Notice is given that an ordinary meeting of the Regional Pest Management Joint Committee will be held on:

Date:	**Friday 8 December 2023**
Time:	**9.30am**
Meeting Room:	**Tasman Council Chamber**
Venue:	**189 Queen Street, Richmond**
Zoom conference link:	https://us02web.zoom.us/j/84106345096?pwd=M2N0ZnFqVWZxYUdHOVZZZzhNREdyZz09
Meeting ID:	841 0634 5096
Meeting Passcode:	043851

Regional Pest Management Joint Committee

AGENDA

MEMBERSHIP	Tasman District Council	Nelson City Council
Chairperson	Cr C Butler	
Deputy Chairperson		Cr R Sanson
Members	Deputy Mayor S Bryant	Cr M Benge
	Cr M Kininmonth	Cr A Stallard

Quorum 3 members – (a member from each Council must be present)

Contact Telephone: 03 543 8400

Email: democracy@tasman.govt.nz

Website: www.tasman.govt.nz

AGENDA

1 OPENING, WELCOME, KARAKIA

2 APOLOGIES AND LEAVE OF ABSENCE

Recommendation
That apologies be accepted.

3 PUBLIC FORUM

Nil

4 DECLARATIONS OF INTEREST

5 LATE ITEMS

6 CONFIRMATION OF MINUTES

That the minutes of the Regional Pest Management Joint Committee meeting held on Tuesday, 22 August 2023, be confirmed as a true and correct record of the meeting.

7 REPORTS

8 CONFIDENTIAL SESSION

Nil

9 CLOSING KARAKIA

7 REPORTS

7.1 REGIONAL PEST MANAGEMENT PLAN 2019 – 2029 PARTIAL REVIEW CONSULTATION

Report To:	Regional Pest Management Joint Committee
Meeting Date:	8 December 2023
Report Author:	Paul Sheldon, Special Projects Analyst - Biosecurity
Report Authorisers:	Guinevere Coleman, Team Leader Biosecurity & Biodiversity; Steve Manners, Group Manager - Information, Science and Technology
Report Number:	RRPMC23-12-1

1. Purpose of Report

1.1 To seek the Regional Pest Management Joint Committee's approval of the Regional Pest Management Plan 2019 – 2029 partial review consultation and proposal document, prior to seeking approval from both councils to publicly notify the partial review.

2. Report Summary

2.1 This report includes the following attachments:

2.1.1 **Attachment 1** contains the Partial Review Proposal of the Tasman-Nelson Regional Pest Management Plan 2019-2029, along with a detailed analysis of the characteristics of each pest species being considered, the options considered for management, and the preferred option.

2.1.2 **Attachment 2** specifically addresses the requirements of the National Policy Direction for Pest Management 2015 which must be met before a pest programme can be included in a Regional Pest Management Plan under the provisions of the Biosecurity Act 1993.

2.1.3 **Attachment 3** contains an early draft of the overview material for notification (a Communications Plan). It should be noted that notification cannot now occur until early February 2024 so there is time available to further refine the wording of this document. The Committee's input into this part of the process is also sought.

2.1.4 **Attachment 4** contains a file note recording the wilding conifer discussions so far and the subsequent changes in recommendations in response**.**

2.1.5 **Attachment 5** contains feedback from the forestry sector on amended wilding conifer provisions.

2.2 A summary of the assessments is contained in the table below:

Species	Level CBA analysis warranted	CBA comments / recommendations	Preferred option: Level of risk	(Alternatives). Pass NPD requirements? What are the risks?
Blue passion flower	Low	Narrative cost and benefit analysis only. Environmental benefits	**Eradication:** Low risk that this option will not	**(Do nothing). Yes.** Modest risk that infestations will damage

Species	Level CBA analysis warranted	CBA comments / recommendations	Preferred option: Level of risk	(Alternatives). Pass NPD requirements? What are the risks?
		highly likely outweigh cost of control. Preferred option passes all NPD requirements.	achieve intended outcome (zero density).	biodiversity value of (e.g.) The Grampians. **(Progressive containment). Yes.** Low but carries a risk that relying on occupier control will not stop spread.
Boneseed (Port Hills)	Low	Environmental benefits probably outweigh cost of control but advised to undertake a quantitative analysis to test revised assumptions. Preferred option passes other NPD requirements.	**Sustained Control in Port Hills:** Low risk that this option will not achieve intended outcome (reduce spread). There is a high risk that specialist control of the coastal cliffs would push costs beyond benefits and a moderate risk that closure of the road causes inconvenience.	**(Do nothing – status quo in Port Hills). Yes.** Modest risk that infestations will damage the biodiversity values of the Port Hills. Also put the boneseed (rest of Nelson and Tasman) eradication objective at risk, with high likelihood of perpetual invasion of high value coastal habitat. **(Eradication in Port Hills). No.** High likelihood that costs outweigh benefits.
Moth plant	Low	Narrative cost and benefit analysis only. Narrative cost and benefit analysis only. Environmental benefits highly likely outweigh cost of control. Preferred option passes all NPD requirements.	**Eradication:** Low risk that this option will not achieve intended outcome (zero density)	**(Do nothing). Yes.** Modest risk that infestations will damage biodiversity value of (e.g.) The Grampians. **(Progressive containment). Yes.** Low but carries a risk that relying on occupier control will not stop spread.
Pampas	Medium	Benefits probably outweigh cost of control. A medium level of analysis can be a quantified analysis using the cost of control borne by occupiers (to be determined) balanced with assumed $$ environmental benefit (to be determined). AgPest calculator to be used to derive net present value as a measure of cost effectiveness. Preferred option passes other NPD requirements.	**Sustained Control in specified areas:** Low risk that this option will not achieve intended outcome (reduce spread). There are modest risks of non-compliance though benign neglect, difficulty undertaking regular inspections, and/or adversity to the proposed rules.	**(Do nothing). Yes.** Modest risk that increasing infestations will damage the biodiversity values of specified areas. Moderate concern of invasion in areas clear of the pest. **(Eradication). No.** High likelihood that costs outweigh benefits.
Sabella	Medium	Benefits highly likely to outweigh cost of control. A medium level analysis would ideally identify costs and benefits in monetary terms along with an estimate of net present value. It may prove difficult to estimate the dollar benefits to the marine farming industry without being overly presumptive. Assumptions of costs may require extrapolation from incomplete data. Preferred option passes other NPD requirements.	**Eradication - new rule:** Lower risk that this option will not achieve intended outcome in contrast to status quo.	**(Eradication - status quo)**. **Yes**. Modest risk that this option will not achieve intended outcome (sustained level of zero density)

Species	Level CBA analysis warranted	CBA comments / recommendations	Preferred option: Level of risk	(Alternatives). Pass NPD requirements? What are the risks?
Vietnamese parsley	Low	Narrative cost and benefit analysis only. Environmental benefits highly likely to outweigh cost of control. Preferred option passes all NPD requirements.	**Sustained Control:** Low risk that this option will not achieve intended outcome (reduce spread). There is a moderate risk of non-compliance until the community become aware that this is a pest. The efficacy of herbicidal control to reduce extent is still being tested. While the need for resource consent for herbicidal control adds a layer of complexity, it is not envisaged that it increases the risk to reducing spread.	**(Do nothing). Yes.** Modest risk that infestations will damage biodiversity and infrastructural value of affected streams. **(Eradication). No.** The intermediate outcome (to control to zero density) is not considered feasible due to the extent of the infestation. There is a high risk that this objective would not be met. **(Progressive containment). Possibly not.** The intermediate outcome (reduce the size of infestation) is only feasible if herbicides are effective. There is a moderate risk that this objective could not be met.
Water	Low	Narrative cost and benefit analysis only. Environmental benefits highly likely to outweigh cost of control. Preferred option passes all NPD requirements.	**Sustained Control:** Low risk that this option will not achieve intended outcome (reduce spread). There is a moderate risk of non-compliance until the community become aware that this is a pest. The efficacy of herbicidal control to reduce extent is still being tested. While the need for resource consent for herbicidal control adds a layer of complexity, it is not envisaged that it increases the risk to reducing spread.	**(Do nothing). Yes.** Modest risk that infestations will damage biodiversity and infrastructural value of affected streams. **(Eradication). No.** The intermediate outcome (to control to zero density) is not considered feasible due to the extent of the infestation. There is a high risk that this objective would not be met. **(Progressive containment). Possibly not.** The intermediate outcome (reduce the size of infestation) is only feasible if herbicides are effective. There is a moderate risk that this objective could not be met.
Pest/wilding conifers	Medium	Environmental benefits probably outweigh cost of control. A medium level analysis would ideally identify costs and benefits in monetary terms along with an estimate of net present value. The cost of control borne by occupiers (to be determined)	**Progressive Containment (pest pines):** Low risk that this option will not achieve intended outcome (contain and reduce infestations). **Site-led:** Low risk that this option will not achieve intended	**(Do nothing):** High risk that wildings of these species will re-occur in the places where they have been removed, resulting in a loss in the investment and reduction in environmental values. **(Do nothing):** High risk that wildings of these species will spread at specific sites

Species	Level CBA analysis warranted	CBA comments / recommendations	Preferred option: Level of risk	(Alternatives). Pass NPD requirements? What are the risks?
		balanced with assumed $$ environmental benefit (to be determined). Cost estimates may be highly presumptive. Environmental benefit based on well-recognised forest and scrub valuation data. AgPest calculator to be used to derive net present value as a measure of cost effectiveness. Preferred options pass other NPD requirements.	outcome (reduction of the incidence of wildings of these species in specific places).	impacting on environmental values.
Feral/stray cats	Medium	Environmental benefits probably outweigh cost of having rules but advised to undertake a quantified analysis. A medium level analysis would ideally identify costs and benefits in monetary terms along with an estimate of net present value. However, the calculation of value proposition is highly presumptive / lacks empirical data. The preferred options pass other NPD requirements.	**Site-led with pest-agent rule:** Low risk that the approach will not achieve intended outcome (reduction of the effects of a pest in specific places), but moderate to high risk of public adversity to rules.	**(Do nothing):** High risk that feral and stray cat numbers will increase, causing incalculable losses of indigenous fauna and other costs associated with spread of disease (toxoplasmosis) and social nuisance.
Koi carp	Not required	Not required	**Change species name:** No risk – maintains consistency.	**(Do nothing):** Slight risk of legal challenge to any Notices of Direction.

3 Recommendation

That the Regional Pest Management Joint Committee:

1. **receives the Regional Pest Management Plan 2019 – 2029 Partial Review Consultation report RRPMC23-12-1; and**
2. **approves the draft Regional Pest Management Plan 2019 – 2029 Partial Review Consultation document (Attachment 1 to the agenda report) for the formal partial review consultation process; and**
3. **recommends to Tasman District Council and Nelson City Council that they approve public notification of the draft Regional Pest Management Plan 2019 – 2029 Partial Review Consultation document for the partial review of the Tasman–Nelson Regional Pest Management Plan 2019-2029, commencing 23 February 2024, for a period of one month, closing on 23 March 2024.**

4 Background and Discussion

4.1 At its Tuesday 22 August 2023 meeting, the Regional Pest Management Joint Committee resolved to recommend the draft partial review proposal to both Tasman District and Nelson City Councils for approval to notify.

4.2 However, the Joint Committee also resolved that it wished to review the draft consultation document prior to the formal consultation process commencing.

4.3 The Joint Committee also indicated that it wished to be appraised of feedback from key stakeholders during pre-notification engagement.

Stakeholder Engagement Activity since 22 August 2023 meeting

4.4 Following the Joint Committee meeting of 22 August, council staff have consulted with a range of stakeholders including government agencies, adjoining councils, sector groups, companies, and community organisations. A summary of the feedback from this engagement is included within Section 3.2 (Table 4) of the Partial Review Proposal attached to this report as **Attachment 1**.

4.5 More detailed information related to some individual organisations responses is held on file. This pre-engagement has not captured every organisation possibly affected but has allowed for further shaping of the rules and highlighted where more clarity is needed. Groups already contacted will be invited to further engage in the public submission process.

4.6 While most pre-engagement responses were supportive, some recommended changes to the form and content of the review proposal. Staff have considered these responses and have made amendments to parts of the attached proposal to accommodate some of this feedback. These amendments largely relate to wording and definitions related to feral and stray cats and to wording and provisions related to both pest and wilding conifers.

4.7 The feedback and subsequent responses in relation to wilding conifer rules are captured in the file note as **Attachment 4**. Given the complexity of the discussions and need to understand the changes in thinking over time staff felt this process required a more detailed record.

4.8 Staff have made some amendments to these parts of the proposal where appropriate. There are other matters raised which staff consider are better managed though the formal notification, submission, and hearing process.

Communications Plan

4.9 A draft Communications Plan, which includes an indicative engagement timeline, is attached as **Attachment 3**. It is intended that staff will work with the Communications Team to develop appropriate material to explain the rule changes to the public. Once the Partial Review Proposal is complete and approved, staff will be able to finalise the detail needed for the communications Plan. Public consultation will be via the Shape Tasman and Shape Nelson website pages.

5 Options

5.1 **Attachments 1** and **2** contain a detailed discussion of a range of options regarding each pest species and programme review being considered. A summary of these options is also contained in Section 2 above.

6. Considerations for Decision Making

6.1. Fit with Purpose of Local Government

Regional Pest Management is a responsibility of Regional Councils and Unitary Authorities under the Provisions of the Biosecurity Act 1993.

6.2. Consistency with Community Outcomes and Council Policy/Legal requirements

The review items being considered would amend and update the existing Regional Pest Management Plan Tasman-Nelson 2019-2029.

The Pests being considered are those specified in the Terms of Reference for the Regional Pest Management Joint Committee.

The changes are consistent with the Tasman Biodiversity Strategy.

6.3. Strategy and Risks

This report presents staff recommendations on Regional Pest Management Plan review options to the Regional Pest Management Joint Committee.

These recommendations are made having regard to the characteristics of the pest species and programmes being considered and the legal requirements of the Biosecurity Act 1993 which requires that pest provisions are worthwhile, achievable, and the costs and benefits are quantified and equitably distributed.

If the Joint Committee supports these recommendations and refers them to Tasman District and Nelson City Council for approval and public notification, then a full hearing submission and decision process will follow during which public support or opposition will be assessed.

6.4. Financial impact/Budgetary implications

The partial review recommendations presented in this report are refinements to the existing Tasman – Nelson Regional Pest Management Plan 2019-2029. They can be managed within existing budget allocations for this programme. While some additional pest species are recommended, other recommended changes will simplify the current Plan delivery.

6.5. Degree of significance and level of engagement

Overall, this matter is of medium significance because of the inclusion of recommended provisions related to feral cats and control of wilding conifers which may be contentious. Therefore, the following engagement/feedback/consultation will occur in the form of both targeted stakeholder consultation along with full public notification with its associated submission and decision process and rights of appeal.

6.6. Climate Impact

The recommendations of this report will be neutral in terms of climate impacts. Provisions related to wilding conifers could be seen as impacting on a carbon sink however these provisions are targeted towards removal of sparse seedlings and do not impact on the provisions of the Emissions Trading scheme or the National Environmental Standard for Plantation Forestry.

6.7. Inclusion of Māori in the decision-making process

	Initial engagement with Iwi practitioners was undertaken at an early stage. Further targeted engagement with Iwi will occur during the preparation of the actual review proposal.
6.8.	The Regional Pest Management Joint Committee has the responsibility for considering and recommending. The Regional Pest Management Joint Committee has the power to make a recommendation to the Councils on this matter.

7 Conclusion and Next Steps

7.1 The Regional Pest Management Joint Committee must provide recommendations to the two councils.

8. Attachments

1.	Partial Review Proposal of the Tasman-Nelson Regional Pest Management Plan 2019-2029	11
2.	Supporting Document for the limited review of certain pests for the Tasman Nelson Regional Pest Management Plan (2023)	87
3.	Partial Review Tasman – Nelson Regional Pest Management Plan Communications Plan	143
4.	File note - wilding conifer discussions	148
5.	Feedback from the Forestry Sector	161

Attachment 1

Proposal for inclusion of new pests and policies

Partial Review of Tasman-Nelson Regional Pest Management Plan 2019 – 2029




Proposal prepared by:

and

Address for service:

Tasman District Council
Management Agency for the Tasman-Nelson Regional Pest Management Plan
189 Queen Street
Private Bag 4
Richmond 7050
Phone: 03 543 8400
Website: www.tasman.govt.nz

Foreword

This is a Proposal to amend the Tasman-Nelson Regional Pest Management Plan 2019-2029 (RPMP). The intent of the Proposal is to declare **blue passion flower**, **moth plant**, **common and purple pampas**, **water celery**, **Vietnamese parsley** and several **pest and wilding conifer** trees as new pests in the whole, or parts of, Tasman-Nelson. It also serves to amend existing pest policies and rules around **boneseed**, **Mediterranean fanworm** (Sabella) and **feral/stray cats**, the details of which place new obligations on occupiers of land and marine craft/structures accordingly.

The Proposal does not otherwise affect the operative Tasman-Nelson RPMP, except for minor consequential changes necessary to update the Plan and reflect the inclusion of the new sections and policies and rules. The current RPMP will remain operative until such time it is amended.

The Proposal is a collaborative effort between Tasman District and Nelson City Councils, as was the development of the current RPMP in 2018/2019. On behalf of both Councils, we are pleased to present this Proposal to the people of Tasman-Nelson, and now call for your submissions. The Councils will consider all submissions received before making amendments to the Plan.

This is your opportunity to influence pest management activities and policies in Tasman-Nelson. We look forward to receiving submissions on the Proposal. Please send yours to:

The Chief Executive
Tasman District Council
189 Queen Street
Private Bag 4
Richmond 7050

or enter it online at https://www.tasman.govt.nz/my-council/public-consultation/submissions/

By **5pm, Friday 22nd March 2024.**

Tim King
Mayor, Tasman District Council

Nick Smith
Mayor, Nelson City Council

Table of Contents

1. Introduction

1.1 Proposer

This document is a Proposal to amend parts of the Tasman-Nelson Regional Pest Management Plan 2019-2029. Other than the amendments identified in full in sections 4.3 to 4.5 of this Proposal, the Tasman-Nelson Regional Pest Management Plan remains unchanged and is not part of the review process or this Proposal.

Tasman District Council (TDC) and Nelson City Council (NCC) - the Councils - have regional leadership roles under section 12B of the Biosecurity Act 1993 (the Act). As such, and in accordance with section 100D(2)(b) of the Act, the Councils propose to undertake a partial review of the Tasman-Nelson Regional Pest Management Plan (RPMP, or the Plan)[1] by way of amending it to incorporate changes relating to several existing and new pest control obligations and requirements.

There are no other proposed changes to the RPMP, other than some minor inconsequential changes set out in section 5.5 of the Proposal. All other pest management programmes in the Plan are unaffected. The operative RPMP, including sections relating to existing pests affected by this Proposal, remains in effect while the Proposal is being considered[2].

Due to the limited scope of the review, in accordance with section 100D(5)(d) of the Act, the Councils will apply section 70 of the Act in this Proposal only in so far as it relates to the specific proposed programme changes.

This Proposal contains all the information necessary for the public, iwi and stakeholders to evaluate it. Although both Councils are collaborating on the review, TDC is the named Management Agency for the RPMP's implementation and is the lead agency for the review. However, both Councils are represented through a Regional Pest Management Joint Committee convened for the review. The Committee has prepared the Proposal, will receive and hear submissions, deliberate on these matters and make recommendations to both Councils. Decisions on the Proposal are anticipated to be made separately but at similar times by both Councils.

1.2 Purpose and reasons for the Proposal

The purpose of the document is to present, for the public's consideration, a Proposal that sees eight pests or pest groupings added to the RPMP and some existing policies and rules amended, to:

- Minimise the actual or potential adverse or unintended effects associated with these pests; and

[1] The current RPMP became operative on 1 July 2019. Page 68 of the RPMP outlines review considerations.

[2] Note: Should science solutions identify any breakthrough technologies or approaches which impact on the management of any pest in the RPMP (e.g. an organism is made sterile through genetic modification) then any new developments will be considered by way of full or partial review, on a case by case basis.

- Maximise the effectiveness of individual pest management actions for these pests by way of regionally coordinated approaches.

The notification of this Proposal is the first formal step in seeking amendment to the operative RPMP. If the Proposal is adopted the RPMP will be amended to declare several new organisms to be 'pests' and changes or additions will be made to three existing policies and rules. Any amendments adopted will also empower the Councils to exercise the relevant advisory, service delivery, regulatory and funding powers available under the Act (and as outlined in the operative RPMP) to deliver appropriate pest control in defined parts of Tasman-Nelson or across the whole area.

Table 1 summarises the proposed pests or pest groupings and the main reasons for their inclusion in the Proposal. Section 4 provides more detailed information on each organism listed.

Table 1: Alphabetical listing of proposed pest additions to RPMP

Proposed pest	Key reasons for proposed change
Blue passion flower	Emerging pest in the region. Eradication is the proposed outcome while infestations are relatively small.
Boneseed (Nelson Port Hills only)	Refinement to the programme, requiring occupiers in a defined area on Nelson's Port Hills to undertake control on their properties. This will help maintain the integrity of the existing eradication programme in the rest of Tasman-Nelson.
Conifers - pest conifers and wilding conifers	Maintaining the gains of prior investment in control work in current (named) operational areas and introducing two new rules: to keep vulnerable land that is clear of wildings clear and for exacerbators of wilding spread from planted forests to undertake control where seed spread is clearly occurring onto neighbouring land.
Feral and stray cats	Increasing threats to indigenous wildlife (birds, fish and invertebrates) at sites of high ecological value - in Tasman (Abel Tasman National Park enclaves and St Arnaud township area) and in Nelson city (named publicly owned parks/reserves).
Moth plant	Emerging pest in the region. Eradication is the proposed outcome while infestations are small. Aligns with Marlborough District Council (MDC) rules.
Pampas (purple and common)	Opportunity to target pampas at two Golden Bay sites only, where controlling pampas is realistic due to its low density and distribution compared with most other places.
Sabella (Mediterranean fan worm)	Consistent with the MDC policy around fouling levels on craft in an aligned Top of the South approach. Includes new occupier / owner control and management obligations.
Vietnamese parsley and water celery	Two emerging pests in the region where sustained control is proposed. The rules are considered together as the proposed management programme is the same.

1.3 Duration

If the Proposal is adopted, the term of the amended RPMP will be unchanged. The current plan came into force on July 1, 2019. Under the Biosecurity Act, the full plan must be reviewed no later than 10 years after enactment.

If adopted, the intent is to transition the implementation of new pests and rules, with factors such as seasonal control requirements, occupier awareness programmes and staff resources to consider. The annual RPMP Operational Plan for the given year will identify the programmes to be implemented.

1.4 Proposal structure

The Act contains prerequisite criteria that must be met to justify regional intervention in the form of rules. Accordingly, this document sets out proposed amendments to the RPMP and supporting information pertaining to adding new or adjusted programmes to the RPMP, in that:

- Section 1 has introduced the Proposal and provides background information.
- Section 2 identifies the relationships between the Proposal and Māori, cost benefit analyses to support the adoption of the proposed programmes and connections with other relevant pest plans and strategies.
- Section 3 provides an overview on consultation carried out, including the overall process and timeline.
- Section 4 presents the proposed amendment details. Pest plants precede pest animals. Pest and wilding conifers are considered in a separate section due to the more complex management propositions.
- Section 5 notes several management considerations around monitoring, funding, administrative powers and raises minor amendments which are needed to the current RPMP.
- A glossary of key terms used in this Proposal and references used in its preparation conclude the document, followed by various maps.

In accordance with section 100D(5)(d) of the Act, the scope of this review is confined to proposed amendments set out in section 4 of this Proposal.

2. Relationship with Māori and other strategies and plans

2.1 Relationship with Māori

As far as can be determined, as noted in pre-consultation on this document, the Proposal does not involve change to the relationship between the current Regional Pest Management Plan and the iwi of Te Tau Ihu[3]. The Councils believe that the amended RPMP will continue to provide for the protection of the relationship between Māori and their ancestral lands, waters, sites, wāhi tapu, and taonga, from the adverse effects of pests. The Councils remain committed to meeting Treaty of Waitangi obligations in implementing the RPMP.

2.2 Relationship with the National Policy Direction for Pest Management

The National Policy Direction (NPD) for Pest Management (2015) sets out requirements for developing pest management plans and programmes under the Biosecurity Act 1993. Its purpose is to ensure that the making of pest management plans provides for the wisest use of available resources, which are in New Zealand's best interests, and that approaches align with each other to achieve good pest management outcomes.

The key NPD requirements are that: objectives are set; programmes are described; costs and benefits are analysed (CBA); the funding rationale is noted and Good Neighbour Rules are adequately described. The Councils have followed the guidance included in the NPD to assess the level of analysis of costs and benefits needed for this Proposal. That assessment, which can be found in Appendix 1, concludes that low to medium levels of analysis are appropriate depending on the species and the certainty of management. Table 2 below summarises the steps the Councils have taken to comply with the NPD.

Table 2: Steps taken to comply with the National Policy Direction for Pest Management

NPD requirements	Steps taken to comply
Programme is described	Checked that the types of programmes comply with clause 4 of the NPD.
Objectives are set	Checked that the contents of section 4 comply with clause 5 of the NPD. These have been set prior through the operative RPMP.
Benefits and costs are analysed	Analysed the costs and benefits (clause 6 of the NPD). This analysis is contained in Appendix 1.
Funding rationale is noted	Checked the funding rationale described has been developed in line with clause 7 of the NPD.
Good neighbour rules (GNRs) are described	GNRs have been developed in line with clause 8 of the NPD.

[3] This statement refers to Tangata Whenua and Māori generally, and not occupiers of Māori land, who are bound by rules and obligations of all occupiers, as set out in the RPMP and this Proposal.

2.3 Relationship to other pest plans

The Tasman-Nelson combined region shares a boundary with MDC, West Coast Regional Council and Environment Canterbury. The Proposal does not involve any change to the relationship between the RPMP and any other neighbouring pest management plan, other than one of enhancement and alignment of policies. One of the key drivers of the partial review is better alignment with MDC, with regard to:

- Moth plant – inclusion for the first time, along with MDC.
- Mediterranean fan worm (Sabella) - alignment with MDC providing a consistent approach to Sabella management across the 'Top of the South'.
- Pest conifers and wilding conifers – inclusion for the first time, and adoption of similar definitions from MDC, with shared interests in the Mt Richmond Management Unit wilding conifer control programme.

Pest conifer and wilding conifer rule provisions proposed are also aligned with the Canterbury Regional Pest Management Plan 2018-2038, managed by Environment Canterbury (ECan), along with boneseed and moth plant rules contained in the Canterbury RPMP. The West Coast Regional Pest Management Plan presently does not have policies for the pests under review except *Pinus contorta*. Half of the species (e.g. blue passionflower, moth plant, Vietnamese parsley, and water celery) appear to be absent from the West Coast, and the Kahurangi National Park, and isolation of the northern west coast and prevailing northwest wind present significant barriers to the natural invasion of conifers, boneseed and pampas.

2.4 Relationship to Tasman District and Nelson City strategies, plans, policies and regulations

The programmes that are the subject of this Proposal sit within a policy framework for Tasman-Nelson which includes the current RPMP, the Nelson Biodiversity Strategy, the Tasman Biodiversity Strategy and the two Councils various other strategic plans and policies.

The two regional biodiversity strategies, in particular, emphasise the threat to indigenous biodiversity values from the effects of introduced pest plants (such as moth plant and wilding conifers) and pest animals (such as feral cats and marine invaders).

It is anticipated that the changes proposed to the RPMP will achieve better biodiversity outcomes by creating greater certainty that target pest numbers and infestations will be kept lower for longer through their inclusion in the RPMP.

The Councils are satisfied that the Proposal is not inconsistent with any regulations.

3. Consultation on proposal

3.1 Summary of the process and timeline

The Joint Committee agreed on a process and timeline, as summarised in Table 3 below.

Table 3: RPMP partial review timeline - draft

Actions	Timeline
1. RPM Joint Committee formed (with Terms of Reference) including list of organisms to be covered by review	24th March 2023
2. Both Councils agree to include additional site-led control for feral/stray cats in review	June - August 2023
3. RPMP Joint Committee receives an internal discussion document	22nd August 2023
4. Pre-consultation with iwi and other stakeholders, leading to development / refinement of Proposal	August – October 2023
5. Joint Committee recommends Proposal then both Councils sign off Proposal document	December 2023 and February 2024, respectively
6. Public notification of Proposal for submissions	23rd February (to 22nd March) 2024
7. Further consultation with stakeholders (where appropriate)	As required
8. Hearing held on public submissions	3 – 10 April 2024
9. Deliberations on submissions and staff recommendations	April – May 2024
10. Amend RPMP and prepare reports for Councils	June 2024
11. Councils make decisions and notify outcomes (includes appeal provisions)	August 2024

3.2 Prior consultation – leading to this proposal

In the development of this Proposal, preliminary discussions were held with several interested parties across Tasman-Nelson. A draft version of the Proposal was used to engage and consult with the iwi of Te Tau Ihu and key stakeholders, such as Crown departments and agencies, neighbouring regions, industry groups (e.g. farming, forestry, boating) and community based organisations (e.g. environmental trusts and societies, predator free groups and weed buster groups, where appropriate and practicable. These conversations are in addition to the formal consultation required by the Act.

Table 4 summarises the consultation undertaken as part of the review process to date.

Table 4: Summary of pre-proposal consultation carried out by the Councils

Party	Type	Date	Feedback Received
Iwi/Runanga			
Ngāti Kōata Trust	Presentation to Te Ohu Taiao & engagement through Te Parikaranga	9 August 2023	
Te Ātiawa o Te Waka-a-Māui Trust	Presentation to Te Ohu Taiao & engagement through Te Parikaranga	9 August 2023	No capacity to engage at present
Te Rūnanga O Ngāti Kuia	Presentation to Te Ohu Taiao & engagement through Te Parikaranga	9 August 2023	No issue at present
Ngāti Toa Rangatira Manawhenua Ki Te Tau Ihu Trust	Presentation to Te Ohu Taiao & engagement through Te Parikaranga	9 August 2023	
Ngāti Rārua Trust	Presentation to Te Ohu Taiao & engagement through Te Parikaranga	9 August 2023	
Ngāti Tama ki Te Waipounamu Trust	Presentation to Te Ohu Taiao & engagement through Te Parikaranga	9 August 2023	Requested regular updates be provided at Te Ohu Taiao hui (6 weekly)
Ngāti Apa	Presentation to Te Ohu Taiao & engagement	9 August 2023	

	through Te Parikaranga		
Rangitane	Presentation to Te Ohu Taiao & engagement through Te Parikaranga	9 August 2023	No capacity to engage at present
Key stakeholders			
Biosecurity NZ / Ministry for Primary Industries	TOSMBP meeting	19 October 2023	
Department of Conservation	Online meeting	26 September 2023	Requested a new map be made to include two subdivisions (Alpine Meadows and Beech Hill Rise) out Tophouse way, as these will have residents with cats.
Land Information NZ	Email and phone call to Beth and Richard Langley	13 September 2023	Supportive of proposed changes. Noted pampas and wildings as having the most impact on LINZ, though not yet present in Tasman LINZ sites.
NZ Transport Agency	Meeting with Lea O'Sullivan, Phil Hamblin (NZTA) & Nick Webby (Fulton Hogan)	29 August 2023	Supportive of proposed changes; will work directly with NCC on proposed boneseed provisions/agreement on operational plan for boneseed control. No further consultation required.
Marlborough District Council	Email and Mt Richmond Meeting	Sept 2023	Consider adding "or clones" to *Larix decidua*
Environment Canterbury			Unable to direct time to this
West Coast Regional Council	Email from Taylor Blyth	25th September 2023	All of the pests listed pose a risk to the West Coast, therefore they support the increase in compliance and control. Pampas control issues pointed out – supportive of GNR rule.
One Forty One	Email and Mt Richmond meeting, separate forestry companies meeting	Sept 2023 and 24 November 2023	Detailed response – as contained in a separate detailed file note/response.

Tasman Pine Forests	Email and Mt Richmond meeting, separate forestry companies meeting	Sept	Detailed response – as contained in a separate detailed file note/response.
P F Olsen	Email and Mt Richmond meeting, separate forestry companies meeting	Sept	Detailed response – as contained in a separate detailed file note/response.
NZ Vet Assoc	Email requesting contact 17th October 2023		
SPCA	Meeting	3 October 2023	Refine definitions, especially re stray cats; consult with cat rescue contacts in Nelson & Tasman
Port Nelson	Email contact 17 October 2023	26 October 2023	Discussed and no concerns from the Port's point of view
Environmental / community organisations			
Forest and Bird			No contact made as yet
Rotoiti Community Council	Email and Txt	11 September 2023	Support draft cat provisions

All feedback was considered to develop and finalise the Proposal.

3.3 Further consultation requirements

Formal consultation on this Proposal will now occur in accordance with the consultation requirements set out in the Biosecurity Act, as summarised in Table 3.

This Proposal has been publicly notified for public submissions, to confirm community expectations and policy directions to be incorporated into the amended RPMP.

4. Proposed amendments to the RPMP

4.1 Reader's guide to suggested changes

This section sets out proposed amendments to the current operative RPMP to include new pests or amended policies and rules for eight pests or pest groupings (as noted in Table 1). Following an overview of where the new pests/policies would be inserted within the current list of organisms covered by the RPMP, details of the proposed programmes are outlined using a generic format:

- Species common and scientific names
- Current status
- Proposed management category (one of the NPD programme types below)

Exclusion	**Eradication**	**Progressive Containment**	**Sustained Control**	**Site-Led**

Note: the objective and intermediate outcome and principal measures for each of the above categories have already been stated in the current RPMP as part of each programme's descriptions. These descriptions are not repeated unless there are new matters to include.

- Rationale for inclusion
- Description and adverse effects
- Plan rules and explanations of rules
- Alternate options
- RPMP inclusions/edits required.

Where possible this information will show where and how amended or new provisions inserted into the operative RPMP would look, once adopted. Specific wording amendments to the current RPMP are identified by underlined text in blue.

4.2 Organisms declared pests – current and proposed

This Proposal should be considered in light of the existing pests and policies and rules contained in the current RPMP. Table 5 shows all the currently named pests in the RPMP. Proposed pests and amended policies are also included and are highlighted to show where they 'fit in' under an amended RPMP.

Table 5: Alphabetical listing of existing and proposed pests in the Tasman-Nelson RPMP

Common Name	Scientific Name	Unwanted organism (Yes/no)	Programme	GNR (Yes/ No)	Lead responsibility for control*
African feather grass	*Pennisetum macrourum*	Yes	Eradication		TDC
Banana passion vine	*Passiflora tripartita var. mollissima, P. tarminiana*	Yes	Sustained control - Golden Bay and Upper Riwaka (different rules apply between areas)		Occupier
Bathurst bur	*Xanthium spinosum*	No	Eradication		TDC
Blackberry	*Rubus fruticosus agg.*	No	Sustained control		Occupier
Black spot	*Venturia inaequalis*	No	Sustained control		Occupier
Blue passion flower	*Passiflora caerulea*	Yes	Eradication		Occupier & TDC/NCC
Bomarea	*Bomarea multiflora*	Yes	Progressive containment		Occupier
Boneseed	*Chrysanthemoides monilifera*	Yes	Eradication - outside Nelson's Port Hills		TDC
Boneseed	*Chrysanthemoides monilifera*	Yes	Sustained control - Nelson Port Hills only		NCC
Boxthorn	*Lycium ferocissimum*	No	Eradication		TDC
Broom	*Cytisus scoparius*	No	Sustained control - Howard – St Arnaud		Occupier
Broom	*Cytisus scoparius*	No	Sustained control - outside Howard - St Arnaud	Yes	Crown and private occupiers
Brushtail possum	*Trichosurus vulpecula*	No	Site-led - Waimea Estuary		TDC/groups Occupier
Cape tulip	*Moraea flaccida*	Yes	Exclusion		MPI
Cathedral bells	*Cobaea scandens*	Yes	Eradication		TDC
Chilean needle grass	*Nassella neesiana*	Yes	Exclusion		TDC
Chinese pennisetum	*Cenchrus purpurascens (*was *Pennisetum alopecuriodes)*	Yes	Progressive containment		Occupier
Chocolate vine	*Akebia quinata*	Yes	Sustained control		Occupier
Climbing asparagus	*Asparagus scandens*	Yes	Sustained control - Eastern Golden Bay		Occupier
Climbing spindleberry	*Celastrus orbiculatus*	Yes	Eradication		TDC
Codling moth	*Cydia pomonella*	No	Sustained control		Occupier
Cotoneaster spp.	*Cotoneaster glaucophyllus* and others	No	Site-led - Abel Tasman NP		Occupier
Darwin's barberry	*Berberis darwinii*	Yes	Site-led - St Arnaud Village		Occupier
Douglas fir	*Pseudotsuga menziesii*	No	Site-led - wildings only, in Abel Tasman NP. *(Refer also to 'Wilding Conifers' below)*		Occupier
Egeria	*Egeria densa*	Yes	Eradication		TDC
Entire marshwort	*Nymphoides geminata*	Yes	Eradication		TDC
European canker	*Neonectria ditissima*	No	Sustained control		Occupier

Common Name	Scientific Name	Unwanted organism (Yes/no)	Programme	GNR (Yes/ No)	Lead responsibility for control*
European holly	*Ilex aquifolium*	No	Site-led - Abel Tasman NP and St Arnaud Village		Occupier
Feral / stray cats	*Felis catus*	No	Site-led - Waimea Estuary, Abel Tasman NP, St Arnaud & various mapped places in Nelson City		TDC in Tasman and NCC in Nelson; and community groups
Feral rabbits	*Oryctolagus cuniculus*	No	Eradication - Golden Bay		Occupier
Ferrets	*Mustela putorius furo*	Yes	Site-led - Waimea Estuary		TDC/groups
Fireblight	*Erwinia amylovora*	No	Sustained control		Occupier
Gambusia	*Gambusia affinis*	Yes	Eradication		DOC
Giant buttercup	*Ranunculus acris*	No	Sustained control		Occupier
Gorse	*Ulex europaeus*	No	Sustained control - Howard – St Arnaud		Occupier
Gorse	*Ulex europaeus*	No	Sustained control - outside Howard - St Arnaud	Yes	Crown and private occupiers
Greater bindweed	*Calystetia sylvatica*	No	Site-led - St Arnaud Village		Occupier
Gunnera	*Gunnera tinctoria, G manicata*	Yes	Sustained control		Occupier
Himalayan balsam	*Impatiens glandulifera*	No	Eradication		TDC
Hornwort	*Ceratophyllum demersum*	Yes	Exclusion		TDC
Indian myna	*Acridotheres tristis*	No	Exclusion		TDC
Indian ring-necked parakeet (wild/feral)	*Psittacula krameri manillensis*	Yes	Eradication		TDC
Johnson grass	*Sorghum halepense*	Yes	Exclusion		MPI
Knotweeds (Asiatic, giant and hybrids)	*Fallopia japonica, F. sachalinensis*	Yes	Eradication		Occupiers (TDC assist)
Koi carp *	*Cyprinus carpio*	Yes	Exclusion		DOC
Kūmarahou (gumdigger's soap)	*Pomaderris kumeraho*	No	Site-led - Abel Tasman NP		Occupier
Lagarosiphon	*Lagarosiphon major*	Yes	Sustained control		Occupier
Madeira vine	*Anredera cordifolia*	Yes	Eradication		TDC
Magpie	*Gymnorhina* species	No	Eradication - Golden Bay		TDC
Moth plant	*Araujia hortorum*	No	Eradication		TDC/NCC
Nassella tussock	*Nassella trichotoma*	Yes	Progressive containment		Occupier
Nodding thistle	*Carduus nutans*	No	Sustained control		Occupier
Old man's beard	*Clematis vitalba*	Yes	Sustained control - Golden Bay-Riwaka, Upper Buller		Occupier

Common Name	Scientific Name	Unwanted organism (Yes/no)	Programme	GNR (Yes/ No)	Lead responsibility for control*
Pampas	Common pampas *(Cortaderia selloana)* and purple pampas *(C. jubata)*	No	Sustained control – two Golden Bay sites		Occupier
Perch	*Perca fluvitalis*	No	Eradication		DOC
Pest conifers - individual species • Contorta pine • Scotts pine • Mountain pine • Bishops pine • Maritime pine • Mexican weeping pine • Ponderosa pine • Corsican pine • European larch • Western white pine	 *Pinus contorta* *Pinus sylvestris* *Pinus mugo (& P. uncinata)* *Pinus muricata* *Pinus pinaster* *Pinus patula* *Pinus ponderosa* *Pinus nigra* *Larix decidua and cultivars* *Pinus monticola*	 Yes No No No No No No No No No	Progressive Containment *(Refer also to 'wilding conifers')*	Yes	Occupier
Phragmites	*Phragmites australis*	Yes	Exclusion		MPI
Powdery mildew	*Podosphaera leucotricha*	No	Sustained control		Occupier
Purple loosestrife	*Lythrum salicaria*	Yes	Progressive containment		Occupier
Queensland poplar	*Homalanthus populifolius*	Yes	Sustained control		Occupier
Ragwort	*Jacobaea vulgaris* (previously *Senecio jacobaea)*	No	Sustained control		Occupier
Rat species	*Rattus rattus; Rattus norvegicus*	No	Site-led - Waimea Estuary		TDC/groups
Red-eared slider turtles (wild/feral)	*Trachemys scripta elegans*	No	Eradication		TDC
Reed sweet grass	*Glyceria maxima*	No	Progressive containment		Occupier
Rooks	*Corvus frugilegus*	Yes	Exclusion		TDC
Rosemary grevillea	*Grevillea rosmarinifolia*	No	Site-led - Abel Tasman NP		Occupier
Rowan	*Sorbus acuparia*	No	Site-led - St Arnaud Village		Occupier
Rudd	*Scardinius erythrophthalmus*	No	Eradication		DOC
Russell lupin	*Lupinus polyphyllus*	No	Site-led - St Arnaud Village		Occupier
Sabella	*Sabella spallanzanii*	Yes	Eradication**		TDC
Saffron thistle	*Carthamas lanatus*	No	Eradication		TDC
Senegal tea	*Gymnocoronis spilanthoides*	Yes	Exclusion		TDC
Spartina	*Spartina spp.*	No	Eradication		DOC
Stoats	*Mustela ermine*	Yes	Site-led - Waimea Estuary		TDC/groups
Sycamore	*Acer pseudoplatanus*	No	Site-led - St Arnaud Village and Abel Tasman		Occupier

Common Name	Scientific Name	Unwanted organism (Yes/no)	Programme	GNR (Yes/ No)	Lead responsibility for control*
Taiwan cherry and cultivars	*Prunus campanulata*	No	Eradication		TDC/NCC
Tench	*Tinca tinca*	No	Eradication		DOC
Variegated thistle	*Silybum marianum*	No	Progressive containment		Occupier
Velvet leaf	*Abutilon theophrasti*	Yes	Exclusion		TDC
Vietnamese parsley	*Oenanthe javanica*	No	Sustained control		Occupier
Wallabies (dama and Bennett's)	*Macropus eugenii, M. rufogriseus*	Yes	Exclusion		TDC
Water celery	*Apium nodiflorum*	No	Sustained control		Occupier
Water hyacinth	*Eichhornia crassipes*	Yes	Exclusion		MPI
Weasels	*Mustela nivalis vulgaris*	Yes	Site-led - Waimea Estuary		TDC/groups
White-edged nightshade	*Solanum marginatum*	Yes	Progressive containment		Occupier
Wild ginger	*Hedychium gardnerianum, H. flavescens*	Yes	Sustained control - Golden Bay-Kaiteriteri		Occupier
Wild kiwifruit (including unmanaged or abandoned)	*Actinidia spp.*	No	Eradication		Occupier
Wilding conifers (naturally occurring, not planted, wildings of the species): • Douglas fir • Radiata pine *(Refer also to 'pest conifers')*	*Pseudotsuga menziesii* *Pinus radiata*	No	Progressive Containment – various locations (Douglas fir is also the subject of a site led programme within the existing Abel Tasman National Park site-led programme)***	Yes	Occupier, or occupier of the land where seed spread is originating from
Woolly nightshade	*Solanum mauritianum*	Yes	Sustained control – Golden Bay		Occupier
Yellow bristle grass	*Setaria pumila*	No	Sustained control - Golden Bay and Upper Buller		Occupier
Yellow flag	*Iris pseudacorus*	Yes	Sustained control		Occupier
Yellow jasmine	*Jasminum humile*	Yes	Sustained control		Occupier

Notes:

1. *This table is further amended by transferring rule location information to the programme column, for greater clarity. This amendment will be applied to the reviewed RPMP document.*
2. *For each listed species, the programme type and rules apply across both the Tasman and Nelson regions, unless stated otherwise.*

* *Subject of a proposed minor name change amendment – refer to section 5.5.*

** *Change is in relation to additional rules for Sabella management.*

*** *Douglas fir inclusion in the ATNP site-led programme was confirmed in 2018/19 in the original RPMP. Pests and wilding conifers are added through the partial review carried out during 2023/24.*

4.3 Pest plants

4.3.1 Blue passion flower (*Passiflora caerulea*)

Current status: Not a named pest in current RPMP.

Proposed management category:

Exclusion	Eradication	Progressive Containment	Sustained Control	Site-Led

Eradication programme proposed for whole region.

Rationale for inclusion: There is a need to act promptly while there is still a chance to eradicate this plant. It already occurs in the Grampians (refer Figure 1) where mature vines were found during 2023 and a very active seedbank in the infested areas. Nelson City sites will require reasonably significant funding and staff resources set aside to support occupiers.

Figure 1: Most dense blue passion flower (BPF) infestations located within urban properties (red circled area), north of Nelson Hospital (centre/right). BPF is already escaping into the Grampians Reserve and the hills behind (arrowed). Photo P. Russell, May 2023.

Blue passion flower has been in the region 20-25 years prior, in a lag phase, from which it now seems to be expanding its range. Estimated current extent is mainly in Nelson urban areas, originating as garden escapees. There are also current sites in Tasman (on individual properties and a larger infestation in Hope).

Description and adverse effects:

A vigorous evergreen climbing vine with hanging white-purple flowers. It can be distinguished from all other passionfruit by at least some of the leaves having five lobes. This species inhabits light gaps and forest edges, scrub, roadside margins, wastelands, hedges, and domestic gardens. It will readily spread into natural areas, smothering native plants and preventing establishment of native plant seedlings. Its seeds are spread by birds and small mammals (e.g. rats/possums).

Plan rules and explanations of rules:

Specific Rule for Blue Passion Flower in the Tasman-Nelson region[4]

Over the duration of this Plan, occupiers within the Tasman-Nelson region must:

a. Report sightings of blue passion flower on their land to Tasman District Council within five working days of their sighting.

b. Destroy any blue passion flower on their property, on an annual basis, on the direction of an authorised person.

A breach of this rule is an offence under Section 154N(19) of the Act.

Explanation of the Rule

The purpose of this rule is in accordance with section 73(5)(a) and (h), to facilitate the eradication of blue passion flower from the region. Blue passion flower has a limited distribution in the Tasman-Nelson region and this rule is intended to ensure prompt removal of plants when discovered, leading to its eradication. While primarily an occupier responsibility to control small infestations, TDC/NCC may assist occupiers with large infestations, as determined on a case by case basis.

Alternate options:

1. Do nothing – would exacerbate further natural and human assisted spread. There is still a chance to eradicate this pest. Small-scale control has been underway since 2021 through public goodwill, but relying on this approach is unsustainable.
2. Progressive containment or sustained control – are not appropriate strategies, as neither approach will stop blue passion flower from spreading further. The councils should not rely on occupier control alone to control this plant.

RPMP edits required:

- Blue passion flower to be added to Table 1, Needs to be listed as an Unwanted Organism (UO) and occupier control responsibility but with assistance from TDC/NCC.
- Species, description and status to be added to Table 3 – *Eradication pests in the whole Tasman-Nelson region*.
- No location specific map required.

[4] Similar to current RPMP eradication rule for knotweed.

4.3.2 Boneseed *(Chrysanthemoides monilifera)* - Nelson Port Hills only

Current status: Eradication in the whole region - except the current Port Hills exclusion area.

Proposed management category:

Exclusion	Eradication	Progressive Containment	Sustained Control	Site-Led

Sustained Control programme proposed for Port Hills area only, and maintain current Eradication rule over the rest of the region.

Rationale for inclusion: Extensive surveys of the Port Hills indicates the need for active control within the area. Includes suburbs of: Beachville, Stepneyville, Washington Valley, Toi Toi, Moana, Britannia Heights, Bishopdale and Nelson South. Eradication is not achievable in these areas but stepped up control here will help maintain the integrity of eradication programmes outside the Port Hills (e.g. Rabbit Island area where boneseed seems likely to be 'washed' off the hills into the sea which then float across to infest neighbouring coastal areas). The Port Hills remains a source of reinvasion into land that is clear of or being cleared of boneseed.

Landowners are to be responsible for control, with contractors potentially involved if funding is available. Some steep and difficult areas to reach on private land could be subject to exemption provisions. Other very difficult to access, publicly owned sites (e.g. Rocks Road cliffs) will need a targeted control programme to be undertaken (e.g. NZTA / Waka Kotahi to consider). With a 20-year seed life this will require a long-term extensive programme to be developed. The benefits of control in the Port Hills to the eradication areas outside the Port Hills has been factored into the CBA for this programme. On its own, the original CBA indicates that control is not favourable but in considering wider environmental benefits then the CBA tests are satisfied.

Description and adverse effects:

A multi-branched bushy shrub, up to 3m high. It is an aggressive coloniser in coastal sites (dunes, cliffs, salt marshes) and can displace desirable native species. Its seed can remain dormant when deeply buried for more than 10 years.

Plan rules and explanations of rules:

Specific Rule for Boneseed in the Port Hills area

Over the duration of this Plan, occupiers in the Port Hills area of Nelson, as shown on Map 1 (in this Proposal), must destroy any boneseed on their land, on an annual basis, prior to the completion of flowering, unless there is a negotiated agreement in place between the Management Agency and occupier as an alternative way to achieve this rule.

A breach of this rule is an offence under Section 154N(19) of the Act.

Explanation of the Rule
The purpose of this rule is in accordance with section 73(5)(h) of the Act and requires occupiers to undertake boneseed control on their property, to reduce its impacts on biodiversity and social/amenity values and limit opportunity for spread to other properties in the Nelson City area.

Alternate options:

1. Do nothing – would result in increasing concern from agencies / occupiers and create further impacts on biodiversity / social values in neighbouring areas where eradication is the goal.

2. Eradication – not feasible in this area as infestation extent is beyond this outcome. Also, additional NCC staff / contractor resources would be required to undertake direct control work (unlikely to be funded/supported).

RPMP edits required:

- Boneseed (within Port Hills) added to Table 1 (yes to UO, occupier control).
- Species, description and status to be added to Table 7 – Sustained Control pests in part Tasman-Nelson region.
- Add specific rule for boneseed in the Port Hills.
- Remove boneseed from Organisms of Interest (OOI) list in Appendix 2.
- Map 1 (original) remains correct but title needs editing.
- Edit map 1.1 title to reflect a new boneseed Sustained Control area and add a new map legend to distinguish between Eradication and Sustained Control areas.

4.3.3 Moth plant *(Araujia hortorum).* Also known as *Araujia sericifera.*

Current status: Not a named pest in current RPMP.

Proposed management category:

Exclusion	Eradication	Progressive Containment	Sustained Control	Site-Led

Eradication pest proposed for the whole region.

Rationale for inclusion: Staff currently respond to a small number of urban sites based mostly on information supplied. Limited numbers of seedlings have appeared so far. However, at some point TDC/NCC will need Biosecurity Act powers to access properties for inspection and issuing directions. Not being listed as a pest will not allow for these powers if occupiers refuse access. Moth plant is highly invasive and many other councils list it in their RPMPs, including MDC. Addition to the Tasman-Nelson RMPM provides cross-boundary consistency. The sizes of known infestations are still small and contained which makes eradication highly feasible. There is a chance to 'nip this pest plant in the bud' before it gets established and prevent 'another old man's beard' scenario.

Description and adverse effects:

A vigorous evergreen climbing vine with clusters of bell-shaped white flowers followed by a leathery pear-shaped pod that is readily mistaken for choko. Has a toxic smelly milky sap that can cause skin irritation and dermatitis. This species inhabits light gaps and forest edges, scrub, roadside margins, wastelands, hedges, and domestic gardens. It will readily spread into natural areas, smothering native plants and preventing establishment of native plant seedlings.

Plan rules and explanations of rules:

The rule for reporting moth plant sightings is covered by the existing blanket rule (following), which would include moth plant along with 13 other species, (*but excludes the five pests/pest groupings noted below*).

Specific Rule for 14 Eradication Pests in the Tasman-Nelson Region (excluding wild kiwifruit, knotweed, spartina, sabella, and pest fish)

Over the duration of this Plan, occupiers within the Tasman-Nelson region must report sightings of the named Eradication Pests on their land to Tasman District Council within five working days of their sighting.

A breach of this rule is an offence under Section 154N(19) of the Act.

Explanation of the Rule
The purpose of this rule is in accordance with section 73(5)(a) of the Act and is to assist in the eradication of these 14 pests from the region. Tasman District Council, as the Management Agency, will take responsibility for controlling these Eradication Pests.

Alternate options:

1. Do nothing – would result in increasing infestations and impacts on urban and wider biodiversity values. Over time, infestations would 'escape' into rural environs.

2. Sustained Control or Progressive Containment – would require occupier rules to manage this pest. As infestations are very few it is more important and more cost effective to undertake council control now rather than leave control to occupiers.

RPMP edits required:

- Moth plant added to Table 1. Not listed as a UO and TDC/NCC would have control responsibility.
- Species, description and status to be added to Table 3 – *Eradication pests in the whole Tasman-Nelson region*.
- No need to include new specific rule as it would be covered by default rule that exists (as per above). No specific location map needed.

4.3.4 **Pampas grass** – common pampas (*Cortaderia selloana*) and purple pampas (*Cortaderia jubata*) - Golden Bay sites only

Current status: Not named pests in the RPMP. Both species listed as 'organisms of interest' in Appendix 2.

Proposed management category:

Exclusion	Eradication	Progressive Containment	Sustained Control	Site-Led

Sustained Control programme proposed in two areas in Golden Bay – the Aorere Valley (lower area) and Whanganui Inlet to Puponga (upper area) – refer to Map 2 in this Proposal.

Rationale for inclusion: Both species are well established and widely spread through much of the lowlands of Tasman District and Nelson City areas. Since 2019, when pampas was removed from the previous RPMP, TDC biosecurity officers have noted a marked increase in the incidence of the pest. However, parts of the Aorere Valley and the western coast of Golden Bay around Westhaven remain relatively free of pampas[5]. Pampas is likely to continue to spread into these areas if unmanaged, affecting the indigenous biodiversity values of bush margins, indigenous grasslands, escarpments and wetlands in these areas.

It is proposed to include both species of pampas, otherwise staff would be left 'splitting hairs' on which species is which. Also, visually, the public see pampas as pampas, not as *C. jubata* or *C. selloana*. Both species have a negative impact on environmental and production values.

Description and adverse effects:

Common pampas

Purple pampas

Pampas are large-clump forming grasses that can grow up to 3m-4m tall. Pampas can be distinguished from the native toetoe (*Austroderia* species) by its more erect and fuller flower head that is white to pinkish (*C. selloana*) or has a purple tinge (*C. jubata*) rather than cream coloured.

Pampas species are hardy and tolerant plants making them highly adaptable to a range of habitats including forest light gaps, slips and other disturbed sites (including sprayed or burned sites), river and forest margins, cliffs, shrublands, tussockland, fernland, herbfields, salt marshes, and wetlands. They colonise quickly and can become very dense, effectively out-competing indigenous species to replace ground cover species and shrubs. Pampas tends not to invade grazed pastures, but can quickly invade retired pasture and over-run restoration planting sites. Seeds are spread very long distances by wind (up to 25km) and occasionally by water, soil movement, contaminated machinery, clothing and on animal pelts.

[5] A July 2023 survey of the Aorere Valley found that the area is largely clear of pampas with the exception of a few fence lines. None was found along the 'tight' bush pasture margins with public conservation land (PCL).

Plan rules and explanations of rules:

Specific Rule For Common and Purple Pampas In The Tasman-Nelson Region

Over the duration of this Plan:

a. Occupiers in Golden Bay (within the Sustained Control areas - Aorere Valley and Whanganui Inlet to Puponga) as shown on Map 2 (in this Proposal) must destroy any common and purple pampas on their land, on an annual basis, prior to the completion of flowering.

b. Occupiers in Golden Bay (adjoining the Sustained Control areas - Aorere Valley and Whanganui Inlet to Puponga) as shown on Map 2 (in this Proposal) must destroy any pampas within 200m of their property boundary (before completion of flowering) where the adjoining occupier (within the Sustained Control area) is taking reasonable steps to destroy pampas on the adjoining land. This is a Good Neighbour Rule.

A breach of this rule is an offence under Section 154N(19) of the Act.

Explanation of the Rule

The purpose of the rule is in accordance with section 73(5)(h) of the Act and aims to control impacts on production and environmental values in these areas by reducing pampas infestations in the two mapped Sustained Control areas in Golden Bay and to prevent inaction by occupiers adjoining the Sustained Control areas impacting on the outcomes and values within the Sustained Control areas.

Alternate options:

1. Do nothing – however staff believe pampas could be positively managed in some areas of north-west Nelson which are still substantially clear of this pest.

2. Eradication - within the two areas of Golden Bay is unlikely, because of firstly the cost of initial knockdown is likely to exceed TDCs resources and would be unfairly loaded to the ratepayer, but more importantly the chance of success with constant reinvasion is unlikely within the timeframe of the Plan.

RPMP edits required:

- Pampas (within 2 sites Golden Bay) added to Table 1 (yes to occupier control).
- Species, description and status to be added to Table 7 – *Sustained Control pests in part Tasman-Nelson region*.
- Add *Specific Rules for pampas in Golden Bay.*
- Amend pampas in OOI list (Appendix 2 of the RPMP) to note 'excluding Golden Bay sites'.
- Map needed to reflect new pampas Sustained Control areas.

4.3.5 Water celery *(Apium nodiflorum)* and Vietnamese parsley *(Oenanthe javanica)*

Current status: Neither species are in the current RPMP.

Proposed management category:

Exclusion	Eradication	Progressive Containment	Sustained Control	Site-Led

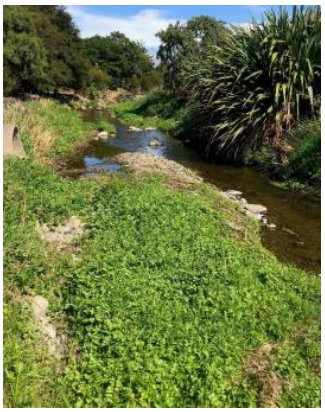
Sustained Control programmes are proposed for the whole region for both species. They are listed together for management purposes as the approach taken is the same for both plants.

Rationale for inclusion: Water celery is in the early stages of naturalisation in Nelson City and Tasman District (e.g. isolated infestations in Brook Stream and Saxton Creek). Likewise, Vietnamese parsley is in a very early establishment stage, near Washbourn Gardens and Poorman Valley Stream. Both plants were the subject of a NIWA commissioned report by NCC (Champion, 2018).

While the abundance of both plants is relatively low, the current infestations are beyond the eradication stage and ability. There is a large invasion potential in regional waterways that are still free of the pest. Trials to control incursions have been successful at reducing the size of infestations, but have not yet proven to be able to eliminate them completely. The most effective herbicides are also ones that require resource consent for use over water.

Both plants are best managed to reduce impacts on the biodiversity values of regional waterways, with obligations on occupiers to undertake control (and assistance from TDC/NCC). A 'check, clean, dry' type rule, with awareness, will also help to reduce spread impacts beyond current areas. The extent of infestation is reasonably well known to the councils but further survey work is required to improve knowledge. Vietnamese parsley in particular is valued as a key ingredient in Asian cuisine, so targeted campaigns would be needed around its harvesting, use and spread risks.

Description and adverse effects:



Water celery smothering stream margins

Water celery is an aquatic herb that appears to be reliant on human activity to disperse fragments. While not cultivated as a culinary herb it can be mistaken for watercress (*Nasturtium officinale*). It is widespread in the North Island, though rare in the South Island. It can have negative impacts on river recreational (fishing and swimming), infrastructural (drainage), and environmental (aquatic biodiversity) values by clogging small streams and waterways.

Vietnamese parsley in Poorman Valley Stream

Vietnamese parsley is an aquatic herb cultivated as an ornamental and culinary herb species. It was first recorded as successfully establishing in the wild in 2014. It impacts on river recreational (fishing and swimming), infrastructural (drainage), and environmental (aquatic biodiversity) values by clogging small streams and waterways.

Plan rules and explanations of rules:

Specific Rule for water celery and Vietnamese parsley in the Tasman-Nelson Region.

Over the duration of this Plan occupiers within the Tasman-Nelson region must:

a. Destroy any water celery and Vietnamese parsley on their land, on the written direction of an authorised person, on an annual basis, prior to the onset of flowering.

b. Remove all fragments of water celery and Vietnamese parsley from their places (i.e. machinery, equipment and craft that have been in contact with waterway vegetation) when leaving infested waterways, and dispose of all fragments to landfill.

A breach of this rule is an offence under Section 154N(19) of the Act.

Explanation of the Rule

The purpose of this rule is in accordance with section 73(5)(h) and aims to reduce the impacts of water celery and Vietnamese parsley on regional values and slow their spread to other waterways in the region. TDC/NCC may assist occupiers depending on locations and densities of infestations, as determined through the RPMP Operational Plan. (e.g. these plants may require herbicide being applied into or over water for their control which requires resource consent and Environmental Protection Authority approval).

In many situations, the land where the infestations occur is occupied by TDC or NCC. Disposal to landfill is the best method for dealing with fragments and isolated plants of both species, as composting works for one but not the other.

Alternate options:

1. Do nothing – would see these pest plants spread through drains and streams and into other water bodies, creating numerous impacts (refer to Figure 2). Spread risk potential through water users and their pathways of spread would steadily increase.
2. Eradication - not feasible, as infestation extents are beyond this point and there is no known herbicide to achieve this. Also, additional contractor resources would be required to undertake substantial direct control work (not cost effective).
3. Under a Sustained Control scenario (e.g. reducing opportunities for spread), Progressive Containment may also be a viable future option, in that some infestations in some locations may be able to be contained and reduced.

RPMP edits required:

- Vietnamese parsley and water celery to be added to Table 1, Neither listed as UOs and occupiers would have control responsibility.
- Species, description and status to be added to Table 6 – *Sustained Control pests in the whole Tasman-Nelson region.*
- Add specific rule for Vietnamese parsley and water celery.
- No location specific map required.

Figure 2: Water celery in a typical drain situation, Richmond. Photo: BBSL, May 2023.

4.4 Pest animals

4.4.1 Feral and stray cats (*Felis catus*)

Current status: Feral cats are only included in the Waimea Estuary site-led programme.

Proposed management category:

Exclusion	Eradication	Progressive Containment	Sustained Control	Site-Led

Further site-led programmes are proposed targeting both feral and stray cats in Tasman and Nelson.

Rationale for inclusion: Both Councils wish to step up feral and stray cat management at sites with important biodiversity values and further promote responsible companion cat ownership overall. Cats in general contribute to negative impacts on indigenous biodiversity (e.g. direct predation on native birds, reptiles and insects, freshwater fish and invertebrates across the region, or indirectly through nest or colony desertions). This proposal concerns management of feral and stray cats at several named high-value sites (refer to Map 3 in this Proposal):

- Nelson City – numerous named publicly owned/managed sites.
- Abel Tasman National Park (ATNP) private enclaves – by adding feral/stray cats to the existing site-led programme.
- St Arnaud site-led programme – include new pest agent rule limiting the presence of companion cats in the village area.

The ability to distinguish companion cats from feral and stray cats may rely over time on bylaws or national cat regulations (around compulsory microchipping) being implemented to support RPMP provisions (and vice versa). Desexing of cats also assists with long term management.

Description and adverse effects:

Feral and stray cats originate from companion cats and are usually short-haired and slightly built, with large heads and 'sharp' features. Coat colours revert to black, tabby or tortoiseshell, with varying extents of white. Adult male cats are generally larger than females and can weigh up to 5kg. They can produce two or three litters per year with an average of four young in each.

New Zealand's unique native wildlife is particularly vulnerable to predation by all cats. Feral and stray cats kill young and adult birds and occasionally take eggs and prey on native lizards, fish, frogs and large invertebrates. Cats are highly efficient predators, and have been known to cause local extinctions of seabird species on islands around the world. Birds that nest or feed on or near to the

ground are particularly at risk. Feral and stray cats are aggressive towards companion (owned) cats and also carry parasites and toxoplasmosis, which causes abortions in sheep and illness in humans.

*The following cat definitions apply when reading this Plan.

Type	Relationships with humans	Considerations
Companion cat	Directly dependent	Has owner/guardian
Stray cat	Directly or indirectly dependent	Community cat(s), semi-owned, unowned, managed or unmanaged as a single cat or colony
Feral cat	Independent and unsocial	Wild animal, considered a pest in many regions in NZ

Source: SPCA/NZ Cat Management Strategy

A cat can also be deemed a 'pest agent cat' under the RPMP, with rules. Pest agent cat definition under this Plan is: any cat that in any way leads to the replication or survival of stray or feral cat populations.

Plan rules and explanations of rules:

New approaches for (i) Nelson City – specific high value sites, (ii) current ATNP site-led programme and (iii) new St Arnaud environs site-led programme (refer to Map 3 of the Proposal). Rules are noted as follows:

Specific rule for feral and stray cats in the Nelson City site led programmes
Over the duration of this Plan, and with regard to high value sites within Nelson City (as shown on Map 3.1 in this Proposal):

a) Any person who suspects the presence of any feral or stray cat in any named high value site must report its presence and location to Nelson City Council within 48 hours of their sighting.

b) No person shall feed or shelter any feral or stray cat in any named high value site.

Explanation of the rules
Rule a. is in accordance with section 73(5)(a) of the Act to assist NCC in detecting the presence of feral or stray cats for the purposes of biodiversity protection and wildlife management.

Rule b. is in accordance with section 73(5)(d) of the Act to discourage people supporting cat colonies on public land with recognised high biodiversity values.

Specific pest agent cat rule for the Nelson City site-led programme

No person shall deliberately release into the wild (i.e., in any named high value site in Nelson as shown on Map 3.1 in this Proposal) any companion or stray cat.

Explanation of the rule
This pest agent rule is in accordance with sections 73(5)(e), (j) and (l) of the Act and aims to support council and community efforts in Nelson to protect wildlife and biodiversity values, by restricting the ability for companion and stray cats potentially breeding with feral cats. It also assists with reducing the likelihood of companion and stray cats being released into the wild, at named sites, and causing long term effects.

Specific rule for feral and stray cats in the St Arnaud environs site led programme
Over the duration of this Plan, and with regard to the St Arnaud site-led programme (as shown on Map 3.2 of this Proposal):

Any person who suspects the presence of any feral or stray cat observed within the mapped area must report its presence and location to Tasman District Council within 48 hours of their sighting.

Explanation of the rule
This rule is in accordance with section 73(5)(a) of the Act to assist TDC and DOC in detecting the presence of feral or stray cats for the purposes of biodiversity protection and wildlife management.

Specific pest agent cat rule for the St Arnaud environs site-led programme
Over the duration of this Plan, and with regard to the St Arnaud site-led programme (as shown on Map 3.2 of this Proposal):

a. No person shall keep, hold or harbour any companion cat within the mapped area unless it is desexed and its identity is microchipped and the chip is registered on the New Zealand Companion Animal Register.

b. No person shall deliberately release into the wild (e.g. Nelson Lakes National Park and environs) any companion cat from or living within the mapped area.

Explanation of the rule
Pest agent rules a. and b. are in accordance with sections 73(5)(a), (d) and (h) of the Act and aim to support existing St Arnaud community work to protect wildlife and biodiversity values, by restricting the presence of companion cats living in the St Arnaud area and potentially breeding with feral cats. It also assists with reducing the likelihood of companion cats being purposely released into the wild around St Arnaud and causing long term impacts.

Additional rule for Abel Tasman National Park private enclaves
Following existing rules a. and b. and in relation to the ATNP site-led programme areas – Awaroa, Torrent Bay and Marahau North, as shown in three maps (Map 3.31, 3.32 and 3.33, respectively, of this proposal):

a. Any person who suspects the presence of any feral or stray cat within the ATNPSLP must report its presence and location to Tasman District Council within 48 hours of their sighting.

Explanation of the rule

Note: the current rule explanation is generic to cover the intent of the inclusion of feral/stray cats but needs to be edited to read 'named pest plants and pest animals' in two places.

A breach of any of the above rules is an offence under Section 154N(19) of the Act.

Alternate options:

1. Do nothing additional to what's already included in RPMP – this won't address the growing call from environmental groups and the community for both Councils to step up their leadership to address declining biodiversity values.

2. Rely on bylaw development by both councils to better manage all cats - however bylaws should not be used to manage pest situations and the RPMP deals with pests only and should not entertain companion animal management (other than via pest agent rules).

3. Rely solely on national cat legislation developed. However, any national cat legislation would likely be years away.

Further assumptions explain the rationale for inclusion of feral / stray cats in the Proposal:

- The RPMP is the most suitable legal tool to consider feral / stray cat management regimes, but realistically only through site-led programmes.

- Local bylaws are best suited for the widespread management of companion cats through bylaws around compulsory microchipping and desexing, in the absence of national cat management legislation.

- It is difficult to impose rules in the RPMP requiring occupiers to control / destroy cats as they are highly mobile (i.e., it would be difficult to use land tenure as the identifier for non-compliance) and may be owned (i.e., a cat may also be property) but not identified as such.

- Any cat could be deemed a 'pest agent cat' in certain circumstances, such as a companion cat which, in any way leads to the replication or survival of stray or feral cat populations.

RPMP edits required:

- Add principal measure 'd.' to Site Led Pests Programme (pg. 57): Service delivery: the Councils, their agents, or other parties authorised by the Councils may undertake direct control of named pests in the site-led category at their discretion (e.g. as part of an integrated predator animal control at named high value sites), as outlined in the RPMP Operational Plan.
- Add new site led programmes and maps as outlined above[6].

[6] Note: A revised site-led programme has been drafted but is not included in this Proposal due to its length.

4.4.2 Sabella, or Mediterranean fan worm (*Sabella spallanzanii*)

Current status: Eradication over whole region with rules requiring occupiers to report Sabella presence and to allow access to places they occupy for control.

Proposed management category:

Exclusion	Eradication	Progressive Containment	Sustained Control	Site-Led

Rationale for inclusion: The proposed amendments align with the Marlborough RPMP and therefore provide consistency across the Top of the South's coastal marine areas. There are three additional Sabella control rules included which provide a backstop ability for the Councils to undertake enforcement action if and when compliance situations arise. The current 'reporting of Sabella' rule would be retained (and edited) as Sabella is a notifiable organism.

The eradication goal is retained with rules added requiring owners of vessels and marine equipment (craft) entering the region to not exceed a standardised fouling level, (as developed by the Cawthron Institute), and for owners/occupiers of places to destroy Sabella when directed to by an Authorised Person, and stating how this is to be done.

Description and adverse effects:

Sabella (also known as Mediterranean fanworm) are marine worms in harbours and estuaries that live inside tough flexible tubes up to 40cm long. The tubes are attached to hard surfaces on vessels and structures and have a single spiral fan extending out the top. They can form dense colonies and compete for nutrients with commercial crops (e.g. mussels) and native marine organisms.

Plan rules and explanations of rules:

Specific Rules For Sabella In The Tasman-Nelson Region

Over the duration of this Plan:

a. The owner or person in charge of any marine craft entering the Tasman-Nelson region must ensure that the fouling on the hull and niche areas of the craft does not exceed level 2 on the Cawthron level of fouling (LoF) scale, unless:

   i) The craft is entering Tasman-Nelson for the purpose of hauling out. The haul out must be undertaken within 24 hours of arriving. Proof via receipt from a haul out facility must be provided to an Authorised Person if requested, or

ii) The craft is entering Tasman-Nelson for emergency purposes and the craft leaves the region within 24 hours of arrival (or otherwise the occupier needs to comply with the rule), or

iii) The craft is required to enter Tasman-Nelson in response to a declaration of a state of emergency, as determined by the Ministry of Civil Defence & Emergency Management.

- *Rule a. does not apply to marine craft that have entered New Zealand waters in compliance with the Craft Risk Management Standard (CRMS) for Biofouling in the period two months prior to either directly or subsequently entering Tasman-Nelson waters.*
- *Rule a. is also not intended to apply to those craft that are usually moored in the Tasman-Nelson region and leave the region for no more than 24 hours before returning.*
- *Level 2 macrofouling (e.g. having goose barnacles) is defined by the Cawthron Institute as: macrofouling is present in small patches, or a few isolated individuals or small colonies, and covers between 1 - 5% of the visible surface (refer to Appendix 2).*
- *In relation to receipt verification from haul out facilities, this will need to be from a recognised haul out facility (i.e. the Top of the South has a list of recognised facilities) or proof that the facility complies with the respective council's consent rules.*

b. The occupier or person in charge of any place (e.g. marine craft or structure) shall destroy Sabella that has been found on that place, on written direction from an Authorised Person, unless there is an approved agreement in place between the Management Agency and occupier as an alternative way to achieve this requirement.

c. In undertaking steps to destroy Sabella (under rule b.), the place shall first be slipped or contained within an encapsulation system and treated with biocode. If that is not practicable, Sabella may be removed in water by divers who are appropriately trained and all Sabella must be contained and returned to the surface for disposal to a suitably authorised facility.

- *Marine craft that have been hand cleared of sabella by divers under rule c. (i.e. where treated in-situ within TDC's jurisdiction) are permitted to stay at the site of treatment for a maximum of one month following treatment. After this period craft are required to be slipped and fully cleaned, to the satisfaction of an authorised person. There is a boat haul out facility with Port Nelson.*

d. Any person who suspects they have observed Sabella in Tasman-Nelson shall notify the Management Agency within 24 hours of making the observation, detailing the location and situation of the suspected pest.

- *Rule d. applies as Sabella is also a notifiable organism through the Biosecurity (Notifiable Organisms) Order 2016. The suspected presence of Sabella must also be reported to the Ministry for Primary Industries in accordance with section 46 of the Biosecurity Act 1993.*

A breach of any part of the rule(s) is an offence under Section 154N(19) of the Act.

Explanation of the Rules

The purpose of these rules is in accordance with sections 73(5)(h) and (m) of the Act and aims to facilitate the eradication of Sabella from the region. Sabella has a limited distribution in the Tasman-Nelson region and these rules are intended to ensure prompt removal of infestations when discovered (through either council or occupier control), leading to its eradication.

TDC, NCC and MDC will work collaboratively on Sabella management in the Top of the South Marine Biosecurity Partnership, in conjunction with the owners of vessels and marine structures (places) who may also have control obligations placed upon them. A key consideration on what action is required will be the extent of biofouling on the place in question – hence the application of rule a.

The extent of TDC/NCC's service delivery funding obligations will be detailed in annual RPMP Operational Plans.

Alternate options:

1. Drop Sabella from the RPMP as it is too difficult and costly to manage – this would impact heavily on the multi-million dollar mussel industry and would directly impact the values and messages portrayed in Figure 3.

2. Do nothing, keep the current RPMP provisions – but this isn't consistent with MDC and doesn't legally provide powers that oblige occupiers to control Sabella on their property/place.

Figure 3: Marine pest signage at Port Tarakohe – June 2023. Photo: BBSL.

RPMP edits required:

- Add new or revised rules as outlined above.
- Add 'level of fouling' diagram or explanation.

4.5 Pest conifers and wilding conifers

Current status: No species of conifers are currently named as pests except for Douglas fir, and only within the Abel Tasman National Park enclaves and subsequent ATNP site-led programme.

Proposed management category:

Exclusion	Eradication	**Progressive Containment**	Sustained Control	Site-Led

Species covered and definitions

There are ten conifer species proposed to be declared 'pest conifers' in the RPMP as listed in Table 6.

Table 6: Conifer species in the pest conifer control programme

• Bishops pine (*Pinus muricata)*	• Maritime pine (*Pinus pinaster)*
• Contorta pine (*Pinus contorta*)	• Mexican weeping pine (*Pinus patula)*
• Corsican pine (*Pinus nigra)*	• Ponderosa pine (*Pinus ponderosa)*
• Mountain pine (*Pinus mugo)* including sub-species and botanical variants	• Scots pine (*Pinus sylvestris*)
• European larch (*Larix decidua)* and botanical variants	• Western white pine (*Pinus monticola*)

The species above occur in planted (historical) or wilding states and all can cause adverse impacts on regional values. Contorta pine is the most invasive of this group and is deemed an unwanted organism nationally. Some pest conifers have commercial worth where they have been planted prior and progressively harvested. However, most of these species have little or no economic worth, in contrast to the significant environmental cost of their spread. Generally, pest conifers need to be controlled / harvested wherever they occur in the region (including where they occur in plantations) as soon as it is practicable.

A further group of conifers comprises two species grown as commercial crops, but which can also naturally spread and contribute to wilding conifer adverse effects. Two species of conifer are proposed to be declared 'wilding conifers' in the RPMP as listed in Table 7.

Table 7: Conifer species in the wilding conifer control programme

• Douglas fir (*Pseudotsuga menziesii*)	• Radiata pine (*Pinus radiata)*

The RPMP is not concerned with preventing production or permanent forestry operating within a landowner's private property. However, plantations of Douglas fir and Radiata pine can result in self-seeded and unintentional spread, hence self-seeded trees of these two species, outside the area of an existing planted forest, are deemed to be 'wilding conifers'. It is widely acknowledged that Douglas fir seed spreads long distances and creates a greater seed spread risk than *P. radiata* (Figure 5).

This Plan also refers to 'pest agent conifer', which means any introduced conifer species that is capable of helping the spread of wilding conifers and is not located within a plantation forest. An example is a shelter belt of Douglas fir under 1 ha. in area that is clearly exacerbating seed spread issues for a neighbouring property.

Readers should note that in this section, in general terms, 'wilding conifer' or 'pest agent conifer' may also refer to any of the 12 named conifer species, in certain situations, to reflect the intent of the National Wilding Conifer Management Strategy, except where 'pest conifers' or 'pest agent conifers' are specifically referenced (e.g. in relation to rules).

Rationale for inclusion:

The inclusion for the first time of pest conifers and wilding conifers into the Tasman-Nelson RPMP is an important interim step in their region-wide management[7]. The main reasoning is to maintain the gains of prior and current control efforts. The region needs to protect the investments made to date in four wilding conifer operational areas under current management (refer to Map 4 in this Proposal):

- Mt Richmond Wilding Conifer Management Unit[8] (refer to Figure 4 below);
- Takaka Hill – Takaka Hill Biodiversity Group Trust;
- Abel Tasman National Park (ATNP) - Project Janszoon; and
- Golden Bay (including the ATNP Halo) - Project De-Vine Environmental Trust.

Criteria for having the intervening 'maintain the gains' policies and rules included alignment with Marlborough District Council policy where possible, and being practical and realistic while containing a degree of flexibility (e.g. promoting negotiated agreements between parties as an alternate option to enforcing rules, where the result may achieve the same or similar outcomes as rules). In relation to including radiata pine and Douglas fir, increasingly, the forestry sector's social license to operate requires external impacts (from seed spread) onto neighbouring occupiers to be better managed. Neighbouring land occupiers should not be required to pay for or undertake pest control on their land through the actions or inactions of other parties.

The final reason for including wilding conifers, and arguably the most important strategically, is to protect land in Tasman-Nelson that has not been impacted by wilding conifers to date, or to control infestations that are only just becoming noticeable. History has shown that an important contributor to wilding conifer problems is a lack of early action, and that the cost of wilding conifer control increases significantly the longer any spread is left uncontrolled. Therefore, the development of rules is an important mechanism to help prevent new areas of wilding conifers becoming established due to a lack of early action. This issue is particularly important given recent policies and economic drivers incentivising afforestation.

Description and adverse effects:

[7] Their inclusion now provides a lead in for a full review in 2028/29 when the whole operative RPMP requires reviewing.
[8] The Mt Richmond MU (through prior administrations) has a long history of locally funded wilding conifer control operations occurring. Operations in the MU now involve a consortium of national, regional and local stakeholders (including MDC) and are funded locally/regionally as well as through the National Programme. At least $5M has been spent on control to date.


Contorta pine cone

Pest and wilding conifers cause significant impacts on native ecosystems in the region, such as iconic tussock grasslands, alpine herblands and ultramafic areas. In regenerating scrub and forest areas they will outcompete native species. They also adversely affect recreational and visual/landscape values, alter soil and soil fauna, reduce pastoral farming availability, impact water availability and quality and create or contribute to wildfire risks. All these impacts also adversely affect tangata whenua values across Te Tau Ihu.

Plan rules and explanations of rules:

Two types of management programme are proposed - a region-wide approach and targeted programmes in operational areas under current management.

i. Region-wide programmes

Three rules are proposed, outside of current operational areas under management:

- A clear land rule;
- A planted conifer forest (wilding spread) rule; and
- A pest agent conifer rule.

Specific rules for pest/wilding conifers applicable across the whole region

Over the duration of this Plan, within the Tasman-Nelson region and prior to cone bearing:

a. Outside of named wilding conifer operational areas, after 1 July 2025, occupiers of land that is clear or relatively clear of **pest or wilding conifer** must destroy any pest or wilding conifer on their land, to ensure that land that is clear or relatively clear of pest or wilding conifers remains clear, on the written direction of an authorised person, unless there is a negotiated agreement in place between the Management Agency and occupier as an alternative way to achieve this requirement.

- *'Clear land' is defined as parts of the region that are currently clear, (or infestations are at a low or very low density), but highly susceptible to wilding conifer spread if a seed source becomes established. Although the majority of wilding conifer spread is predictable, a characteristic of spread (particularly in highly susceptible areas[9]) is also the occurrence of random, irregular, long distance spread into areas previously unaffected. This rule provides an early intervention trigger for these vulnerable or susceptible areas. Further, protected 'specimen' conifer trees named in District Plans (made under the Resource Management Act) may be exempt from this requirement, on a case by case basis.*

b. From 1 July 2024, occupiers of planted conifer forests (greater than 1 hectare), outside of named wilding conifer operational areas, are responsible for the removal

[9] Currently undetermined and unmapped. The intention is to map these areas within a year of RPMP amendments being adopted. Example 'susceptible areas would include: coastal headlands and ecosystems, areas of cultural importance and numerous other sites of ecological or production related importance. This work would also assess the threshold that determines 'low' or 'very low' density.

of any **wilding conifers** present on adjoining land, within 200m of the planted forest property's boundary. This requirement will be on written direction from an authorised person, following a valid complaint from an adjoining affected neighbour, and where there is evidence (in the opinion of an authorised person) that wilding spread has occurred from the planted forest to an adjoining property.

c. Occupiers must destroy any pest agent conifer on their land, on direction of an authorised person, where an adjoining occupier is undertaking active pest conifer or wilding conifer control on their land and the wilding spread is clearly attributable to the pest agent conifer(s).

(ii) Current operational areas under management

It is assumed that current priority control areas and programmes will continue to be funded until the 'back of each problem' is broken (i.e. no coning trees remain) and responsibility for ongoing control can be transferred back to individual land occupiers to manage. 'Transitional' criteria have yet to be determined nationally, however the following rules would generally not be implemented until an operational area has received:

- Initial control; and
- 2-3 rounds of maintenance control (with varying years, i.e. typically 3-5 years, between control cycles, dependant on the species)[10].

There are four wilding conifer control operational areas in the Tasman-Nelson region which are the key subject of the RPMP pest conifers proposal.

Specific rules for pest/wilding conifers in parts of the region (as listed below):

- Mt Richmond Wilding Conifer Management Unit;
- Takaka Hill community project;
- Abel Tasman National Park (ATNP) - Project Janszoon; and
- Golden Bay (including ATNP Halo) - Project De-vine.

Over the duration of this Plan, within the above operational areas under current management, in the Tasman-Nelson region (as shown in Maps 4.1, 4.2 and 4.31 and 4.32 in this Proposal) and prior to cone bearing:

d. Occupiers must destroy any pest/wilding conifers on their land where they are located within a defined operational area that has received prior control, or there is a negotiated agreement in place between the Management Agency and occupier as an alternative way to achieve this requirement.

e. Occupiers within a defined operational area must destroy any pest/wilding conifers on their land within 200m of an adjoining property boundary, where the adjoining property has previously been cleared of pest/wilding conifers through prior control and the adjoining occupier is also undertaking active control work within 200m of their property boundary. This is a Good Neighbour Rule and will apply unless there is

[10] The level of control received will be proportionate to the infestation size and density and other factors such as seed banks.

a negotiated agreement in place between the Management Agency and occupier as an alternative way to achieve this requirement..

A breach of any of the above rules is an offence under Section 154(N)19 of the Act.

Explanation of the Rules
The purpose of these rules is in accordance with sections 73(5)(h) , as outlined below:

- *Rule (a) is a 'clear land rule' and requires occupiers to take specific actions to control pest or wilding conifers when instructed to by appropriate council officers in writing. The intent of the rule is to primarily protect high value biodiversity areas which are deemed vulnerable to any wilding conifer spread where infestations are small (and densities low to very low) and control now is feasible and cost effective, as determined by council officers. The rule could also be used to protect production land or for cultural/aesthetic reasons where wilding or pest conifers are impacting on these values. A negotiated agreement between the Council and occupier is a valid alternative way to meet this rule requirement.*

- *Rule (b) is a 'planted forestry seed spread rule' and aims to ensure that forest occupiers (plantation and permanent forests) are responsible for any wilding spread of conifer seedlings from their forests onto immediately neighbouring land, from 1 July 2024 onwards. It is unreasonable for affected occupiers adjoining planted forests to have to clear wildings and/or pay for this control work (i.e. the 'polluter pays' principle). Implementation of this rule is based on the opinion of an appropriate council officer and must be backed with proof of spread occurring. The rule only applies where the adjoining occupier (making the complaint) is making reasonable attempts to keep their land clear of wildings and their land use remains otherwise unchanged.*

  A four-step process is followed:
  Step 1: Complaint received by council.
  Step 2: Complaint investigated by an appropriate Authorised Person (with powers of entry) to validate complaint.
  Step 3: Meeting held between the parties to engage them on the most appropriate way to deal with the problem.
  Step 4: If no agreement can be reached, RPMP enforcement provisions may be enacted.

  A negotiated agreement between the forest occupier and adjoining occupier (and validated by the Management Agency) will be a binding way to meet this rule requirement, e.g. that the agreement documents which party will undertake and/or fund the required control, over what time period and what the access agreements are to carry out control work.

- *Rule (c) is a 'pest agent conifer rule' which aims to prevent pest/wilding conifer establishment across property boundaries through the control of conifer woodlots and shelterbelts (under 1 hectare in size) or individual trees that are determined, in the opinion of an authorised person, to be genuine sources of seed spread. This rule would be triggered primarily through a valid complaint made by a neighbour to the Management Agency, and that person must be making a genuine attempt to control pest/wilding conifers on their property.*

- *Rule (d) is about 'maintaining the gains' of any control work undertaken to ensure that the benefits of control are not lost through inaction (or for any other reason) by any occupier. 'Prior' means any work underway from 1 January 2016 (when the national programme commenced) to the present day. 'Control' means any work funded all or in part through formalised or planned programmes (e.g. national, regional or local operations including environmental trust led initiatives, as deemed valid by the Management Agency). This definition extends to include individual private property control programmes, on a case by case basis.*

- *Rule (e) is a 'good neighbour rule' designed to protect an occupier who has been taking reasonable steps (e.g. active/ongoing control work) on their property and is being impacted by wilding conifer infestations on neighbouring property (e.g. through inaction or unsatisfactory/incomplete control). The 200m distance is based on science that notes the majority of conifer seeds fall within this space from source trees. In practicable terms this is the only suitable way to bind the Crown to meet its RPMP obligations.*

- *Rules d-e above relate to operational areas that have received the agreed level of work, or agreed control targets have been met, and where the Management Agency determines that ongoing control will transition back to individual land occupiers.*

Alternate options:

1. Do nothing – however, in every other region where work is undertaken under the National Programme, wilding conifers are included in the relevant RPMP. This is because without their inclusion, and without rules, there is no compulsion on occupiers to maintain any of the gains made to date.

2. Eradication is not feasible. A Sustained Control Programme, while containing the same rules as Progressive Containment, does not address the overall goal sought of wildings management, being the control of spread then progressively pushing back infestations to source areas then controlling those source areas (in the long-term).

Figure 4: Current operational area in the Mt Richmond Wilding Conifer MU. Legacy plantings of contorta and mountain pine on Beebys Ridge (right) are to blame. Control was commenced by DOC in 2018. Further control is scheduled for 2023/24. Photo source: BBSL, November 2023.

RPMP edits required:

Add principal measure 'd.' to Progressive Containment Pest Programme (pg 40):

d. Tasman-Nelson pest and wilding conifer management programme: Both councils will play a leadership role in facilitating collaborative on-the-ground management of pest and wilding conifers. Major components of this approach will include providing support as a partner and actively supporting community led initiatives. The outcomes of the programme will be heavily reliant on the sustained implementation of current and future operations through equitable regional and national funding. While some local/regional funding for control operations is likely to continue, the programme will become increasingly dependent on the National Wilding Conifer Control Programme (NWCCP). This is a collaborative nation-wide control approach and funding model for wilding conifer management. Significant joint Crown funding for control work, from the Ministry for Primary Industries, Department of Conservation and Land Information New Zealand, came into effect in 2016 but the programme requires ongoing Crown funding and occupier support to continue (including on Crown occupied land). Work to control pest and wilding conifers may also occur outside current operational areas should it be prioritised and resourced through agreements between the various parties involved.

- Add new progressive containment programmes / rules as outlined above.

Figure 5: Wilding Douglas fir along the Beebys Track / Te Araroa Trail close to the regional boundary with Marlborough District. A Douglas fir plantation is just out of photo to the right with the Raglan Range in the background – November 2023. Photo: BBSL.

5. Management considerations

5.1 Responsibilities and obligations

Tasman District Council remains the Management Agency responsible for implementing the RPMP, which was established in 2019 and is in effect until 2029. The proposed amendments make some changes to the responsibilities of other agencies (e.g. DOC or NZTA, as outlined in this Proposal), including, for example, that Nelson City Council may choose to undertake service delivery for Sabella, feral/stray cats and assist with blue passion flower control.

5.2 Monitoring

The current RPMP contains a detailed approach to RPMP monitoring:

- Measuring RPMP objectives;
- Monitoring the performance of the Management Agency;
- Monitoring how effective the RPMP is; and
- Determining if there are other impacts of the RPMP's implementation.

The monitoring provisions and activities noted above are not affected by the proposed amendments, other than to the extent an increased number of pests will require additional or redirection of existing resources.

5.3 Powers and duties under the Biosecurity Act 1993

The powers and duties noted in Table 13 of the current RPMP, such as duty to provide information (Part 4 of the Act); ability to undertake inspections; giving directions and appointing Authorised Persons (under Part 6 of the Act) are not affected by the Proposed amendments.

5.4 Funding analysis

Who should pay?

The Biosecurity Act 1993 and the Local Government (Rating) Act 2002 require that funding is sought from:

- People who have an interest in the RPMP.
- Those who benefit from the Plan's implementation (beneficiaries).
- Those who contribute to the pest problems (exacerbators).

The pests listed in this Proposal are all major threats to indigenous biodiversity values in the Tasman-Nelson region and, to a lesser extent, regional production values (e.g. feral cats, Sabella and wilding conifers).

Occupiers of places[11] with pest infestations, including the Crown and the Councils, are generally the principal exacerbators of most pest problems. They are 'exacerbating' the problems by virtue of owning/managing land, craft, or structures and are therefore best placed to undertake and pay for the costs of any control, and ensure that infestations are not impacting on biodiversity and production values and/or spreading to their neighbours.

The Tasman-Nelson regional community is the principal beneficiary given that managing these pests for the protection of biodiversity values is deemed a 'public good'. Rural land occupiers may also be beneficiaries where production values are affected (e.g. through wilding conifer control and avoiding animal health impacts of diseases carried by feral/stray cats). Urban land occupiers will also be beneficiaries of control (e.g. moth plant and boneseed in urban areas) and in some cases they will be exacerbators of pest spread. With regard to pampas, the protection of biodiversity values on the conservation estate is a national public good with the nation being a principal beneficiary. Marine occupiers are both exacerbators and beneficiaries of Sabella control by contributing to or avoiding impacts on marine structures, craft and mussel lines (in the case of the region's valuable mussel industry).

In terms of managing these pests on private land for the public good, there is general acceptance that the wider regional community is a beneficiary and that the Councils support is appropriate to maximise the effectiveness of individual control across the region. The regional community is able to assess the costs and benefits and effectiveness of the various control programmes through the annual planning and reporting processes under the Local Government Act 2002 and through the review of future pest management plans.

Table 14 in the current RPMP (page 73) summarises the beneficiaries and exacerbators of the pests listed. The additional eight pests, or groups of pests, contained in this Proposal is not inconsistent with the 2018/19 assessment carried out.

Proposed allocation of costs

The specific costs of implementing this Proposal will depend on a number of factors that are yet to be fully determined (e.g. wilding conifer control costs are dependent on the national programme). No decisions on new budgets or any revised allocation of costs have been made. These issues will be considered and discussed with the community as part of the 2024 Long-Term Plan (LTP), a process undertaken separately by both Councils and occurring concurrently with this review process.

The changes envisioned in this Proposal will not be enacted until the LTP and appropriate revenue and financing policies have been reviewed. Until any changes to the proposed pest programmes are implemented, revenue sources and the allocation of costs will remain unchanged from the current RPMP, which states:

As occupiers are both exacerbators and beneficiaries to varying degrees, implementation of this Plan will be funded principally from the general rate levied on individual rateable properties in the Tasman-Nelson region by the two Councils. It is considered that this is the most appropriate method of charging ratepayers for the services provided by the Regional Pest Management Plan.

[11] Refer to the glossary for a definition of 'place'.

5.5 Minor amendments to RPMP

Section 100G(4) of the Act allows the Management Agency to make minor changes to plans, by council resolution, without undertaking a review (under section 100D of the Act). The following minor changes are included in this Proposal in the interests of grouping all amendments together for consideration. The minor changes do not carry any new rights or impose obligations on any person and are without significant effect.

Species: Koi carp (*Cyprinus rubrofuscus*) or European koi carp

Koi are a named Exclusion pest with DOC having a lead responsibility for their management. They are also listed nationally as an Unwanted Organism. No change to their status or management regime is proposed. Koi were formerly designated as *Cyprinus carpio.* Koi carp are now referred to as *Cyprinus rubrofuscus* and also as European koi carp.

A recent international taxonomic name change of *C. carpio* to *C. rubrofuscus* reflects a recent review of the taxonomic classification of the majority of koi found in New Zealand. Tables 1 and 2 in the RPMP will be amended by changing the scientific name and adding the new common name.

Species: Kahili ginger *(Hedychium gardnerianum)*

Both ginger species are named Sustained Control pests in the Golden Bay area. Table 1 and Appendix 2 contain an incorrect spelling of the scientific name for kahili ginger. They will be amended to read *Hedychium gardnerianum*.

Table 1: Organisms classified as pests

Table 1 lists all the organisms named as pests in the RPMP, in alphabetical order. As part of this partial review any new organisms or other changes will be added or made as per hearing outcomes. However, further clarity has been provided to this table (as noted in Table 4 of this Proposal which is the revised version) by moving area or site location from the 'species' column to the 'programme' column. This makes reading the Table more logical.

6. Glossary

Various technical and planning terms used in this proposal are defined in this Glossary. Unless the context indicates otherwise, the following definitions apply.

Act means the Biosecurity Act 1993.

Adjacent means, for the purpose of the Plan, a property that is next to, or adjoining, another property.

Appropriate means as determined to be appropriate by the Tasman District Council or Nelson City Council or its officers acting under delegated authority.

Authorised person is a person who is appointed an authorised person under Section 103 of the Biosecurity Act, for the purposes of exercising powers and functions of the Act in relation to implementation of an RPMP.

Beneficiary means the receiver of benefits accruing from the implementation of a pest management measure or the Plan.

Biological diversity (or biodiversity) means the variability among living organisms, and the ecological complexes of which they are a part, including diversity within species, between species, and of ecosystems.

Council means either Tasman District Council, or Nelson City Council (as appropriate)[12].

Costs and benefits includes costs and benefits of any kind, whether monetary or non-monetary.

Crown means his Majesty the King in right of New Zealand, Ministers of the Crown and all departments; but does not include an Office of Parliament, a Crown entity or a State-owned enterprise named in the First Schedule to the State-Owned Enterprises Act 1986.

Destroy means to immediately kill an animal or extinguish all growth of a plant.

Eradication pest programme means a programme intended to eradicate specified pests from part or all of the region.

Exacerbator means a person who, by their activities or inaction, contributes to the creation, continuance or makes worse a particular pest management problem.

Externality impacts, in relation to pest management, are adverse and unintended effects imposed on others.

Good neighbour rule means a rule that seeks to manage the externality impacts arising from pests spilling over from one property to a neighbouring property that is free of, or being cleared, of that pest.

[12] In places 'the Councils' is used, which refers to Tasman District and Nelson City councils together.

Iwi is defined for this Plan as a recognised iwi authority with interests in Te Tau Ihu (Nelson-Marlborough).

Management agency means the agency responsible for implementing a regional pest management plan. In terms of this Plan, Tasman District Council is the overall Management Agency, while other agencies have responsibilities for managing specific named pests.

Means of achievement means the general management options, tactics, or technical methods by which the Councils or land occupiers will achieve an objective or objectives.

Occupier means
(a) in relation to any place physically occupied by any person, means that person; and
(b) in relation to any other place, means the owner of the place; and
(c) in relation to any place, includes any agent, employee, or other person, acting or apparently acting in the general management or control of the place.

Operational Plan means a plan prepared by the management agency under section 100B of the Act. Sets out how objectives in the RPMP will be achieved in any given financial year.

Pest means an organism specified as a pest in a pest management plan.

Pest agent has the same meaning as in the Biosecurity Act 1993:
"in relation to any pest, means any organism capable of:

a) Helping the pest replicate, spread, or survive; or
b) Interfering with the management of the pest.

Pest management plan means a Plan made under Part V of the Act, for the exclusion, eradication or management of a particular pest or pests.

Place includes any building, conveyance, craft, land or structure, and the bed and waters of the sea and any canal, lake, pond, river or stream.

Private land means any land which is for the time being held in fee simple by any person other than His Majesty; and includes any Māori land.

Progressive containment programme is the pest management programme intended to contain and reduce the geographic distribution of the specified pests to an area over time.

Region, in relation to a regional council, means the region of the regional council[13] as determined in accordance with the Local Government Act 2002 (LGA).

Rule means a rule included in a pest management plan in accordance with Section 73(5) of the Act.

Site-led programme is a programme that focuses on protecting certain values at certain sites by controlling specified pests.

[13] Tasman District and Nelson City Councils are deemed unitary authorities under the LGA.

Sustained control pest programme means a management programme for which the intermediate outcome for the programme is to provide for ongoing control of the subject, or an organism being spread by the subject, to reduce its impacts on values and spread to other properties.

Wilding conifers are any introduced conifer tree, including (but not limited to) any of the species listed in Table 5 and Table 6, established by natural means, unless it is located within a forest plantation, and does not create any greater risk of wilding conifer spread to adjacent or nearby land than the forest plantation that it is a part of. For the purposes of this definition, a forest plantation is an area of 1 hectare or more of predominantly planted conifer trees.

Note: Two separate but linked definitions apply for 'wilding conifers':

- *Pest conifers – 10 named species which generally are not marketable and their existence in plantations is being phased out.*
- *Wilding conifers only – two named species which have important commercial value in the region but are also prone to spreading.*

Pest agent conifer means any introduced conifer species that is capable of helping the spread of wilding conifers and is not located within a plantation forest.

7. References

Biosecurity Act 1993. NZ Government.

Champion, P. 2018. Two new emergent aquatic weeds in Nelson City - Vietnamese parsley *(Oenanthe javanica)* and water celery *(Apium nodiflorum)* - Prepared for Nelson City Council, by National Institute of Water & Atmospheric Research Ltd (NIWA), May 2018.

Ministry for Primary Industries. (2014). The right tree in the right place: New Zealand Wilding Conifer Management Strategy 2015- 2030.

Mount Richmond stakeholders (various). 2022. Mt Richmond Management Unit Wilding Conifer Strategy 2022-2032.

National Policy Direction for Pest Management. (2015). NZ Government.

Nelson City Council. 2007. Nelson Biodiversity Strategy.

Tasman District Council. 2022. Te Mana o te Taiao ki te Tai o Aorere. Tasman Biodiversity Strategy.

Tasman-Nelson Regional Pest Management Strategy 2019-2029. (2019) Tasman District Council and Nelson City Council.

Maps

Map 1: **Boneseed** (Port Hills only)

Map 2: **Pampas** (Golden bay sites)

Map 3: **Feral and stray cats site led programmes** (all sites):

3.1 Nelson City high value sites
3.2 St Arnaud environs
3.3 Abel Tasman National Park enclaves (3.31 Awaroa; 3.32 Torrent Bay; 3.33 Marahau North)

Map 4: **Pest and wilding conifer containment areas** (all sites):

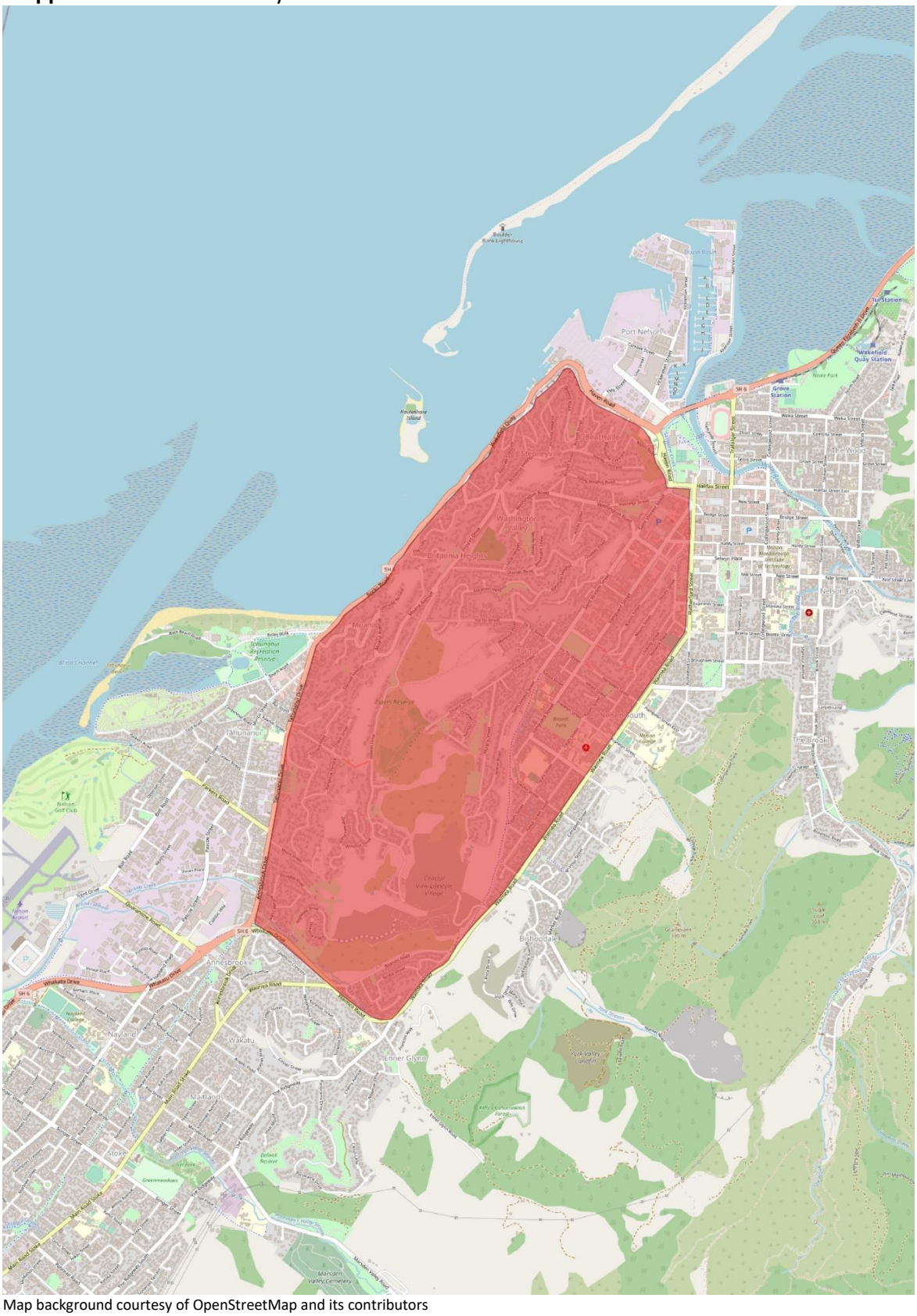
4.1 **Project DeVine Environmental Trust**
4.2 **Takaka Hill**
4.3 **Mt Richmond MU** (4.31 Roding and Nelson; 4.32 Redhills)

Regional Pest Management Plan

Boneseed Sustained Control Area

Map 1

Mapped Area: Port Hills only



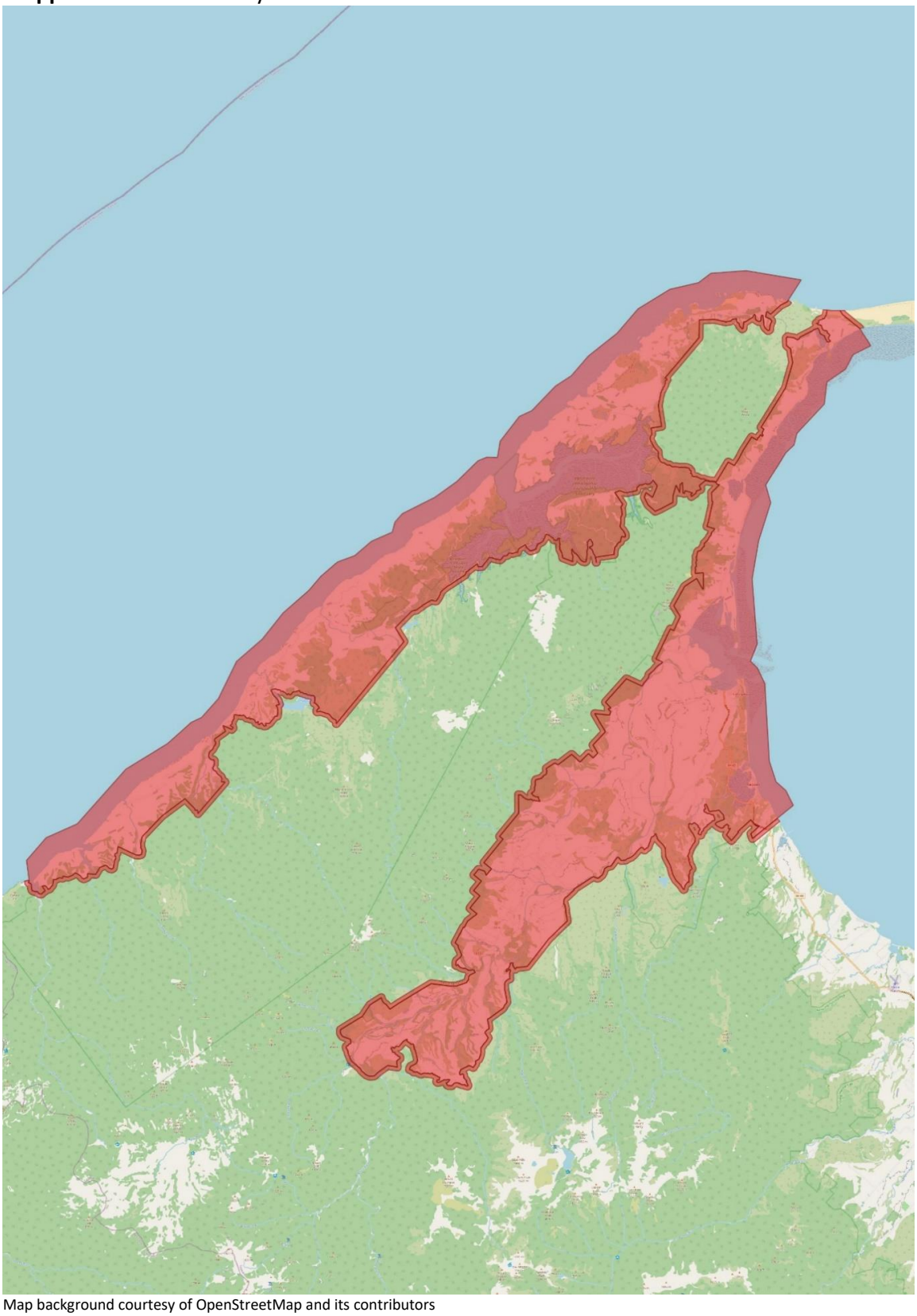
Map background courtesy of OpenStreetMap and its contributors

Regional Pest Management Plan

Pampas Sustained Control Area

Map 2

Mapped Area: Golden Bay Sites

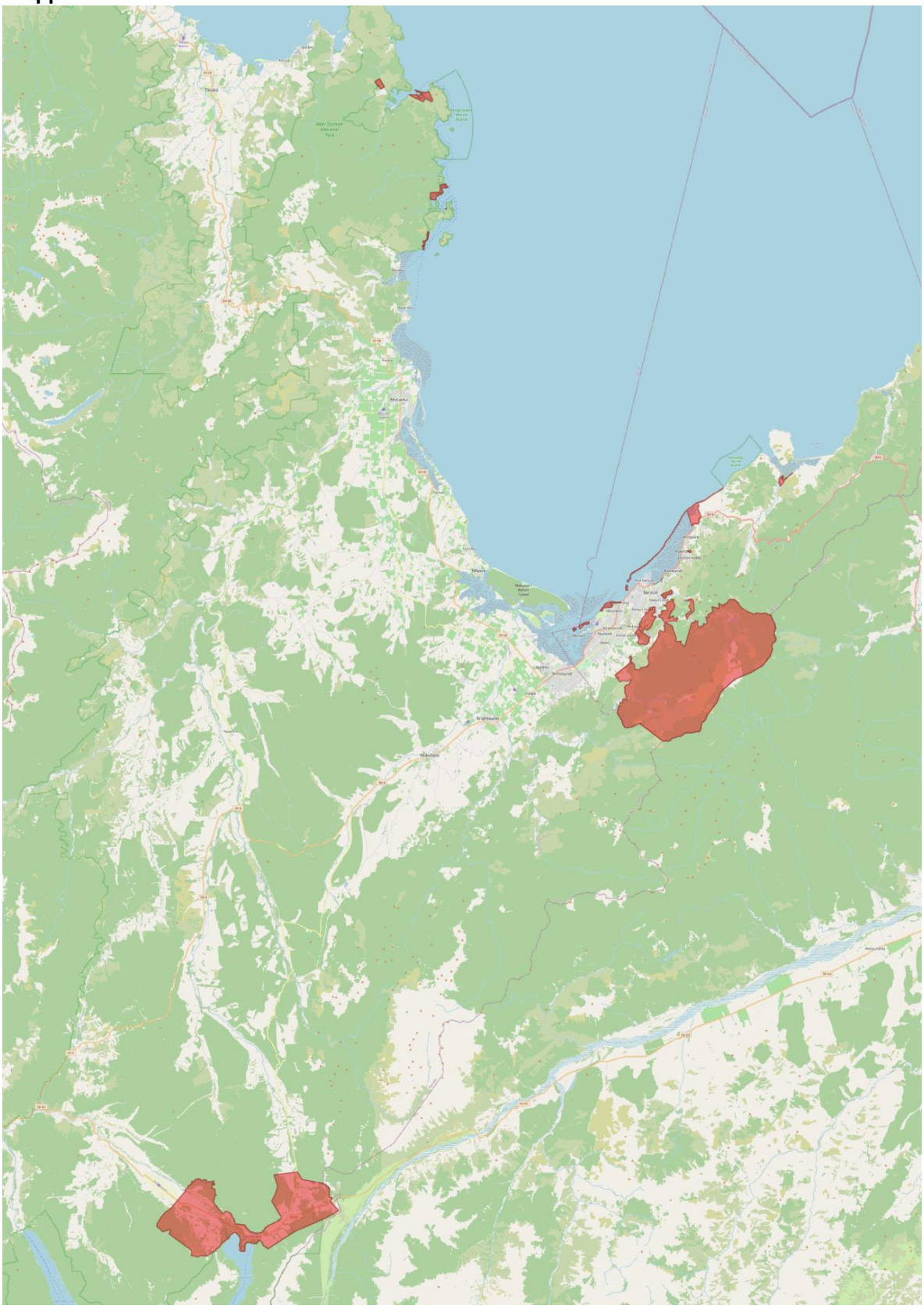


Map background courtesy of OpenStreetMap and its contributors

Regional Pest Management Plan

Feral and Stray Cats in Site-led Programmes **Map 3**

Mapped Area: Nelson and Tasman – all sites

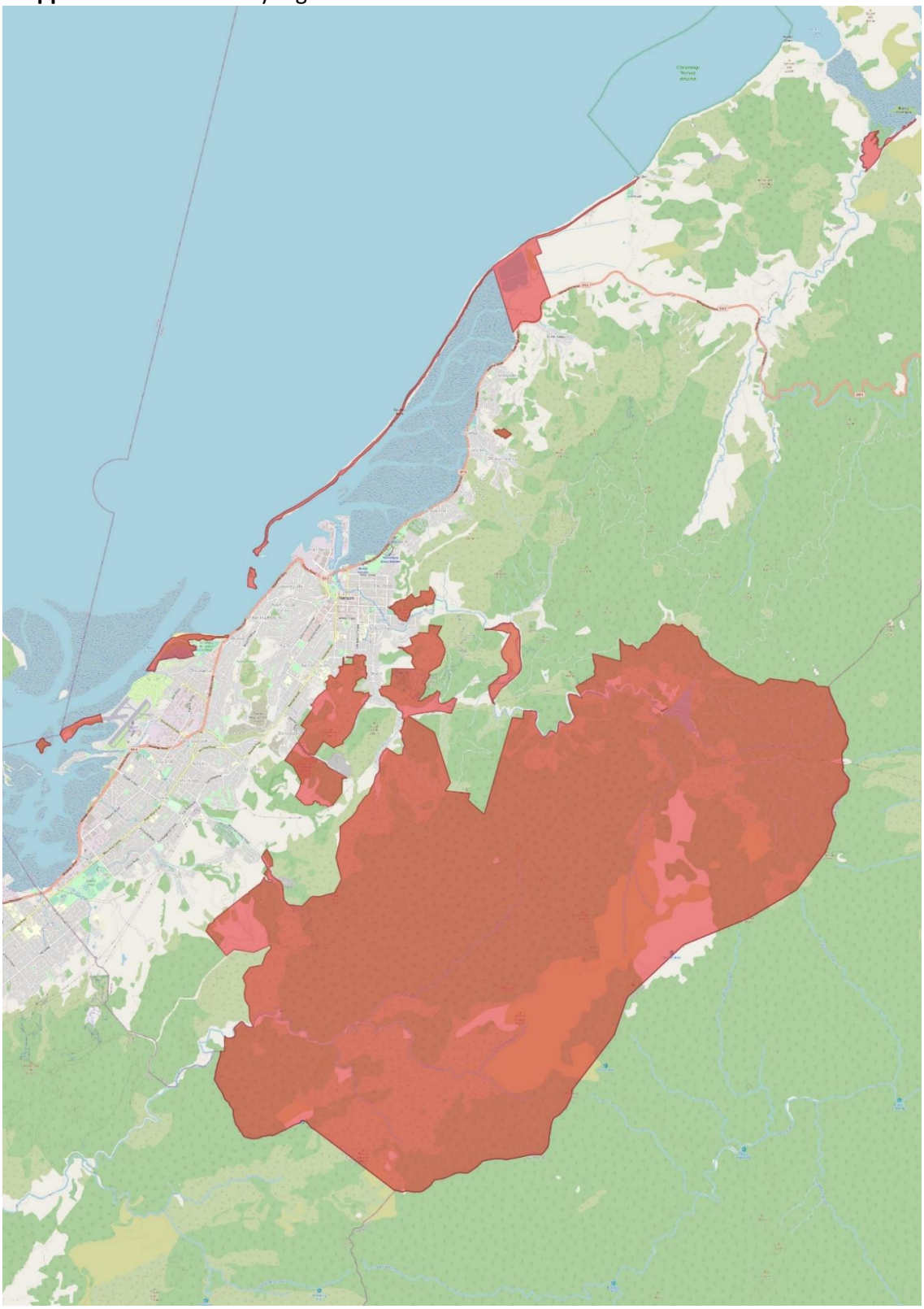


Map background courtesy of OpenStreetMap and its contributors

Regional Pest Management Plan

Feral and Stray Cats in Site-led Programmes **Map 3.1**

Mapped Area: Nelson City high value sites

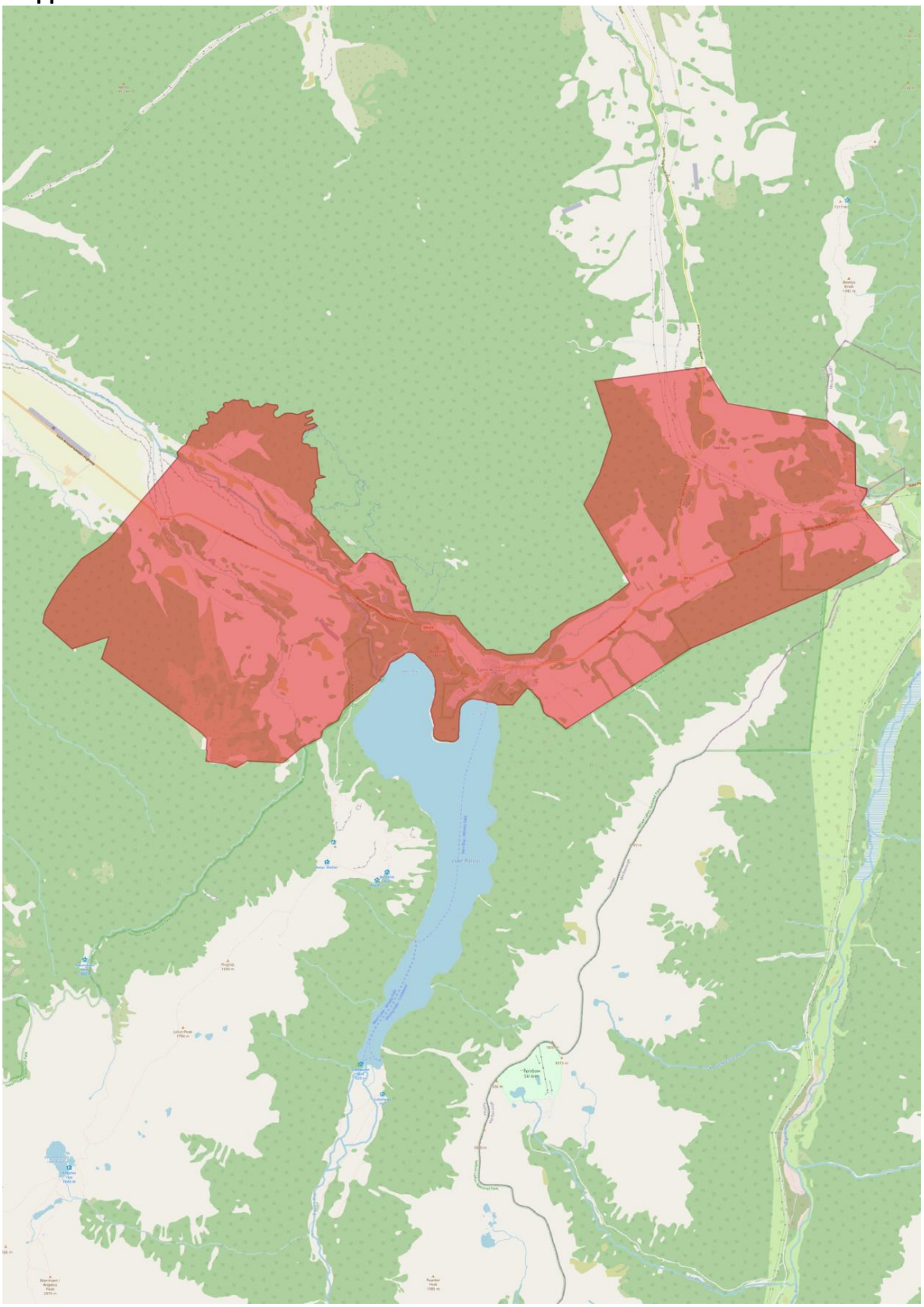


Map background courtesy of OpenStreetMap and its contributors

Regional Pest Management Plan

Feral and Stray Cats in Site-led Programmes **Map 3.2**

Mapped Area: St Arnaud environs



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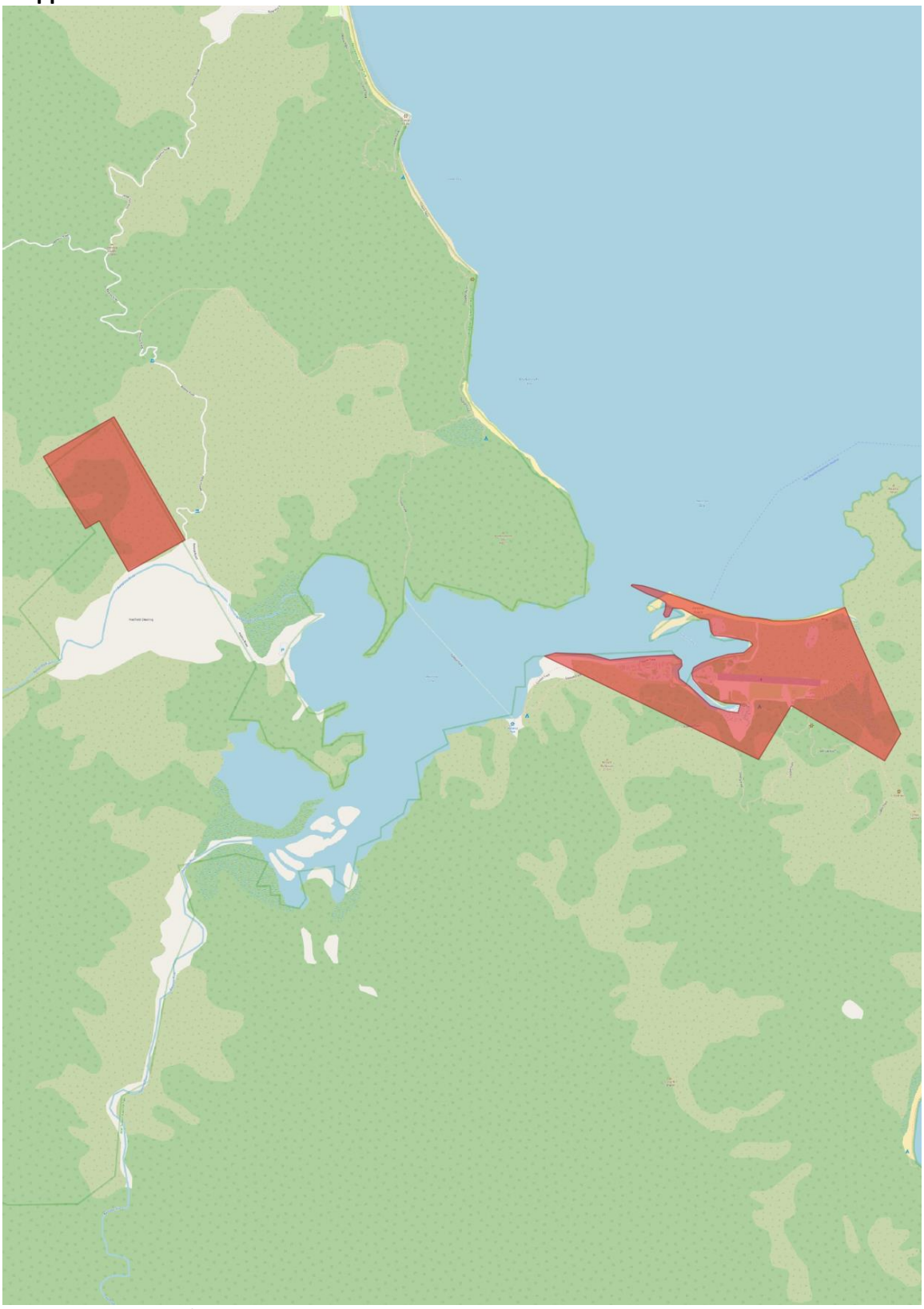
Regional Pest Management Plan

Feral and Stray Cats in Site-led Programmes

Map 3.31

Mapped Area: Abel Tasman NP – Awaroa



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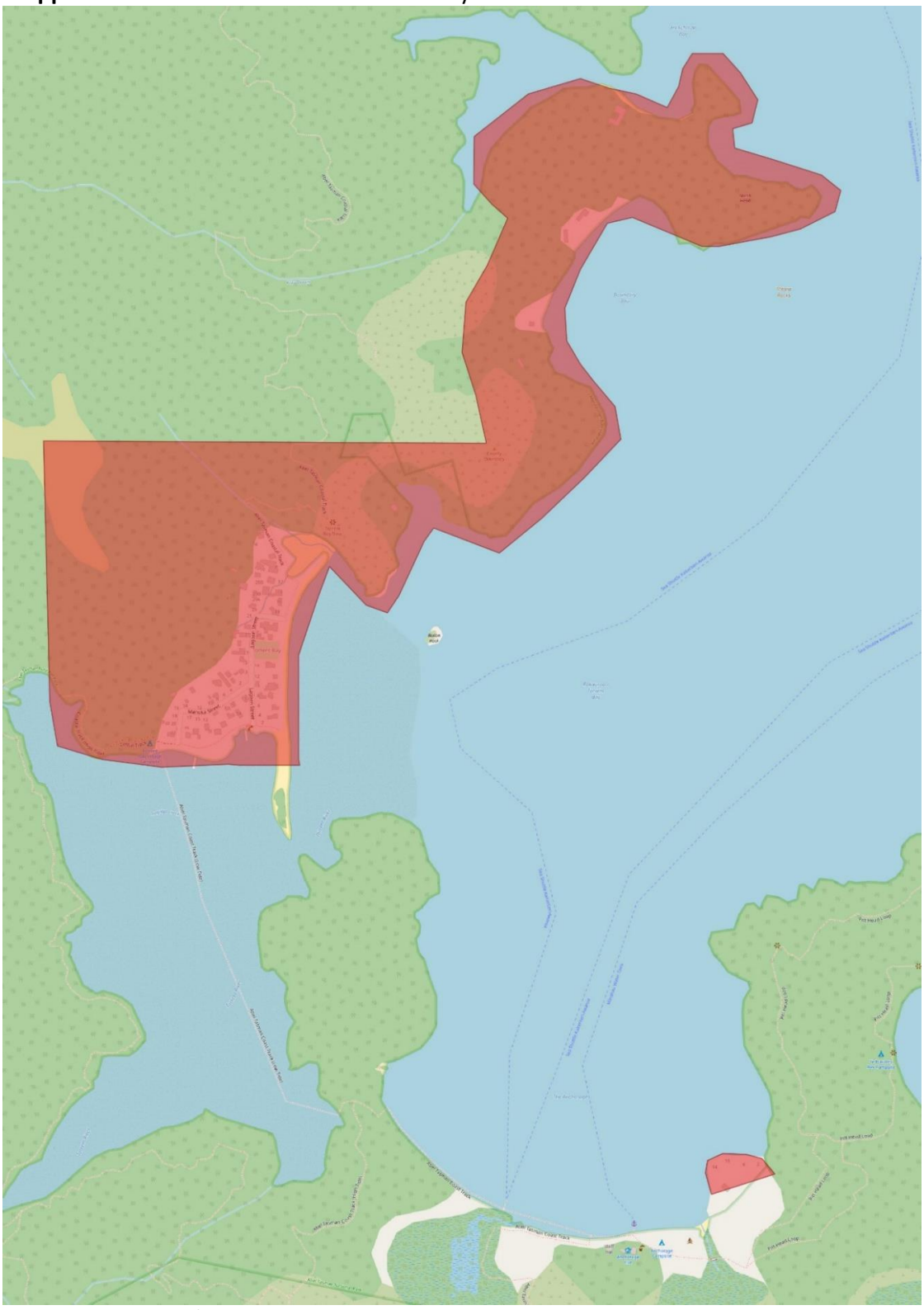
Regional Pest Management Plan

Feral and Stray Cats in Site-led Programmes **Map 3.32**

Mapped Area: Abel Tasman NP – Torrent Bay



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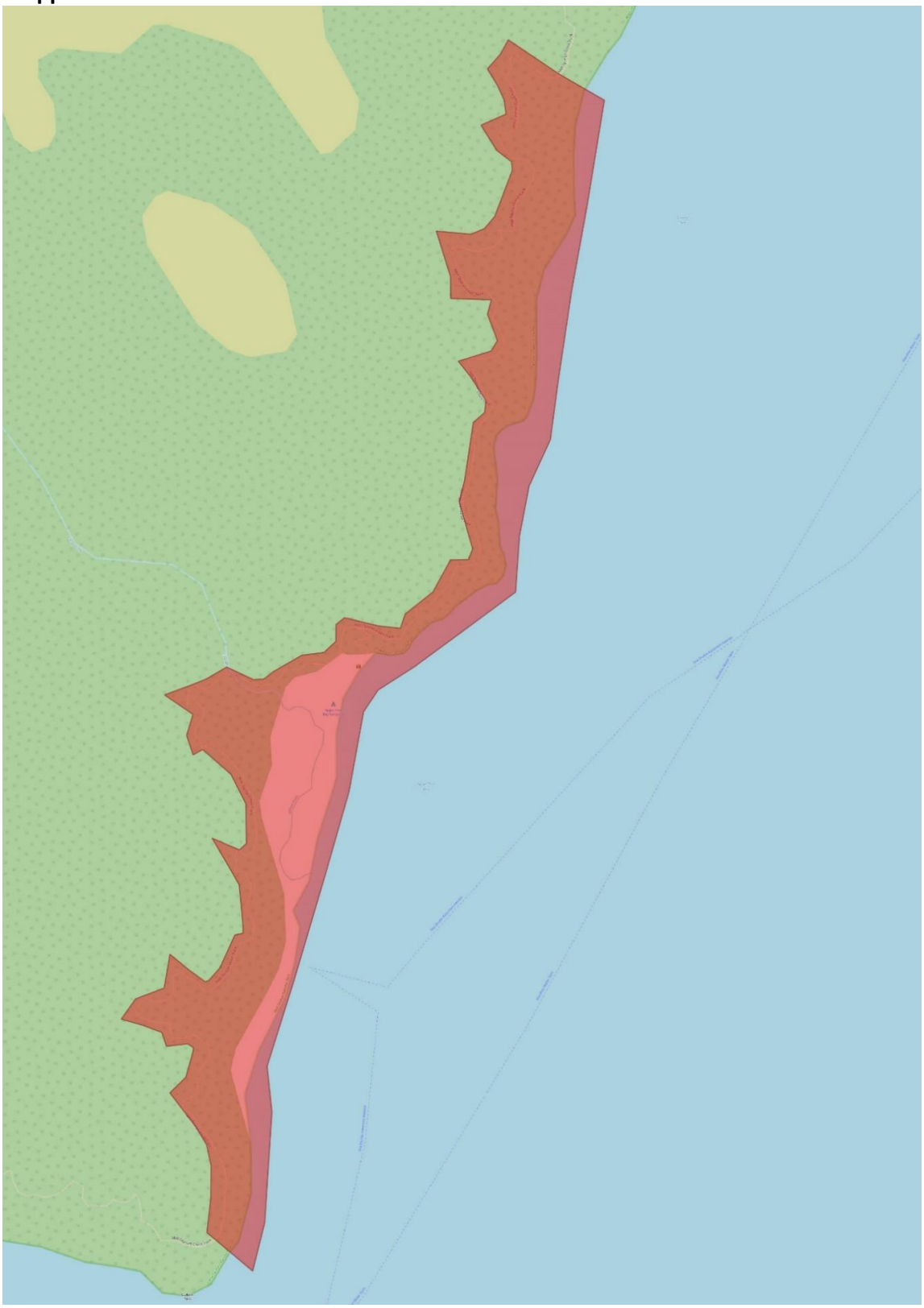
Regional Pest Management Plan

Feral and Stray Cats in Site-led Programmes

Map 3.33

Mapped Area: Abel Tasman NP – Marahau North



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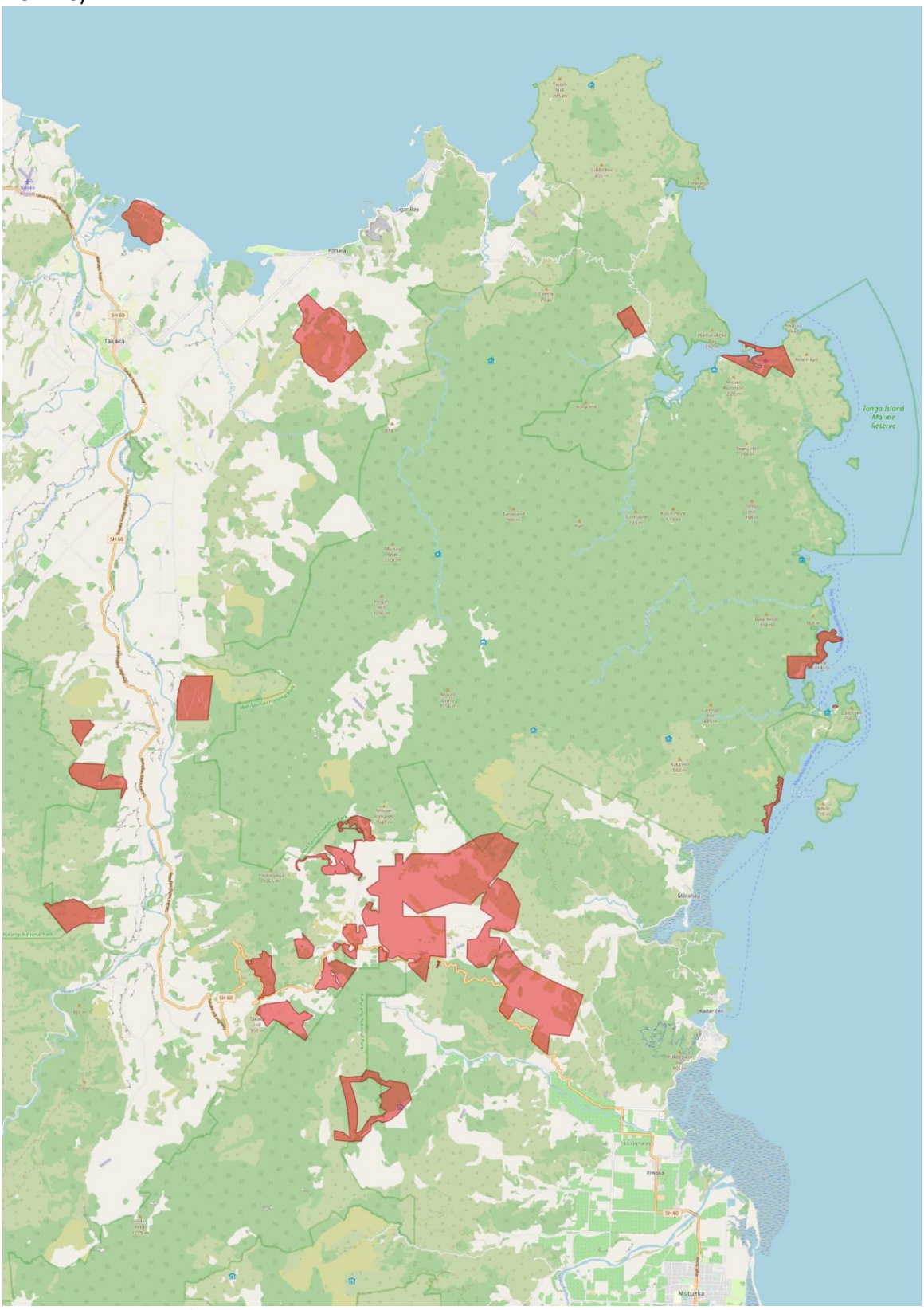
Regional Pest Management Plan

Pest and Wilding Conifer Progressive Containment Area

Map 4

Mapped Area: Takaka Hill Community Project, ATNP (Site-led area), and ATNP Halo (Project De-vine)



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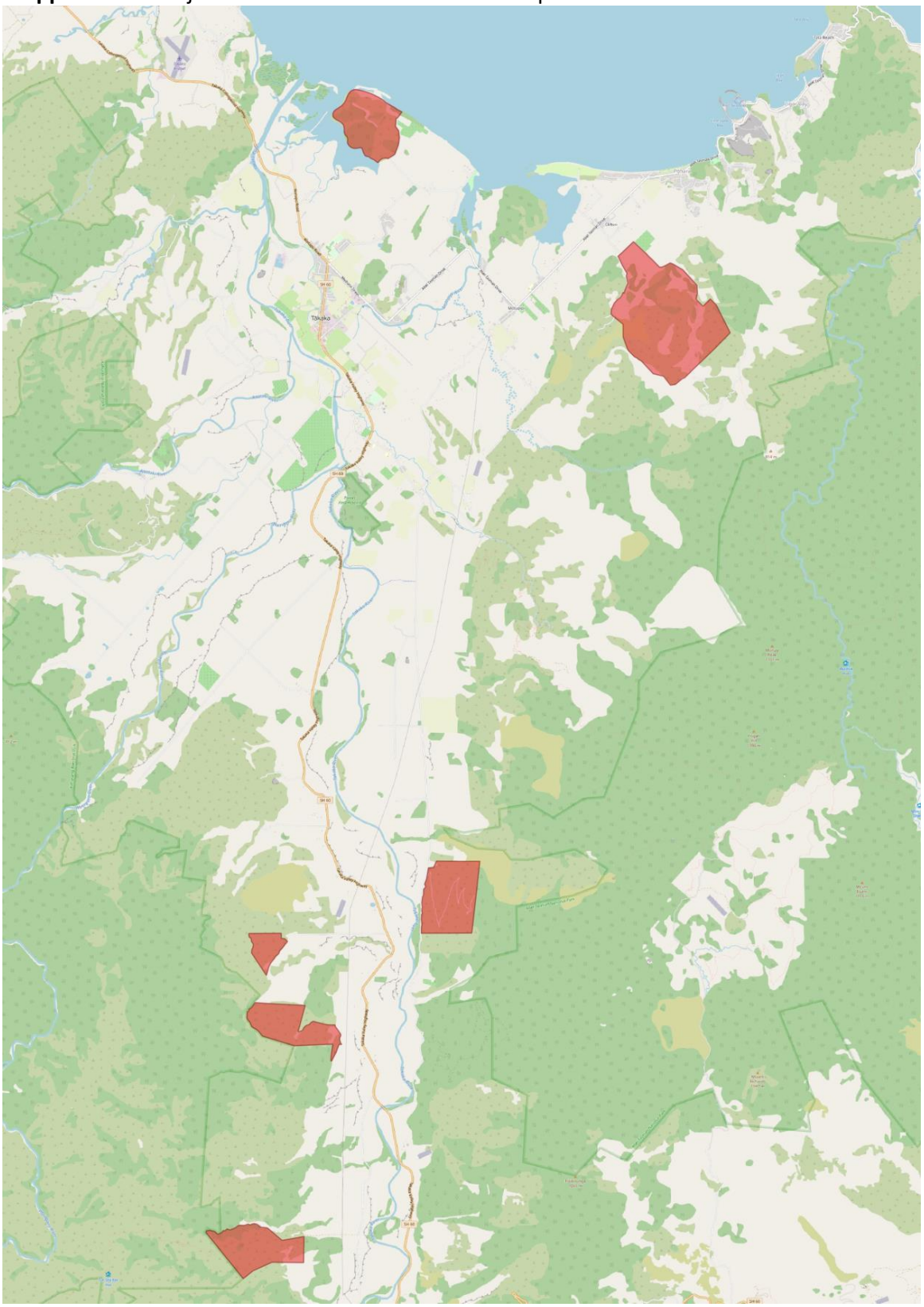
Regional Pest Management Plan

Pest and Wilding Conifer Progressive Containment Area

Map 4.1

Mapped Area: Project De-Vine Environmental Trust Operational Area



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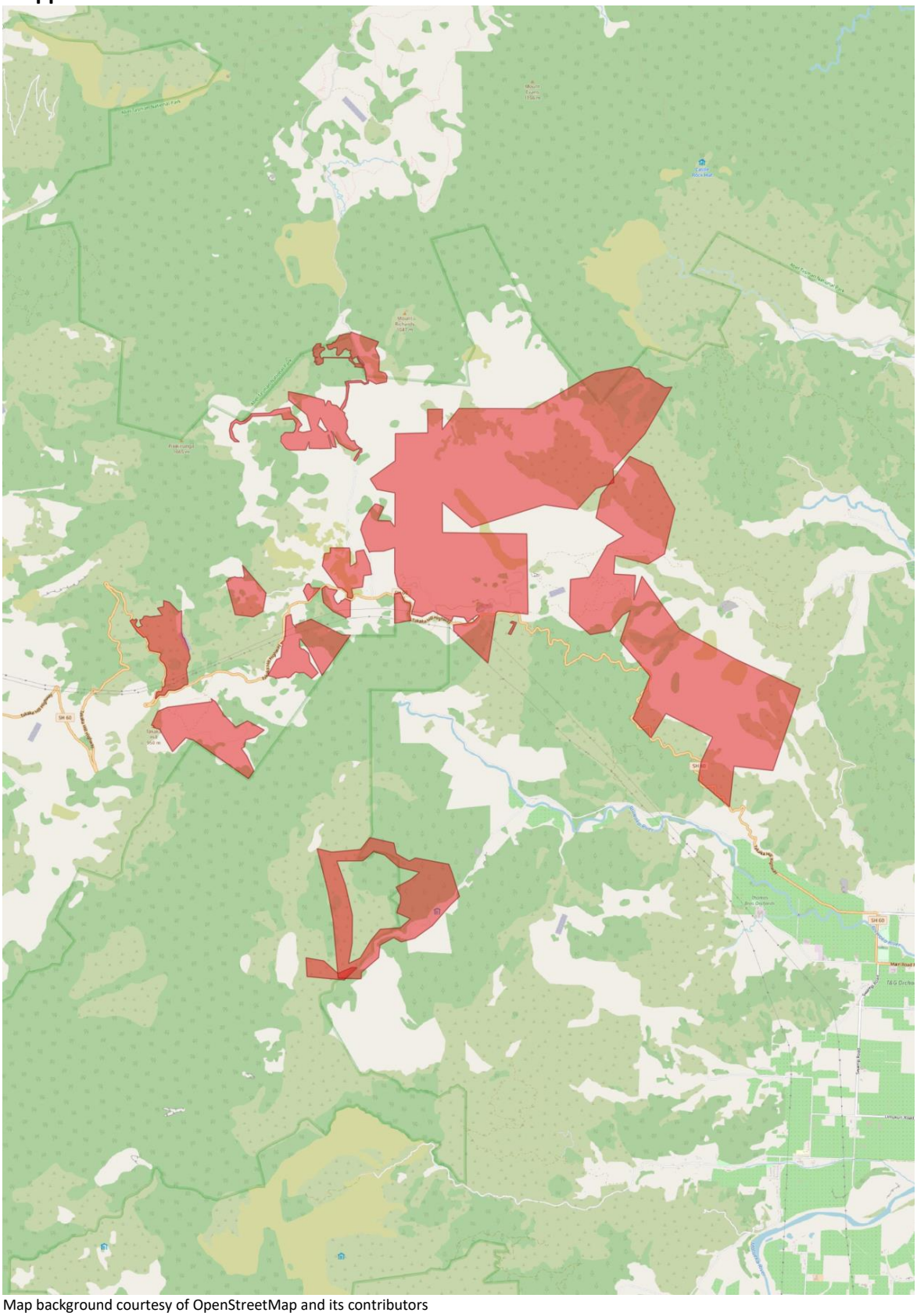
Regional Pest Management Plan

Pest and Wilding Conifer Progressive Containment Areas

Map 4.2

Mapped Area: Takaka Hill



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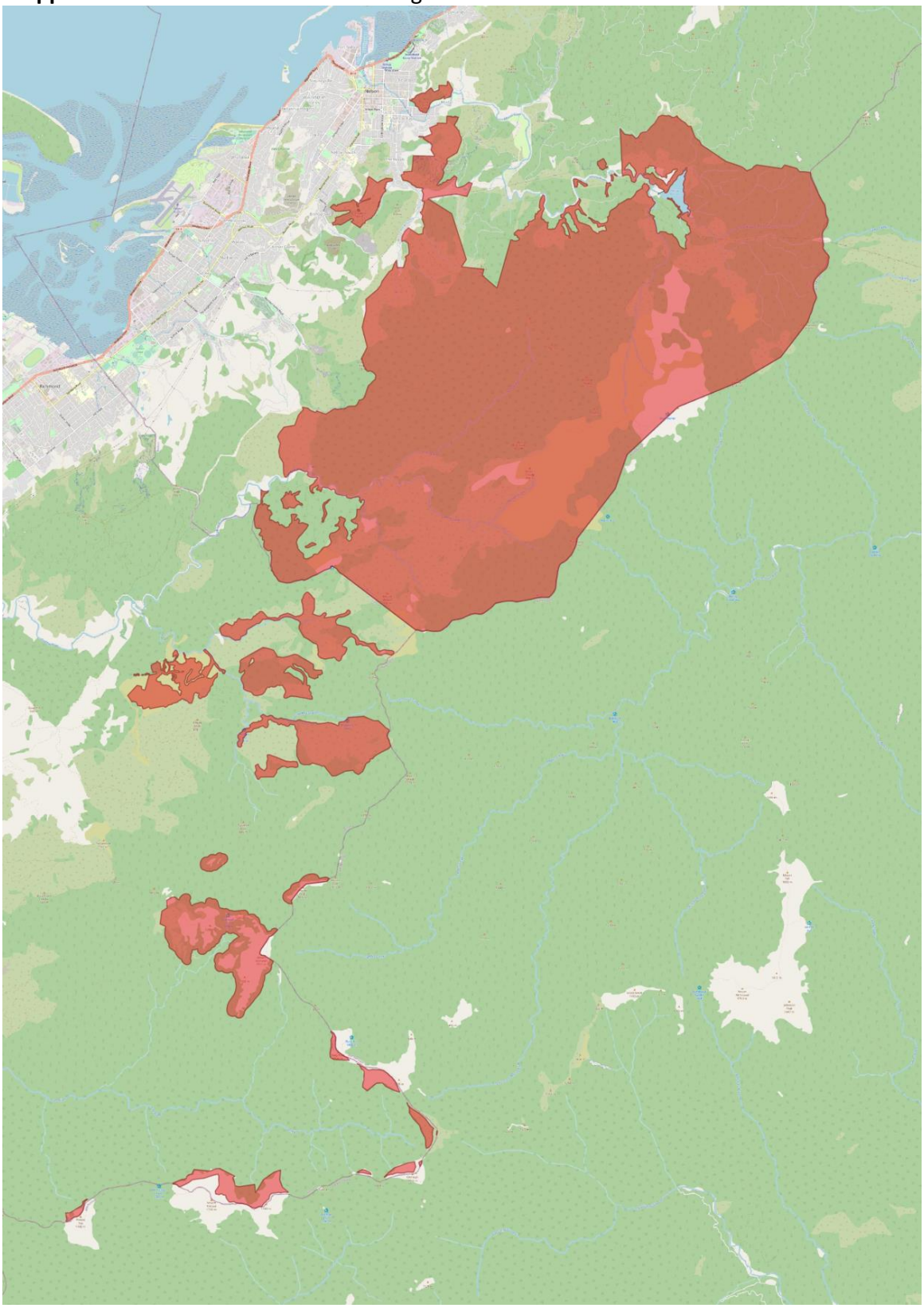
Regional Pest Management Plan

Pest and Wilding Conifer Progressive Containment Areas

Map 4.31

Mapped Area: Mt Richmond MU – Roding and Nelson



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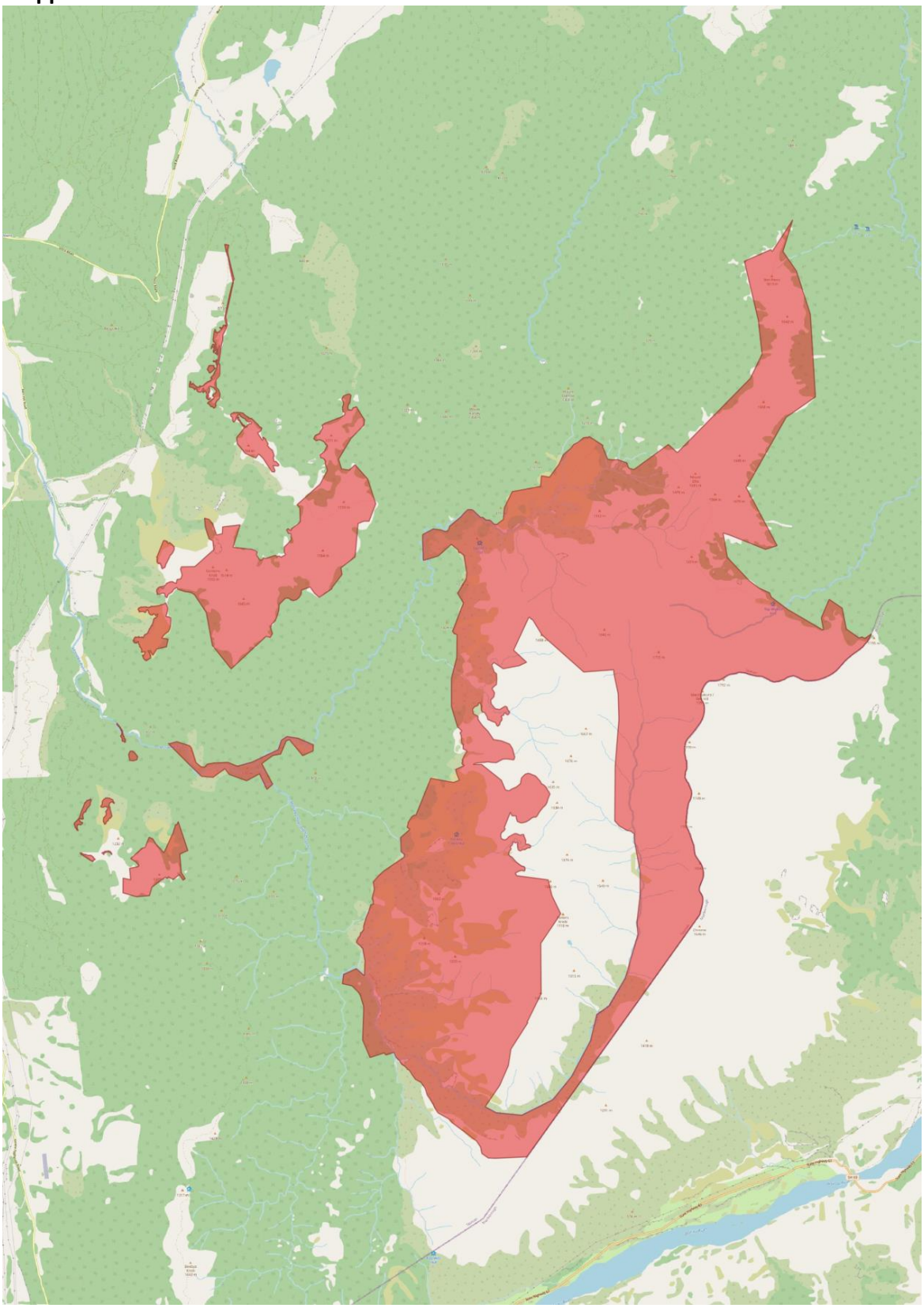
Regional Pest Management Plan

Pest and Wilding Conifer Progressive Containment Areas

Map 4.32

Mapped Area: Mt Richmond MU – Redhills



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Appendix 1: Summary of analysis of options against National Policy Direction for Pest Management (NPD)

Section 6(1) of the NPD specifies four criteria to consider when determining the level of cost and benefits analysis to undertake. Assessment criteria to consider for each pest included:

1 Uncertainty of the impact of the pest and the effectiveness of the methods of control:

- **High uncertainty** – Little known about its impacts and the effectiveness of control measures.
- **Medium uncertainty** – Some information available on its impacts and on the effectiveness of control measures.
- **Low uncertainty** – Plenty of information exists on its impacts and effectiveness of control measures.

2 Significance of the pest or the proposed measures

- **High** – High total costs **or** strongly opposed community views **or** significant community interest.
- **Medium** – Moderate total costs **or** some opposed community views **or** moderate community interest.
- **Low** – Low total costs **or** limited community interest.

3 Relationship between costs and benefits

- **High** – costs are likely to be similar to the benefits.
- **Medium** – costs are likely to be less than the benefits.
- **Low** – costs are likely to be much lower than the benefits.

4 Level and quality of available data

- **High** – High quality data on distribution and well-established costs and impacts.
- **Medium** – Limited information on distribution and on costs and impacts.
- **Low** – Little information available on distribution and costs and impacts.

The level of Cost Benefit Analysis that is required to be undertaken is determined by the combination of ratings for these different categories where:

- A **High** level of CBA is needed when three of the four criteria listed above (Criteria 1-4) are assessed as high.
- A **Low** level of CBA can be undertaken when none of the first three criteria (Criteria 1-3) are ranked high and no more than two are ranked as medium.
- A **Medium** level of CBA is required for all other combinations.

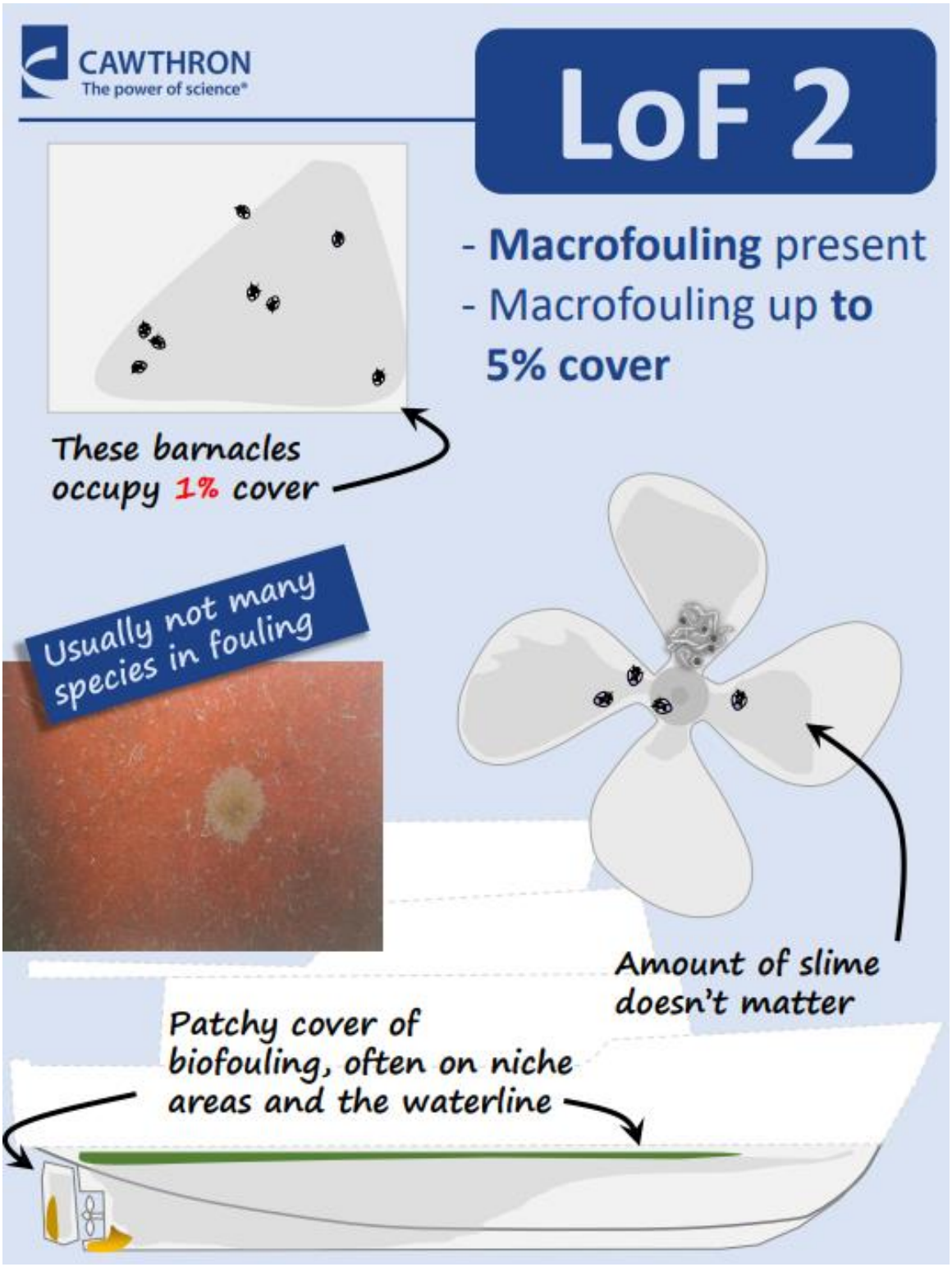
The conclusion of the "level of CBA" assessment for the preferred option follows, along with assessments of alternatives against the NPD requirements. A full copy of this report is available on request.

Species	Level of CBA analysis needed	CBA comments / recommendations	Preferred option: Level of risk	(Alternatives). Pass NPD requirements? What are the risks?
Blue passion flower	Low	Narrative cost and benefit analysis only. Environmental benefits highly likely outweigh cost of control. Preferred option passes all NPD requirements.	**Eradication:** Low risk that this option will not achieve intended outcome (zero density).	**(Do nothing). Yes.** Modest risk that infestations will damage biodiversity value of (e.g.) The Grampians. **(Progressive containment). Yes.** Low but carries a risk that relying on occupier control will not stop spread.
Boneseed (Nelson Port Hills only)	Low	Environmental benefits probably outweigh cost of control but advised to undertake a quantitative analysis to test revised assumptions. Preferred option passes other NPD requirements.	**Sustained Control in Port Hills:** Low risk that this option will not achieve intended outcome (reduce spread). There is a high risk that specialist control of the coastal cliffs would push costs beyond benefits and a moderate risk that closure of the road causes inconvenience.	**(Do nothing – status quo in Port Hills). Yes.** Modest risk that infestations will damage the biodiversity values of the Port Hills. Also put the boneseed (rest of Nelson and Tasman) eradication objective at risk, with high likelihood of perpetual invasion of high value coastal habitat. **(Eradication in Port Hills). No.** High likelihood that costs outweigh benefits.
Moth plant	Low	Narrative cost and benefit analysis only. Narrative cost and benefit analysis only. Environmental benefits highly likely outweigh cost of control. Preferred option passes all NPD requirements.	**Eradication:** Low risk that this option will not achieve intended outcome (zero density)	**(Do nothing). Yes.** Modest risk that infestations will damage biodiversity value of (e.g.) The Grampians. **(Progressive containment). Yes.** Low but carries a risk that relying on occupier control will not stop spread.
Pampas	Medium	Benefits probably outweigh cost of control. A medium level of analysis can be a quantified analysis using the cost of control borne by occupiers (to be determined) balanced with assumed $$ environmental benefit (to be determined). AgPest calculator to be used to derive net present value as a measure of cost effectiveness. Preferred option passes other NPD requirements.	**Sustained Control in specified areas:** Low risk that this option will not achieve intended outcome (reduce spread). There are modest risks of non-compliance through benign neglect, difficulty undertaking regular inspections, and/or adversity to the proposed rules.	**(Do nothing). Yes.** Modest risk that increasing infestations will damage the biodiversity values of specified areas. Moderate concern of invasion in areas clear of the pest. **(Eradication). No.** High likelihood of reinvasion means this species is not suited to an eradication programme.
	Medium	Benefits highly likely to outweigh cost of control. A medium level analysis would ideally identify costs and benefits in monetary terms along with an estimate of net present value. It may prove difficult to estimate the dollar	**Eradication - new rule:** Lower risk that this option will not achieve intended outcome in contrast to status quo.	**(Eradication - status quo)**. **Yes**. Modest risk that this option will not achieve intended outcome (sustained level of zero density)

Species	Level of CBA analysis needed	CBA comments / recommendations	Preferred option: Level of risk	(Alternatives). Pass NPD requirements? What are the risks?
		benefits to the marine farming industry without being overly presumptive. Assumptions of costs may require extrapolation from incomplete data. Preferred option passes other NPD requirements.		
Vietnamese parsley	Low	Narrative cost and benefit analysis only. Environmental benefits highly likely to outweigh cost of control. Preferred option passes all NPD requirements.	**Sustained Control:** Low risk that this option will not achieve intended outcome (reduce spread). There is a moderate risk of non-compliance until the community become aware that this is a pest. The efficacy of herbicidal control to reduce extent is still being tested. While the need for resource consent for herbicidal control adds a layer of complexity, it is not envisaged that it increases the risk to reducing spread.	**(Do nothing). Yes.** Modest risk that infestations will damage biodiversity and infrastructural value of affected streams. **(Eradication). No.** The intermediate outcome (to control to zero density) is not considered feasible due to the extent of the infestation. There is a high risk that this objective would not be met. **(Progressive containment). Possibly not.** The intermediate outcome (reduce the size of infestation) is only feasible if herbicides are effective. There is a moderate risk that this objective could not be met.
ery	Low	Narrative cost and benefit analysis only. Environmental benefits highly likely to outweigh cost of control. Preferred option passes all NPD requirements.	**Sustained Control:** Low risk that this option will not achieve intended outcome (reduce spread). There is a moderate risk of non-compliance until the community become aware that this is a pest. The efficacy of herbicidal control to reduce extent is still being tested. While the need for resource consent for herbicidal control adds a layer of complexity, it is not envisaged that it increases the risk to reducing spread.	**(Do nothing). Yes.** Modest risk that infestations will damage biodiversity and infrastructural value of affected streams. **(Eradication). No.** The intermediate outcome (to control to zero density) is not considered feasible due to the extent of the infestation. There is a high risk that this objective would not be met. **(Progressive containment). Possibly not.** The intermediate outcome (reduce the size of infestation) is only feasible if herbicides are effective. There is a moderate risk that this objective could not be met.
Pest/ wilding conifers	Medium	Environmental benefits probably outweigh cost of control. A medium level analysis would ideally identify costs and benefits in monetary terms along with an estimate of net present value. The cost of control borne by occupiers (to be determined) balanced with assumed $$ environmental benefit (to be determined). Cost estimates may be highly	**Progressive Containment (pest pines):** Low risk that this option will not achieve intended outcome (contain and reduce infestations). **Site-led:** Low risk that this option will not achieve intended outcome (reduction of the incidence of wildings of these species in specific places).	**(Do nothing):** High risk that wildings of these species will re-occur in the places where they have been removed, resulting in a loss in the investment and reduction in environmental values. **(Do nothing):** High risk that wildings of these species will spread at specific sites impacting on environmental values.

Species	Level of CBA analysis needed	CBA comments / recommendations	Preferred option: Level of risk	(Alternatives). Pass NPD requirements? What are the risks?
		presumptive. Environmental benefit based on well-recognised forest and scrub valuation data. AgPest calculator to be used to derive net present value as a measure of cost effectiveness. Preferred options pass other NPD requirements.		
Feral/ stray cats	Medium	Environmental benefits probably outweigh cost of having rules but advised to undertake a quantified analysis. A medium level analysis would ideally identify costs and benefits in monetary terms along with an estimate of net present value. However, the calculation of value proposition is highly presumptive / lacks empirical data. The preferred options pass other NPD requirements.	**Site-led with pest-agent rule:** Low risk that the approach will not achieve intended outcome (reduction of the effects of a pest in specific places), but moderate to high risk of public adversity to rules.	**(Do nothing):** High risk that feral and stray cat numbers will increase, causing incalculable losses of indigenous fauna and other costs associated with spread of disease (toxoplasmosis) and social nuisance.

Appendix 2: Level of fouling for proposed sabella rule



Attachment 2

Supporting Document for the limited review of certain pests for the Tasman Nelson Regional Pest Management Plan (2023)

An analysis against the requirements of the National Policy Direction for Pest Management including narrative analyses of benefits and costs

November 2023

Introduction

This technical report provides detail on the benefits and costs of the proposed revisions to the *Tasman Nelson Regional Pest Management Plan 2019-2029* (the RPMP). The RPMP review is limited to proposals for eight new species to be added as pests to be managed under the RPMP (blue passion flower, boneseed (Nelson Port Hills only), moth plant, pampas, Vietnamese parsley, water celery, pest/wilding conifers, and feral/stray cats), an additional rule for *Sabella*, and a name change for koi carp).

The first steps in the making of a plan to manage a pest under the under the Biosecurity Act 1993 (BSA) is to form a proposal which sets out, among many things, the pest(s) to be managed, the objective of that management, and an analysis of the benefits and costs of the plan (Section 70 BSA). To guide the decision-making process, the National Policy Direction for Pest Management 2015 (NPD) includes directions on the content and process requirements for developing a pest management plan which includes directions on analysing benefits and costs (Section 6 of the NPD).

The proposed change of species name for koi carp is minor and does not trigger the requirements to perform an analysis following the NPD. For the remaining proposals, Appendix 1 of this technical report presents an assessment of the appropriate level of benefit and cost analysis with the body of the report dedicated to presenting an assessment of the benefits and costs of each option with quantification (where practicable), and the assumptions on which these assessments are based (a requirement of Section 6 (2) of the NPD).

The body of the report also presents other matters addressing Section 6 of the NPD particularly NPD 6 (3) which considers the risks that each option will not achieve its objective and 6 (4) identification of the residual risk, indicating the likelihood, and impact on the benefits mostly likely affected if the risk eventuated. In doing so, this technical report brings to satisfaction NPD 6 (5) – that the assessment of level of benefit analysis, the cost and benefit analysis itself, and the risks – are documented.

To assist the decision-making process, this technical report also identifies the beneficiaries, exacerbators and the proposed allocation of costs as required by NPD Section 7 along with a specific consideration of the cost allocation of grouped pests (NPD 7 (1)) where appropriate and a specific comment on satisfying NPD Section 8 with regard to proposed Good Neighbour Rules where appropriate.

Blue passion flower

Blue passion flower (*Passiflora caerulea*) is a vigorous evergreen climbing vine with hanging purple/white flowers. It can be distinguished from all other passionfruit by at least some of the leaves having five lobes. This species inhabits light gaps and forest edges, scrub, roadside margins, wastelands, hedges, and domestic gardens. It will readily spread into natural areas, smothering native plants and preventing establishment of native plant seedlings. It is spread by birds and possums.

While it appears that the species has yet to become fully naturalised in the Nelson-Tasman area, there are signs of wild spread. The proximity of the known occurrence of this species to the Grampians Reserve is a significant threat to the natural values of that area. It would be very difficult to control this species once it gets out of the current domestic setting.

The preferred option is ***Eradication*** with ***Do nothing*** and ***Progressive Containment*** presented as alternative options.

Analysis of Costs and Benefits [NPD 6(2)]

The level of costs and benefits analysis required for blue passion flower is "low" (see Appendix 1). The following narrative (qualitative) costs and benefits analysis is deemed sufficient to meet the requirements of the NPD.

It is estimated that there is a 26-hectare core infestation in and around South Nelson. There are isolated infestations in North Nelson, Stoke, Hope, Wakefield and Appleby, which in total (including the core) is around 360 hectares of infestation. This estimate is based on a 200m buffer of known infestations. If left uncontrolled, it is estimated that this pest could affect at least 1200 hectares of the native forest and shrubland values of the Grampians and Sugarloaf Hill within 10 years and could become widespread across the eastern hills from Brightwater to the Gentle Annie in 50 years.

The most significant aspect of the cost of control lies with the councils undertaking service delivery and monitoring for compliance. The cost to landowners / occupiers is mainly a time cost to remove this pest from their gardens (estimated to be less than $25 per annum). An indirect benefit of this approach is that the costs borne by the councils are fairly disbursed across the wider community of beneficiaries.

Risks that each option will not achieve its objective [NPD 6(3)]

Programme Options	Do Nothing	Eradication	Progressive Containment
Objective	Do nothing / rely on voluntary occupier control.	Over the duration of this Plan, eradicate blue passion flower and eliminate its adverse effects.	Over the duration of this Plan, progressively contain blue passion flower and reduce its adverse effects.
Intermediate outcome	The infestation of blue passion flower may spread in the short to medium term.	Reduce the infestation level of blue passion flower to zero levels in	Relying on occupiers to reduce the infestation to near-zero density in the medium term.

Programme Options	Do Nothing	Eradication	Progressive Containment
		the short to medium term.	
Technical and operational risks	Low	Low	Low
The risk that the option cannot be implemented and of non-compliance	Low / none	Low While blue passion flower has some inherent value as a garden ornamental, people with this pest are generally aware of its potential to spread once they have had it in the garden for a while.	Low While blue passion flower has some inherent value as a garden ornamental, people with this pest are generally aware of its potential to spread once they have had it in the garden for a while.
The risk that compliance with other legislation will adversely affect implementation of the option	Low / none	Low Blue passion flower can be managed by manual means and is readily controlled using off-the-shelf woody weed herbicides.	Low Blue passion flower can be managed by manual means and is readily controlled using off-the-shelf woody weed herbicides.
The risk that public or political concerns will adversely affect implementation of the option	Low There is possibly a degree of ambivalence or unawareness among the general population of the potential for this pest to spread.	Low While blue passion flower has some inherent value as a garden ornamental, there are less weedy species that can be used instead.	Low While blue passion flower has some inherent value as a garden ornamental, there are less weedy species that can be used instead.
Other material risks	None identified	None identified	Low Occupier-led control slightly increases the risk that spread will not be stopped (in contrast to Council-led eradication)

Residual risks that each option will not achieve its objective [NPD 6(4)]

Do Nothing: Low

There are no residual risks to the objective. However, there is a modest to high risk that this pest could deteriorate the natural values of the Grampian Hills over the next ten years.

Eradication: Low

The risk of not achieving the intermediate outcome of a reduction in the area of the pest within the next ten years is also rated as low. Under this scenario, the pest might not be completely eradicated in ten-years' time, but the value of indigenous and forest habitats in the near vicinity of the infestation will not deteriorate (due to blue passion flower) within the next ten years.

Progressive Containment: Low

The risk of not achieving the intermediate outcome of a reduction in the area of the pest within the next ten years is rated as low. However, under this scenario, the reliance on occupier control slightly increases the risk that the spread of the pest is not stopped, leading to a deterioration of the indigenous and forest habitats in the near vicinity of the infestation within the next ten years.

Beneficiaries of the programme [NPD 7(2)(b)]

The eradication of this environmental pest benefits the whole community through the protection of native habitats and biodiversity.

Exacerbators of the programme [NPD 7(2)(c)] (those who contribute to the creation, continuance or exacerbation of the problem)

Active and passive exacerbators are occupiers with this plant on their land

Best mechanism to impose cost allocation [NPD 7(2) (d) and (e)]

The simplest and most efficient method of allocating the cost fairly across beneficiaries and exacerbators is to incorporate it into the Council's general rates. Where an exacerbator is identified due to non-compliance with rules, it is fair that the councils seek to recover the costs for compliance enforcement (e.g., the cost of acting on default).

Effects of not intervening

This vine will spread rapidly, with its seed being carried by water, animals and machinery, invading indigenous-dominated ecosystems and reducing their indigenous biodiversity.

Rationale

There is a need to act promptly while there is still a chance to eradicate this plant. The size of known infestations are still relatively small and contained which makes eradication highly feasible. Eradication may reduce the overall cost in contrast to the longer-term costs of a *Progressive Containment* programme or on-going cost of a *Sustained Control* programme.

Reasons for not relying on voluntary actions [BSA Section 70(2)(c)(vi)]

Based on the slow but trending increase in the incidence of this pest, depending on every occupier with this pest on their land to take voluntary action to ensure its eradication is not a reliable strategy to avoid the ecological effects of this species.

Adverse effects [BSA Section 71(d)]

Is blue passion flower capable of causing an adverse effect on:		**Comments**
Economic well-being?		
The viability of threatened species or organisms?	Yes	Invasion and transformation of natural habitats of threatened plants.
The survival and distribution of indigenous plants or animals?	Yes	Invasion and transformation of natural habitat.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?	Yes	The leaves and unripe fruit contain cyanide and can be poisonous if consumed. Can be confused for the edible banana passionfruit.
Social and cultural well-being?	Yes	Loss of valued natural ecosystems.
The enjoyment of the recreational value of the natural environment?	Yes	Impedes access and restricts roadside vision.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Invasion of natural ecosystems.

Boneseed (Nelson Port Hills only)

Boneseed (*Chrysanthemoides monilifera* subsp. *monilifera*) is a bushy shrub or small tree up to 2-3m tall with bright yellow daisy-like flowers and a very hard seed. It quickly forms dense thickets, replacing all native communities under 2m tall and preventing establishment of native seedlings. It can colonise disturbed sites faster than native species.

Boneseed is presently an *Eradication* species for all of the Tasman District and Nelson City area except for the Port Hills which is identified as an area of no control in the current RPMP. While good progress is being made outside the zone, the Port Hills infestation remains a source of re-invasion into areas close to the Port Hills zone and along Tahunanui Beach and Moturoa Rabbit Island. Also, while the Port Hills infestation has areas that are very difficult to manage, there are areas within the Port Hills zone that remain clear of the pest and will likely benefit from remaining that way.

The preferred option is ***Sustained control*** within the Port Hill zone with ***Do nothing*** (the status quo) and ***Eradication*** (Port Hills) presented as alternative options. The existing eradication programme over the rest of the Nelson and Tasman region remains unchanged.

Analysis of Costs and Benefits [NPD 6(2)]

The level of costs and benefit analysis required for boneseed is "low" (see Appendix 1) and the following narrative (qualitative) on costs and benefits analysis is deemed sufficient to meet the requirements of the NPD. However, as a quantitative analysis undertaken in 2018 identified that eradication of boneseed from the Port Hills was not cost beneficial, it is prudent to check the revised assumptions using quantitative analysis. Appendix 2 presents a quantified cost efficiency analysis which investigates the net present value on the proposed investment based on the assumed annual cost of control compared to the value of ecosystem services benefits that accrue as a result of the management of boneseed.

Under the 2018 costs and benefits analysis, the prevailing assumption was that the Port Hills costs should be considered in isolation to the rest of the Nelson – Tasman region due to the overwhelming cost of eradicating boneseed from difficult sites along the coastal cliffs above Wakefield Quay / Rocks Road. The benefits were also considered in isolation and the result was that the cost of eradication substantially outweighed the benefits.

It is increasingly apparent that the Port Hills infestation continues to spread within the Port Hills zone. Seed is spread from this zone via birds and water into sensitive sites many kilometres away, causing ongoing cost to the regional eradication programme and putting that programme in jeopardy. If left uncontrolled, it is estimated that this pest could affect a further 509 hectares of urban garden, open space, forest and shrubland within the Port Hills zone and continue to be the source of reinfestation of at least 261 hectares of indigenous habitat including coastal land and bush margin outside the Port Hills zone over the next 25 years.

The revised assumptions for a sustained control programme specifically for Port Hills are:

- that the costs of a sustained control programme (stopping the spread) are not nearly as high as eradication, with
    - effective management of easy to reach garden infestations being within the means of most property occupiers (less than $25 dollars per year) who are not expected to achieve eradication, just the destruction of flowering bushes;
    - effective management of the more difficult infestations is not adding much more to the existing weed control budget of the property owners who have formal weed destruction programmes over the same estates (namely Waka Kotahi);
- a small cost of monitoring for compliance within the Port Hills area is likely to be less than the continued cost of control in the eradication zone;
- that the benefits, of not having boneseed in valuable habitats within 1.5km outside the Port Hills zone, accrue to the boneseed (Port Hills) sustained control programme.

The benefit of the sustained control programme is the improved protection afforded to regenerating native shrubland and cliff escarpment communities and the reduction of spread outside the zone into areas where boneseed is being eradicated.

Following these updated assumptions the quantitative analysis, which compares the assumed cost of sustained control within the Port Hills Zone with the benefits accrued from reducing the spread into valuable indigenous habitats within the zone and 1.5km buffer, identifies that this proposal is cost beneficial. The internal rate of return is 36% with a net present value of over $689,691 after 25 years of investment.

Risks that each option will not achieve its objective [NPD 6(3)]

Programme Options	Do Nothing	Eradication	Sustained Control
Objective	Do nothing / rely on voluntary occupier control.	Over the duration of this Plan, eradicate boneseed and eliminate its adverse effects.	Over the duration of this Plan, undertake the ongoing control of boneseed to reduce its impacts on biodiversity and urban garden values in the Port Hills zone and reduce its spread to properties outside the zone.
Intermediate outcome	The infestation of boneseed will continue to increase within the Port Hills zone in the short to medium term and may threaten the eradication objective outside the zone.	Reduce the infestation level of boneseed in the Port Hills zone in the short to medium term.	The spread of boneseed on to properties clear of the pest will reduce in the short to medium term.

Programme Options	Do Nothing	Eradication	Sustained Control
Technical and operational risks	Low / none	Modest to high. The longevity of the seed in the soil is a technical hurdle for eradication from difficult to access sites due to the frequency of visits required to eliminate all seedlings	Low for most areas. The longevity of the seed in the soil is a technical hurdle, but *Sustained Control* is chosen as a feasible option to manage this effect. High along the coastal cliffs – involves specialist machinery and crew and (possibly) road closures.
The risk that the option cannot be implemented and of non-compliance	Low / none	Low in most areas but high along Wakefield Quay / Rock Road.	Low in most areas but high along Wakefield Quay / Rock Road.
The risk that compliance with other legislation will adversely affect implementation of the option	Low / none	Low The shrub is readily treatable with woody herbicides.	Low The shrub is readily treatable with woody herbicides.
The risk that public or political concerns will adversely affect implementation of the option	Moderate There is public demand for increased control in the Port Hills area	Moderate to high The cost of control is likely to outweigh the benefits	Moderate It is anticipated that the control of infestations along the coastal cliffs could lead to short term inconvenience to users of the road.
Other material risks	None identified	Cost likely to outweigh benefit	None identified

Residual risks that each option will not achieve its objective [NPD 6(4)]

Do Nothing: Low

There are no residual risks to the objective within the zone itself, but doing nothing puts the eradication programme outside the zone at risk. This includes a high likelihood of perpetual invasion of high value coastal habitat. There is also a modest risk that the value of indigenous habitats within Port Hills zone will deteriorate over the next ten years.

Eradication: Low

There are no residual risks to the objective within the zone itself, but attempting to undertake eradication is likely to result in costs that outweigh benefits.

Sustained Control: Low

The risk of not achieving the Sustained Control objective within the next ten years is also rated as low. Under this scenario, the value of indigenous habitats within the Port Hills zone will not deteriorate further within the next ten years and the eradication objective outside the zone is less at risk.

Beneficiaries of the programme [NPD 7(2)(b)]

The prime beneficiaries are considered to be occupiers who have land that is clear of this pest. However, there is a benefit to the whole community resulting from the protection of biodiversity values in the Port Hills and security of the eradication of boneseed from high value coastal habitats that are under the neighbouring boneseed eradication programme.

Exacerbators of the programme [NPD 7(2)(c)] (those who contribute to the creation, continuance or exacerbation of the problem)

Active and passive exacerbators are occupiers with this plant on their land within the Port Hills zone who retain seeding bushes on the property that they occupy.

Best mechanism to impose cost allocation [NPD 7(2) (d) and (e)]

The simplest and most efficient method of allocating the cost fairly across beneficiaries is to incorporate compliance monitoring costs into the general rate. The simplest and most efficient method of allocating the cost fairly across exacerbators is for them to bear the cost of control. Where an exacerbator is identified due to non-compliance with rules, it is fair that the councils seek to recover the costs for compliance enforcement (e.g., the cost of acting on default).

Effects of not intervening

Boneseed will continue to spread through the Port Hills area, invading indigenous-dominated ecosystems and reducing their indigenous biodiversity and putting the regional eradication programme at risk.

Rationale

Extensive survey of the Port Hills indicates the need for active control within the area. It is a source of reinvasion into land that is clear of or being cleared of the pest. This type of problem is suited to a *Sustained Control* -style programme.

Reasons for not relying on voluntary actions [BSA Section 70(2)(c)(vi)]

Based on the slow but trending increase in the incidence of this pest, depending on every occupier with this pest on their land to take voluntary action to ensure its eradication is not a reliable strategy to avoid the ecological effects of this species.

Adverse effects [BSA Section 71(d)]

Is Boneseed capable of causing an adverse effect on:		**Comments**
Economic well-being?		
The viability of threatened species or organisms?	Yes	Will readily invade coastal sand ecosystems, competing with and destroying the habitat of pīngao (for instance).
The survival and distribution of indigenous plants or animals?	Yes	Invasion and transformation of natural habitat.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural well-being?	Yes	Loss of valued natural ecosystems.
The enjoyment of the recreational value of the natural environment?	Yes	Impedes access and restricts roadside vision.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Invasion of natural ecosystems.

Feral/stray cat

The origins of feral and stray cats are from the domestic cat (*Felis catus* or *Felis* 'domesticus'). Like other felines, *Felis catus* has a strong flexible body, quick reflexes, and retractable claws. Like domestic cats, feral/stray cats can produce two or three litters per year with an average of four kittens in each.

Under this proposal, a feral or stray cat is a *Felis catus* that is not microchipped and registered on the New Zealand Companion Animal Register, and is free living, unowned and unsocialised or feral in nature and has limited or no dependence on humans.

Feral cats are more often short-haired, more slightly built, with large heads and "sharper" cat-like features in contrast to many domestic breeds. Colouration is not a distinguishing factor, but feral cats tend to be black, tabby or tortoiseshell, with varying extents of white. Stray cats are more like domestic cats in appearance. The most distinguish factor is socialisation to humans[1]. Feral cats are fully unsocialised and tend to avoid human contact. A stray cat is a cat that was once socialised but has lost regular human contact and may be unsocialised or less socialised in contrast to a well socialised pet cat.

Cats are obligate carnivores, and cannot survive without the amino acid taurine in their diet[2]. Cats are opportunistic predators favouring small terrestrial mammals when available but also highly capable hunters of birds, bats, reptiles, amphibians, and invertebrates. They will also feed on carrion.

This proposal also refers to the 'pest agent' cat which is any cat (including any owned companion cat) that in any way leads to the replication or survival of pest (i.e., feral or stray) cat populations – usually in the form of an unneutered male cat or a sexually entire female cat that is abandoned or does not come back home (i.e., becomes stray).

The preferred option is ***Site-led*** with ***Do nothing*** presented as an alternative option.

Analysis of Costs and Benefits [NPD 6(2)]

The level of costs and benefits analysis required for feral/stray cats is "medium" (see Appendix 1). The following is a low-level analysis that sets out the prevailing assumptions with a quantification of costs and benefits where possible. A medium-level analysis, where the known dollar costs of the proposal are measured against the dollar benefits to identify cost efficiency, has not been undertaken. As explained below, this is because the cost of feral/stray cat control is wrapped into the total cost of predator management, with benefits that accrue to native wildlife that area attributable to the control of a range of pests, not just feral/stray cats.

Cats are an apex predator in Aotearoa New Zealand, and in ecologically sensitive areas, have undoubtedly significant effects on indigenous fauna. In the absence of intervention, there may be direct costs in the form of impacts on the survival, reproductive productivity, and distribution of indigenous animals in regionally significant ecosystems with knock-on effects in the reduction in economic wellbeing from a reduction in nature tourism and a reduction in the amenity, social, and recreational value of indigenous ecosystems resulting from (for instance) the loss of bird song or local extinction of rare species. These costs are difficult to quantify. The ecosystem benefits derived

[1] www.alleycat.org/resources/feral-and-stray-cats-an-important-difference/#:~:text=Stray%3A%20Might%20walk%20and%20move,Unlikely%20to%20make%20eye%20contact.
[2] https://www.npvet.co.nz/pets/animal-info-pets/natural-medicine-articles/natural-feeding-cats/

annually from forest and scrub ecosystems, wetlands, and coastal ecosystems are conservatively valued as being between $485 and $17,159[3] per hectare per year - although the degree to which cats diminish these values is not known.

The cost of feral/stray cat control within high-value ecosystems is also somewhat of an unknown because the total number of feral and stray cats is not known. As the control of feral/stray cats under this proposal is linked to site-led programmes which seek to control a raft of mammalian pests, the cost of implementation cannot be attributed to any one type of pest nor apportioned to each pest. Combined with the above problem of quantifying the degree to which cats diminish ecosystem benefits, there is presently too little information to quantitively gauge the value proposition of feral/stray cat control for biodiversity outcomes under the proposal.

With the exception of the St Arnaud rules for companion cats, the proposal does not impose any new costs on companion cat owners. The cost of implementing the St Arnaud rule concerning domestic cat de-sexing and micro-chipping is assumed to be in the order of $22,400. This is based on the identification of 498 freehold properties within the proposed St Arnaud cat management zone and assumes that cat ownership mirrors national trends[4]. It also assumes that the split of unneutered queens (at $227 per operation) and un-spayed toms (at $144.50 per operation) is 50/50, and micro-chipping costs $80 per cat[5]. Assuming entire queens produce at least four kittens (one litter) per year, the "snip and chip" of the St Arnaud domestic cat population potentially averts the production of at least 88 new domestic cats into the St Arnaud environment each year and prevents domestic toms from fathering untold feral cats. While caution is advised when attempting to extrapolate the biodiversity benefits of cat management from ecosystems valuation data, the cost of de-sexing and micro-chipping the St Arnaud domestic cat population is much smaller than the estimated $2.6 M / year of ecosystem services benefits provided by the surrounding forest[6].

Cats are the only animal in which the organism *Toxoplasma gondii* - which causes toxoplasmosis – can sexually reproduce. Toxoplasmosis can cause serious complications for pregnant women and people with weakened immune systems, and deaths of livestock. The increasing incidence of toxoplasmosis in Hector's (Nationally Vulnerable) and Māui (Nationally Critical) dolphins is linked to the cat population on the mainland. There is too little empirical information to attribute the cost of toxoplasmosis to the regional economy.

Companion cats are also beneficial, not only for the companionship that cats provide but for the industry created through cat breeding and veterinary services. However, with respect to the proposal, valuing these benefits is moot because the proposal does not seek to reduce the number of companion cats.

[3] As presented by Auckland Regional Council (2016) internal report *Valuing native ecosystems for cost benefit analysis*, adjusted to "todays" terms.

[4] The SPCA estimates that around 43% of households own on average 1.7 companion cats. Of these 88% are de-sexed and 49% are micro-chipped. This yields an estimated 44 sexually entire cats and 186 un-chipped cats.

[5] Cat snip and chip data sourced verbatim from local veterinary services.

[6] There is estimated to be 5268 hectares of indigenous forests within 1km of the proposed St Arnaud cat management area with a conservative ecosystems services value of $495 per hectare per annum.

Risks that each option will not achieve its objective [NPD 6(3)]

Programme Options	Do Nothing	Site-led
Objective	Do nothing / rely on voluntary occupier control.	Over the duration of this Plan, control the number of feral and stray cats at listed sites.
Intermediate outcome	To allow feral and stray cat populations to increase.	To reduce the number of feral or stray cats at sites to reduce their impacts on the values of those sites.
Technical and operational risks	Low	Low
The risk that the option cannot be implemented and of non-compliance	Low	Low - moderate It is understood that owners of companion cats in the St Arnaud village area are quite supportive of responsible cat ownership and feral cat control. It is likely that cat enthusiasts will not report the presence of a feral or stray cat. However, this is unlikely to significantly affect programme success. It is possible that cat enthusiasts will attempt to shelter and/or feed feral or stray cats near or within named high value sites. This is an effect that enforcement of the rules is anticipated to address.
The risk that compliance with other legislation will adversely affect implementation of the option	Low	Low
The risk that public or political concerns will adversely affect implementation of the option	Moderate The public is increasingly intolerant of the loss of indigenous biodiversity to feral and stray cats	Moderate Some enthusiasts do not distinguish the negative value of feral/stray cats and the positive value of companion cats

Programme Options	Do Nothing	Site-led
Other material risks	None identified	None identified

Residual risks that each option will not achieve its objective [NPD 6(4)]

Do Nothing: High

There are no residual risks to the objective. However, there is high risk that the population of feral/stray cats in high value ecosystems will continue to increase, causing increased losses in the value of those ecosystems.

Site-led: Low

The risk of not achieving feral/stray cat control within specific sites is rated low. While it is possible that there will be non-compliance with rules initially, it is anticipated that the value of indigenous habitats will not deteriorate due to feral/stray cats.

Beneficiaries of the programme [NPD 7(2)(b)]

The prime beneficiaries are considered to be the regional community and general public who enjoy the wildlife value of high value natural areas.

Exacerbators of the programme [NPD 7(2)(c)] (those who contribute to the creation, continuance or exacerbation of the problem)

Any person who willingly or accidentally causes the persistence of a feral or stray cat population in a listed site as a consequence of non-compliance with the rules.

Best mechanism to impose cost allocation [NPD 7(2)(e)]

The simplest and most efficient method of allocating the cost of control is for feral / stray cat control to be part of community-funded or council-funded site-led pest control programmes.

Given the public benefit, the simplest and most effective (and fair) method of allocation the cost of compliance monitoring is for those costs to be subsumed into regional pest management budgets. Where an exacerbator is identified due to non-compliance with rules, it is fair that the councils seek to recover the costs for compliance enforcement (e.g., the cost of acting on default).

Effects of not intervening

The population of feral/stray cats in high value ecosystems will continue to increase, causing increased losses in the value of those ecosystems.

Rationale

Feral and stray cats have a negative impact on indigenous fauna. These effects cannot be managed through responsible companion cat management alone, as it requires control of the feral/stray population.

Reasons for not relying on voluntary actions [BSA Section 70(2)(c)(vi)]

To date the Waimea site-led feral cat control programme has proven effective without the need for rules due to a high level of interest by the surrounding community, some of whom are owners of companion cats, most of which are desexed and microchipped. However, as the number of site-led programmes increases, there is increasing risk that there will be sexually entire and non-microchipped companion cats being caught and mistaken for feral or stray cats if voluntary de-sexing and microchipping is relied on. The rules provide for the fast and effective identification of companion cats. The rules also provide the regulatory backstop that has been missing with respect to dumping cats in the wild.

Adverse effects [BSA Section 71(d)]

Are feral / stray cats capable of causing an adverse effect on:		**Comments**
Economic well-being?	Yes	Toxoplasmosis affects livestock health
The viability of threatened species or organisms?	Yes	Predation and nesting success of threatened fauna
The survival and distribution of indigenous plants or animals?	Yes	Predation of threatened fauna
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Predation of threatened fauna
Soil resources?		
Water quality?	Yes	Contamination of water resources with *Toxoplasma*
Human health?	Yes	Toxoplasmosis affects human health
Social and cultural well-being?	Yes	Predation of threatened fauna. Social nuisance.
The enjoyment of the recreational value of the natural environment?	Yes	Predation of threatened fauna. Social nuisance.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Predation of threatened fauna

Moth plant

Moth plant (*Araujia hortorum*). Also known as *Araujia sericifera*. A vigorous evergreen climbing vine with clusters of bell-shaped white flowers followed by a leathery pear-shaped pod that can be mistaken for choko. This plant has a toxic smelly milky sap that can cause skin irritation and dermatitis. This species inhabits light gaps and forest edges, scrub, roadside margins, wastelands, hedges, and domestic gardens. It will readily spread into natural areas, smothering native plants and preventing establishment of native plant seedlings. It can also gum up the feeding parts of moths and butterflies feeding on the nectar, leading to starvation. Moth plant has black thistledown-like seeds that are spread by wind.

While it appears that the species has yet to become fully naturalised in the Nelson-Tasman area, there are signs of wild spread. The proximity of the known occurrence of this species to the Grampians is a significant threat to the natural values of that area. It would be very difficult to control this species once it gets out of the current domestic setting.

The preferred option is ***Eradication*** with ***Do nothing*** and ***Progressive containment*** presented as alternative options.

Analysis of Costs and Benefits [NPD 6(2)]

The level of costs and benefit analysis required for moth plant is “low” (see Appendix 1). The following narrative (qualitative) costs and benefits analysis is deemed sufficient to meet the requirements of the NPD.

It is estimated that there are around 450 hectares of moth plant infestation involving a small core infestation in and around the Enner Glynn / Stoke area and isolated infestations which occur from Marybank through Richmond to Hope, and in Mapua, Upper Moutere, Motueka, Korere, and Kaiteriteri. The infestation estimate is based on a 200m buffer of known infestations.

If left uncontrolled, it is estimated that this pest could affect at least 4900 hectares of indigenous forest and scrub, exotic forest, orchard and botanical park values in and around Stoke, the Grampians, and Sugarloaf, Jenkins and Saxton Hills within 10 years (spreading 200m per year). In 50 years, this pest could become widespread across the eastern hills from Brightwater to the Gentle Annie and throughout the Moutere Valley, Motueka, Korere and Kaiteriteri if left unmanaged.

The most significant aspect of the cost of control lies with the councils undertaking service delivery and monitoring for compliance. The cost to landowners / occupiers is mainly a time cost to remove this pest from their gardens. An indirect benefit of this approach is that the costs borne by the councils are fairly disbursed across the wider community of beneficiaries.

Risks that each option will not achieve its objective [NPD 6(3)]

Programme Options	**Do Nothing**	**Eradication**	**Progressive Containment**
Objective	Do nothing / rely on voluntary occupier control.	Over the duration of this Plan, eradicate moth plant to eliminate its adverse effects.	Over the duration of this Plan, progressively contain moth plant and reduce its adverse effects.

Programme Options	Do Nothing	Eradication	Progressive Containment
Intermediate outcome	The infestation of moth plant may spread in the short to medium term.	Reduce the infestation level of moth plant to near-zero levels in the short to medium term and to zero levels in the long term.	Relying on occupiers to reduce the infestation to near-zero density in the medium term.
Technical and operational risks	Low	Low	Low
The risk that the option cannot be implemented and of non-compliance	Low / none	Low People with this pest are generally aware of its potential to spread once they have had it in the garden for a while.	Low People with this pest are generally aware of its potential to spread once they have had it in the garden for a while.
The risk that compliance with other legislation will adversely affect implementation of the option	Low / none	Low Moth plant can be managed by manual means and is readily controlled using off-the-shelf woody weed herbicides.	Low Moth plant can be managed by manual means and is readily controlled using off-the-shelf woody weed herbicides.
The risk that public or political concerns will adversely affect implementation of the option	Low There is possibly a degree of ambivalence or unawareness among the general population of the potential for this pest to spread.	Low While moth plant has some inherent value as a garden ornamental, there are less weedy species that can be used instead.	Low While moth plant has some inherent value as a garden ornamental, there are less weedy species that can be used instead.
Other material risks	None identified	None identified	Low Occupier-led control slightly increases the risk that spread will not be stopped (in contrast to council-led eradication)

Residual risks that each option will not achieve its objective [NPD 6(4)]

Do Nothing: Low

There are no residual risks to the objective. However, there is a modest to high risk that this pest could deteriorate the natural values of the eastern hills, riparian margins and botanical parks in the Stoke area over the next ten years.

Eradication: Low-moderate

There is some risk of not achieving zero-levels in the short to medium term. Under this scenario, the pest is unlikely to be completely eradicated in ten years (the life of the current RPMP). However, the value of indigenous and forest habitats in the near vicinity of the infestations will not deteriorate (due to moth plant) within the next ten years if control is continued.

Progressive Containment: Low

The risk of not achieving the intermediate outcome of a reduction in the area of the pest within the next ten years is rated as low. However, under this scenario, the reliance on occupier control slightly increases the risk that the spread of the pest is not stopped, leading to a deterioration of the indigenous and forest habitats in the near vicinity of the infestation within the next ten years.

Beneficiaries of the programme [NPD 7(2)(b)]

The eradication of this environmental pest benefits the whole community through the protection of native habitats and biodiversity. It also benefits orchardists and forestry owners who presently do not have this pest affecting the vigour of their trees or endangering their health.

Exacerbators of the programme [NPD 7(2)(c)] (those who contribute to the creation, continuance or exacerbation of the problem)

Active and passive exacerbators are occupiers with this plant on their land.

Best mechanism to impose cost allocation [NPD 7(2) (d) and (e)]

The simplest and most efficient method of allocating the cost fairly across beneficiaries and exacerbators to incorporate it into the general rate. Where an exacerbator is identified due to non-compliance with rules, it is fair that the councils seek to recover the costs for compliance enforcement (e.g., the cost of acting on default).

Effects of not intervening

This vine will spread rapidly, with its seed being carried by wind, water, animals and machinery, invading indigenous-dominated ecosystems and reducing their indigenous biodiversity. Will also invade orchards, hedgerows, and forestry margins.

Rationale

The size of known infestations are still relatively small and contained which makes eradication highly feasible. Eradication may reduce the overall cost in contrast to the longer-term costs of a *Progressive Containment* programme or on-going cost of a *Sustained Control* programme. At some point TDC/NCC will need the powers under the Biosecurity Act to access properties.

Reasons for not relying on voluntary actions [BSA Section 70(2)(c)(vi)]

Based on the slow but trending increase in the incidence of this pest, depending on every occupier with this pest on their land to take voluntary action to ensure its eradication is not a reliable strategy to avoid the ecological effects of this species.

Adverse effects [BSA Section 71(d)]

Is moth plant capable of causing an adverse effect on:		**Comments**
Economic well-being?	Yes	Will invade orchards and the margins of pine forests affecting plant vigour and/or making harvest more difficult.
The viability of threatened species or organisms?	Yes	Invasion and transformation of natural habitats of threatened plants.
The survival and distribution of indigenous plants or animals?	Yes	Invasion and transformation of natural habitat. The nectar can have a negative impact on butterflies and moths.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?	Yes	The sap can cause irritation of the skin and dermatitis
Social and cultural well-being?	Yes	Loss of valued natural ecosystems.
The enjoyment of the recreational value of the natural environment?	Yes	Impedes access and restricts roadside vision.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Invasion of natural ecosystems.

Pampas species (Golden Bay Sites)

Pampas grass (*Cortaderia selloana*) and purple pampas grass (*Cortaderia jubata*) are large-clump forming grasses of up to 3m-4m tall. Pampas can be distinguished from the native toetoe (*Austroderia* species) by its more erect and fuller flower head that is white-pinkish (*C. selloana*) or has a purple tinge (*C. jubata*) rather than cream coloured.

The pampas species tolerate most extremes making them highly adaptable to a range of habitats including forest light gaps, slips and other disturbed sites (including sprayed or burned sites), river and forest margins, cliffs, shrublands, tussockland, fernland, herbfields, salt marshes, and wetlands. It colonises quickly and can become very dense, effectively out-competing indigenous species to replace ground cover species and shrubs. Pampas tends not to invade grazed pastures, but can quickly invade retired pasture and over-run restoration planting sites.

Seeds are spread very long distances by wind (up to 25km) and occasionally by water, soil movement, contaminated machinery, clothing and on animal pelts.

Both species have been planted and are spread through much of the lowlands of the Tasman District and Nelson City areas. Since 2019 when pampas was removed from the RPMP, TDC biosecurity officers have noted a marked increase in the incidence of the pest. Parts of the Aorere Valley and the western coast of Golden Bay around Westhaven remain relatively free of pampas. Pampas is likely to continue to spread into these areas if unmanaged, affecting the native biodiversity values of bush margins, indigenous grasslands, escarpments and wetlands in these areas.

The preferred option is ***Sustained Control*** with ***Do nothing*** and ***Eradication*** presented as alternative options.

Analysis of Costs and Benefits [NPD 6(2)]

The level of costs and benefits analysis required for pampas species (Golden Bay) is “medium” (see Appendix 1). The following is the result of a medium-level analysis setting out the prevailing assumptions of costs, benefits, and net present value in 2023-dollar terms. Appendix 2 presents the full list of assumptions and modelling results.

The size of the present infestation within the proposed management zones is estimated to be 138 hectares based on assigning a 50m buffer to known infestations. This estimate is based on a recent and intensive survey of the proposed management areas which noted that spread from known infestations is still presently quite limited. The estimated cost of treatment is in the order of $201,000 every third year for knock-down control and $10,000 for each of the intervening years for compliance inspection. These figures may be an over-exaggeration as they are based on a scenario of council-led total control with no assumption of decreasing effort. It therefore represents the worst-case cost scenario.

The benefits involve the protection of 6624 hectares of land valued for indigenous biodiversity that is habitat for pampas, including the dunes and swales of Farewell Spit, wetland and estuarine margins of the West Haven Inlet, and the bush margin of the Kahurangi National Park. The annual environmental capital generated by that habitat is estimated to be (on average) $5557 per hectare per annum.

Based on these assumptions, the internal rate of return is greater than 100% with a net present value of over $65M after 25 years of investment. This proposal is highly cost beneficial.

Risks that each option will not achieve its objective [NPD 6(3)]

Programme Options	Do Nothing	Eradication	Sustained Control
Objective	Do nothing / rely on voluntary occupier control.	Over the duration of this Plan, eradicate pampas from the pampas control sites to eliminate its adverse effects.	Over the duration of this Plan, cease the expansion of the geographic distribution of pampas within the pampas control areas to reduce their adverse effects on the environment.
Intermediate outcome	The infestation level of pampas will continue to increase in the short to medium term.	Reduce the infestation level of pampas to zero levels in the short to medium term.	The ongoing control of pampas in specified areas to reduce its impacts and its spread to other properties.
Technical and operational risks	Low	High Reinvasion risk (from external sources) is high	Low Reinvasion from external sources is an acceptable risk, as long as spread is manageable.
The risk that the option cannot be implemented and of non-compliance	Low / none	Moderate to High Enforcing control of pampas on Crown Land can only be via a Good Neighbour Rule which itself can only be used to manage spread.	Low A Good Neighbour Rule manages spread
The risk that compliance with other legislation will adversely affect implementation of the option	Low / none	Low Pampas is readily killed by glyphosate.	Low Pampas is readily killed by glyphosate.
The risk that public or political concerns will adversely affect implementation of the option	Moderate There may be moderate concern from occupiers of invasion in areas clear of the pest	Moderate Crown land and forestry land occupiers may be averse to the imposition of a Good Neighbour Rule	Moderate Crown land and forestry land occupiers may be averse to the imposition of a Good Neighbour Rule

Programme Options	Do Nothing	Eradication	Sustained Control
Other material risks	None identified	None identified	None identified

Residual risks that each option will not achieve its objective [NPD 6(4)]

Do Nothing: Low

There are no residual risks to the objective. However, there is a modest risk that the value of indigenous habitats within the pampas control zones will deteriorate over the next ten years.

Eradication: High

Eradication is unlikely to be achievable due to the sources of reinvasion and limitations on how the RPMP can bind Crown agencies. The cost to TDC (if undertaking council-led control across the zones) for initial knock-down treatment is likely to exceed the council's annual budgetary means. Also, the value proposition of pampas control rests significantly with the occupiers as both the exacerbator and beneficiary. It is considered inappropriate for all of the cost of control to be borne by the ratepayer, and therefore TDC is not proposed as the lead control agency. The lower level of TDC active intervention (to compliance enforcement only) reduces the certainty of eradication as an objective.

Sustained Control: Low

The risk of not achieving the Sustained Control objective within the next ten years is also rated as low. Under this scenario, the value of indigenous habitats that are presently clear of pampas within the pampas control zones will not deteriorate within the next ten years.

Beneficiaries of the programme [NPD 7(2)(b)]

The prime beneficiaries are occupier (including the Crown) where the estate is clear of this pest and other restored or naturally regenerating indigenous habitat. However, the protection from the further spread of this pest benefits the whole community (including national community) through the protection of native habitats and biodiversity. There are also benefits to forestry occupiers where the continued absence of the pest reduces a future cost of having to clear it from access routes at harvest time.

Exacerbators of the programme [NPD 7(2)(c)] (those who contribute to the creation, continuance or exacerbation of the problem)

Active and passive exacerbators are occupiers with this plant on their land.

Best mechanism to impose cost allocation [NPD 7(2) (d) and (e)]

The simplest and most efficient method of allocating the compliance and inspection cost fairly across regional beneficiaries and exacerbators to incorporate it into the general rate. It is considered that the cost of control should rest with occupiers who are more direct beneficiaries or exacerbators (for instance, Crown agencies who represent the national community of beneficiaries and are a local exacerbator). Where an exacerbator is identified due to non-compliance with rules, it is fair that the councils seek to recover the costs for compliance enforcement (e.g., the cost of acting on default).

Effects of not intervening

Pampas will continue to spread, invading indigenous-dominated grassland, shrubland, and ultramafic ecosystems which reduces their indigenous biodiversity. Pampas will also invade forestry margins and tracks making access more difficult.

Rationale

The size of known infestations at Aorere and Westhaven are still relatively small which makes sustained control highly feasible. The pest is so extensive across the rest of the Tasman and Nelson regions that a wider regional pest management programme is unlikely to be cost beneficial.

Reasons for not relying on voluntary actions [BSA Section 70(2)(c)(vi)]

Based on the slow but trending increase in the incidence of this pest, depending on every occupier with this pest on their land to take voluntary action to ensure its eradication is not a reliable strategy to avoid the ecological effects of this species.

Comment on Good Neighbour Rule [NPD Section 8]

In the absence of the rule, it is highly likely that pampas would spread to high biodiversity-value land that is adjacent or nearby and cause an unreasonable deterioration of those values which is a cost to the occupier - particularly with respect to high value conservation estate. Given that the Crown is both a beneficiary and an exacerbator, the rule does not impose a cost on the Crown that is not otherwise balanced by benefits. For other occupiers, the costs imposed are limited to the control of immediate spread (within 200m) of a boundary and only applies if the affected neighbour is also undertaking steps to destroy pampas on the adjoining land. The requirements of NPD Section 8 are satisfied.

Adverse effects [BSA Section 71(d)]

Is pampas capable of causing an adverse effect on:		Comments
Economic well-being?	Yes	There is a cost to forestry to clear tracks of pampas at harvest time.
The viability of threatened species or organisms?	Yes	Invasion and transformation of natural habitats of threatened plants.
The survival and distribution of indigenous plants or animals?	Yes	Invasion and transformation of natural habitat.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural well-being?	Yes	Loss of valued natural ecosystems.
The enjoyment of the recreational value of the natural environment?	Yes	Impedes access and restricts roadside vision.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Invasion of natural ecosystems.

Sabella

Sabella spallanzanii or Mediterranean fanworm is a marine worm that inhabits harbours and estuaries that attaches to hard surfaces such as boat hulls and wharf pilings. Sabella is a sessile (non-mobile) organism that has a long leathery tube of up to 40cm long which extends a spiral fan of yellow-orange filaments to collect plankton from the water column. Sabella can form dense colonies of up to 1000 individuals per square metre that will exclude the settlement of other organisms. The presence of Sabella on areas where mussels or oysters are located may affect their growth due to competition for food and space.

Sabella is an *Eradication* species in the current RPMP. Under the RPMP, any marine based occupiers and operators, including marina personnel, who identify the presence of Sabella is required to report it to the Tasman District Council and/or MPI. TDC currently works with NCC, MDC and MPI under the Top of the South Marine Biosecurity Partnership (TOSMBP) to destroy any infestations as and when they are identified.

While the present monitoring and immediate control operation has been successful at preventing the permanent establishment of infestations in the Tasman and Nelson regions, boats entering the region with modest to high levels of fouling have been identified as a significant cause of and/or risk of reinvasion of the species into places that are clear of this pest. The review proposes to add a new rule that requires boat owners to keep their boats free of Sabella by reducing the level of fouling on their boats (as opposed to destroying it only when they see it – by which time the pest may already have spread).

The preferred option remains *Eradication* with an ***Additional Rule***. The ***Status Quo*** is presented as an alternative option.

Analysis of Costs and Benefits [NPD 6(2)]

The level of costs and benefit analysis required for Sabella is “medium” (see Appendix 1). For the most part, there is too little information with which to quantify the benefits of the management of Sabella on the value of indigenous ecosystems and the enjoyment value of the Tasman and Nelson coastline and so only a low-level qualitative analysis can be presented. However, a high level (thorough) analysis of the cost of Sabella on the green-lipped mussel industry has been undertaken at national scale (Soliman and Inglis; 2018)[7]. Information contained in that report is deemed to meet at least the “medium” level of analysis and is presented as a regionalised summary here.

The continued elimination of Sabella from the Tasman and Nelson regions is a significant benefit to the protection of the green-lipped mussel. Simulations considering the direct economic impact of Sabella on producers estimates that the immediate loss in revenue of a widespread Sabella incursion is $14 million dollars (Soliman and Inglis; 2018). Within that research, the authors indicate that Tasman and Golden Bay account for 3% of the proportion of the total production of green lipped mussel industry. It is assumed then that the immediate loss in revenue to mussel producers in the Tasman-Nelson region could be as much as $420,000.

[7] Soliman, T. and Inglis, G.T. Forecasting the economic impacts of two biofouling invaders on aquatic production of green-lipped mussels *Perna canaliculus* in New Zealand. Aquaculture Environment Interactions Vol 10, pp. 1-12.

The additional cost of the new rule is estimated to be around $20,000 per year. This is based on an estimated cost of $753 per boat per annum[8] with an estimated 26 boats likely to be required to be cleaned in any given year (based on existing trends)[9]. The benefit is the improved certainty that Sabella remains at near-zero density across the Tasman and Nelson regions. The cost imposition of the new rule is much smaller than the economic losses if Sabella was to gain a foot hold in the Tasman and Nelson regions.

Risks that each option will not achieve its objective [NPD 6(3)]

Programme Options	Status Quo	Additional Rule
Objective	Over the duration of this Plan, eradicate the pests listed in the Eradication Programme to eliminate their adverse effects.	Over the duration of this Plan, eradicate the pests listed in the Eradication Programme to eliminate their adverse effects.
Intermediate outcome	To reduce the infestation level of the Sabella to zero levels in the short to medium term.	To reduce the infestation level of the Sabella to zero levels in the short to medium term.
Technical and operational risks	Low – while the pest is known to be difficult to control once established, the current plan has been effective at preventing establishment	Medium – the lack of haul-out facility at Tarakohe limits the efficacy of hull cleaning.
The risk that the option cannot be implemented and of non-compliance	Low There is a low risk that inspection and control operations cannot be carried out annually.	Low While there is a lack of haul-out facility, *in-situ* cleaning may have some benefit over doing nothing.
The risk that compliance with other legislation will adversely affect implementation of the option	Low	Low

[8] Cost to clean a boat at the Nelson facility ranges from $306 (9m) to $1200 (18m) (average = $753 per boat) for lift, water blast and return. The estimated cost of compliance with the rule does not include the hull-repaint which is assumed to be a cost of normal / responsible boat maintenance.

[9] Based on the average number of moored boats in the Tasman and Nelson areas that have > level 2 fouling. This is likely to be an over-estimate of the cost of the rule, noting that some of the boats may be residential to the region rather than visitors (so the rule is not intended to apply) and noting that many boat owners already incur this cost as part of normal boat maintenance.
https://marinebiosecurity.gitlab.io/report/lof.html?region=overall&from=2022&to=2023

Programme Options	Status Quo	Additional Rule
The risk that public or political concerns will adversely affect implementation of the option	Low	Low Antifouling / de-fouling is part of normal boat maintenance.
Other material risks	None identified	None identified

Residual risks that each option will not achieve its objective [NPD 6(4)]

Status Quo: Low

Moderate to high levels of fouling of residential boats is a suspected cause of breakdowns (reinfestation) in areas previously clear of Sabella. Boats higher than "light" levels of fouling put the current eradication objective at risk.

Additional Rule: Lower

The risk of not achieving the eradication objective is likely to be lower as a consequence of the new rule, but comes with an additional cost of enforced boat maintenance.

Beneficiaries of the programme [NPD 7(2)(b)]

The prime beneficiaries are the whole community and the aquacultural industry as a result of decreased risk of *Sabella* becoming established in the Tasman and Nelson regions, affecting coastal habitats and marine biological resources.

While the proposed additional rule will add costs to boat owners, they benefit from better boat performance.

Exacerbators of the programme [NPD 7(2)(c)] (those who contribute to the creation, continuance or exacerbation of the problem)

Active and passive exacerbators are boat owners with *Sabella* on their boat hulls.

Best mechanism to impose cost allocation [NPD 7(2)(e)]

The simplest and most efficient method of allocating the cost of compliance inspection is to incorporate it into the general rate. It is fair for the cost of boat hull cleaning rest with the boat owner/occupier as the prime exacerbator. Where an exacerbator is identified due to non-compliance with rules, it is fair that the councils seek to recover the costs for compliance enforcement (e.g., the cost of acting on default).

Effects of not intervening

Boats with moderate to heavy fouling have higher risk of spreading *Sabella* to other parts of the Tasman and Nelson Regions. This would undermine the success of the current strategy that ensures that this pest does not become established in the regions.

Rationale

Eradication remains the objective the *Sabella* regional pest management programme. The proposed new rule reduces the risk of spread of *Sabella*. The rule provides the means by which the councils can identify and externalise the cost of this potential risk.

Reasons for not relying on voluntary actions [BSA Section 70(2)(c)(vi)]

It is clear from current data that there is an increasing trend in the number of boats with higher than "low" levels of fouling. Depending on boat owners to undertake regular hull cleaning is not a reliable strategy to reduce the potential spread of *Sabella* if it is on the hulls of such boats.

Adverse effects [BSA Section 71(d)]

Is Sabella capable of causing an adverse effect on:		**Comments**
Economic well-being?	Yes	It is an aggressive competitor that will occupy marine farms.
The viability of threatened species or organisms?	Possibly	Will outcompete native sessile species (if/where present).
The survival and distribution of indigenous plants or animals?	Yes	Invasion and transformation of natural habitat.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural well-being?	Yes	Loss of valued natural ecosystems.
The enjoyment of the recreational value of the natural environment?	Yes	Occupies space otherwise occupied by a more diverse native flora and fauna.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Invasion of natural ecosystems.

Vietnamese parsley

Vietnamese parsley (*Oenanthe javanica*) is cultivated as an ornamental and culinary herb species and was first recorded as naturalised (successfully establishing in the wild) in 2014 (Champion; 2018). It is an aquatic herb that can have negative impacts on river recreational (fishing and swimming), infrastructural (drainage), and environmental (aquatic biodiversity) values by clogging small streams and waterways. It is in the very early stages of naturalisation in the Tasman District and Nelson City, in isolated infestations near Washbourn Gardens and Poorman Valley Stream.

Trials to control the species have been successful at reducing the size of infestations, but have not yet proven to durably eliminate the pest completely. The most effective herbicides are also ones that require resource consent for use over water. Infestations can be managed by manual means to prevent nuisance levels of growth but this would need to be undertaken in perpetuity with increased risk of spread to new sites by contaminated machinery and fragments (Champion; 2018). Therefore, control to effectively remove Vietnamese parsley permanently from the wild is a specialised long-term operation involving herbicides and resource consenting.

Due to the specialised nature of control and high potential for the organism to be spread in the short term by people unaware of the nature of this pest, eradication or containment are presently not viable objectives.

The preferred option is ***Sustained Control*** with ***Do nothing*** and ***Eradication*** presented as alternative options. Under the sustained control scenario (reducing the spread), progressive containment remains a viable future option if herbicidal control trials prove effective.

Analysis of Costs and Benefits [NPD 6(2)]

The level of costs and benefit analysis required for Vietnamese parsley is “low” (see Appendix 1). The following narrative (qualitative) costs and benefits analysis is deemed sufficient to meet the requirements of the NPD.

It is estimated that there is less than 1 kilometre of stream margin presently infested with Vietnamese parsley. If left uncontrolled, it is estimated that this pest could affect up to 9109 kilometres of stream habitat within 10-20 years. Because much of this spread would be within urban catchments, the spread has a high cost on the efficacy of stormwater infrastructure (by clogging water ways) if left unmanaged. There is an indirect benefit of early intervention in the form of mitigation of future costs on stormwater infrastructure management as well as direct environmental benefits accruing from waterways remaining open for native fish migration.

One significant aspect of the cost of control lies in resource consenting where herbicides are being trialled. Another significant cost of control is mechanical clearance. As the current infestation is within waterways managed by Tasman District or Nelson City Council, this is a cost that can be subsumed within council operational budgets which removes any privatised cost involved with consents and mechanical clearance. An indirect benefit of this is that the costs are fairly disbursed across the wider community of beneficiaries.

Risks that each option will not achieve its objective [NPD 6(3)]

Programme Options	Do Nothing	Eradication	Sustained Control
Objective	Do nothing / rely on voluntary occupier control.	Over the duration of this Plan, eradicate Vietnamese parsley to eliminate its adverse effects.	Over the duration of this Plan, cease the expansion of the geographic distribution of Vietnamese parsley to reduce its adverse effects on the environment and economic well-being.
Intermediate outcome	The infestation level of Vietnamese parsley will continue to increase in the short to medium term.	Reduce the infestation level of Vietnamese parsley to zero levels in the short to medium term.	The ongoing control of Vietnamese parsley to reduce its impacts and its spread to other streams.
Technical and operational risks	Low	High The efficacy of herbicidal treatment is still being tested. Without this tool, current control methods make eradication infeasible.	Low Methods to effectively manage spread are known. While herbicidal use requires resource consents, it is not envisaged that this is a significant operational risk.
The risk that the option cannot be implemented and of non-compliance	Low / none	High Until herbicidal treatment is proven effective, eradication would involve mechanical control across all known sites. The cost is likely to be beyond annual budgetary means of the councils.	Low to Moderate There is a moderate risk of non-compliance through community ignorance in the short term. In the longer term, it is expected that the risk will reduce to low as the community becomes more aware of this pest species.

Programme Options	Do Nothing	Eradication	Sustained Control
The risk that compliance with other legislation will adversely affect implementation of the option	Low	Low The use of herbicides requires resource consent but it is not envisaged that this will conflict with other legislation.	Low The use of herbicides requires resource consent but it is not envisaged that this will conflict with other legislation.
The risk that public or political concerns will adversely affect implementation of the option	Low The general public are not aware of the problem of this pest	Low to Moderate A small community of people use Vietnamese parsley as a culinary herb and it might be spread purposely into the wild for culinary use. Herbicide use over water requires social license which is assumed to be granted on the issuance of consent.	Low to Moderate A small community of people use Vietnamese parsley as a culinary herb and it might be spread purposely into the wild for culinary use. Herbicide use over water requires social license which is assumed to be granted on the issuance of consent.
Other material risks	None identified	The size of the infestation is possibly beyond the “lag” phase which makes eradication practicably infeasible.	None identified

Residual risks that each option will not achieve its objective [NPD 6(4)]

Do Nothing: Low

There are no residual risks to the objective. However, there is a modest risk that the aquatic biodiversity value and stormwater infrastructural value of local waterways will deteriorate over the next ten years.

Eradication: High

The risk of not achieving eradication within the next ten years is rated as high. The cost of manual treatment of all known sites at a level that would lead to eradication is likely to be higher than the councils can afford. Until herbicidal trials prove the long-term efficacy and durability of control, eradication is out of reach.

Sustained Control: Low

The risk of not achieving the Sustained Control objective within the next ten years is rated as low. Under this scenario, the value of indigenous habitats and stormwater infrastructure is less likely to deteriorate (due to Vietnamese parsley) within the next ten years. While the need for resource consents for herbicidal application adds a layer of complexity, it is not envisaged that it adds more risk to the objective of reducing spread.

Consideration of combined cost allocation [NPD 7(1)]

It is proposed that Vietnamese parsley and water celery are to be grouped for ease of administering the proposed rules. For intents and purposes, the environment in which they live is the same, their effects are the same, and the habitats to be protected from spread at the same. For all intents and purposes the methods by which they will be managed are the same. The exacerbators and beneficiaries are very similar. For these reasons, it is also proposed that these pests are grouped for cost allocation analysis.

Beneficiaries of the programme [NPD 7(2)(b)]

The sustained control of this Vietnamese parsley and water celery benefits the whole community through the protection of native habitats and aquatic biodiversity and protection of drainage infrastructure.

Exacerbators of the programme [NPD 7(2)(c)] (those who contribute to the creation, continuance or exacerbation of the problem)

Active and passive exacerbators are occupiers with Vietnamese parsley and water celery on their land, or who dump or otherwise purposefully (or inadvertently) release viable fragments of these species into the wider environment. Presently, the councils are the occupier of much of the affected lands, although there may be private occupiers growing Vietnamese parsley in home gardens.

Best mechanism to impose cost allocation [NPD 7(2)(e)]

The simplest and most efficient method of allocating the cost of inspection and compliance fairly across beneficiaries and exacerbators to incorporate it into the general rate. The fairest mechanism for the allocation of cost of control lies with the occupier. In most instances, this is a cost borne by the councils who are the occupiers and who can then allocate out to beneficiaries either as part of the general biosecurity rate (for the protection of the natural environment) or as part of drainage scheme (for efficient management of the infrastructure).

Where an exacerbator is identified due to non-compliance with rules, it is fair that the councils seek to recover the costs for compliance enforcement (e.g., the cost of acting on default).

Effects of not intervening

Vietnamese parsley will continue to spread downstream of current infestations and may be transported into other waterways through poor machinery hygiene. This spread potentially reduces the viability of indigenous-dominant aquatic ecosystems and may cause a reduction in the efficacy of the drainage infrastructure.

Rationale

The known infestations are still relatively contained which makes sustained control (reducing / preventing spread to other sites) highly feasible. Reducing the size of infestation (*Progressive containment*) is not considered feasible until / unless ongoing trials identify that the species can be contained and reduced (as required by the legal definition of that category). Eradication is also not considered feasible until / unless ongoing trials identify that the species can be removed to zero densities of infestation (as required by the legal definition of that category).

Reasons for not relying on voluntary actions [BSA Section 70(2)(c)(vi)]

Based on the slow but trending increase in the incidence of this pest, and due to the need for resource consents for herbicidal control, depending on every occupier with this pest on their land to take voluntary action to ensure its control is not a reliable strategy to avoid the ecological and infrastructure effects of this species.

Adverse effects [BSA Section 71(d)]

Is Vietnamese parsley capable of causing an adverse effect on:		**Comments**
Economic well-being?	Yes	Clogs streams and drains, causing flooding of properties.
The viability of threatened species or organisms?	Yes	Invasion and transformation of natural habitats of threatened plants.
The survival and distribution of indigenous plants or animals?	Yes	Invasion and transformation of natural habitat.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural well-being?	Yes	Loss of valued natural ecosystems.
The enjoyment of the recreational value of the natural environment?	Yes	Clogs waterways.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Invasion of natural ecosystems.

Water celery

Water celery (*Apium nodiflorum*) is not cultivated as a culinary herb but may be mistaken for watercress (*Nasturtium officinale*). It was as naturalised (successfully establishing in the wild) in 1947 and is now widespread in the North Island, though rare in the South Island (Champion; 2018). It as an aquatic herb that appears to be quite reliant on human activity to disperse fragments. It can have negative impacts on river recreational (fishing and swimming), infrastructural (drainage), and environmental (aquatic biodiversity) values by clogging small streams and waterways. It is in the very early stages of naturalisation in Nelson City and Tasman District, in isolated infestations in Brook Stream, Orphanage Stream, Jenkins Creek, Saxton Creek, Appleby Stream, and O'Connor Creek, Eastern Hills waterway, Borck Creek, Neimann Creek, Jimmy Lee Stream, Cotterell Road.

Like Vietnamese parsley, trials to control water celery have been successful at reducing the size of infestations, but have not yet proven to durably eliminate the pest. The most effective herbicides are also ones that require resource consent for use over water. Infestations can be managed by manual means or repeat use of glyphosate to prevent nuisance levels of growth but this would need to be undertaken in perpetuity with the risk of spread to new sites by contaminated machinery (Champion; 2018). Therefore, like Vietnamese parsley, control to effectively remove water celery permanently from the wild is a specialised long-term operation involving herbicides and resource consenting.

Due to the specialised nature of control and high potential for the organism to be spread in the short term by people unaware of the nature of this pest, eradication or containment are presently not viable objectives. The preferred option is ***Sustained Control*** with ***Do nothing*** and ***Eradication*** presented as alternative options. Under the sustained control scenario (reducing the spread), progressive containment remains a viable future option.

Analysis of Costs and Benefits [NPD 6(2)]

The level of costs and benefit analysis required for water celery is "low" (see Appendix 1). The following narrative (qualitative) costs and benefits analysis is deemed sufficient to meet the requirements of the NPD.

It is estimated that there are around 10 kilometres of stream margin presently infested with water celery. If left uncontrolled, it is estimated that this pest could affect up to 9109 kilometres of stream habitat within 10-20 years. Because much of this spread would be within urban catchments, the spread has a high cost on the efficacy of stormwater infrastructure (by clogging water ways) if left unmanaged. There is an indirect benefit of early intervention in the form of mitigation of future costs on stormwater infrastructure management as well as direct environmental benefits accruing from waterways remaining open for native fish migration.

One significant aspect of the cost of control lies in resource consenting where herbicides are being trialled. Another significant cost of control is mechanical clearance. As the current infestation is within waterways managed by Tasman District or Nelson City Council, this is a cost that can be subsumed within council operational budgets which removes any privatised cost involved with consents and mechanical clearance. An indirect benefit of this is that the costs are fairly disbursed across the wider community of beneficiaries.

Risks that each option will not achieve its objective [NPD 6(3)]

Programme Options	Do Nothing	Eradication	Sustained Control
Objective	Do nothing / rely on voluntary occupier control.	Over the duration of this Plan, eradicate water celery to eliminate its adverse effects.	Over the duration of this Plan, cease the expansion of the geographic distribution of water celery to reduce its adverse effects on the environment and economic well-being.
Intermediate outcome	The infestation level of water celery will continue to increase in the short to medium term.	Reduce the infestation level of water celery to zero levels in the short to medium term.	The ongoing control of water celery to reduce its impacts and its spread to other streams.
Technical and operational risks	Low	High The efficacy of herbicidal treatment is still being tested. Without this tool, current control methods make eradication infeasible.	Low Methods to effectively manage spread are known. While herbicidal use requires resource consents, it is not envisaged that this is a significant operational risk.
The risk that the option cannot be implemented and of non-compliance	Low / none	High Until herbicidal treatment is proven effective, eradication would involve mechanical control across all known sites. The cost is likely to be beyond annual budgetary means of the councils.	Low to Moderate There is a moderate risk of non-compliance through community ignorance in the short term. In the longer term, it is expected that the risk will reduce to low as the community becomes more aware of this pest species.

Programme Options	Do Nothing	Eradication	Sustained Control
The risk that compliance with other legislation will adversely affect implementation of the option	Low	Low The use of herbicides requires resource consent but it is not envisaged that this will conflict with other legislation.	Low The use of herbicides requires resource consent but it is not envisaged that this will conflict with other legislation.
The risk that public or political concerns will adversely affect implementation of the option	Low The general public are not aware of the problem of this pest	Low to Moderate. Herbicide use over water requires social license which is assumed to be granted on the issuance of consent.	Low to Moderate Herbicide use over water requires social license which is assumed to be granted on the issuance of consent.
Other material risks	None identified	The size of the infestation is possibly beyond the "lag" phase which makes eradication practicably infeasible.	None identified

Residual risks that each option will not achieve its objective [NPD 6(4)]

Do Nothing: Low

There are no residual risks to the objective. However, there is a modest risk that the aquatic biodiversity value and stormwater infrastructural value of local waterways will deteriorate over the next ten years.

Eradication: High

The risk of not achieving eradication within the next ten years is rated as high. The cost of manual treatment of all known sites at a level that would lead to eradication is likely to be higher than the councils can afford. Until herbicidal trials prove the long-term efficacy and durability of control, eradication is out of reach.

Sustained Control: Low

The risk of not achieving the Sustained Control objective within the next ten years is rated as low. Under this scenario, the value of indigenous habitats and stormwater infrastructure is less likely to deteriorate (due to water celery) within the next ten years. While the need for resource consents for

herbicidal application adds a layer of complexity, it is not envisaged that it adds more risk to the objective of reducing spread.

Consideration of combined cost allocation [NPD 7(1)]

As identified in the section on Vietnamese parsley above, it is proposed that Vietnamese parsley and water celery are to be grouped for ease of administering the proposed rules. If follows that the NPD Section requirements to identify the beneficiaries and exacerbators, and describe the cost allocation, are the same and so these are not reiterated below.

Effects of not intervening

Water celery will continue to spread downstream of current infestations and may be transported into other waterways through poor machinery hygiene. This spread potentially reduces the viability of indigenous-dominant aquatic ecosystems and may cause a reduction in the efficacy of the drainage infrastructure.

Rationale

The known infestations are still relatively contained which makes sustained control (reducing / preventing spread to other sites) highly feasible. Reducing the size of infestation (*Progressive containment*) is not considered feasible until / unless ongoing trials identify that the species can be contained and reduced (as required by the legal definition of that category). Eradication is also not considered feasible until / unless ongoing trials identify that the species can be removed to zero densities of infestation (as required by the legal definition of that category).

Reasons for not relying on voluntary actions [BSA Section 70(2)(c)(vi)]

Based on the slow but trending increase in the incidence of this pest, and due to the need for resource consents for herbicidal control, depending on every occupier with this pest on their land to take voluntary action to ensure its control is not a reliable strategy to avoid the ecological and infrastructure effects of this species.

Adverse effects [BSA Section 71(d)]

Is water celery capable of causing an adverse effect on:		Comments
Economic well-being?	Yes	Clogs streams and drains, causing flooding of properties.
The viability of threatened species or organisms?	Yes	Invasion and transformation of natural habitats of threatened plants.
The survival and distribution of indigenous plants or animals?	Yes	Invasion and transformation of natural habitat.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural well-being?	Yes	Loss of valued natural ecosystems.
The enjoyment of the recreational value of the natural environment?	Yes	Clogs waterways.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Invasion of natural ecosystems.

Pest/Wilding conifers

The pest/wilding conifer group are all cone-bearing plants with needles instead of leaves. With the exception of European larch (*Larix decidua*), all are evergreen trees. In addition to larch, the species in this group are bishop pine (*Pinus muricata*), lodgepole pine (*P. contorta*), Corsican pine (*P. nigra*), dwarf mountain / mountain pine (*P. mugo*), maritime pine (*P. pinaster*), Mexican weeping pine (*P. patula*), Monterey/radiata pine (*P. radiata*), ponderosa pine (*P. ponderosa*), Scots pine (*P. sylvestris*), western white pine (*P. monitcola*), and Douglas fir (*Pseudotsuga menziesii*).

With the exception of radiata pine and Douglas fir, these species have little economic (timber) value, though have been planted in the Nelson and Tasman regions (some species quite extensively) either for (valuable) ornamental, shelterbelt, erosion protection or (not valuable) timber enterprises. They have all proven to naturalise readily and are now considered a threat to the viability of indigenous ecosystems (including intact native forests, scrub and regenerating forests, ultramafic areas and sub-alpine and alpine environments above the natural tree line) and low-intensity pastoral production. The proposal to manage these species as pests in an RPMP provides the legislative tool for the strategic destruction of these species over time through a progressive containment programme.

Radiata pine and Douglas fir remain commercial crops of significant economic value to the Nelson and Tasman regions. However, wildings of both species are proving to be a similar threat to indigenous habitat and production values. The proposal to manage the wildings of these species is not concerned with preventing ongoing production or permanent forestry, but rather to provide the legislative tools for the strategic management of unintentional spread.

The preferred options are ***Progressive Containment*** **and** ***Site-led*** with ***Do nothing*** presented as an alternative option.

Analysis of Costs and Benefits [NPD 6(2)]

The level of costs and benefit analysis required for pest/wilding conifers is “medium” (see Appendix 1). A high level (thorough) analysis of the costs and benefits of wilding conifer control has been undertaken at national scale (Sapere; 2022)[10]. Information contained in that report, including the Net Present Value of various control scenarios is deemed to meet at least the “medium” level of analysis. A regionalised summary is presented below.

Under the proposal, the responsibility for the annual control of emerging pest and wilding conifers on land that is clear of (or has been cleared of) those pests rests with the landowner (both private and public). Within the mapped wilding and pest conifer control zones, the purpose of the proposal is to capitalise on the gains made from knockdown control of wilding and pest conifers funded by central or local government, and/or community effort supported by public funds. This control scenario is consistent with the “Maximum-national control” scenario presented by Sapere (2022), albeit at regional scale rather than national scale.

Sapre (2022) identify the following ‘use’ benefits from wilding conifer control:

- Primary production / productive land use;
- Water yield for hydro generation and irrigation;

[10] Sapere (2022). Benefits and Costs of Additional Investment in Wilding Conifer Control. Prepared for the Ministry for Primary Industries on behalf of the National Wilding Conifer Control Programme.

- Reduced wildfire spread and damage risk; and
- Protecting iconic landscapes for recreation and aesthetic value.

And 'non-use' benefits

- Avoiding biodiversity losses- including preventing soil legacies;
- Protecting Māori cultural values e.g. protecting sites of significance to Mana Whenua, and Māori land, from the impacts of introduce species.

(Sapere; 2022).

Comparing these benefits with the dollar value of control over a 50-year time frame, the national-level control costs and benefits analysis identifies that continued effort to control wilding conifers yields a significant net present value of $6,671 M. The value accrues to the nation as a consequence of high dollar value of monetarised benefits arising from the protection of productive pasture, water yield benefits, cultural and biodiversity benefits, and protection from wild fire. Reducing the national-level effort (which for Tasman / Nelson, assumes zero further work) would result in a net loss of $3.8 billion dollars (Sapere; 2022).

Table 4 of the Sapere (2022) report breaks down each region's share of the wilding conifer problem, identifying that "Nelson Tasman" has 64,469 hectares of current wilding conifer infestation. This equates to around 2.6% of the total infestation in Aotearoa New Zealand. It follows then that the net present value that accrues to the combined Tasman and Nelson regions for continued control of emergent wilding and pest conifers on land that is presently clear of the pest (as proposed) is in the order of $176,057,000. It also follows that "do nothing" could potentially result in the loss of $98.8 M from the regional economy over the next 50 years.

The national CBA rules out carbon sequestration as a liability or a benefit because new wilding forests have no value as emissions credits. Nevertheless, the rules proposed for pest/wilding conifer control in the Tasman and Nelson regions provide for a flexible approach to the long-term management of pest/wilding conifers that might include benefits derived from carbon sequestration. For example, under the proposal, it is possible for an occupier to approach TDC/NCC with a plan to progressively manage an infestation of wildings using carbon credits generated under the Emissions Trading Scheme (ETS) from a portion of a wilding forest to fund the destruction of the remaining infestation. However, until or unless such forests are registered under the ETS, the benefits of the ETS payout from a wilding infestation is unknowable, and therefore not factored into this analysis.

Risks that each option will not achieve its objective [NPD 6(3)]

Programme Options	Do Nothing	Progressive Containment and Site-led
Objective	Do nothing / rely on voluntary occupier control.	Over the duration of this Plan, reduce the geographic distribution of the pest/wilding conifers to reduce their adverse effects.
Intermediate outcome	The infestation levels of the listed pest/wilding conifers will continue to increase in the short to medium term.	The geographic distribution of pest/wilding conifers will be contained and slightly reduced in the short to medium term.
Technical and operational risks	Low	Low
The risk that the option cannot be implemented and of non-compliance	Low There is a low risk that inspection and control operations cannot be carried out annually.	Low There is a low risk that the inspection and control operations cannot be carried out annually.
The risk that compliance with other legislation will adversely affect implementation of the option	Low	Low
The risk that public or political concerns will adversely affect implementation of the option	Modest The effects of pest/wilding conifers on agricultural productivity and indigenous forests are increasingly unacceptable to the public.	Low While it is anticipated that the forestry sector will be concerned with regulation, the negotiated management plan option provides flexibility while assuring responsibility.
Other material risks	None identified	High The signalled central government decrease in funding is likely to slow down the initial knockdown phase of work, delaying the implementation of this proposal

Residual risks that each option will not achieve its objective [NPD 6(4)]

Do Nothing: Low-modest

There are no residual risks to the objective. However, there is a high risk that the value of agricultural productivity and indigenous habitats within the management zones will deteriorate. There is also a risk that "walking away" from investments already made is publicly unacceptable.

Progressive Containment and Site-led: High (for Richmond MU). Low for other sites.

The risk of not achieving the proposed Progressive Containment objectives within the Richmond MU over the next ten years is rated as high. This is due to the government's signalled decrease in the knockdown funding which is likely to lead to continued spread in some circumstances in the immediate future. Over the longer term though, once knockdown has been achieved, the value of indigenous habitats within the pest/wilding conifer control zones will not deteriorate under the proposed "maintain the gains" scenario. The risk of not achieving the proposed site-led objective is low. Under this proposal, the values of indigenous habitats within the site-led programmes will not deteriorate (due to pest and wilding conifers) over the next ten years.

Consideration of combined cost allocation [NPD 7(1)]

The listed pest and wilding conifers are combined for ease of administering the proposed rules. For intents and purposes, the environment in which they live is the same, their effects are the same, and the habitats to be protected from spread at the same. For all intents and purposes the methods by which they will be managed are the same. The exacerbators and beneficiaries are the same. For these reasons, it is also proposed that these pests are grouped for cost allocation analysis.

Beneficiaries of the programme [NPD 7(2)(b)]

The prime beneficiaries are considered to be occupiers who benefit from the capital that accrues in the absence of the pest. With respect to conservation forests and public lands of high biodiversity value, there are benefits to the whole community.

Exacerbators of the programme [NPD 7(2)(c)] (those who contribute to the creation, continuance or exacerbation of the problem)

Active and passive exacerbators are occupiers with any of the listed pest and wilding conifers on their properties that are the sources of conifer propagules on neighbouring land that is clear of, or being cleared of pest/wilding conifers. This includes private occupiers and Crown agencies.

Best mechanism to impose cost allocation [NPD 7(2)(e)]

The simplest and most efficient method of allocating the cost of control is on the occupier being both the exacerbator and the beneficiary. On occasions where pest/wilding conifer spread is demonstrably

as a result of sources on neighbouring land, this cost will be enforced on the exacerbator as a means of fairly apportioning the cost of control.

The simplest and most efficient method of allocation the cost of inspection and compliance is for this to come under the general rate. This helps apportion some of the cost of the programme to the public beneficiaries. At its discretion, each council may also contribute funding toward site-led programmes as a means of allocating the cost of control back to the general public beneficiaries.

Where an exacerbator is identified due to non-compliance with rules, it is fair that the councils seek to recover the costs for compliance enforcement (e.g., the cost of acting on default).

Effects of not intervening

Pest/wilding conifers will continue to spread causing untold impacts on pastoral productivity and loss of value of indigenous forests, scrublands, and grasslands.

Rationale

The pest conifers are invasive species that are well-known for their propensity to invade indigenous and pastoral ecosystems and transform them into monocultures of conifers. Control of these pests and their source populations is necessary to protect existing ecosystem and production value.

The basis for including wilding conifers (including Douglas fir and radiata pine) stems from a need to protect the substantial investment that has already been made in reducing pest/wilding conifer populations in the Mt Richmond Forest Park area, other vulnerable ultramafic areas in North Nelson, Takaka Hill area, Abel Tasman National Park, and Golden Bay area.

Reasons for not relying on voluntary actions [BSA Section 70(2)(c)(vi)]

The emergence of pest/wilding conifers as a national threat is evidence that relying on voluntary action is insufficient to stem the tide of invasion. Bearing in mind that the emergence of the problem has its source in past and current conifer plantation schemes, there is need for a certain level of regulatory oversight to allocate costs on to exacerbators where this can be deemed fair and reasonable under the specific circumstances of spread.

Comment on Good Neighbour Rule [NPD Section 8]

In the absence of the rule, it is highly likely that pest/wilding conifers would spread to high biodiversity-value land that is adjacent or nearby and cause an unreasonable deterioration of those values which is a cost to the occupier - particularly with respect to high value Crown conservation estate and Council reserves. Given that, with respect to high value conservation areas, the Crown and the councils may be both a beneficiary and an exacerbator, the rule does not impose a cost on them that is not otherwise balanced by conservation benefits. For other occupiers, the costs imposed are limited to the control of immediate spread (within 200m) of a boundary and only applies if the affected neighbour is also undertaking steps to destroy pest/wilding conifers on the adjoining land. The requirements of NPD Section 8 are satisfied.

Adverse effects [BSA Section 71(d)]

Are pest/wilding conifers capable of causing an adverse effect on:		Comments
Economic well-being?	Yes	Under low-intensity grazing regimes, can outcompete pasture, reducing pastoral productivity.
The viability of threatened species or organisms?	Yes	Loss of habitat of rare plants. Includes habitat above the natural treeline, coastal dunes, and the ultramafic mineral belt.
The survival and distribution of indigenous plants or animals?	Yes	Invasion and transformation of natural habitat.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement. Includes habitat above the natural treeline, coastal dunes, and the ultramafic mineral belt.
Soil resources?		
Water quality?	Yes	Invasion of tussock grassland and other non-forest habitats changes hydrological patterns.
Human health?		
Social and cultural well-being?	Yes	Loss of valued natural ecosystems.
The enjoyment of the recreational value of the natural environment?	Yes	Impedes access and restricts roadside vision.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Invasion of natural ecosystems.

Appendix 1: Determining the level of costs and benefits analysis to be applied [NPD 6(1)].

Section 6(1) of the NPD specifies four criteria to consider when determining the level of cost and benefits analysis. Guidance on how to set levels for each of the criteria is provided by *Meeting the requirements of the National Policy Direction for Pest Management 2015* (Version 1.0) produced by the Ministry for Primary Industries (MPI; 2015). The following assessment criteria have been derived from these sources:

Assessment criteria

1 Uncertainty of the impact of the pest and the effectiveness of the methods of control

- **High uncertainty** – Little known about its impacts and the effectiveness of control measures
- **Medium uncertainty** – Some information available on its impacts and on the effectiveness of control measures
- **Low uncertainty** – Plenty of information on its impacts and effectiveness of control measures

2 Significance of the pest or the proposed measures

- **High** – High total costs **or** strongly opposed community views **or** significant community interest
- **Medium** – Moderate total costs **or** some opposed community views **or** moderate community interest
- **Low** – Low total costs **or** limited community interest

3 Relationship between costs and benefits

- **High** – costs are likely to be similar to the benefits
- **Medium** – costs are likely to be less than the benefits
- **Low** – costs are likely to be much lower than the benefits

4 Level and quality of available data

- **High** – High quality data on distribution and well-established costs and impacts
- **Medium** – Limited information on distribution and on costs and impacts
- **Low** – Little information available on distribution and costs and impacts

The level of Cost Benefit Analysis that is required to be undertaken is determined by the combination of ratings for these different categories where:

- A **High** level of CBA is needed when three of the four criteria listed above (Criteria 1-4) are assessed as high.
- A **Low** level of CBA can be undertaken when none of the first three criteria (Criteria 1-3) are ranked high and no more than two are ranked as medium.
- A **Medium** level of CBA is required for all other combinations.

The results of the application of the NPD Section 6(1) criteria are presented in Table 1 below.

Table 1: Assessment of the level of cost and benefits analysis (CBA) to be applied

Pest	6(1)(a) Uncertainty of impacts and effectiveness of methods	6(1)(b) Likely significance or controversy of the pest or proposed measures or cost of measures	6(1)(c) Likely costs relative to likely benefits	6(1)(d) Level and quality of data	Level of CBA warranted	Response
Blue passion flower	Low - the environmental impact of the species is known. Control measures known.	Low – a proportion of currently affected occupiers appear to be aware of the pest nature of the species and are undertaking voluntary control already.	Low - the environmental benefits are likely to significantly outweigh costs. There would potentially be lower occupier costs for this TDC-led programme.	High - the total extent assumption is based on good existing information about the extent of the pest.	Low	A narrative (qualitative) costs and benefits analysis is presented for this pest.
Boneseed (Nelson Port Hills only)	Low - the environmental and production impact of the species is known. Control measures known.	Low – the general public are aware of the pest nature of this species and there is public demand for its increased control in the Port Hills area.	Medium - the environmental benefits likely outweigh the costs except at known steep and inaccessible sites. Previous analysis identified that the costs outweigh the benefits. This was based on a *Progressive Containment* scenario that included the cost to manage sites that are difficult to access.	High - location of infestations reasonably well known. Further survey is needed to improve knowledge of full distribution.	Low	A narrative (qualitative) cos and benefits analysis presented for this pest. A quantitative analysis may l warranted to test revise assumptions.
Moth plant	Low - the environmental and health impact of the species is known. Control measures known.	Low – while the general public are likely to be unaware of the problems of this pest, the currently known infestation is very small. The imposition of the proposed reporting rule on occupiers is very minor.	Medium – while at low density in an urban area, the environmental benefits and the cost of control are likely to be similar ("high"). However, the wider regional environmental benefits are likely to significantly outweigh the costs if this pest was allowed to spread ("low").	Medium to high - the total extent assumption is based on good existing information about the location of the pest.	Low	A narrative (qualitative) costs and benefits analysis is presented for this pest.
Pampas	Low - the environmental impacts are understood. Control tools are known.	Low to medium – the public are generally aware of the pest nature of this species aware of the pest. Possibly some resistance to imposing costs onto Crown occupiers. For other occupiers, the imposition is similar to that which existed when pampas was a pest in the RPMP prior to 2019.	Medium. Given the distribution of these pests inside the proposed sustained control aera.	Medium to High. The distribution within the control zones appears to be low, though further survey is needed to confirm full extent. Both species are known to be widely distributed in the buffer zone.	Medium	A medium level analysis warranted.

Pest	6(1)(a) Uncertainty of impacts and effectiveness of methods	6(1)(b) Likely significance or controversy of the pest or proposed measures or cost of measures	6(1)(c) Likely costs relative to likely benefits	6(1)(d) Level and quality of data	Level of CBA warranted	Response
Sabella	Medium - the environmental effects are well known. The difficulties managing this marine pest is known.	Medium – there is ongoing public support for control of this species. A new impositions posed on boat owners will introduce new costs.	Medium – the qualitative CBA identifies that the benefits are likely to outweigh the cost, but that there will be a new cost imposition on boat owner.	High - the source of this pest and mechanisms of dispersal are well known.	Medium	A medium level analysis warranted. It may prove difficult to estimate the dollar benefits to the marine farming industry without being overly presumptive. Assumptions of costs may require extrapolatio from incomplete data.
Vietnamese parsley	Low - the environmental impact of the species is known. Control measures known. While the need for resource consent is required for use of herbicides over water, this does not reduce certainty.	Low to medium – the general public are probably unaware of the significance of this pest but are also likely to be ambivalent about its management as long as the cost of control is justifiable and reasonable. The plant is a culinary herb and so there may be some disbenefit from the ban on sale and distribution. The number of affected parties is assumed to be small. The need for resource consent may impose an unreasonable burden on private occupiers. However, as all currently affected land is council managed, the privatised costs remain low.	Low - the environmental and drainage infrastructure benefits are likely to significantly outweigh costs.	High - the total extent assumption is based on good existing information about the extent of the pest.	Low	A narrative (qualitative) costs and benefits analysis is presented for this pest.
Water celery	Low - the environmental impact of the species is known. Control measures known. While the need for resource consent is required for use of herbicides over water, this does not reduce certainty.	Low – recent work by NCC to manage this species has not led to controversy. The plant has minor use as a culinary herb and so there may be some disbenefit from the ban on sale and distribution. The number of affected parties is assumed to be small. The need for resource consent may impose an unreasonable burden on private occupiers. However, as all currently affected land is	Low - the environmental and drainage infrastructure benefits are likely to significantly outweigh costs.	High - the total extent assumption is based on good existing information about the extent of the pest.	Low	A narrative (qualitative) costs and benefits analysis is presented for this pest.

Pest	6(1)(a) Uncertainty of impacts and effectiveness of methods	6(1)(b) Likely significance or controversy of the pest or proposed measures or cost of measures	6(1)(c) Likely costs relative to likely benefits	6(1)(d) Level and quality of data	Level of CBA warranted	Response
		council managed, the privatised costs remain low.				
Pest/wilding conifers	Low - the environmental impact of the species is known. Control measures known.	Medium – pest nature well understood. The proposal to include an "approved management agreement" option in the rule is intended to manage the imposition on neighbouring forest owners to a level that, while possibly significant, remains reasonable and acceptable to those owners.	Medium – the environmental benefits are likely to outweigh the cost under most scenarios, but the medium level of uncertainty on distribution leads to some uncertainty in the level of cost.	Medium – the extent of the wilding infestation in the control area is reasonably well known (medium level of certainty). The costs of ongoing management are well known.	Medium	A medium level analysis warranted. The dollar benefits to the protection of indigenou biodiversity requires extrapolation, but an acceptable and logical process can be followed. Assumptions of costs may require extrapolation from incomplete data and may be highly presumptive.
Feral/stray cats	Low - the environmental and social impact of the species in feral and unowned state is known. Control measures known.	High – there are strongly opposing points of view on the management of cats.	Low – the environmental and social benefits of a lower feral and unowned cat population are likely to outweigh the cost of cat registration.	Low – the number of feral and stray cats is not known. The number of sexually entire and un-microchipped companion cats is unknown.	Medium	A medium level analysis warranted, however the dollar benefits to the protection of indigenous biodiversity and dollar costs of control require extrapolation from incomplete data and will be highly presumptive.

Appendix 2: A Quantitative Cost Efficiency Analysis for Boneseed and Pampas

The cost efficiency analyses for boneseed and pampas use the AgResearch *Cost Benefit Analysis for Regional Pest Management* tool (McAuliffe and Bourdot: 2017) to calculate the Net Present Value of the proposed investment of control. The Net Present Value is based on the difference between the estimated cost of control over time and the assumed dollar benefits that accrue as a result of the value of loss prevented, presented in "todays" terms. In addition to the assumptions of the cost of control and the value of the protected asset there are further assumptions needed to forecast the consequence of not controlling the pest (the invasion trajectory). This appendix presents the assumptions used and results of the modelling for boneseed and pampas.

Base Assumptions for Invasion Trajectory

Within the AgResearch tool is a section for building the Invasion Trajectory Without Management scenario. This sets the cost baseline for the effect of the pest without management. The model assumes that the pest follows logistical growth starting at an inputted value of "Initial area infested" or H_0 (hectares) until it fully occupies the area inputted as value of "Max[imum] area or H_1 that could become infested" (hectares) over time (years) which is inputted as the "time for infestation to reach 90% of max[imum]" or T_{90}.

The current extent of boneseed and pampas have been derived from data supplied by TDC including the TDC pest database as at September 2023 and a separate investigation into pampas in the Aorere Valley supplied by TDC in June 2023.

Estimating Initial and Maximum area infested

Boneseed

This model only investigates the indigenous ecosystems services benefits of boneseed control and makes no assumption on benefits that accrue to urban environments. Boneseed colonises predominately coastal areas and is a semi-woody small tree with up to 50,000 seeds produced in a flowering season (NZPCN 2023). The seed is relatively long lived in the seed bank if the seed is buried (up to 10 years). Boneseed is therefore a significant threat to the indigenous biodiversity value of coastal dune (including sand, gravel and rock), escarpments, scrubby habitats and the margins of indigenous forest.

The valued habitats for this analysis are identified using the Landcover Database (version five – LCDB) land cover classes of indigenous forest, broadleaved forest, manuka / kanuka sand, gravel or rock. In addition to these classes, areas identified as the Top 30 Biodiversity Priorities for NCC and TDC (per Leathwick 2019) were also considered. The Top 30 are overlaid with the LCDB to determine the predominant landcover type.

To estimate the current area infested, a 150 m radius (buffer) of active loci within the Nelson Port Hills Management Zone is used to delimit the zone of imminent spread. The approach follows the assumption that imminent spread (i.e., within the next 12 months) is predominantly bird-mediated. The zone of imminent spread is then overlaid with a model of valuable habitat to determine the initial area of indigenous habitat infested. This analysis yields an initial area of infestation (H_0) of 13 ha of high value habitat.

The maximum area of spread is assumed to be within a 1500 m radius (buffer) of the Port Hills boneseed Management Zone. This is to account for the coastal habitats and forest margins outside

the zone that may be subject to continued reinvasion after eradication (under the existing control programme) based on an assumption of long-distance bird and water-mediated spread.

The areas of valuable habitat within the 1500 m radius of known infestations, including the management zone yields 261 ha that could potentially be continuously infested with boneseed (H_1).

T_{90} is 25 years assuming that all valuable habitats within a 1500 m radius could experience boneseed reinvasion from the Port Hills source at any time within the next 25 years, leading to continued significant impact on the biodiversity value of those sites if spread is not managed.

Pampas

This model investigates the spread of pampas into habitats that will support pampas that are predominantly indigenous habitats at present. Common seed sources include plantation forestry, roadsides, farm hedges, quarries, and wasteland (NZPCN 2023) and can be dispersed by wind, water, animals, and human-mediated means. There is no evidence at this stage to suggest that pampas seed is long lived and the present infestation within the proposed management zone is still quite confined. Therefore, total knockdown control is feasible (for a price). The problem continues to be the constant long-distance reinvasion (up to 25 kms) from seed sources in uncontrolled areas of the region.

The valued habitats for this analysis are identified using the LCDB land cover classes of tall tussock grassland, sand or gravel, flax land, herbaceous freshwater vegetation, gravel and rock, and river areas (including all of Farewell Spit).

To estimate the current area infested, a 50 m radius (buffer) of active loci is used, based on a search radius that would be needed to ensure the locus is sufficiently controlled. This approach uses a practical level assumption based on gravity-mediated spread of pampas and ignores the potential for long-distance spread in the immediate (i.e., within the next 12 months) term assuming that new long-distance loci are identified as new infestations and are not part of the existing loci.

The analysis yields an initial infestation (H_0) of 138 ha.

The maximum area of spread is assumed to be within a 25 km radius of the active infestation. This extent is limited to the Aorere River catchment as the south-most extent to account for the habitats that would most likely be affected by the infestation of interest (i.e., within the proposed management zone) versus the habitats that would be affected by uncontrolled infestations outside the proposed management zone. Overlaying the LCDB with a 25 km radius of an active infestation (H_1) yields 6624 ha of valuable habitat that is at risk and potentially protected by this proposal.

T_{90} is 25 years in keeping with the above assumption that all valuable habitats within a 25 km radius could be invaded by pampas from sources within the control zone at any time within the next 25 years, leading to significant effects on the biodiversity value of those sites if spread is not managed.

Base assumptions for Costs and Benefits

The AgResearch tool has a section for building up the cost of control and the benefits accrued from managing the pest. This section describes the assumptions applied to the costs and benefits aspect of the tool.

Estimating the average earnings per hectare of high value habitat

The analyses in this report draw on a valuation framework developed to assess the ecosystem services provided by indigenous habitats from Patterson and Cole (2013) and van den Belt and Cole (2014) as described by Auckland Regional Council (2016) with the values adjusted to 2023 terms using the online inflation adjustment calculator provided by the New Zealand Treasury (https://www.treasury.govt.nz/information-and-services/state-sector-leadership/guidance/reporting-financial/discount-rates). The table below presents the values for each habitat type.

Habitat type	Landcover Database description	Suggested minimum value ($/ha) (2023)	Suggested maximum value ($/ha) (2023)	Source
Native terrestrial (non-priority)	Scrubland and forest (including Broadleaved Indigenous Hardwoods; Fernland; Flaxland; Matagouri or Grey Scrub; Indigenous Forest; Manuka and/or Kanuka; Tall tussock grassland.	622.42		Min = 'scrub' from Patterson and Cole (2013).
Native terrestrial (priority)	As above, but identified as Top 30 Priority for NCC or TDC per Leathwick (2019).		750.75	Max = 'forest' from Patterson and Cole (2013) minus the raw materials component.
Freshwater	Lakes; ponds; rivers; herbaceous freshwater vegetation.	22,020.80	39,597.41	Min = 'lakes' from Patterson and Cole (2013) Max = 'wetland' from Patterson and Cole (2013)
Estuarine	Estuarine open water; mangroves; herbaceous saline vegetation.	5,428.52	62,629.48	Min = 'estuaries' from Patterson and Cole (2013) Max = 'estuaries' mean from van den Belt and Cole (2014)
Coastal / rock (non-priority)	Sand or gravel; gravel or rock.	793.10		Min = recreational value of 'lakes' from Patterson and Cole (2013)
Coastal / rock (priority)	As above, but identified as Top 30 Priority for NCC or TDC per Leathwick (2019). The overlay includes other LCDB cover types that occur on the Nelson and Tasman coast such as "estuarine open water" and "exotic forest" that are assumed to be high value "coastal" habitat.		1,685.02	Max = recreational value of 'wetlands' from Patterson and Cole (2013)

A per hectare ecosystems services value for each of boneseed and pampas is calculated by multiplying the sum total of each of the affected habitat types with the suggested per hectare values in the table above. These values are then summed to give an overall value of all of the habitats combined, and then divided by the total hectares of habitat to get the weighted average value per hectare.

Boneseed

For boneseed the habitats have been split between those identified as indigenous land cover types following the LCDB but not identified as priorities following Leathwick (2019) (non-priority) and areas identified as the Top 30 Priority (priority). The non-priority habitats are assigned the minimum value per hectare and the priority habitats are assigned the maximum value per hectare for the corresponding habitat types.

Habitat type	Hectare	Total estimated value ($)
Native terrestrial (non-priority)	204	126,725
Native terrestrial (priority)	16	12,012
Coastal / rock (non-priority)	6	4,997
Coastal / rock (priority)	35	58,807
Total	**261**	**202,541**
Weighted average $ per hectare		**777**

Pampas

For pampas the habitats have not been split into priorities. For this analysis the minimum value per hectare for each habitat type is used so as to not overvalue the benefits.

Habitat type	Hectare	Total estimated value ($)
Native terrestrial	3535	2,200,254
Freshwater	1515	33,361,512
Coastal / rock	1574	1,248,339
Total	**6624**	**73,620,212**
Weighted average $ per hectare		**5557**

Reduction of earnings and discount rate

Boneseed

Reduction in earning is set at 100% assuming that the presence of boneseed in these indigenous habitats significantly detracts from their value. While this may over emphasise the disbenefits of boneseed on indigenous habitats it weights favour toward controlling boneseed at source rather than waiting for high value sites to become infested before initiating control.

Pampas

Reduction in earning is set at 50%, based on the assumption that the habitats could easily be dominated by pampas but might not be exclusively pampas.

The chosen discount rate for both boneseed and pampas is 5% per annum. This is the default for projects that are difficult to categorise including regulatory proposals and most social sector projects (Reserve Bank of New Zealand general inflation (CPI) calculator).

Probability of success

The probability of success is a discount that can be used to account for any risk that the objective will not be achieved. This section presents the rationale for the probabilities of success.

Boneseed

For boneseed the probability of success is 100%. While the longevity of the seed in the soil is a technical hurdle, the sustained control option accommodates this as a continued cost of control with no assumption of decreasing costs over time. The sustained control of boneseed is readily achievable by occupiers by treating shrubs before they flower using manual means or off-the-shelf woody herbicides.

Pampas

For pampas the probability of success is 100%. Under the proposed scenario all immediate flowering sources within the zone are extirpated in year 1 (assuming occupiers follow the rules). This leads to an infestation at near zero density (i.e., near-eradication). While it is certain that the annual investment could result in a reduction of the population, the constant risk of invasion from outside the control zones makes eradication untenable. Rather than lowering the probability of success to accommodate the re-invasion risk, the reinvasion from external sources is an accepted part of a sustained control proposal where there is no assumption of decreasing cost over time (i.e., the risk is already accounted for as a cost).

Annual control costs

The final aspect of the AgResearch tool is the input of yearly cost of control. There are a number of critical control and surveillance assumptions. These are that:

Boneseed

- It is better to control boneseed at source and prevent spreading rather than to control it once it has spread.
- Urban occupiers can control spread by removing shrubs before they flower and that cost is unlikely to be more than $25 per occupier per year. At present there are 59 affected properties. The total annual cost is therefore around $1,475 per annum. This is likely to be an overestimate because new seedlings will not be flowering until the year after first emergence (i.e., the rule will result in the necessity for treatment only every second year on each occupier).
- Waka Kotahi undertakes control of pest plants along Wakefield Quay and the Rocks Road escarpment every second year. Controlling boneseed is estimated to add $8,800 to that biennial control programme.
- Annual surveillance and control of boneseed in public parks cost NCC around 40 hours per annum (estimated cost of $7,480 per annum).

Pampas

- Due to a lack of data on the time-cost for occupiers to control infestations, the cost scenario assumes the time cost as if this was a council-led total control programme. The result is an assumed cost of knockdown of $201,000[11] to treat the known flowering infestation in the immediate term (as encouraged by the rule).
- Pampas is assumed to take at least two years from seedling emergence to flowering and therefore knockdown events are programmed for each triennium.

[11] The per hectare estimate of the cost of control is based on the assumed cost of treatment using Glyphosate (360g/L) and an estimate of Tasman District Council Biosecurity staff time. Advice from West Coast Regional Council is that the two species (C. selloana and C. jubata) have different times of the year when they are most sensitive to glyphosate. To account for this, the cost of control is doubled. The recommended rate of application of Glyphosate 360 for the control of pampas is at concentrations of 1 litre per 100L with 9L / hectare application. At $80 per 5L, the cost of herbicide itself is about $177.77 per hectare per control event ($355.54 per hectare per year). The Golden Bay infestations are reasonably accessible, but would still require an estimated 960 hours (24 weeks) of staff time per annum to treat infestations if this was a council-led programme. The 24-week estimate assumes two visits per site to assure knockdown control. The Biosecurity Staff charge out rate for 2023-2024 is $187 per hour which equates to $147.39 per hectare per year.

- In the two intervening years there is need for council inspection for compliance (year 2) and council delimitation of infestations to be treated (year 3). Each of these years is assumed to cost $10,000 per annum.
- Any new infestations will not become apparent until year three which will then inform the year four knockdown event.
- This triennial scenario is repeated over 25 years to determine whether sustained control is cost effective over the long-term.
- The scenario approximates an eradication programme. However, does not assume a decreasing cost over time due to the likelihood of invasion event occurring through inadvertent transport into the control zone via human and animal vectors and wind.

Results

Boneseed

Based on the assumptions above, the proposed sustained control of boneseed in the Nelson Port Hills boneseed control zone is cost efficient. The internal rate of return is a positive 36% with a net present value of over $689,691 after 25 years of investment.

The total cost of control over 25 years is estimated to be $338,275. The cost scenario may be a slight over-exaggeration because it assumes that urban occupiers will need to undertake annual control.

Pampas

Based on the assumptions above the proposed sustained control of pampas in the Aorere / Westhaven pampas control zone is highly cost beneficial. The internal rate of return is greater than 100% with a net present value of over $65M after 25 years of investment.

The total cost of control over 25 years is estimated to be $1,969,000. The cost scenario in this model is probably an exaggeration and presents a worst case. In reality, sustained control may be possible at a lower investment rate than posed in this scenario because the control effort is likely to reduce overtime and become more evenly spread as different occupiers treat their flowering infestations as and when needed in accordance with the rule. However, there is no information on which to base a more realistic scenario.

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Attachment 3

Partial Review Tasman – Nelson Regional Pest Management Plan

Communications Plan

ORGANISATIONS INVOLVED: Tasman District Council, Nelson City Council

Project Owner: Rob Smith

Project Managers: Guinny Coleman

Communications/Community Liaison: who (Tasman District Council), @@@ who Nelson City Council

Media spokesperson/people: Team Leader Biosecurity and Biodiversity Guinny Coleman

Stakeholders

- TDC and NCC staff and councillors
- Iwi
- Primary sector groups - in particular farming and commercial forestry
- Animal welfare organisations - including SPCA and vets
- Marine operators - including recreational boating, marine farming and transport (including Top of the South Marine Partnership members)
- Conservation organisations - including DoC, Project De-vine, Project Janszoon, Takaka Hill group and Forest and Bird
- Regulatory organisations including MPI, LINZ, NZTA/ Waka Kotahi, DoC and adjoining regional/unitary councils
- Community Boards (e.g. Golden Bay for pampas rule) and community associations
- The public, including:
  - Wider public of the region
  - Occupiers in specific areas (e.g. St Arnaud environs for cat management, Nelson Port Hills for boneseed management)

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- Plant nurseries and outlets
- Freshwater recreational boaties and gatherers of aquatic plants
- Prior submitters on the 2018/19 RPMP (e.g. those not already included in above group).

Key messages

- Biosecurity / pest management is everyone's responsibility (the team of 5 million). We do this in order to protect our environmental, economic, social and cultural wellbeing from being damaged, outcompeted and replaced by plants, animals and other organisms that are not natural to Aotearoa New Zealand.

- This review is a mid-Plan amendment being undertaken to better manage some emerging pest species, better improve alignment of some current pest management rules of our adjoining councils (in particular Marlborough) and to progress some pest management provisions which were not completed during the previous full review, for example considerations related to wilding conifers and feral cats.

- This review is limited in its scope. It only relates to 9 pests or groups of pests (blue passion flower, moth plant, common and purple pampas, water celery, Vietnamese parsley, pest and wilding conifers, boneseed, Mediterranean fanworm or *Sabella* and feral/stray cats), including existing rule refinements for some of these species. The remainder of the operative Regional Pest Management Plan remains in force unchanged.

- Only the parts of the RPMP that are being changed are open for consultation. The remainder continues on in its present form until the next full review. Submissions related to parts of the RPMP which are not included in this limited review will not be considered.

- Regarding wilding conifers, they are a nationwide problem. Exotic conifers (including pines) were introduced for timber, shelter and erosion control and the ongoing economic value of well managed commercial forests is recognised. However, due mostly to historical erosion control plantings several pine species have resulted in the wilding issues being dealt with today. If left unchecked, the rapid spread of wilding pines will transform large areas of Tasman-Nelson into dense, impenetrable pine forests. This means more than just lost views, they threaten native species, water resources, cultural values and access, food production, and elevates wildfire risks.

Significant progress has been made in combating wilding pines to date and the parties have come too far to fall short now. There is much more work to be done. Without sustained management input and funding now and into the future, the gains made will be lost along with the massive public investment.

- Regarding cats, their value to people, the community and general society is well recognised. However, there is a need to better and humanely manage all cats to protect their welfare and our unique environment. Increased controls on feral cats especially (which are unowned, unsocialised, and have no dependence on humans) and which impact on sensitive wildlife areas are required. Feral (and stray) cats in particular kill young and adult birds, destroy eggs and prey on native lizards, fish, frogs and large insects. Stepped up management to exclude feral cats at high value biodiversity sites is proposed. This approach would be even more meaningful where supported with responsible cat ownership initiatives and having the ability to distinguish between feral and companion cats (e.g. through compulsory microchipping and desexing of companion cats promoted through bylaws).

Internal Communications

- Keep Councillors of both councils informed via internal updates as the project progresses.
- Regular intranet updates for residents

Benefits	Disbenefits
Emerging pest species are managed before they are out of control	Additional rules add to some landowner/occupier obligations to manage these pests
Pest management rules across the Top of the South (Te Tau Ihu) are better aligned.	There is some additional cost to both councils and some landowners/occupiers
There has been further development of provisions related to some pest species not complete during the last full review.	
The RPMP is being maintained as a living plan and not being let get out of date.	
Amended RPMP will continue to provide for the protection of Maori and their relationships with ancestral lands, waters, sites, wāhi tapu and taonga	

Risks/opportunities

Risks	Opportunities
Lack of public support to make changes	Good communications / flyers developed for 'real life' issues
New rules do not work as intended	Engagement with sectors and community on recent changes
Non compliance by some landowner/occupiers (and rules challenged)	Foster community support
Funding unknowns – due to annual Government budgets and Council LTP and Annual Plan processes	Advocate for adequate funding

Indicative engagement timetable

Activity	Date	Deadline	Details	Cost	Involved	Actions
Project page on website – Shape Tasman - Nelson						
Public notification of limited review	23/02/24				Coms	
Submissions phase meetings with potential submitters to help them understand the proposals	23/02/24 To 22/03/24				Biosecurity	
Hearing of those submitters who requested to be heard	03/04/24 To 10/04/24				RPMJC Biosecurity	
Joint Committee deliberations and recommendations	Late April 24 To Early May 24				RPMJC Biosecurity	
Amend review proposals and prepare council reports	June 24				Biosecurity staff	
Decisions made by full councils	TDC 20/07/24				Councils Biosecurity	

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	NCC 01/08/24					
Notification of decisions	August 24				Biosecurity	
Opportunity for appeal of decisions	August 24					
Final review provisions come into force	Sep 24				Biosecurity	

Evaluation

- Good relationships maintained with MPI, sector groups and community
- Councillors kept updated as project progresses – no surprises
- Minimal negative feedback and general support
- Active support of on-the-ground pest management action

Attachment 4

File note

File No: xx

Date: 10th November 2023

To: Paul Sheldon, Special Projects Analyst Biosecurity

From: Peter Russell, Director - Better Biosecurity Solutions Ltd

Subject: **Wilding conifer discussion timeline and recommendations and record**

Purpose

The purpose of this report is to record, in a time-line summary, the rationale for inclusion of **wilding and pest conifers** into the Tasman-Nelson RPMP limited review proposal. The starting point is the eventual non-inclusion of wildings in the operative RPMP 2019-2029, and those reasons, through to the end point of decisions made by the Joint Regional Pest Management Hearings Committee in mid-2024 during the limited review process.

Disclaimer

This document has been prepared and written by Better Biosecurity Solutions Ltd (BBSL) for Tasman District Council. It is intended to provide accurate and adequate information on the subject matter. The information supplied is as accurate as possible and the author has exercised all reasonable skill and care in its preparation. BBSL does not accept any responsibility for fact omission or errors, or legal liability whether direct or indirect, nor for the consequences of any decisions based on this information.

Peter Russell
Director Better Biosecurity Solutions Ltd
Website: https://betterbiosecurity.co.nz/

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	Date	Discussion point / issue	Outcomes / recommendations	Source
1	Dec. 2018	**In 2017/18, 11 wilding conifer species listed** in Proposed RPMP (Nov 2017), with a caveat that further work was required with stakeholders to seek consensus on species/locations of programmes. Hearings panel on original RPMP declined to include wilding conifers in the 2019-2029 next iteration RPMP.	Decision: Resolved that all areas, including the Nelson Nature Wilding Conifer Operational Area, be further developed for instigating wilding conifer control programmes, through a Plan Change, in consultation with all affected parties, Any amendments could also be affected by the National Wilding Conifer Control Programme (which had only recently commenced during 2017/18). The 11 species were added to RPMP in Appendix 2, listed as organisms of interest (i.e. those species considered for inclusion but either did not meet NPD requirements or control was too complex or onerous or programmes were not well developed enough).	Proposed RPMP – 4 November 2017 RPMP Decisions Report – 3 December 2018
2	Nov. 2022 Feb - March 2023	**Need for a Plan review signaled by staff**. Joint RPM Committee (JC) proposed of 3 councillors from each council to be members. Drafting of Terms of Reference for partial review of RPMP. The review was to be limited to considering: • alignment of Sabella rules to those of Marlborough District Council (MDC) to provide consistency • extending control of boneseed into the Port Hills area currently excluded from eradication; and • **control of wilding conifers**, water celery, Vietnamese parsley, purple pampas, blue passionflower and moth plant.	Review process developed, which recommended that: • both Nelson City Council and Tasman District Council be requested to re-form the Regional Pest Management Joint Committee at the commencement of the next term of council. • staff (and consultants as needed) commence compilation of other material required to satisfy Section 70 such as pest descriptions, rational for proposed programmes (including CBA), objectives and the like. Meeting of JC occurred 24th March 2023 to confirm terms of reference and instruct staff to proceed on the review.	Joint RPM committee agenda item and supporting info on process and timeline
3	Jan. to March 2023	**Initial staff and stakeholder discussions** on wilding conifer provisions, including Mt Richmond MU group (comprising wide range of interested parties).	Think pieces developed by staff – 2 internal documents – focusing on protecting investment in current operational areas, outside of (undefined) intractable areas.	Mt Richmond MU group

			Thoughts assisted by Project Devine presentation to Wilding Pine conference, Sept 2022 and DOC email conversation Oct 2022.	meeting, primarily
4	May to July 2023	**Development of draft policy for wilding conifers**, along with 7 other pests identified, which included: • review of MDC 2019/20 policy on wildings for greater alignment (3 species were added to the draft Tasman-Nelson list) • Version 1 policy developed 13/6/23 – all species listed as wilding conifers (one table) and one set of rules drafted (whole region). • Version 2 policy refined 4/7/23 – the concept developed (for JC explanation purposes) along with policy (pest conifers and wilding conifers separated). • Version 3 produced 24/7/23, as the basis for JC discussion paper inclusion, along with other pests. • Development of CBA documentation carried out concurrently with above policy development and refinement[1].	Consultants James Lambie and Peter Russell engaged to undertake National Policy Direction for Pest Management 2015 (NPD) required CBA work and Plan proposal review (including rules), respectively. Initial brief = to include wilding conifer management as a lead in to a full review in 2028/29. Recommended to include (for Version 1) rules to protect prior investment – eg two maintain the gains rules, a pest agent rule, and introduce 2 new rules, per below: • A clear land rule – as recommended by MPI in advice in from 2016 (a stitch in time approach); and • A planted forest spread (to neighbours) rule – based on the 'polluter pays' principle. Final version contained two programmes: • Region wide – focusing on 3 rules - keeping clear land clear, pest agent conifer rule and planted forest spread rule; and • Parts of region – four operational areas that had received prior/current national programme funding, being Mt Richmond, Project De-Vine; Takaka Hill and ATNP (Project Janszoon).	Consultant briefing held Richmond – 26 May 2023 BBSL meetings internally (PR and J Simmons) – 13 June 2023, and online with TDC and J Lambie – 20 June 2023
5	22 August 2023	**RPM Joint Committee meeting held – Richmond**, to consider partial review details and proposed programmes.	The outcome sought from the meeting was that drafting instructions be provided so that staff from both councils could	Joint RPM Committee agenda and

[1] Titled: *Supporting document for the limited review of certain pests for the Tasman Nelson Regional Pest Management Plan (2023). An analysis against the requirements of the National Policy Direction for Pest Management including narrative analyses of benefits and costs*. Includes detailed summary analysis over 7 pages, drawing on national CBA work undertaken (Sapere, 2022) plus a summary assessment of the level of cost and benefits analysis to be applied.

		The meeting's purpose was to: • Set out for initial approval, all of the pests and programmes proposed for inclusion in the RPMP partial review. • Summarise proposed rules and their rationales, alternative options and recommendations, with supporting NPD & Costs and Benefits Analyses (CBA) comments in summary form to assist with interim decision making.	draft the Limited Review Proposal in a form suitable for wider stakeholder consultation. The JC agreed with policy directions in general terms. Regarding wilding conifers, the agreement was subject to more consultation with affected parties.	attachments – draft policy paper and programmes, and CBA assessments
6	Late Aug, thru late Oct, to mid Nov. 2023	**Preparation of a Proposal document for public comment**, based on the 22/8 meeting paper. Separate section called - '4.3 Pest and Wilding Conifers'. Features include: - All info in one section, generic layout as per other pests. - Refinement of policy concurrent with receiving feedback (per no. 7 below). - Mapping of areas op. areas completed. Rationale for inclusion of wilding/pest conifers clearly outlined, maps created and policy further refined following further internal project team discussions.	All information put into a formal report template that meets public expectations for making of submissions. Purpose – to be signed off at December 2023 JC meeting for recommendation to both councils to publicly notify the proposal. Further wildings discussions: mapping - 16/10; submissions made - 1-3 Nov and policy reviews - 27/10 & 7/11.	Initiated by TDC project team meeting online – 30th August 2023
7	Sept. to Oct. 2023	**Consultation with affected parties, as part of Proposal development above.** Regarding wildings: DOC, MPI, neighbouring regional councils, iwi and forestry companies were identified for further dialogue.	**One Forty One** 1. The repeated statements about pest conifers having no value are factually not correct. *Response: Amended the wording to recognise that some legacy plantings do have some commercial value.*	Written feedback received by TDC

		Invitations were extended to the following forestry companies to provide feedback on the draft policy (the version sent was the original JC report extract on wildings from 22 August meeting), with feedback received as follows: • One Forty One – 19 October 2023 • Tasman Pine Forests Ltd – 27th October 2023 • PF Olsen Ltd – 31 October 2023. A brief search was also carried out of scientific research on the role of radiata in wilding spread, with two different conclusions reached: • Bellingham and 8 authors (refer to Appendix 1); and • N Ledgard presentation October 2023 (refer to Appendix 2). *Wilding radiata spread was clearly recorded as occurring at many different places, due to climate and historical landuse issues. Although radiata's spread impacts are less than other pines, they nonetheless need to be addressed.*	2. There is inconsistency in the descriptions of the narrative around the pest conifers. *Response: Amended after table 5 in new version.* 3. Rule a. 'clear land' - While we understand the intention of the rule, its wording requires amending. This is to be certain as to what land is the clear land. *Response:* Suggested rephrasing provided is helpful - *"Outside of named wilding conifer operational areas, after 1 July 2024, occupiers of land that is clear or relatively clear of pest or wilding conifer must destroy any such pest or wilding conifer on their land, to ensure that land that is clear or relatively clear of pest or wilding conifers remains clear, on the written direction of an authorised person, unless there is a negotiated agreement in place between the Management Agency and occupier as an alternative way to achieve this requirement".* 4. Rule b. 'planted forest rule' - The proposed rules (region wide) single out plantation forests for specific legal responsibilities. The proposed rule is different to other regional pest management plans and needs to be explained. *Response: Being responsible does not mean physically doing. Revised rule makes this clearer. What is intended is that a conversation is triggered between the parties on the appropriate way to deal with the wildings and it is made clear that the plantation owner has some liability. Revised explanation below:* *Rule (b) is a 'planted forestry seed spread rule' and aims to ensure that forest occupiers (plantation and permanent forests) are responsible for any wilding spread of conifer seedlings from their forests onto immediately neighbouring land from 1 July 2024 onwards. It is unreasonable for affected occupiers adjoining planted forests to have to clear wildings and/or pay for this*	

			control work (i.e. the 'polluter pays' principle). Implementation of this rule is based on the opinion of an appropriate council officer and must be backed with proof of spread occurring. The rule only applies where the adjoining occupier (making the complaint) is making reasonable attempts to keep their land clear of wildings and their land use remains otherwise unchanged. *A four-step process is proposed:* *Step 1: Complaint received by council.* *Step 2: Complaint investigated by an appropriate Authorised Person (with powers of entry) to validate complaint.* *Step 3: Meeting held between the parties to engage them on the most appropriate way to deal with the problem.* *Step 4: If no agreement can be reached, RPMP enforcement provisions may be enacted.* *A negotiated agreement between the forest occupier and adjoining occupier (and validated by the Management Agency) will be a binding alternative way to meet this rule requirement, e.g. that the agreement documents which party will undertake and/or fund the required control, and over what time period and access agreements to carry out control work.* 5. It would be appreciated if the process for enforcement could be set out in the explanation. *Response: The process is referred to in Table 13 of the operative RPMP, but not clearly outlined. All councils follow a basic 3-step compliance process, with many sub-steps in between to negotiate satisfactory outcomes if at all possible. The 3 steps are:* *1. Request to control letter sent (not prescribed in Act)* *2. Notice of direction sent (s. 122 of the Act)* *3. Power to act on default (s. 128 of the Act)* Refer to Appendix 3 on a common 'train of action' that applies.	

6

			6. We cannot support the pest agent rule as it does not appear to be related to 'maintaining the gains' explanation and that it appears to be a whole region rule and Rule a. whole region is sufficient to cover the issue. *Response: Agreed, pest agent rule does not rightly sit here in relation to prior national programme work. It is now included in the 'region-wide' rule section. However, this rule is required and is useful for situations outside of plantations (under 1 ha), where spread may be occurring from say a Douglas fir shelter belt, for example.* **Tasman Pine Forests** 1. Opposes the inclusion of *Pinus radiata* for 5 reasons, e.g. sustainable and renewable; legacy planting issues; create bias among planners; strict controls in the NES-CF and would lower investor confidence. *Response: Concerns acknowledged, however radiata is prone to wilding, the NES wont assist in managing existing spread situations. Any issues would be dealt with through management agreements, case by case.* 2. Tasman Pine inherited a stand of *Pinus muricata* in 2016, a forestry right on iwi land, to be handed back to iwi soon. The reason not to harvest is due to it providing a desirable habitat for powelliphanta snails. An order to destroy these trees would result in habitat loss and population decline. *Response: Agreed, would not be a good outcome. There are exemption provisions in the RPMP/Biosecurity Act which could be practicably applied in this situation, or/and decisions made as part of pest management agreements.* 3. Absence of statement about sterilisation through genetic modification in the future.	

			Response: Agreed, but a suitable generic statement is included in the Proposal introduction and applies to any pest covered, not just pest or wilding pines. **PF Olsen** 1. Concerned about the inclusion of *Pinus radiata* – as it's low risk compared with D. fir and species of choice for afforestation projects driven by carbon /timber values. *Response: Yes, lower spread risk but still opportunity for spread and there are many instances around NZ of this happening. Councils with WC in their RPMPs include wilding radiata and do report unwanted radiata spread, albeit of less magnitude than D. fir and contorta.* 2. The 200m control buffer could be increased for Douglas Fir, but only if *Pinus radiata* was removed from the plan as a wilding conifer species. *Response: As above, radiata is prone to wilding, so remains included as per situations all around NZ. The 200m spread rule for D. fir (and others) is well acknowledged as not being ideal but local govt. and the biosecurity industry opted for a blanket 200 m distance for any pest plant when developing Good Neighbour Rules, on the basis that for most plants, most seed fall occurs within 200m from source.* 3. Add provision for species that have been made sterile through genetic modification *Response: Agreed, as per above for Tasman Pine.*	
8	8 Dec. 2023	**RPM Joint Committee meeting held – Richmond**		
9	TBD	**Limited review Proposal released for public submissions**		

10	TBD	**Submissions received and hearing/deliberations held** – (WC related sections only)		
11	TBD	**Decision on submissions** – (WC related sections only)		

Appendix 1: Bellingham et al. paper 2022

Biol Invasions
https://doi.org/10.1007/s10530-022-02892-6

ORIGINAL PAPER

The right tree in the right place? A major economic tree species poses major ecological threats

P. J. Bellingham · E. A. Arnst · B. D. Clarkson · T. R. Etherington · L. J. Forester · W. B. Shaw · R. Sprague · S. K. Wiser · D. A. Peltzer

Received: 3 February 2022 / Accepted: 28 July 2022

Abstract Tree species in the Pinaceae are some of the most widely introduced non-native tree species globally, especially in the southern hemisphere. In New Zealand, plantations of radiata pine (*Pinus radiata* D. Don) occupy *c.* 1.6 million ha and form 90% of planted forests. Although radiata pine has naturalized since 1904, there is a general view in New Zealand that this species has not invaded widely. We comprehensively review where radiata pine has invaded throughout New Zealand. We used a combination of observational data and climate niche modelling to reveal that invasion has occurred nationally. Climate niche modelling demonstrates that while current occurrences are patchy, up to 76% of the land area (i.e. 211,388 km^2) is climatically capable of supporting populations. Radiata pine has mainly invaded grasslands and shrublands, but also some forests. Notably, it has invaded lower-statured vegetation, including three classes of naturally uncommon ecosystems, primary successions and secondary successions. Overall, our findings demonstrate pervasive and ongoing invasion of radiata pine outside plantations. The relatively high growth rates and per individual effects of radiata pine may result in strong effects on naturally uncommon ecosystems and may alter successional trajectories. Local and central government currently manage radiata pine invasions while propagule pressure from existing and new plantations grows, hence greater emphasis is warranted both on managing current invasions and proactively preventing future radiata pine invasions. We therefore recommend a levy on new non-native conifer plantations to offset costs of managing invasions, and stricter regulations to protect vulnerable ecosystems. A levy on economic uses of invasive species to offset costs of managing invasions alongside stricter regulations to protect vulnerable ecosystems could be a widely adopted measure to avert future negative impacts.

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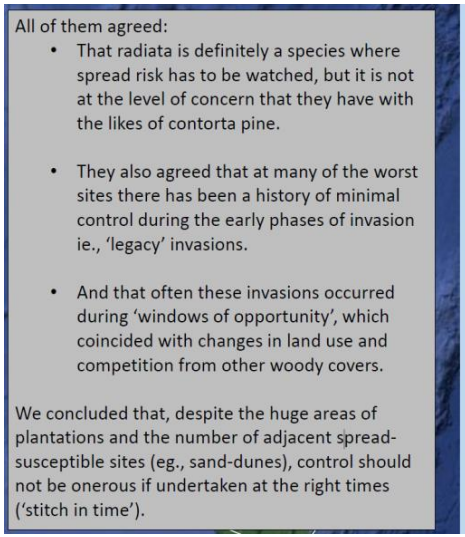
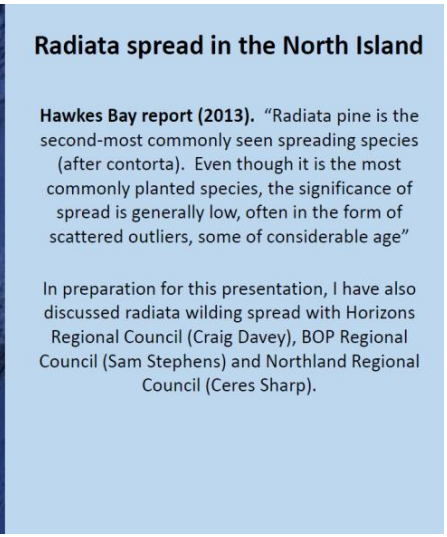
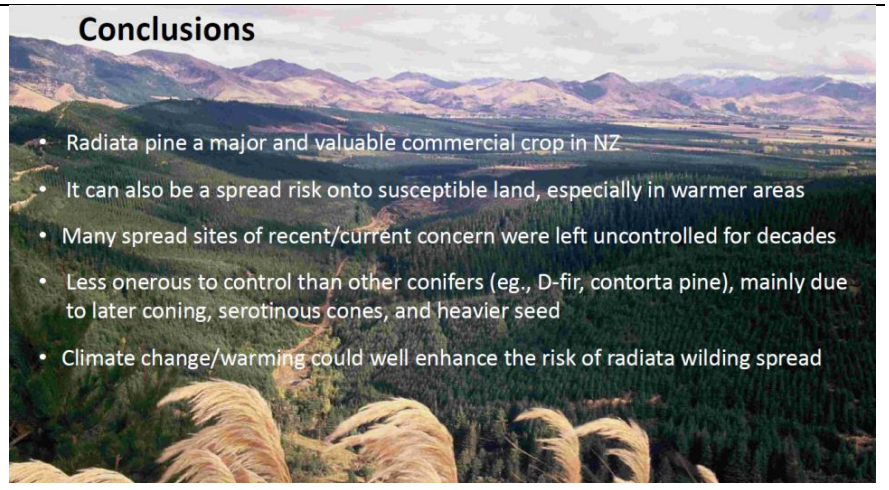
Published online: 13 August 2022

Springer

Appendix 2: Presentation to Wilding Pine Conference – October 2022 (Nick Ledgard)







Conclusion: Radiata is certainly a spread-risk, but I feel the Bellingham et al. paper vilified the species far more than reality indicates?

Appendix 3: General RPMP compliance actions by councils

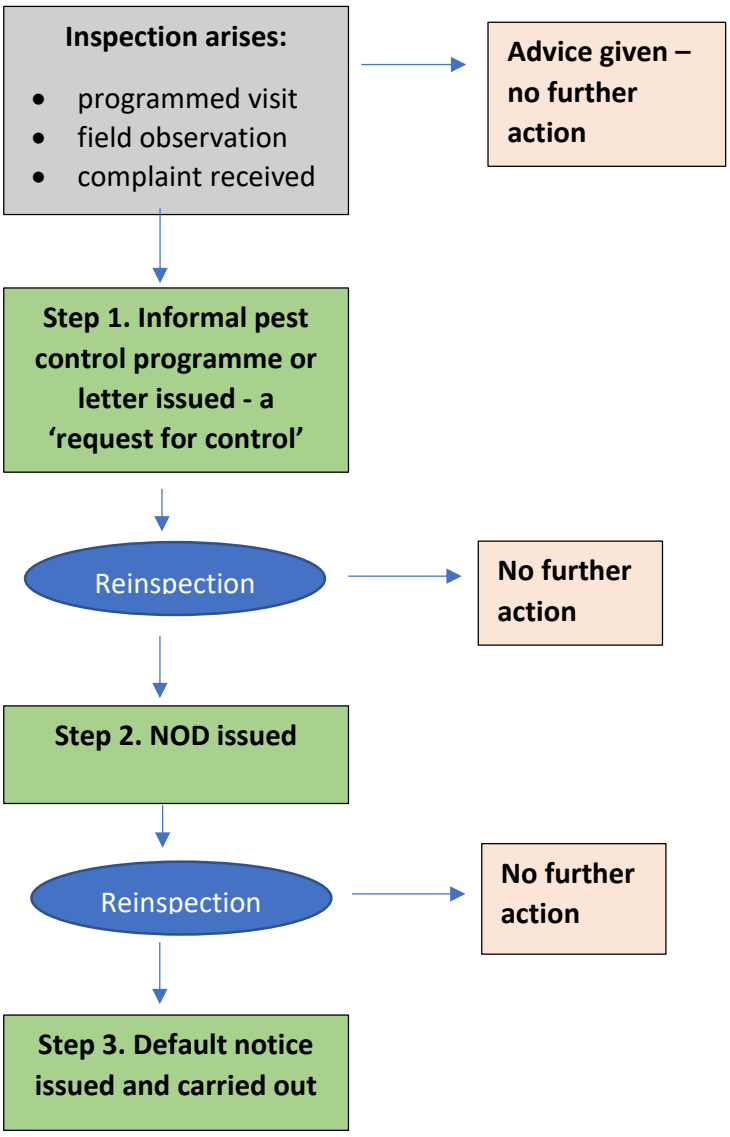
The only legal requirements are shown in red. Note also the number of opportunities for engagement. A summary diagram (following) shows the same process graphically.

1. Complaint received, or scheduled visit due
2. Research issue - background / check history
3. Inspection planned and carried out
4. Engagement with occupier – education / advice
5. Request to carry out pest control - advice issued (engagement)
6. Reinspection (further engagement)
7. S. 122 NOD issued (engagement)
8. Reinspection (further engagement)
9. Decision time – next step by council to be agreed
10. S. 128 NIAD (default action) planned – notice issued
11. Default work undertaken – billed to occupier
12. Statutory Land Charge on property – lien

For the **proposed planted forest spread rule** a variation on the above process would be instigated, again allowing every opportunity for amicable outcomes to be reached.

1. Process initiated by complaint (from immediately adjoining neighbour)
2. Complaint investigated by biosecurity officer (with powers of entry)
3. Valid complaint accepted or rejected - (assumed accepted to advance to next step)
4. Call a meeting of parties
5. Negotiation of management actions
6. Resort to Biosecurity Act processes if attempts to negotiate fail (i.e. steps 7-12 above).

Summary of 3-step process



Attachment 5

Tasman Pine Forests Limited
189 Main Road
Spring Grove
RD1, Wakefield

27th October 2023

To: the Tasman-Nelson Regional Pest Management Joint Commitee

Thank you for the opportunity to comment on the dra Regional Pest Management Plan. Tasman Pine appreciate the difficules Council face around pest conifer controls and legacy issues. However, it is imperave that any rules implemented achieve posive outcomes without placing an unfair onus on one of our regions key industries or prohibit it altogether. We need to work together on this difficult issue to ensure the best possible outcome.

Tasman Pine staunchly oppose the inclusion of *Pinus radiata* in the RPMP for the following reasons:

1) *Pinus radiata* is used as a sustainable renewable resource with scienfically proven superiority over alternave producve land uses in the following areas:

    a. *Biodiversity*
    b. *Sediment retention (over the duration of a standard rotation)*
    c. *Carbon sequestration*
    d. *Water quality*
    e. *Economic returns*
    f. *Employment*

    Contrary to public percepon all of the above have scienfic and economic papers available that jusfy them being on the list.

2) There are numerous complicaons around legacy planng issues that could unfairly be placed on forest owners.
3) The inclusion of *Pinus radiata* in the RPMP would induce an unfair bias in Council Planners when deciding if afforestaon or replanng can be consented.
4) There are already strict wilding conifer controls in the NES-PF and recently released NES-CF (the proposed RPMP changes pre-date the release of the NES-CF).
5) Investor confidence would decrease. This is not limited to large scale investors and would be more evident in small scale growers. For example, farmers that want to ulise marginal land instead of it turning into scrub and weeds.

We do not have many stands of pest species but to help decision makers understand the some of the complexies with pest species control, here is a specific example. Tasman Pine inherited a stand of *Pinus muricata* (Bishop pine) when we purchased the estate in 2016. This stand is a forestry right on iwi land that will likely be handed back to iwi with standing trees in coming years. The reason we will not harvest this parcular stand is due to it providing a highly desirable habitat for powelliphanta snails, a threatened rare taonga species. An order to destroy the Bishop pine would result in habitat loss for the species and ulmately decline the populaon. Furthermore, the trees are 42 years old and there is no evidence of spread, so it is hard to argue that they pose any threat to surrounding environments.

It is worth noting the absence of a simple statement that acknowledges any of the species listed can be struck off if we can genecally sterilise them at some point during the lifespan of the PRMP. Realiscally, douglas fir is the only species this may apply to but it sll needs to be acknowledged.

In summary Tasman Pine cannot support the amendments added to this version and retain our support for dra version 2 with the provision that “Control Operaon” and Intractable Containment Area” are adequately defined.

Kind Regards
Dan Montgomery
Technical/Environmental Forester

Tasman Pine Forests Ltd

Tasman Pine Forests Limited
189 Main Road
Spring Grove
RD1, Wakefield

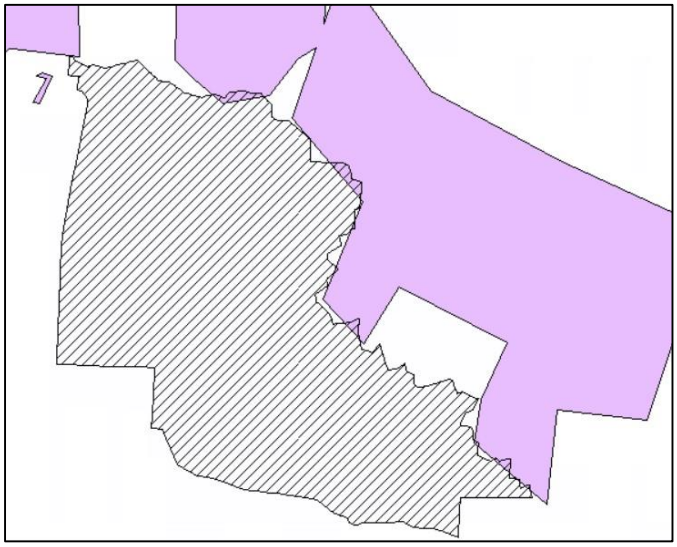
28th November 2023

To: the Tasman-Nelson Regional Pest Management Joint Commitee

Thank you for the continued dialogue around development of a workable regional pest management strategy.

Tasman Pine Forest's (TPFL) fully support One Forty One's second submission dated 28th November 2023.

Further to OFO's submission, Tasman Pine also have concerns around the mapping quality relang to rules d & e. The example below shows the Takaka Hill control area in purple and Tasman Pine estate in black hatch. The control area has obviously not been mapped accurately using minimal verces which encompasses Tasman Pine's managed tree crop. It would be unrealisc to install a rule that requires us to remove 200m of crop due to poor mapping, this would need to be recfied for all landowners prior to implementaon.



The rules also have the potenal for perverse outcomes. Tasman Pine Forests have considerable boundary areas with neighbours who are lifestyle block owners or farmers. At present any wilding conifers that originate from TPFL are eaten by livestock or controlled by culvaon.

Should a neighbour decide to convert adjoining land to nave forest and exclude livestock then any potenal spread of radiata pine, if classified as a pest species, from TPFL land could potenally under the proposed rules require TPFL to pay for the removal of the wilding conifers from the neighbours newly forested land and also remove radiata pine a distance of 200m from along the neighbours boundary, creang a carbon liability and potenally significant loss of value to the plantaon owner, clearly an untenable situaon.

Kind Regards
Dan Montgomery
Technical/Environmental Forester
Tasman Pine Forests Ltd

Tasman Pine Forests Limited

189 Main Road

Spring Grove

RD1, Wakefield

30th November 2023

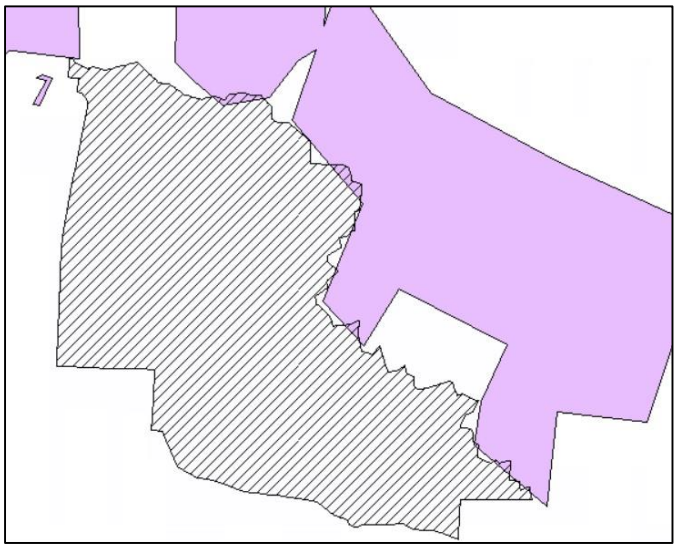
To: the Tasman-Nelson Regional Pest Management Joint Commitee

Thank you for the connued dialogue around development of a workable regional pest management strategy.

Tasman Pine Forests Ltd (TPFL) strongly support One Forty One's (OFO) second submission dated 28th November 2023.

Further to OFO's submission, we want to be sure that the rules are writen very clearly to avoid any confusion. The rules must be clear in stang that radiata pine is not a 'Pest' species and producve land will not be forced to become unproducve as a result of any rules being implemented. Any land that is currently in plantaon is managed for weeds and generang an economic return. It would be contrary to the plans objecves to forcefully remove managed crop and leave an unmanaged haven for weeds, induce carbon liabilies, inhibit the ability to generate significant income for the region and deter investors that spend significant amounts of money on weed control throughout the region.

To ensure rules d & e are clearly understood, the mapping quality of operaonal areas needs to be improved. The example below shows the Takaka Hill control area in purple and Tasman Pine estate in black hatch. The control area has obviously not been mapped accurately using minimal verces which encompasses Tasman Pine's managed tree crop. Even if the rules have no impact on the plantaon estate, this needs to be ded up to avoid ambiguity.



Kind Regards,

Dan Montgomery

Technical/Environmental Forester

TASMAN PINE FORESTS LTD

19 October 2023

To: Tasman-Nelson Regional Pest Management Joint Committee

Subject: OneFortyOne New Zealand Ltd submission to the Regional Pest Management Plan Partial Review 2023/24 – Attachment 1

Thank you for the opportunity to comment on the draft proposals. These comments are made on behalf OneFortyOne New Zealand Limited (OFO).

General

Pest conifers

Within the OFO estate there are legacy plantings of what is now deemed pest conifers. We refer particularly to *Pinus muricata* (Bishop pine) and *Larix decidua* (Larch). These species were generally planted by the Forest Service to identify potential commercial species for New Zealand. Larch has been used around highways as ornamental plantings and to reduce winter shading. These species are termed as minor species. There is reference to these minor species as having no commercial value. Within the OFO estate they have been and continue to be harvested and sold. The repeated statements about the pest conifers having no value are factually not correct.

There is inconsistency in the descriptions of the narrative around the pest conifers. In some paragraphs they are described as being wildings and in others they are described as "*planted in the Nelson and Tasman regions (some species quite extensively) either for (valuable) ornamental, shelterbelt, erosion protection or (not valuable) timber enterprises*".

The narratives need to be consistent.

Whole region rules

Rule a. 'clear land' (p.47 Appendix 4)

While we understand the intention of the rule, its wording requires amending. This is to be certain as to what land is the clear land. The question is, is it where there are legacy plantings and or wildings or is it the downwind land of any such plantings and or wildings?

Amendments to draft Rule a. – Whole region:

a. Outside of named wilding conifer operational areas, after 1 July 2024, occupiers of land that is clear or relatively clear of **pest or wilding conifer** must destroy any such pest or wilding conifer on their land, to ensure that land that is clear or relatively clear of pest or wilding conifers remains clear, on the written direction of an authorised person, unless there is a negotiated agreement in place between the Management Agency and occupier as an alternative way to achieve this requirement.

Rule b. 'planted forest rule' – **Whole region** (p. 48 Appendix 4)

Despite a clear recognition that the pest conifers may occur from plantings other than plantation forests the proposed rules for region wide single out plantation forests for specific legal responsibilities. The proposed rule is different to other regional pest management plans.

There needs to be an explanation as to why plantation forests have been singled out for this rule.

First, we do not support the proposal to make occupiers of plantation forests legally responsible to destroy conifer wildings, of any age, on adjoining land. Our reasons are as follows:

1. As it is illegal to trespass and destroy property owned by someone else it is not clear how this proposed rule is legally enforceable. We cannot trespass on adjoining land.
2. There is no definition as to who an occupier of plantation forest is.
3. The proposal does not set out the process for how a plantation forest occupier is going to be held responsible to undertake the destruction of wildings on adjoining land.
4. Trees on land run with the land, that is they are owned by the landowner.
5. The uncertainty as to what is clear evidence that wilding spread has occurred from the planted forest. The explanation requires a definition of the science required to describe clear evidence.

For us to be able to comment on this proposal it would be appreciated if the process for enforcement could be set out in the explanation.

It is extremely unfair and not reasonable to be held responsible for legacy wildings. The actions of the adjoining landowner cannot be controlled by the occupier of the forest. Our concerns are as follows:

6. The adjoining owner may have let wilding conifers grow.
7. To retrospectively require an occupier of a plantation forest, who may be a different occupier of the forest from its original plantings, be responsible for the actions of adjoining owner is extremely unfair and unreasonable. We view this situation as very different to the proposals set out for the targeted operational areas.
8. We cannot control or be responsible for adjoining land use change. The National Environmental Standards for Commercial Forestry controls the risk of wildings from afforestation and replanting using the wilding risk calculator. The business decision of the type of species to plant flow from those calculations, and in particular the risk calculations take into account existing adjoining land uses. The proposed rule has potential to adversely affect planting and replanting risk calculations that could be altered by change in adjoining land use, of which the occupiers of the plantation forest have no control over.

Accordingly, we cannot support this rule.

Targeted operational areas – Specific rules (p.48 Appendix 4)

Rule (a) "maintaining the gains"

We support this rule subject to the wording '*prior to cone bearing*' is written within the rule itself. **Rule (b)** ***"good neighbour rule"***

We support this rule subject to the wording '*prior to cone bearing*' is written within the rule itself. **Rule (c)** ***"pest agent rule"***

We cannot support this rule as it does not appear to be related to 'maintaining the gains' explanation and that it appears to be a whole-region rule and *Rule a. Whole region* is sufficient to cover the issue.

Jo Field
Environment Manager – NZ Forests
Email jo.field@onefortyone.co.nz
onefortyone.com

28 November 2023

To: Tasman-Nelson Regional Pest Management Joint Committee

Subject: OneFortyOne New Zealand Ltd second submission to the Regional Pest Management Plan Partial Review 2023/24

Thank you for the opportunity to provide a second submission on the draft proposals and subsequent from meeting with Tasman District Council and Nelson City Council. These comments are made on behalf OneFortyOne New Zealand Limited (OFO).

Proposed Rule b

We object to this rule for the following reasons:

a. No other South Island (not finished checking north island) RPMPs have such a rule. This is a new type of rule.
b. It introduces a new concept that Plantation Forest owners are "responsible" to remove wilding conifers on adjoining land.
c. The rule cannot be enforced.

Other RPMPs

Yes, Douglas fir and Pinus radiata are included as "wilding conifers" but not as "pest conifers". The RPMPs define wilding conifers and most have the same or similar definition. The plans include rules to maintain gains of previous clearance especially around identifying management areas, good neighbour rules and pest agent rules.

Proposed Rule b would more generally fall within the good neighbour concept.

The proposal does not bring this region in line with MDC. It is unclear if the 2020 changes to the 2018 MRPMP have been made operative (we have requested MDC to confirm this plan is now operative or not and are awaiting a response). Our comments relate to the decision changes to the Marlborough plan to incorporate a programme for pest conifers. In that plan MDC separates out pest conifers from wilding conifers and as such **does not control radiata pine as is being proposed.**

See Chapter 5.22 pest conifers and in particular Rules 5.22.2.1 to 5.22.2.4.

Plantation owner responsibility

This rule is unlike other rules in making plantation owners "responsible" on the principle of "polluter pays". It introduces an RMA concept but without all the checks and balances that the RMA provides, that is, ability to have a hearing, have rights of appeal, as discussed at the meeting on 24/11/2023 with TDC and NCC).

The Biosecurity Act 1993 (the Act) does not provide for these checks and balances. The question is why not? It is our opinion the answer is that the proposal is out of scope with the provisions of the Biosecurity

Act. The proposal is making a plantation owner "responsible" for removal of wilding conifers on someone else's property. This Act is not set up for such a concept. Yes, it is set up for obligations of occupiers, contributions, and cost benefit analysis as to those paying contributions being the benefactor of. such contributions but not for prescribing the responsibility as set out in proposed Rule b.

The process proposed is defective in that the consultant advises that if a negotiated agreement can not be reached that council may direct that action may be undertaken. However, this a legal nonsense for this proposed rule.

Under section 122 of the Act the direction powers are as follows:

"s.122 Power to give directions

(1)
An inspector or authorised person may, whenever that inspector or authorised person considers it to be necessary, direct the occupier of any place or the owner or person in charge of any organism or risk goods—

(a)
to treat any goods, water, place, equipment, fitting, or other thing that may be contaminated with pests or unwanted organisms; or

(b)
to destroy any pest or unwanted organism or any organism or organic material or thing that there are reasonable grounds to believe harbours a pest or unwanted organism; or

(c)
to take steps to prevent the spread of any pest or unwanted organism.

(2)
An inspector or authorised person may, by notice in writing, direct any person who has failed to comply with a rule included in a pest management strategy to comply with that rule.

(3)
An inspector or authorised person may direct the owner or person in charge of risk goods or a craft to take steps to avoid, remedy, or mitigate an effect of non-compliance with a pathway management plan."

None of these powers would allow the plantation owner to be responsible to remove wilding conifers on an adjacent property.

Need for the proposed Rule b

We are still not clear why there is a need to introduce a region wide rule. Reference has been made to the adverse effects of wilding conifer spread. We not objecting to rules related to specified areas. Interestingly the management programmes for the identified areas largely based on the earlier work of Nick Ledgard. In his latest report Nick Ledgard refers to the Able Tasman and the Mt Richmond Forest Park areas. He does not advise that in this region there is a risk such as to introduce the type of regional-wide proposed rule.

National Environmental Standard for Commercial Forestry 2023 (NESCF)

The above NES replaces the 2017 NES for Planation Forestry. The NESCF now requires a wilding calculation to be undertaken on the replanting of any conifer. Under the existing regulations we know of no afforestation and or replanting of Douglas fir, in the South Island. The inability to meet the threshold calculation for Douglas fir has already had the change in planting. You can check with the Councils. They have the information as they are given notice of afforestation and replanting. The NESCF is now requiring a wilding calculation to be undertaken of the replanting of any conifer. We do not know of any instances in this region where replanting in Pinus radiata would fail the wilding calculation.

Nick Ledgard has a major input into the development of the Wilding Calculator.

Jo Field
Environment Manager – NZ Forests
Email: jo.field@onefortyone.co.nz

31st October 2023

To: Regional Pest Management Joint Committee Submission: Regional Pest Management Plan Partial Review 2023/24

To whom it may concern

PF Olsen has been asked to provide comments on the draft Regional Pest Management Plan. PF Olsen manages the plantation forest estates (including attached private reserve land) of the Tasman District Council, Nelson City Council and many private woodlots in the region. PF Olsen also holds the contract to carry out wilding conifer control services in the Mt Richmond Forest Park via TDC.

Upon review of the draft plan, we have the following comments relating to section 4.10 Pest/Wilding Conifers:

1. We are concerned about the inclusion of *Pinus radiata* as a wilding conifer species.
    a. *Pinus radiata* has a relatively low spread risk in comparison to Douglas Fir and other wilding conifers.
    b. *Pinus radiata* is still the primary species of choice for afforestation projects driven by carbon and timber values. Therefore, helping work towards NZ's emission targets and supporting the economy through improved employment over hillcountry sheep and beef farming. Adding further restrictions to those already proposed with the NES CF, will limit confidence in this species as an afforestation option. The next best species e.g. Redwoods, is high risk and lower return, so afforestation and re-forestation is liable to slow down.
2. The 200m control buffer could be increased for Douglas Fir, but only if *Pinus radiata* was removed from the plan as a wilding conifer species
    a. Douglas Fir spreads long distances, if forest owners of Douglas Fir only had to control the first 200m on neighbouring properties, then it would potentially leave large areas of wildings untreated. This distance could be increased, the exact quantum needs some science for it to be more appropriately determined.
    b. This will further discourage afforestation and replanting of Douglas Fir, and encourage the early harvesting of Douglas Fir stands.
3. Add provision for species that have been made sterile through genetic modification.

Kind regards,

Sam Nuske

Regional Manager - Nelson

Re: OFO second submission to Tasman Nelson Pest Management partial review 2023-24

Reply | Reply All | Forward | ...

Wed 29/11/2023 9:19 am

Sam Nuske <Sam.Nuske@pfolsen.com>
To Jo Field; Paul Sheldon
Cc dan.montgomery@tasmanpine.co.nz; Guinevere Coleman; Phillip Cochrane; Richard Frizzell

If there are problems with how this message is displayed, click here to view it in a web browser.

Hi Paul

PF Olsen would like to endorse One Forty One's second submission attached.

Having experience both plantation management and wilding control locally, we feel that the inclusion of *Pinus radiata* as a pest species is not practical. Most of the *Pinus radiata* wilding issues in the Mt Richmond Forest Park have been on regenerating land where the wildings have grown alongside the manuka/kanuka e.g. Hacket, rather than spreading into established/mature native forest.

Regards

Sam Nuske | Regional Manager - Nelson
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