

## 9.2. Regional Pest Management Plan Effectiveness Review

Council paper presented at the Environmental Delivery Committee meeting, 5 June 2025, Otago Regional Council Chambers, Phillip Lang House, 144 Rattray Street, Dunedin.<sup>1</sup> Edits have been made to formatting alone to improve readability.

**Prepared for:** Environmental Delivery Committee  
**Report No.** GOV2561  
**Activity:** Governance Report  
**Author:** Murray Boardman, Performance and Reporting Specialist  
Libby Caldwell, Manager Environmental Implementation  
**Endorsed by:** Joanna Gilroy, General Manager Environmental Delivery  
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### PURPOSE

- [1] To present the findings of the review into the effectiveness of the Otago Regional Pest Management Plan 2019-29 (RPMP) and present a recommended prioritised schedule of implementing the recommendations.

### EXECUTIVE SUMMARY

- [2] An external effectiveness review to assess the achievement of the RPMP objectives was commissioned in late 2024. The findings of the review identify that the delivery of the RPMP is partially effective. The effectiveness of the RPMP is variable depending on the pest, with some pests (e.g. exclusion pests, rooks, spiny broom, spartina) being assessed as being effective while other pests were found to have only been partially effective (Wilding conifers, Nassella tussock, feral rabbits) or not effective (e.g. Bomarea, Old Man's Beard, gorse and broom). Due to limitations in data and the underlying context, the effectiveness of some pests was inconclusive (e.g. ragwort, nodding thistle).
- [3] The RPMP Review identifies 12 approaches that help provide effective delivery of the RPMP, while 13 areas were identified that contributed to a partial or ineffective delivery. An implementation schedule to give effect to the matters raised in the review has been developed, with changes prioritised.

### RECOMMENDATION

*That the Committee:*

- 1. Notes this report.*
  - 2. Recommends that Council approves the prioritisation of the recommendations to improve the effectiveness of delivery of the current and future RPMP.*
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<sup>1</sup> <https://www.orc.govt.nz/media/l20ghtuu/20250605-ed-agenda.pdf>

## BACKGROUND

- [4] Due to the current RPMP being halfway through its implementation, it was decided that as part of the 2024/25 workplan, a mid-term review should be undertaken to assess if the implementation of the RPMP was on track and to determine if any changes are needed. Through an open tender, and in line with Council's procurement processes, Sapere was selected as the supplier to undertake the RPMP Review. This review started in September 2024 and was completed in April 2025. The full report prepared by Sapere is attached to this paper as Attachment 1.
- [5] The objective of the review was to:
- a. Identify aspects of the RPMP where Council is being effective in achieving the stated objectives;
  - b. Identify aspects of the RPMP where Council is not being effective in achieving the stated objectives and describe how/where improvements can be made; and,
  - c. Provide recommendations to guide the next edition of the RPMP to be more efficient, more effective and fit-for-purpose.
- [6] The RPMP Review was a mixed methods study, involving analysis of pest data from Council and iNaturalist, relevant Council reports and processes/systems. This was supported by extensive engagement with stakeholders:
- a. Public sector land occupiers (District councils, NZTA, Kiwirail, MPI, LINZ, DOC);
  - b. Regional Councils (ORC staff and councillors, Environment Canterbury and Environment Southland);
  - c. Private sector land occupiers (Beef and Lamb, Ernslaw One, HortNZ), NGOs (Forest and Bird, OSPRI, Whakatipu Wilding Control Group, Southern Lakes Sanctuary, Otago Peninsula Biodiversity Trust, Predator Free Dunedin and SWAT [Otago Peninsula], Rabbit Group Moeraki);
  - d. Iwi (Aukaha/mana whenua)

## DISCUSSION

- [7] Table 1 provides a summary of the findings of the report, on the effectiveness in achieving the objectives for pest management as listed in the RPMP, by pest and programme. The effectiveness of implementation provides a guide as to whether achievement is on-track for that specific pest.
- a. There are five programmes – Exclusion, Eradication, Progressive containment, Sustained control and Site-led – as set out by the National Direction of Pest Management (2015). Each pest is allocated a programme that determines the intent in managing that specific pest. Consequently, the effectiveness in achieving the pest objective is assessed through the intent of the programme (e.g. rabbits are managed in terms of 'Sustained Control' and not 'Eradication').

<b>Effectiveness of Implementation</b>	<b>Pest</b>	<b>Programme</b>
<b>Effective</b> <i>(on-track)</i>	African feather grass, Chilean needle grass, Egeria, False tamarisk, Hornwort, Moth plant	Exclusion
	Rooks, spiny broom Wallaby <i>(in raising awareness)</i>	Eradication
	Spartina	Progressive containment
<b>Partially Effective</b> <i>(partially on-track)</i>	Wilding pines (includes ten species), African love grass, Nassella tussock	Progressive containment
	Feral rabbits	Sustained control
	Lagarosiphon	Site-led
	Otago Peninsula and West Harbour – Mt Cargill	Site-led
<b>Not Effective</b> <i>(off-track)</i>	Wallabies <i>(in reducing populations and preventing spread)</i>	Eradication
	Bomarea, Old Man’s Beard	Progressive containment
	Gorse and broom, Russell lupin	Sustained control
<b>Inconclusive</b> <sup>1</sup>	Boneseed, Bur daisy, Cape ivy, Perennial nettle, White-edged nightshade	Progressive containment
	Nodding thistle, ragwort	Sustained control
	Quarantine and Goat Island	Site-led

- [8] The RPMP Review highlights 12 current practices (Table 2) undertaken by the Council that positively contributes to the effective outcomes of the RPMP. These are practices that should be continued and, where practical, enhanced to ensure the continued effective delivery of pest objectives and improve effectiveness where needed.

<p><b>Investment in technology:</b> the use of tools such as GIS mapping and the improved data collection system (Survey123) are significant improvements made by ORC.</p> <p><b>Investment in staff:</b> ORC has made investment in their staff, creating additional biosecurity and managerial roles to support the programme.</p> <p><b>Increased total RPMP funding uplift:</b> funding for the RPMP was increased to support the delivery of the programme.</p>
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<sup>1</sup> Inconclusive refers to there being insufficient data to make a reasoned assessment. The lack of data may be a consequence of how the RPMP is written (i.e. in order to assess ragwort, a compliant that meets a good neighbour rule is required. If there are no (or limited) complaints, then there will be no (or limited) data on which to assess the effectiveness).

**Targeted funding for specific initiatives:** dedicated funding streams for pests, such as rooks, spartina, wilding pines, or site-led programmes led to success in pest control.

**Education campaigns:** public education campaigns e.g. targeting wallabies, pest of the month

**Cross-boundary collaboration:** partnerships with councils (e.g. Environment Canterbury) support cross-boundary pest management and control (e.g. wallabies).

**Oversight:** ORC has provided oversight and brought together stakeholders, e.g. Otago Peninsula, demonstrating successful pest management.

**Targeted monitoring:** where ORC provided targeted monitoring, success can be achieved (e.g. spiny broom, rooks, or lagarosiphon).

**Localised species control:** success stories include rook eradication, and lagarosiphon management in Lake Wanaka and Lake Wakatipu.

**Increased community participation:** education-first approaches have led to greater involvement in local initiatives controlling possums.

**Targeted successes:** targeted inputs, oversight, and clear monitoring led to success in rook eradication, spiny broom and spartina control. Site-led programmes have supported pest management. National funding support enable improved pest management (wallaby, wilding conifers).

**Enhanced awareness in some areas:** specific outreach efforts have led to improved understanding of pests among some rural landowners.

- [9] The RPMP Review identifies 13 themes (Table 3) that limit the effective delivery of the RPMP. Addressing these themes is seen as an important step to improve the effective delivery of the RPMP. Due to this, these themes are used to shape and inform the recommendations presented in Tables 4 and 5.

**Table 3: Contributors to Ineffectiveness** *(edited from the Report, page viii-x)*

**Funding and prioritisation challenges:** while funding has increased, stakeholders report limited capacity for enforcement, monitoring, and proactive pest management.

**Funding use:** resources targeted towards a reactive rather than proactive pest management approach.

**Transparency and inclusivity:** insufficient transparency in budget allocation to pest management initiatives of the RPMP (e.g. pest programmes and pests).

**Lack of RPMP spending understanding:** ORC's current accounting system does not permit specific tracking of RPMP-related expenditures, hampering appropriate assessment of where funding is spent.

**Limited spending on communicating the RPMP:** ORC has set aside a limited funding to engage with the public to create awareness. Creating awareness is a key success factor for RPMP effectiveness.

**Limited communication:** The lack of communication of the RPMP rules strongly reduces awareness of the plan, and landowner/occupier responsibilities. This is a critical point and causes an inefficiency of the RPMP.

**Monitoring and inspection approach:** While ORC's efforts to enhance monitoring is acknowledged, current inspections have a strong focus on specific pests (i.e. rabbits, Bomarea, and Old Man's Beard).

**Re-inspections and new inspections:** Re-inspections are limited which are essential to determine non-compliance. Increasing the number of new (first-

time) inspections is also important to ensure identification non-compliant properties.

**Lack of enforcement:** there is low prioritisation of enforcement hence ORC is not meeting its objectives.

**Follow-up to non-compliance:** there is limited enforcement post non-compliance. While Notices of Direction have been issued, there has been no follow through in terms of the consequences for non-compliance.

**More visibility needed:** success stories of how funding is used and how the RPMP affects pest management efforts, potentially creating more community buy-in.

**Broader systemic issues:** systemic issues, like reinfestation of rabbit populations in localised areas, or gorse and broom issues fragmented efforts.

**Limited awareness of and compliance to the RPMP:** There is a general unawareness of the RPMP, and the related responsibilities, among the landowners/occupiers as reported by stakeholders.

- [10] The following sections summaries some of the key observations from the RPMP Review related to the five priority pests in the current Biosecurity Operational Plan (2024-2025).

#### **Exclusion Pests – Exclusion Programme**

- [11] No exclusion pests (i.e. African feather grass, Chilean needle grass, egeria, false tamarisk, hornwort, and moth plant) have been confirmed in Otago. This indicates that Council's efforts have been effective to date.
- [12] The use of eDNA sampling offers a positive means to indicate any incursion and contribute to raising awareness and is worthwhile continued investment.
- [13] The effectiveness of the exclusion programme can be enhanced through aligning pest pathway management between neighbouring councils.

#### **Rabbits – Sustained Control Programme**

- [14] The finding by the RPMP Review is that the implementation of the RPMP has been partially effective in sustainably controlling rabbits.
- [15] There was positive feedback from stakeholders regarding the community approach to rabbit management (e.g. Gibbston, Moeraki, and Lake Hayes) where community events improved awareness and education about rabbit control. Stakeholders acknowledged that Council's clear focus on landowner responsibilities has led to increased engagement from landowners who were previously passive.
- [16] One important finding showed that when non-compliant properties that were re-inspected there was a median decrease of one level in the Modified McLean Scale (from MMS 5 to MMS 4). This change is statistically significant ( $p < 0.001$ ,  $n = 148$ ). While the median re-inspection remained above the compliance level of MMS 3, this evidence suggests that initial work requests (non-regulatory) encourage occupiers/landowners to undertake control to reduce rabbit prevalence prior to re-inspection. This suggests that re-inspecting non-compliant properties is a positive step that should be applied to all non-compliant pest observations.

[17] The RPMP Review recognised that Council has made significant investment to increasing rabbit inspections over the course of the RPMP. However, the current approach has been reactive rather than proactive, with less than optimal resources to adequately monitor rabbit populations at the scale required. This will be picked up in the proposed new work plan for 2025-2026.

[18] It was noted that larger landowners, generally, do well in rabbit control, whereas peri-urban and lifestyle blocks often do not take enough responsibility, making it harder to achieve widespread control. This is a critical gap in the RPMP, as these landowners are not adequately engaged or incentivised. Through the implementation plan and biosecurity work plan, staff will pick up this gap and identify ways to further support smaller landowners.

[19] The report highlights that there is ineffective enforcement which leads to a disengagement between the RPMP objective and individual landowner responsibilities under the RPMP. The lack of enforcement reduces the overall effectiveness of the pest management plan, not only with rabbits but all pests. This will be picked up in the proposed work plan for 2025-2026 and through the implementation of the Biosecurity Enforcement and Compliance Policy.

#### **Wilding Conifers – Progressive Containment**

[20] Wilding conifers (pines) was assessed as being partially effective in meeting the RPMP objectives. The leading reason for low effectiveness was around the interpretation and lack of clarity with the RPMP rules. In particular, the good neighbour rules which were seen as being inadequate. A second reason was the lack of enforcement, with a request that ORC take a more proactive approach to enforcement. This will be picked up in the proposed work plan for 2025-2026 and through the implementation of the Biosecurity Enforcement and Compliance Policy.

[21] Public awareness around wilding conifers has improved significantly. Stakeholders noted that the RPMP has likely contributed to the increase in awareness. Positive co-operation with landowners was also acknowledged.

#### **Wallabies – Eradication Programme**

[22] The report separates the effectiveness of eradicating wallabies from communication about wallabies. From a communications perspective this is seen as being effective, while in terms of eradication it is less effective.

[23] The review identifies that Council has undertaken good education efforts under the RPMP to raise public awareness of wallabies and the need to report them when sighted. Other positive findings include cross-boundary work with ECan and the use of research.

[24] The review accepts that eradicating wallabies is challenging. While only a few wallabies are observed in Otago, they are hard to find, and a lot of resources are allocated by Council to find these last few. The specific challenge is to embed eradication as contrasted to containment or control. To improve the effectiveness of eradication, the review encourages better data sharing as a key opportunity.

**Lagarosiphon – Site-led Programme**

- [25] Lagarosiphon was assessed as being partially effective in meeting the RPMP objectives.
- [26] Council has been effective in meeting the RPMP objective for several sites in Otago, working with key partners. Key factors of success are that Council managed to gain local buy-in and sustained support for controlling the pest, and that it provides a coordinated approach and funding. The ‘Check Clean Dry’ programme has a part in this success as it provides good advocacy and education around lagarosiphon and freshwater pests in general.
- [27] Lagarosiphon control in Lake Dunstan poses a challenge with limited effectiveness. Lagarosiphon has been recorded in Wanaka (Bullock Creek and Albert Town Detention Ponds). Outside of Central Otago, it has been located in the Purerua River, and Inch Clutha. This is not necessarily a negative rather an example where increased inspections and monitoring can reveal more presence.

**RECOMMENDATIONS**

- [28] Recommendations in the Review were separated into two parts.
- a. Thirteen recommendations are given to enhance the effectiveness of the current RPMP.
  - b. Nine recommendations are provided to guide the preparation of the next RPMP. Four additional suggestions are presented on pest management strategy.
- [29] Table 4 lists the thirteen recommendations to enhance the effectiveness of the current RPMP. This table includes a staff response to the recommendation, the cost band, priority and implementation date.
- [30] Table 5 lists the nine recommendations and four suggestions to guide the preparation of the next RPMP. The suggestions also require additional enquiry through public consultation.

**Table 4: Recommendations to improve the effectiveness of the current RPMP (2019-2029)**

#	Recommendation	Staff Assessment	Cost Band <sup>1</sup>	Priority	Commence <sup>2</sup>
1.	Simplify the RPMP presentation, accessibility and reach	Review current material and simplify. <i>Note: A simplified RPMP will be a core attribute of any future RPMP.</i>	Low	High	1 July 2025
2.	Clarify rules and target communication to key audiences	Embed into #1 where possible <i>Note: It should be noted that the rules cannot be changed during an RPMP Operational Period (unless public consulted), however they can be better explained and presented.</i>	Low	Medium	1 Nov 2025
3.	Improve transparency to and motivation of public by sharing more success stories	Work with communications team to share more success stories	Low	Medium	1 Nov 2025
4.	Communicate more clearly the consequences of non-compliance following inspections, while also highlighting success stories resulting from enforcement efforts.	Work with communications team to share more around consequences of non-compliance and success stories [align with #3]	Low	Medium	1 Nov 2025
5.	Increase the number of new and re-inspections. Consider targeting areas with highest biodiversity or economic/cultural value first. <sup>3</sup>	Increase inspections and re-inspections. Identify priority areas to focus on. Prioritise progressing enforcement and follow through the enforcement processes which are already set up where non-compliance is evident [see #6]	Low	High	1 July 2025

<sup>1</sup> Cost bands are defined as follows:

1. Low: should be able to be undertaken via management decisions within current budget.
2. Medium: possibly require some increase in funding
3. High: will require additional funding

<sup>2</sup> This is the planned commencement date for this recommendation. The use of a commencement date is preferred as most of these recommendations will be on-going once started hence won't have a finish date.

<sup>3</sup> Note: this should be accompanied by appropriate enforcement activities (i.e. default work and cost recovery) as inspections alone will have limited impact without follow-through.

6.	Target enforcement efforts where investments and awareness are already in place (i.e. old man's beard, rabbits, bomarea, wilding pines). Also consider prioritisation of areas with highest biodiversity or economic/cultural value.	Progress enforcement where non-compliance is evident. See #13 in regard to prioritisation of areas	Low	High	1 July 2025
7.	Leverage data to optimise enforcement efforts.	Combine with enforcement recommendation [#6]. May require some new resourcing (see Recommendation #16, Table 5).	Medium	High	1 July 2025
8.	Utilise powers under the Act of default work and cost recovery in cases of repeated non-compliance.	The requirements for default work and cost recovery is complex. Need to ensure systems are in place to progress.	Medium	Medium	1 Nov 2025
9.	Fill data gaps by leveraging citizen science and integrating stakeholder data.	While citizen science provides important data, there are other priorities that would have greater effectiveness on implementing the RPMP. Initial work would revolve around scoping the practicalities of acquiring citizen and stakeholder data (e.g. Find a Pest and iNaturalist), how we can ensure it can be utilised and is collected in a coordinated and streamline way and to see what resourcing this would involve.  This work is likely to be picked up through a Council wide look at Citizen Science and any system and policy to support it.	Medium	Low (in terms of RPMP priority)	1 July 2026
10.	Incentivise the public to contribute data where gaps are present.	See #9	Medium	Low	1 July 2026
11.	Consider introducing outcome-based monitoring.	Outcome-based monitoring (OBM) offers more complete assessment however, comes	High	Medium	1 Mar 2026

		with increased investments especially data and staff (e.g. OBM requires community level surveys). Likely to be integrated into future RPMP with commensurate funding.			
12.	Invest in capacity and capability by utilising tools such as AI-enabled traps, drones, and remote sensing; additionally, provide training for biosecurity staff.	Essential requirement to be effective. Will require allocated funding to progress. Council have recently employed specialist staff who can support the understanding of what is available and best for our region.	High	Medium	1 Nov 2025
13.	Prioritise efforts where data gaps are most significant, focusing first on areas with the highest biodiversity or economic/cultural value.	There is already GIS data available on areas with the highest biodiversity values, so this can be implemented quickly. Data on what is deemed to be economic/cultural values will need to be acquired.	Low (for biodiversity values) Medium (for other values)	Medium	1 Nov 2025

**Table 5: Recommendations and suggestions to improve the effectiveness of the future RPMP**

As these recommendations are for the future RPMP only a staff assessment is provided here. The specifics (e.g. cost and priority) of these recommendations will be drawn out in the development of the next RPMP through public consultation.

#	Recommendation	Staff Assessment
14.	Effectiveness could be enhanced by revising the good neighbour rules	The good neighbour rules are complex and require specific steps in order for them to be effective under the RPMP. Clarifying the good neighbour rules (in fact, any rules) will be an important consideration for the next RPMP.
15.	Expand pest scope	The expansion of pest scope is not related to the effectiveness of the RPMP. (Effectiveness relates to the 'how' not the 'what'). According to the Biosecurity Act 1993, what best can be included in the RPMP is dependent on public consultation and cost-benefit analysis. Hence any increase in pest scope can only be undertaken as part of developing the next RPMP or undertaking a partial review.

		As staff are already working in refreshing the RPMP this recommendation is not required to be fulfilled.
<b>16.</b>	Fund an additional full-time equivalent data science officer	Data is increasing an essential part of effectively implementing the RPMP and this will only get more important with the use of remote sensing, drones, AI and machine learning [see #18]. Data analysis is essential to guide management decisions and strategy development. Any decision on staffing would be made through Annual Plan and Long Term Plan processes.
<b>17.</b>	Leverage existing data from repositories, crowd-sourced from iNaturalist/ Global Biodiversity Information Facility /Report a Pest, stakeholders, and neighbouring councils to develop a regional data dashboard.	Not specifically related to the effectiveness of the RPMP more related to Biodiversity strategy.
<b>18.</b>	Commission a predictive AI model that integrates data from various sources, updates the dashboard, and identifies current and future pest trends. This model should provide real-time estimations of pest concerns, helping ORC and stakeholders to target and prioritise efforts effectively.	It is clear AI will have an increased importance in implementing the RPMP in the future. Further costing and resourcing will be needed before implementing.
<b>19.</b>	Increase the number of site-led programmes across Otago, varying in size based on local needs and community buy-in. Identify sites by recognised biodiversity value with a clear biosecurity outcome, but also consider local preferences, for example local understanding of need, willingness to participate, or areas of cultural significance and taoka species.	The purpose of this review was to assess how well we achieve our current objectives not to increase the scope. This will be picked up in the refreshed RPMP. In order to support the site-led programmes sufficiently these will need to be resourced appropriately. The number of site-led programmes however will depend on public consultation and community willingness to co-lead.
<b>20.</b>	Build on the success of site-led programmes where ORC has taken on a coordinating role	See #19
<b>21.</b>	Sustain funding and provide longer-term financial support for initiatives	Any increase in programming will require additional funding. Providing long term funding to initiatives supports the community to understand what the Council's priorities are and ensures they remain engaged and proactive.

22.	Leverage small-scale management programmes (SSMPs) to progressively act on emerging pest threats (which does not require a consultation under the Biosecurity Act). Embed consideration of SSMPs approach in the next RPMP, explaining how and why it would be used within the RPMP.	While SSMPs offers flexibility to manage emerging pest threats they do not need to be embedded into an RPMP, rather they can be implemented via the BSA. The proactive use of SSMPs will be incorporated into the Biosecurity Strategy.
<b>Suggestion</b>		<b>Staff Assessment</b>
23.	Identify value proposition to gauge catchment group/community interest. Decisions should be based on their capacity and willingness <i>If the value proposition is clear/support exists, establish the approach</i>	This suggestion can be progressed, and is happening, through the development of catchment action plans (CAPs) where Council can facilitate the development. However, as this is non-regulatory, the RPMP public consultation process would need to be used to assess what the catchment/community groups require in terms of regulation to achieve their goals.
23a.	ORC would provide support and resourcing to catchment groups including involved community groups and groups of landowners.	
23b.	ORC would ensure that RPMP objectives complement catchment group goals, particularly in biodiversity protection. This would require a formal consultation with the public for the next RPMP.	
23c.	ORC would take a leadership and communication role and focus on emerging pests and enforcement	

## CONSIDERATIONS

### Strategic Framework and Policy Considerations

[31] Some of the recommendations have implications at a strategic level, especially in terms of catchment groups.

### Financial Considerations

[32] Potential cost implications have been signposted in the above assessment. Most of the high priority recommendations are assessed as having a low-cost implications that should not require additional funding to implement outside of management direction.

### Significance and Engagement

[33] There are no significance and engagement considerations associated with this report.

### Legislative and Risk Considerations

[34] There is no legislative or risk considerations and Council needs to implement the current RPMP. However, the revision of the Biosecurity Act may have an impact on some recommendations for the future RPMP. Any impacts will only be known once the new Act is gazetted.

### Climate Change Considerations

[35] No climate change considerations were required as part of this review. However, the development of the next RPMP will take climate change into consideration.

### Communications Considerations

[36] The recommendations require a revision and simplification of current communication materials. Staff will work with the Communications and Engagement Teams on plans for the 2025/2026 work programme.

## NEXT STEPS

[37] To implement the recommendations as prioritised in Tables 4 and 5.

## ATTACHMENTS

Full report can be found on the following webpage: <https://www.orc.govt.nz/your-council/plans-and-strategies/regional-pest-management-plan/>