The Act would need to state what matters or criteria the Minister must consider before recommending these to the Governor-General.

Other parts of the CCRA have similar mechanisms in place. For example, Section 60 of the CCRA allows the Minister of Climate Change to recommend that exemptions be made to exempt people from being a participant in the NZ ETS, or needing to surrender NZUs, in limited circumstances. In making recommendations, section 60 requires the Minister to:

- be satisfied that the costs won't exceed the benefits, and the order won't undermine the environmental integrity of the NZ ETS.
- give regard to:
  - the need to maintain the environmental integrity of the NZ ETS;
  - the desirability of minimising any compliance and administrative costs associated with the NZ ETS;
  - the relative costs of giving the exemption or not and who will bear the costs of the exemption;
  - any alternatives for achieving the objectives the Minister has in giving the exemption;
  - and other matters the Minister considers relevant.

Box 6: we will also make provisions for Permanent Forest Sink initiative (PFSI) covenant holders with exotic forests

The PFSI was one of the Government's sustainable forestry programmes that enabled landowners to receive carbon units through the creation of permanent forests. The PFSI and the NZ ETS was reviewed between 2013 and 2018. In December 2018, the Government announced it would discontinue the PFSI, instead replacing it with the new permanent post-1989 forest category in the NZ ETS.

The Government has agreed that covenant holders won't be adversely affected by the discontinuation of the PFSI. Covenant holders will have the option to transfer their PFSI covenants into the new permanent post-1989 forestry category when it becomes available on 1 January 2023.

No new forest land will be added to the PFSI before being moved into the NZ ETS.

The PFSI is discussed is more detail in Section 9 (page 21).

Option 3B: moratorium

A moratorium could temporarily prevent exotic forests, or all types of forest from entering the permanent category of the NZ ETS. A moratorium could be short (1-2 years) or longer (3-5 years). The legislation could provide an ability to extend the moratorium via secondary legislation.

There are a range of ways the moratorium could apply. For example, it could end automatically, or could require a decision after several years to continue (or to end). Under a moratorium, once the moratorium ends, exotic forests could be able to register in the permanent post-1989 category in the NZ ETS. We do not have a preferred option.

A moratorium would give the Government time to consider where and what types of exotic forests are desirable in the category – while keeping open the possibility of the Government letting the moratorium lapse (and allowing permanent exotic forests into the permanent forest category). If the Government decides to introduce exceptions during or after the moratorium, these could be introduced via secondary legislation.

There are risks with a moratorium. A moratorium (of any length) may not significantly alter the incentives to stop foresters planting permanent exotic forests now – if they expect to be able to register the forests at some point in future once the moratorium has ended. If this were the case, exotic species might be registered into averaging accounting and then moved to the permanent forest category if/when the moratorium ends.

Question – comparing Option 3a (exceptions by secondary legislation) and Option 3b (exceptions after a moratorium)

If we choose to introduce exceptions ...

9. Do you support exceptions by regulations [option 3a] or exceptions after a moratorium [option 3b]? Why?
10. If we choose to introduce exceptions by regulations, what conditions or criteria should be placed on the Minister in choosing to pursue these?
11. If we choose a moratorium (Option 3b) – how long should it be? Why?
12. Do you think a different type of moratorium (whether it requires a decision to be ended/ continued) would have different impacts? Or do you prefer a different approach?

Managing the risk of forests in other NZ ETS categories being managed as permanent

Removing the ability to register exotic forests in the NZ ETS permanent category will reduce the incentive to plant permanent exotic forests. However, the Government also needs to monitor the risks associated with other types of forests registered in the NZ ETS being managed as permanent forests.

At the current and expected future NZU prices *Pinus radiata* forests registered under averaging accounting are expected to have a positive return on investment, regardless of whether they are harvested. There is a risk that forests registered under averaging accounting could be managed as permanent if harvesting is not economically viable.

These forests could contribute negative environmental impacts if poorly managed such as wilding, pests, disease and fire risk.

Furthermore, forests currently registered under the existing NZ ETS stock change accounting are not currently required to switch to averaging accounting when it becomes available on 1 January 2023.

Forests registered under stock change between 1 January 2019 and 31 December 2022 will have the option to switch to averaging accounting once it becomes available. Forests registered before 2019 will remain on stock change. There is a risk that a proportion of the 310,000 hectares of exotic forests currently registered under stock change accounting could be managed as permanent forests and continue to earn NZUs within the NZ ETS (or sold to new owners who convert management of the forest to a permanent exotic forest).

The Government will need to consider the likelihood that exotic forests registered under both stock change and averaging accounting will be managed as permanent and whether measures are needed to mitigate potential adverse impacts.

9. Implementing changes to the permanent forestry category

If we choose to restrict exotic forests in the NZ ETS permanent category, we will need to ensure the restrictions are enforceable and enforced. We want feedback on:

1. How we define indigenous forest? What happens if forest changes over time, and no longer fits this definition?
2. If we remove forests which no longer meet the definition of indigenous forest from the permanent category in the NZ ETS, how should we do it?
3. If we remove exotic forests from the permanent category in the NZ ETS, what changes should be made to the penalties in the category?
4. Treatment of exotic forests in the PFSI.

How should we define indigenous forest? What happens if forest changes over time, and no longer fits this definition?

Checking forests at registration

We propose to check the forest type at registration. We could reject or alter applications which contain exotic forests. If rejected, the participant would be able to resubmit the application without those areas of exotic forest.

What happens if the forest changes after it has been registered?

Forests and species composition changes over time. Occasionally, some land will be indigenous forest at registration and become predominantly exotic. This can be due to specific events, (such as disease or a fire) or slower processes like wilding spread from within the forest or a neighbouring property.

Often, these species changes can be outside the participants control, and are expensive to reverse (particularly if the exotic forest must be cleared). We want your input on how we should monitor compliance on an ongoing basis, and what you think we should do if the forest becomes non-compliant. We are considering two options. We are interested to hear from you if there are other options you prefer.

Option 1: Areas of forest which become predominantly exotic are removed from the NZ ETS

Participants could be required to declare if any of their forest becomes exotic when submitting an emissions return. We could then remove it from the NZ ETS, transition it to averaging accounting, or require the participant to reinstate indigenous forest as the dominant type.

These options are set out in more detail below. Removing the forest from the NZ ETS could be very expensive for participants, and could create risk for owners of indigenous forests if species changes occur outside their control. However, it would mean that the restrictions on exotic species in the permanent category in the NZ ETS are very tightly enforced.

Option 2: We continue to treat the forest as it was originally registered in the NZ ETS, even if areas change to exotic over time

We could treat any area which becomes non-compliant over time as if the forest is still indigenous. The area would continue to earn NZUs like an indigenous forest, even though it may now contain predominantly exotic species. This could be cheaper and lower risk for the participant, while still removing the incentive to transition a permanent indigenous forest to an exotic forest.

If we choose to remove forests which have become predominantly exotic over time (option 1 above), how should we do it?

If Option 1 above is implemented, there are different methods we can use to remove the forest from the permanent category in the NZ ETS.

Option 1A: Remove the land from the NZ ETS immediately.

Once an area of forest no longer complies with the restrictions of the permanent category (e.g. indigenous becomes exotic), it is deregistered and the participant must surrender NZUs. Leaving the category could be very expensive for participants, and mean owners are less likely to register indigenous forests in the permanent category.

Option 1B: Allow the land to remain in the NZ ETS but transition to averaging accounting

This would potentially reduce the cost for the participant but would allow participants to 'escape' their permanence period by converting their indigenous forest to an exotic forest.

Option 1C: Provide a time-period for the participant to become compliant again

Participants could be given a certain number of years to make the forest meet the conditions of the category, and if they do not do this within the timeframe, the forest is removed and NZU surrenders apply. Accounting could also pause over the affected areas in a similar way to temporary adverse event exemptions, where participants could stop earning NZUs until the forest returns to being predominantly indigenous forest. Restoring indigenous forest could be very expensive if it was required at scale, and could mean owners are less likely to register indigenous forests in the permanent category.

Participants who have to clear exotics to restore indigenous forests could also be subject to penalties for clear-felling forest registered in the permanent category. Fines would further increase the cost of and risk for participants in the permanent category.

The next section of this document discusses changes to the penalty regime for the permanent category.

If we remove exotic forests from the permanent activity, what changes should be made to the penalties in the permanent category?

The permanent activity has strong penalties for clear-felling forests, to protect the requirement to leave the forest for 50 years with no 'clear-felling'.[29] A participant who clear-fells will be fined equal to the deemed value of the forest which was cleared below 30 percent canopy cover. This is a complex penalty driven by the potential for high returns from clear-felling exotic forests and selling the timber, and was designed to remove any incentive to clear-fell permanent forests.

If exotic species are heavily restricted in the category, we may be able to safeguard the indigenous forest through other mechanisms which are simpler and less severe.

For example, we could make clear-felling a prosecutable offence with a set rate per hectare of clearing, based on approximate returns from indigenous forestry.

We want to know if you think penalties should be reconsidered if exotics are restricted within the category, and if so, what penalty would be more appropriate.

How will exotic forests registered in the PFSI be treated?

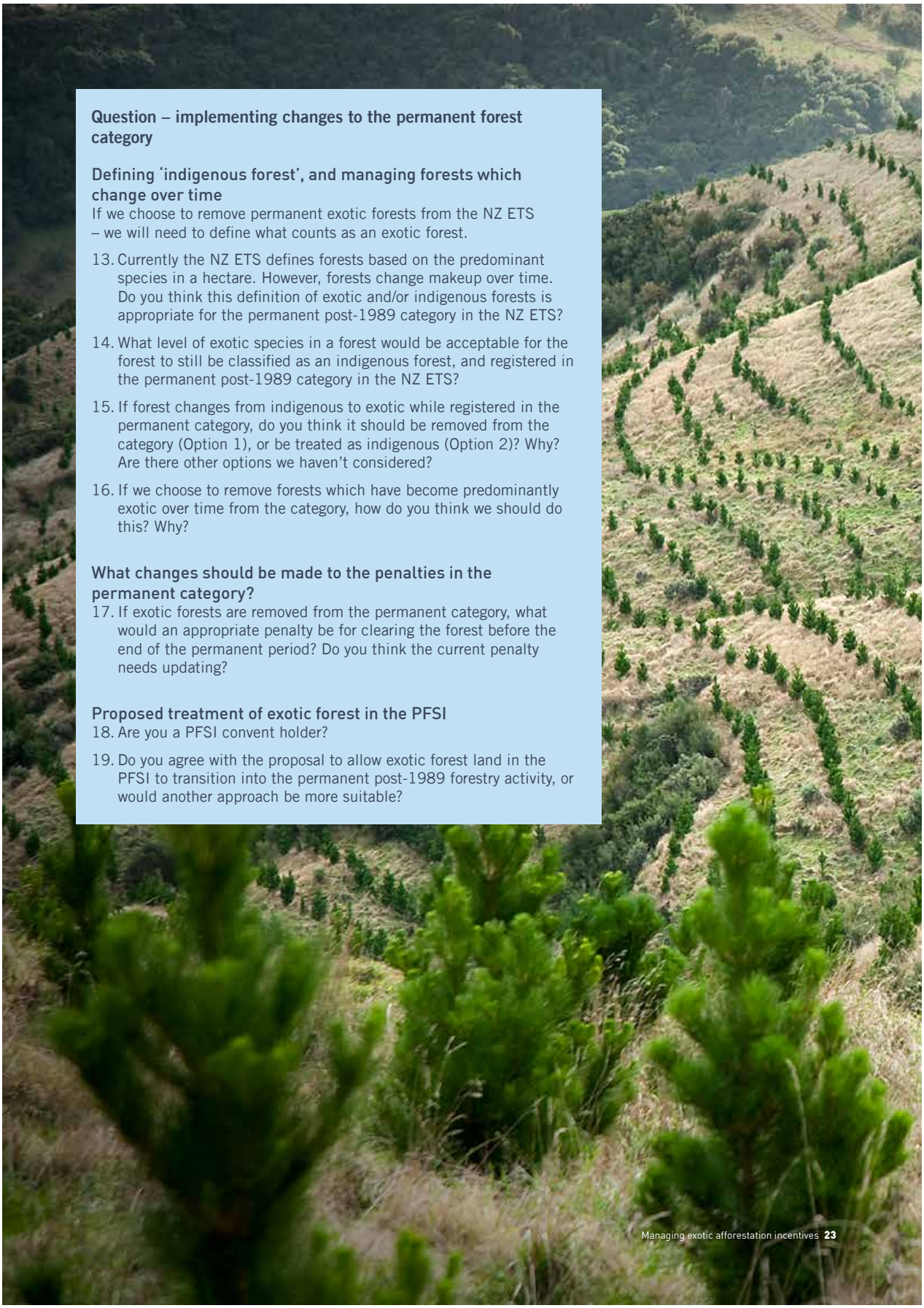
The PFSI was one of the Government's sustainable forestry programmes that enabled landowners to receive carbon units through the creation of permanent forests. The PFSI and the NZ ETS was reviewed between 2013 and 2018. In December 2018, the Government announced it would discontinue the PFSI, instead replacing it with the new permanent post-1989 forest activity in the NZ ETS.

Around 3,600 hectares of exotic forest are on PFSI covenanted land, from a total of around 15,500 hectares under PFSI covenant. No new forest land will be added to the PFSI before it is moved into the NZ ETS.

In 2023, PFSI covenant holders will have the option to transfer the forest land in their PFSI covenants into the new permanent post-1989 forestry activity or standard post-1989 forestry subject to averaging accounting. For forest land which transfers to averaging, if the forest land is older than the appropriate average, there will be a surrender obligation for the difference.

We propose to allow the exotic forest in the PFSI to be able to transfer into the permanent post-1989 forestry category, and remain in the NZ ETS, regardless of the wider decisions that result from this paper.

29 Clear-felling is defined in the Climate Change Response (Emissions Trading Reform) Act 2020 as at least one hectare on which trees are cleared or killed by any form of human activity (including felling, harvesting, burning, removal by mechanical means or herbicide spraying with intent to kill), and that after clearing or killing the land has tree crown cover of less than 30 percent in each hectare.



Question – implementing changes to the permanent forest category

Defining 'indigenous forest', and managing forests which change over time

If we choose to remove permanent exotic forests from the NZ ETS – we will need to define what counts as an exotic forest.

13. Currently the NZ ETS defines forests based on the predominant species in a hectare. However, forests change makeup over time. Do you think this definition of exotic and/or indigenous forests is appropriate for the permanent post-1989 category in the NZ ETS?
14. What level of exotic species in a forest would be acceptable for the forest to still be classified as an indigenous forest, and registered in the permanent post-1989 category in the NZ ETS?
15. If forest changes from indigenous to exotic while registered in the permanent category, do you think it should be removed from the category (Option 1), or be treated as indigenous (Option 2)? Why? Are there other options we haven't considered?
16. If we choose to remove forests which have become predominantly exotic over time from the category, how do you think we should do this? Why?

What changes should be made to the penalties in the permanent category?

17. If exotic forests are removed from the permanent category, what would an appropriate penalty be for clearing the forest before the end of the permanent period? Do you think the current penalty needs updating?

Proposed treatment of exotic forest in the PFSI

18. Are you a PFSI convent holder?
19. Do you agree with the proposal to allow exotic forest land in the PFSI to transition into the permanent post-1989 forestry activity, or would another approach be more suitable?

10. Averaging accounting for remote and marginal land

From 1 January 2023, a new carbon accounting method – averaging accounting – will be used to determine how and when newly registered production forests in the NZ ETS will earn NZUs. Averaging accounting was introduced to simplify the process of calculating and earning NZUs and encourage afforestation by delivering more low-risk carbon to owners of production forests.[30]

During consultation on averaging accounting in 2021, stakeholders highlighted that not all forests registered under averaging accounting will be harvested at an age which results in the corresponding average age. Forests on remote and marginal land with high harvesting costs are often left to grow older (and can store more carbon) than the typical harvest age if the costs of harvesting outweigh the revenue from selling the logs.

We have an opportunity to consider changes to how we apply averaging accounting to remote and marginal land. We invite your views on developing and designing a "longer rotation" averaging forest category which recognises *Pinus radiata* grown on remote and marginal land is likely to be harvested later than other production forests, so will probably store more carbon.

What is averaging accounting?

Forests registered under averaging accounting earn NZUs based on the long-term amount of carbon the forest is expected to store on average over many planting and harvesting cycles (rotations).

Under averaging accounting new forests earn NZUs up until the age the forest reaches its expected long-term average carbon stock. The age that the forest reaches its long-term carbon stock is called its 'average age'.

Averaging accounting sets one average age for each forest type. The average ages, which are set out below, are based on the typical New Zealand harvest age for each forest type:[31]

- *Pinus radiata*: age 16
- Douglas fir: age 26
- Exotic softwoods: age 22
- Exotic hardwoods: age 12
- Indigenous: age 23

After a forest reaches its average age no further transactions of NZUs are required. Forests will not earn or be required to surrender any additional NZUs, provided the forest continues to be replanted after harvesting.

This enables foresters to manage their forests with lower ongoing administrative and transaction costs than the current accounting method (stock change accounting), and provides flexibility for managing these forests in line with changing economic, regulatory, and environmental conditions.

Averaging accounting is replacing the existing stock change accounting method used in the NZ ETS since 2008 for newly registered forests. Stock change provides continuous NZUs for forests as they grow, and requires NZUs to be surrendered if and when the forest is harvested. If the forest is replanted after harvest the forest can again earn NZUs for its growth.

Forests registered on stock change accounting are not currently required to switch to averaging accounting. However, forests registered since 1 January 2019 can switch to averaging (if they choose to do so) once the averaging accounting becomes available on 1 January 2023. Averaging accounting will be only option available for forests registered after 1 January 2023.

We have an opportunity to improve how averaging accounting applies to remote and marginal land

Forests with high harvesting costs are often left to grow older than the typical harvest age if the costs of harvesting outweigh the revenue from selling the logs. These forests tend to be remote, located far from ports or domestic markets, difficult to access, grown on marginal land, or expensive to harvest due to other factors such as slope.

Forests harvested later than usual, are likely to have a higher long term average carbon stock than forests harvested at the typical harvest age.

During consultation in 2021, stakeholders suggested a long rotation category should be created under averaging accounting for *Pinus radiata* forests which are not profitable to harvest at age 28, recognising additional carbon stored by these forests.

30 Because NZUs do not have to be repaid after harvest or species changes, all of the NZUs a forest earns under averaging can be traded at low risk, so long as the forests are replanted after harvest.

31 https://www.mpi.govt.nz/forestry/forestry-in-the-emissions-trading-scheme/averaging-accounting/ The average age for indigenous forest was calculated on the oldest age in the lookup tables – age 50. We anticipate this could be extended in the future as tables are updated.

Māori own a disproportionate amount of remote and marginal land which is typically better suited to long rotation forestry or permanent forestry. Māori stakeholders were particularly concerned about a lack of recognition for the additional carbon stored by long-rotation forests. Approximately 146,000 hectares of Māori land may be eligible to be registered in the NZ ETS which is located over 100km from port and may not be profitable to harvest *Pinus radiata* forests at the typical harvest age of 28.[32]

Long rotation forestry increases the quality of timber, creating the potential for higher value uses and may provide an opportunity for land that is marginal for production forestry on a typical rotation length (or land that may be considered for permanent forestry) to be harvested and provide an economic return.

We seek your feedback on whether the Government should develop a long rotation category under averaging accounting for *Pinus radiata* forests to credit additional carbon, which is likely to be stored by those long rotation forests. This includes feedback on any limits that should apply to the category and measures to mitigate risks if the land doesn't become profitable to harvest.

If we introduce a long rotation category under averaging accounting, we will implement this via updated regulations after 2022.

Option 1: Status quo

When averaging accounting becomes available on 1 January 2023, new forests registered in the NZ ETS under averaging accounting and harvested after the forest reaches the average age for the forest type, will receive NZUs up until the forest reaches the average age for the forest type. For example, up to 16 years for all *Pinus radiata* forests.

Option 2: Create a 'long rotation' category under averaging accounting for Pinus radiata forest which are not profitable to harvest at the typical harvest age

A long rotation category could be created under averaging accounting for *Pinus radiata* forests which are not profitable to harvest at the typical harvest age of 28.

A long rotation category could assume a harvest age of 40, setting the average age at 21.

It is likely to be easiest to implement a long rotation category which is mandatory for all *Pinus radiata* forests registered under averaging accounting on land where it is not expected to be profitable to harvest *Pinus radiata* at age 28.

Forests in a long rotation category could be harvested before age 40 by surrendering NZUs down to the existing average age of 16. This would require surrendering any additional NZUs earned between age 16-21.

A long rotation category could be applied solely to *Pinus radiata* forests, as this would be the simplest option while retaining benefits for relevant landowners, as *Pinus radiata* is the predominant forest type in New Zealand and other forest types already have higher average harvesting ages (for example, Douglas Fir and exotic softwoods are both credited to an average age of over 22).

Question – long rotation category under averaging accounting

20. Should the Government create a long rotation category under averaging accounting for *Pinus radiata* forests which are not profitable to harvest at age 28, recognising the additional carbon which is likely to be stored by these long rotation forests?
21. What do you think the impacts of introducing a long rotation category as proposed would be?
22. Do you think forests in this category are likely to be harvested? Are measures needed to prevent forests in a long rotation category being left permanently and never harvested, or to mitigate potential adverse effects of these forests being left permanently?
23. What criteria should be in place to restrict the category to *Pinus radiata* forests which are not profitable to harvest at age 28?
24. Do you think a long rotation category aligns with the proposed changes to the permanent activity and supports the Governments wider forestry objectives?
25. Are there alternative options to a long-rotation forest category that could be more effective at addressing the concerns raised by stakeholders about remote and marginal land and that align with the Government's forestry objectives?

32 Based on the Māori Land Online Database, and the LUCAS Land Use Map (MfE).

11. Biodiverse permanent indigenous forests – update on work

Current rates of indigenous afforestation

The Climate Change Commission recommended that, in general, permanent forests established as carbon sinks should be indigenous species and support biodiversity gains.

To provide a long-term carbon sink beyond 2050, the Commission's assumption was such forests would have long-lived tree species that grow and sequester carbon for hundreds of years. The Commission emphasised the importance of integrated pest control for establishing this biodiverse, carbon sink and maintaining the carbon stock in all new and existing indigenous forests.

Restrictions on exotic forest species in the permanent post-1989 forest category will not necessarily lead to more permanent biodiverse indigenous forests being established.

Current rates of indigenous forest regeneration and establishment are much lower than the rates envisaged by the Commission. The costs of establishing and maintaining indigenous forests, particularly on marginal land, are high and there are currently limited commercial returns.

Feedback on indigenous afforestation in the ERP consultation

As part of the Government's consultation on its first ERP, we sought feedback on what is needed to make it more economically viable to establish and maintain indigenous forest through planting or regeneration on private land.

Box 6: Feedback on indigenous afforestation in the ERP consultation

Broad support for greater levels of indigenous afforestation:
There was widespread support for establishing new and regenerating existing indigenous forests in Aotearoa. To support this, most submitters said the Government should support or incentivise indigenous tree planting. Some also suggested more technical support for landowners for indigenous tree planting. Indigenous tree planting was recognised by some as an opportunity for re-establishing indigenous flora and fauna and for improving biodiversity outcomes.

Many supported indigenous planting and an exotic-to-indigenous transition. These submitters said the benefits of indigenous forestry included improved biodiversity and longer-term carbon storage. Some of these submitters also highlighted the need for more pest control and other measures and the lack of financial incentive for indigenous tree planting.

Suggested NZ ETS-related changes for indigenous forests

Most submitters said the most important thing is for changes to be made to the NZ ETS to recognise the value of indigenous forests. In particular, the long lead time for indigenous tree sequestration and the benefits of indigenous trees should be better acknowledged, with suggestions that NZ ETS look-up tables and measurement should be updated for indigenous forest species. Others suggested that NZ ETS settings should also be changed to value biodiversity as well as carbon sequestration.

Some submitters suggested removing barriers for private landowners to register in the NZ ETS could also improve the financial competitiveness of permanent indigenous forests.

Many highlighted the risks browsing animals presented to carbon sequestration and storage in forests. Some submitters recommended the Government recognise the importance of browsing animal management to increase or maintain carbon sequestration.

Some also called for the Government to investigate the different issues with the NZ ETS for freehold general title land and Māori land.

A few submitters raised other equity issues with forestry on Māori land, and with ensuring they can gain credit. Submitters raised the importance of ensuring Māori land is not alienated under the NZ ETS.

Next steps

Drawing on consultation feedback provided through the ERP, the Government is progressing work to consider opportunities to overcome barriers and incentivise greater levels of indigenous afforestation (achieved through new planting and land retirement (reversion), as well as management of existing regeneration to speed up succession to forest and increase carbon stocks).

The work will include consideration of the viability of native afforestation and restoration as a long-term sustainable land use, including through potential incentivisation or initiatives impacting the costs of establishing and regenerating native forests.

A broad range of options will be considered over the coming year, these include, but are not limited to:

- **NZ ETS Yield Tables** – considering options relating to methods to ensure that carbon stored in NZ ETS forests is accurately accounted for.
- **Approaches to lowering the costs of native afforestation** – such as through the use of innovation, propagation techniques and the benefits of economies of scale.
- **Provision of advice, best-practice sharing and further research** – including operational, scientific and innovate solutions and improving our understanding of management interventions that provide measurable increases in carbon stock in existing native forests.
- **Barriers to entering indigenous forest into the NZ ETS** – for example, examining eligibility criteria of shrub and scrub land as post-1989 forest land.
- **Understanding workforce barriers** – including the use of both volunteer and professional planting services.
- **System issues** – alignment with wider work on pest management and valuing biodiversity.

Although we are not actively consulting on options for indigenous afforestation incentives as part of this round of consultation, we are interested in your views on how we could better encourage indigenous restoration and afforestation. We therefore welcome further feedback on opportunities to reduce barriers to indigenous afforestation for anyone wishing to provide feedback.

Ongoing feedback we receive will feed into the Government's wider programmes of work to incentivise indigenous afforestation. We anticipate further rounds of consultation and engagement on other aspects of the indigenous afforestation work programme mid-late 2022.

Question – incentivising indigenous afforestation [Optional]

26. Do you have any further feedback on how the Government can reduce barriers and incentivise permanent indigenous afforestation to ensure we deliver long-term resilient, biodiverse forests?

Note: Submitters interested in forest models involving transition of forests from exotic species to indigenous species over time are encouraged to respond to questions 4 to 6 on page 29 relating to whether and how criteria for exceptions to the registration of exotic species in the permanent forest category NZ ETS could be provided.

12. How to have your say

The Government welcomes your feedback on this discussion document. The questions posed throughout this document are summarised on pages 29 and 30. They are a guide only and all comments are welcome. You do not have to answer all the questions.

To ensure your point of view is clearly understood, you should explain your rationale and provide supporting evidence where appropriate.

This consultation starts on 14 March 2022 and ends on 22 April 2022.

Following the end of consultation, we will publish a summary and may make all or parts of submissions publicly available on our website. We cannot reply to individual submitters.

Our preferred proposals will see the changes to the CCRA take effect from 1 January 2023.

Timeframes

The proposed timeline for changes to the NZ ETS is:

Milestone/Activity	Timeframe
Public consultation on proposals	March – April 2022
Analysis of submissions and development of final decisions	May – June 2022
Final Cabinet decisions & drafting of amendments	Mid-2022
Parliamentary process	~Q3/Q4 2022

How to make a submission

You can send us your comments in two ways.

- Complete the survey on the MPI website.
- Write your own submission.

We request that you don't post submissions as this can risk the submission not getting to us in a timely manner. However, if you need to, written submissions can also be sent to Managing Exotic Afforestation Consultation, Climate Change Policy, Ministry for Primary Industries, PO Box 2526, Wellington 6140 and include:

- your name or organisation
- your postal address
- your telephone number
- your email address.

If you are emailing your submission, send it to mpi.forestry@mpi.govt.nz as a:

- PDF
- Microsoft Word document (2003 or later version).

Submissions close at 5pm, 22 April 2022.

For more information

Please send any queries to:

Email: mpi.forestry@mpi.govt.nz

Postal: Managing Exotic Afforestation Consultation, Climate Change Policy, Ministry for Primary Industries, PO Box 2526, Wellington 6140

Publishing and releasing submissions

All or part of any written comments (including names of submitters), may be published on the Ministry for Primary Industries website, mpi.govt.nz.

Unless you clearly specify otherwise in your submission, the Ministry will consider that you have consented to website posting of both your submission and your name.

Contents of submissions may be released to the public under the Official Information Act 1982 following requests to the Ministry for Primary Industries (including via email).

Please advise if you have any objection to the release of any information contained in a submission and, in particular, which part(s) you consider should be withheld, together with the reason(s) for withholding the information. We will take into account all such objections when responding to requests for copies of, and information on, submissions to this document under the Official Information Act.

The Privacy Act 2020 applies certain principles regarding the collection, use and disclosure of information about individuals by various agencies, including the Ministry for Primary Industries. It governs access by individuals to information about themselves held by agencies.

Any personal information you supply to the Ministry in the course of making a submission will be used by the Ministry only in relation to the matters covered by this document. Please clearly indicate in your submission if you do not wish your name to be included in any summary of submissions that the Ministry may publish.

13. Consultation questions

Is this a fair description of the problem?

1. Do you agree with our description of the problem? Why/Why not?
2. Do you have evidence you can share that supports or contradicts this problem definition? Or that demonstrate other problems?

Assessment criteria

3. Do you agree with our criteria for managing permanent exotic afforestation? If not, what would you change and why?

Designing exceptions (option three)

4. Should we provide for exceptions allowing exotic species to register in the permanent forest category under certain conditions?
5. Are there particular circumstances that you support introducing exceptions for (for example, exceptions for certain species of exotics)? Why?
    - What are the likely impacts, risks and costs of allowing exceptions in these circumstances?
    - If we allow exceptions for exotic species under certain conditions, should we place additional conditions on the granting of this exception? What could these be?
6. Are there alternative ways we can recognise and encourage these forests, either withing or outside, the NZ ETS? (For example, through the resource management system.)

Options to manage permanent afforestation

7. Of these options, what is your preferred approach? Why? Are there other options you prefer, that we haven't considered?

Timeframes

8. Do you agree with our preferred approach (acting before 1 January 2023)? Why/why not? If not, what is your preference?

Comparing Option 3a (exceptions by secondary legislation) and Option 3b (exceptions after a moratorium)

9. Do you support exceptions by regulations [option 3a] or exceptions after a moratorium [option 3b]? Why?
10. If we choose to introduce exceptions by regulations, what conditions or criteria should be placed on the Minister in choosing to pursue these?
11. If we choose a moratorium (Option 3b) – how long should it be? Why?
12. Do you think a different type of moratorium (whether it requires a decision to be ended/ continued) would have different impacts? Or do you prefer a different approach?

Implementing changes to the permanent forest category

13. Currently the NZ ETS defines forests based on the predominant species in a hectare. However, forests change makeup over time. Do you think this definition of exotic and/or indigenous forests is appropriate for the permanent post-1989 category in the NZ ETS?
14. What level of exotic species in a forest would be acceptable for the forest to still be classified as an indigenous forest, and registered in the permanent post-1989 category in the NZ ETS?
15. If forest changes from indigenous to exotic while registered in the permanent category, do you think it should be removed from the category (Option 1), or be treated as indigenous (Option 2)? Why? Are there other options we haven't considered?
16. If we choose to remove forests which have become predominantly exotic over time from the category, how do you think we should do this? Why?
17. If exotic forests are removed from the permanent category, what would an appropriate penalty be for clearing the forest before the end of the permanent period? Do you think the current penalty needs updating?
18. Are you a PFSI convent holder?
19. Do you agree with the proposal to allow exotic forest land in the PFSI to transition into the permanent post-1989 forestry activity, or would another approach be more suitable?

Long rotation category under averaging accounting

20. Should the Government create a long rotation category under averaging accounting for Pinus radiata forests which are not profitable to harvest at age 28, recognising the additional carbon which is likely to be stored by these long rotation forests?
21. What do you think the impacts of introducing a long rotation category as proposed would be?

22. Do you think forests in this category are likely to be harvested? Are measures needed to prevent forests in a long rotation category being left permanently and never harvested, or to mitigate potential adverse effects of these forests being left permanently?
23. What criteria should be in place to restrict the category to *Pinus radiata* forests which are not profitable to harvest at age 28?
24. Do you think a long rotation category aligns with the proposed changes to the permanent activity and supports the Governments wider forestry objectives?
25. Are there alternative options to a long-rotation forest category that could be more effective at addressing the concerns raised by stakeholders about remote and marginal land and that align with the Government's forestry objectives?

Incentivising indigenous afforestation [Optional]

26. Do you have any further feedback on how the Government can reduce barriers and incentivise to permanent indigenous afforestation to ensure we deliver long-term resilient, biodiverse forests?

14. Glossary

Accounting, accounting rules and accounting approach	In the NZ ETS this refers to the methodology for quantifying the changes in the carbon stored in registered forests from tree growth, and the amount emitted upon events such as clearing (harvesting) and deforestation.
Afforestation	Establishment (either by planting or natural regeneration) of forest on land that did not previously have tree cover.
Averaging accounting	The averaging accounting method reflects the amount of carbon stored in their forest over the long term, with emissions units allocated to participants. Averaging accounting is a new method to account for carbon storage in forests intended to be harvested that are registered in the NZ ETS. Forests will earn NZUs up until the age the forest is expected to reach its long-term average carbon stock over multiple rotations of replanting and harvesting.
Carbon price	The cost of one emissions unit (New Zealand Unit). One emissions unit represents one tonne of carbon dioxide equivalent.
Carbon sequestration	The uptake and long-term storage of carbon dioxide from the atmosphere (for example, in vegetation)
Carbon sink	Natural and artificial processes which take carbon dioxide from the atmosphere and store it are known as 'carbon sinks'. Forests are a good example of a carbon sink, as they take in and store carbon dioxide through the process of photosynthesis.
Carbon stock	The amount of carbon contained within a forest.
Clear-felling	Typical method for harvesting production forests in New Zealand. In the NZ ETS, it is defined as harvesting which drops tree crown cover below 30 percent across a hectare.
Climate Change Response Act 2002	A legal framework to help enable New Zealand to meet its international climate change obligations under various international agreements such as the United Nations Framework Convention on Climate Change and the Kyoto Protocol.
Climate Change Response (Emissions Trading Reform) Amendment Act 2020	A legal framework which introduced significant changes to the forestry provisions in the NZ ETS, including: a) a new carbon accounting approach, called 'averaging' – averaging will replace the current 'stock change' approach for post-1989 forests registered in the NZ ETS from 2023 and will be optional for forests registered from 2019 (intended to reduce the financial risk of NZ ETS participation and to promote better alignment with international accounting); b) a new permanent post-1989 activity for permanent forests which will replace the PFSI (PFSI participants will shift into the ETS unless they elect to de-register, and the PFSI will be dis-established in 2024); c) a new exemption from carbon liabilities for forests partly or fully cleared from a temporary adverse event; and d) a large number of operational and technical improvements to improve efficiency for regulators and the overall NZ ETS experience for participants.
Deforestation	a) Means to convert forest land to land that is not forest land; and (b) Includes clearing forest land, where section 179 applies.
Emissions	Greenhouse gases released into the atmosphere from human activity
Emissions Reduction Plan	The Emissions Reduction Plan (ERP) will set out how New Zealand will meet its first emissions budget (2022-2025) and set the path towards meeting our long-term climate targets. It is a key step in the country's transition to a low emissions future.
Exotic forest	A forest in which the main species does not occur naturally in New Zealand.

Forest land	a) Means an area of land of at least one hectare that has, or is likely to have, tree crown cover from forest species of more than 30 percent in each hectare; and b) Includes an area of land that temporarily does not meet the requirements specified in paragraph (a) because of human intervention or natural causes but that is likely to revert to land that meets the requirements specified in paragraph (a); but c) Does not include – i. a shelter belt of forest species, where the tree crown cover has, or is likely to have, an average width of less than 30 metres; or ii. an area of land where the forest species have, or are likely to have, a tree crown cover of an average width of less than 30 metres, unless the area is contiguous with land that meets the requirements specified in paragraph (a) or (b).
Forest type	Forests in the ETS are assigned one of five possible forest 'types'. The type is used to determine what lookup table or FMA table to use for carbon accounting. The forest types are: • *Pinus radiata* (*Pinus radiata* is also split into region when a participant uses lookup tables); • Douglas fir; • Exotic softwoods (other than *Pinus radiata* and Douglas fir); • Exotic hardwoods; and • Indigenous
Harvesting	Harvesting occurs when forest land is cleared and in the future new seedlings are either planted or naturally regenerate. There is no change in land-use; the forest land is considered to be temporarily unstocked. There is a time limit for how long harvested land may be temporarily unstocked before it is deemed deforested.
Indigenous forest	We use the phrase indigenous forest, rather than native forest, in order to align with the terminology the CCRA. In the CCRA, indigenous forest species means a forest species that occurs naturally in New Zealand or has arrived in New Zealand without human assistance.
International climate change targets	New Zealand is committed to international climate change targets as a party to the United Nations Framework Convention on Climate Change and the Kyoto Protocol.
Look-up tables	Tables for default carbon storage used to determine participants' NZU entitlements and obligations for forests in the NZ ETS where forest areas are less than 100 hectares in area.
Liability	Liability here means the requirement to surrender or repay NZUs under the NZ ETS.
Nationally Determined Contribution (NDC)	How a country states its target under the Paris Agreement on Climate Change. It represents the individually determined contributions each country should make to reduce national greenhouse gas emissions and adapt to the impacts of climate change.
New Zealand Emissions Trading Scheme (NZ ETS)	The NZ ETS is an emissions pricing scheme. This is the key tool used by New Zealand for reducing emissions. Under this scheme, emitters must report and pay for their emissions. The NZ ETS was created through the Climate Change Response Act 2002 (CCRA), passed in recognition of New Zealand's obligations under Kyoto Protocol.
New Zealand Units (NZUs)	A unit issued by the Registrar of the NZ ETS that can be used to meet obligations by participants of the NZ ETS.
Participant	Here, a person, persons or entity that is registered and: • participates in a forestry activity; or • carries out an activity covered by the NZ ETS. A participant must report on emissions (or on carbon captured) and may need to surrender units to cover emissions or may receive an entitlement of units for carbon capture.

Permanent forest	Permanent forests are those not intended to be clear fell-harvested, but may be subject to selective or small coupe harvesting
Permanent forest sink initiative (PFSI)	A scheme to incentivise afforestation established in 2006 under the Forests Act 1949. It enables landowners to receive units for carbon stored in post-1989 permanent forests. It is being discontinued and participants in the PFSI are being transitioned into the Permanent Forest Activity
Permanent post-1989	A new category (activity) in the Climate Change Response Act 2002 (CCRA) which is available from 1 January 2023. Participants who opt to enter the permanent forest category will remain in the NZ ETS for 50 years. Forest land registered in the permanent forest category will earn on the stock change approach, and participants will be unable to clear-fell their forests for 50 years.
Post-1989 forest land	Post-1989 forest land is land which meets the forest land criteria, and includes land which: • was not forest land on 31 December 1989; or • was forest land on 31 December 1989 but was deforested between 1 January 1990 and 31 December 2007; or • was pre-1990 forest land that was deforested on or after 1 January 2008, and any ETS liability has been paid.
Pre-1990	Pre-1990 forest land is land which: • was forest land on 31 December 1989; remained as forest land on 31 December 2007; and • contained predominantly exotic forest species on 31 December 2007. Land that was indigenous forest land on 31 December 1989, and remained so on 31 December 2007, is not pre-1990 forest land and is not subject to ETS obligations.
Register	In this context; enter an area of eligible forest land into the NZ ETS.
Rotation	The cycle of growth and felling or cutting of trees.
Stock change accounting	Where the participant accounts for the net carbon stock change in the forest.
Surrender	Surrender means the transfer of one or more units to the Crown surrender account in the Register to meet an emissions obligation.
Temporary adverse event	Adverse events which do not directly result in long term or permanent deforestation

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