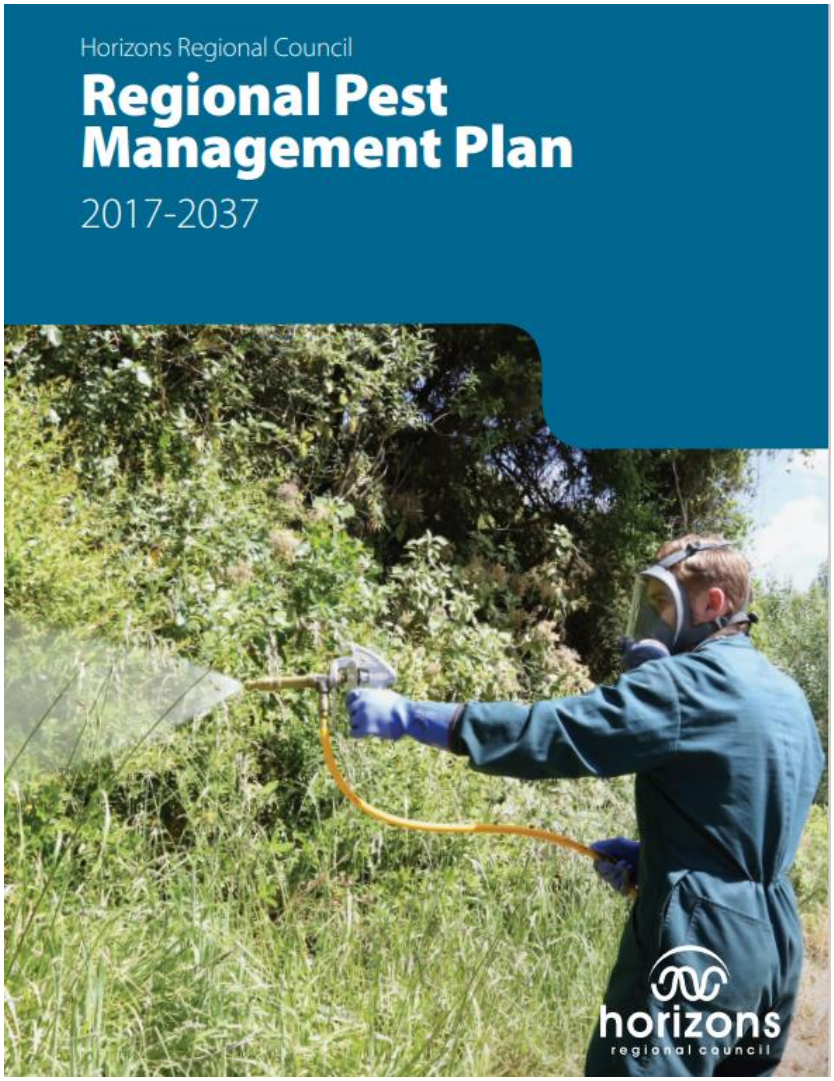
Evaluation of Horizons Regional Pest Management Plan



Is the RPMP effective and efficient and is Horizons doing what it said it would?

October 2024

BBS
Better Biosecurity Solutions Ltd

Reference: Evaluation of Horizons Regional Pest Management Plan. Is the RPMP effective and efficient and is Horizons doing what it said it would?		
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Status: FINAL	**Version 2**	**Issue date: 23 October 2024**
Reading and using this report This is a standalone report prepared in response to Horizons Regional Council project specific requirements. Two separate addendums should be read in conjunction with the main evaluation report – highlighted at Appendices 2 and 4.		

EXECUTIVE SUMMARY

The Horizons Regional Pest Management Plan 2017-2037 (RPMP, or the Plan) has been operative for seven years. Prior to its formal 10-year review Horizons Regional Council (Horizons) instigated an efficiency and effectiveness evaluation to help answer:

1. Is the Plan effective? (Are the current sets of issues and options still relevant, have new issues arisen? Are the issues and options being adequately addressed?)
2. Is the Plan efficient? (Are the costs in line with what was anticipated? Are there additional costs/risks/time and resource implications created as a result of the plan? Is the workload implicit in the plan manageable?)
3. Is Horizons doing what they said they would do?
4. Is the Plan consistent with national policy and statutory context? (Includes the National Policy Direction for Pest Management 2015).

Essentially, what the Council wants to know is whether the Plan is working, are the policy settings correct, the appropriateness of the rules and are the outcomes in line with Plan objectives? Three sources of information informed the evaluation: internal data analysis; Horizons staff and contractors views on progress and perceptions of key stakeholders (as partners in biosecurity or obligated through the RPMP to undertake pest control on lands they administer).

A traffic light system summarises progress for each pest within the RPMP categories. Sections 4 and 5, respectively, contain data analyses and commentary on how individual species are tracking (summarised below) and provide assessments on each pest category's progress.

Pest plants

Exclusion plants – 11 species

Californian bulrush, Chilean needle grass, Noogoora bur, Saffron thistle, Sweet pittosporum	On track to achieve RPMP objectives
N/A	Objectives might not be achieved as stated, but may be over a longer term
Humped bladderwort, Heath rush , Manchurian wild rice, *Phragmites australis, Sagittaria platyphylla,* Tussock hawkweed	RPMP objectives unlikely to be achieved within the period based on current trends

Excellent progress has been made in preventing many plants establishing. 'Red status' species have mostly been removed from the programme due to difficulties in identification, locating them and methods of control.

Eradication plants – 18 species or groups of species

Alligator weed, Arrowhead, Chilean rhubarb, Chinese pennisetum, Climbing alstromeria, Knotweeds, Nassella tussock and Mexican feather grass, Queensland poplar	On track to achieve RPMP objectives

African feather grass, Blue passion flower, Climbing spindleberry, Himalayan balsam, Rum cherry, Spartina	Objectives might not be achieved as stated, but may be over a longer term
Cathedral bells, Purple loosestrife, Senegal tea, Woolly nightshade	RPMP objectives unlikely to be achieved within the period based on current trends

There are some good signs that progress towards eradication of these plants is being achieved. However, more effort and funding is needed for the majority of listed pests, which will have impacts on other species and activities. The eradication programme is overly ambitious (with current resource levels) and a better grasp on the full extent of infestations and partner agency effort is required.

Progressive containment plants (mapped) – 11 species

Grey willow, Contorta pine, Dwarf mountain pine, Mountain pine	On track to achieve RPMP objectives
Banana passionfruit, Darwin's barberry, Moth plant, Scots pine	Objectives might not be achieved as stated, but may be over a longer term
Boneseed, Evergreen buckthorn, Old man's beard	RPMP objectives unlikely to be achieved within the period based on current trends

While a lot of good work has occurred on controlling mapped progressive containment plants, progress towards achieving objectives has slipped. The RPMP must be achievable, costed and funded appropriately. There is increasing uncertainty around the cost and effort required to contain these mapped pests. Key issues include:

- Suppression in Active Management Zones (AMZ) is achievable, where actively worked, but more sites are being found. AMZs were drawn with limited knowledge, there are now large tracts of land with uncontrollable infestations.
- Survey and control of some species (e.g. old man's beard, Darwin's barberry, banana passionfruit and evergreen buckthorn) is beyond current resources.
- Partner agencies (DOC in particular) have considerably reduced inputs into prior agreed work. This is seriously compromising RPMP programmes.
- Having Agreed Management Programmes (AMP) in place with other agencies (NZTA, Kiwi Rail and TLAs) are worthwhile but agencies see this work as low priority.
- Consideration of contorta control in Karioi Forest is required, including rule suitability, transfer of land to iwi occupiers and impacts of Karioi's mills closures.

Regarding non-mapped Progressive Containment plants:

- Ten mostly production species are covered, with implementation complaints based. The Clear Land Rule is unique to Horizons and is seen as useful. However, it is not well used or understood (by staff and occupiers in general).
- Similarly, the Good Neighbour Rule (GNR) approach is limited but the philosophy sound. Council does not have a strong emphasis on enforcement of rules. Increased of compliance using Biosecurity Act 1993 powers is suggested.

- The future inclusion of five (unmapped) aquatic pest plants is questioned given they are not actively managed.

Pest animals

Wallaby, Rook, Possum, Rabbit	On track to achieve RPMP objectives.

- Excellent and timely efforts are being made to prevent wallabies establishing.
- Rook control is on target, due to recent successes. Pressure needs to be continued, including trialing new technology and liaising more with neighbouring councils.
- Horizons' desire to maintain the gains of prior possum control and implement the now widespread PCO is applauded. The average RTCI monitoring results achieved are well below the 10% target. However, as it is Horizons largest and most expensive biosecurity programme it should be reviewed prior to, or concurrently with, the RPMP. A number of suggestions for improvement are made.
- Maintaining regional overview on rabbit issues is required and the GNR is the only way to ensure that externality issues of rabbits between neighbours are managed.

Recommendations

Horizons has achieved a lot of positive outcomes and there is much to be commended. However, evaluations tend to focus on where improvements can be made. This report concludes by noting recommendations which address the efficiency and effectiveness of Horizons' RPMP and biosecurity programmes.

Strategic issues

- ✓ Consider developing a Biosecurity Strategy concurrently with the RPMP review, to provide greater regional context and assist in strengthening stakeholder relationships.
- ✓ Performance measures used (Annual Plan and LTP related) to determine progress in meeting RPMP aims need a refresh.
- ✓ A clearer process needs to be developed and socialised regarding how emerging pest issues of concern to the regional community can be raised.
- ✓ Land use changes (e.g. from farming to forestry) require an urgent response now and as part of the RPMP review.
- ✓ Investigate the merits of inter-regional pathway pest management plans with neighbouring councils, including a new and targeted pest plant surveillance programme.
- ✓ Increased project collaborations with others for mutual benefit, e.g. following the successful 'Project Yellow model'.

Significant programmes

- ✓ Safeguard investment in the PCO programme and review it prior to the RPMP review. Matters to include: RTCI targets; collaboration with PF 2050 Ltd and NZDF; assessment of methodologies used; lack of control on DOC managed lands; addressing landowner indifference to PCO; awareness raising among new generations of farmers and sustainable funding.

- ✓ Review of all current and potential pest plants for inclusion in the revised RPMP:
    - Current 'high priority' species need urgent reassessment, including full delimiting surveys and assessing future reliable funding partners.
    - Regarding the Clear land Rule and Good Neighbour Rule concepts, consider using other categories to manage pests, e.g. Sustained Control and Site-led.
    - Changes of categories are mooted, e.g. woolly nightshade is in the wrong category, Sagittaria should transfer from exclusion to eradication and the wilding pines rule in Karioi Forest needs review.

Relationships

- ✓ Investigate creating a Biosecurity Stakeholders Forum, prior to RPMP review. Membership would be drawn from a range of Crown, TLA and sector groups. Terms of reference include: shaping a Biosecurity Strategy, emerging threats, engagement through sectors, alignment of annual work programmes and testing new policies.
- ✓ Reassess all policies and programmes that rely on the involvement of DOC as a partner in regional biosecurity. So much rests on the future of pest control on public conservation land.
- ✓ Maintain and enhance existing relationships with key stakeholders. Individual relationship maintenance is separate to but linked with a Stakeholders Forum.

Operational matters

- ✓ Pest plant delivery balance between staff and contractors could be examined. There are tradeoffs between having hands-on service delivery by staff and resources being freed-up for more contract management, awareness and surveillance.
- ✓ The above principles should be extended to PCO delivery and whether the current 75% staff and 25% contractor mix is cost effective when considering all costs.
- ✓ The Frontline database needs a revamp to make reporting more user friendly.
- ✓ Enforcement should be increased for all relevant programmes. The Biosecurity Act has robust processes. Continuous non-compliance by occupiers should not be tolerated.
- ✓ A rules exemptions register needs to be developed.
- ✓ Approved Management Plans require reviewing and strengthening to include the consequences of inaction or poor treatment.
- ✓ Continue applying pressure on active rookeries, through trialing new technology and ensuring that the North Island inter-regional rook forum maintains momentum.

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1. Introduction

1.1 Background

The Manawatū-Whanganui region covers approximately 22,000 km², extending from south of Levin to north of Taumarunui and from Whanganui across the Ruahine and Tararua Ranges to the east coast. The region comprises three major river systems, two coasts, the Central Plateau and 25,000 km of waterways. Horizons, the trading name for the Manawatū-Whanganui Regional Council,[1] has many responsibilities including managing the region's natural resources[2] and undertaking pest management (biosecurity) to help safeguard the region's environmental, production and cultural values.

Horizons is the Management Agency responsible for the implementation of the Horizons Regional Pest Management Plan 2017-2037[3] (RPMP, or the Plan), developed under the Biosecurity Act 1993 (the Act). Pest management is a joint effort between regional councils, their communities and many public agencies and private organisations that have roles in managing pests. The RPMP uses the provisions of the Act to support that effort. Horizons is mandated through the Act to provide regional leadership on biosecurity matters and is committed to the efficient and effective management of pest threats.

Horizons has a requirement to evaluate its RPMP ahead of a formal 10-year review. The aim of this project is to evaluate four key matters: its effectiveness in protecting values, assessing cost efficiencies, reviewing legal consistency and overall, determining if policies have been followed through to delivery.

1.2 Purpose

Better Biosecurity Solutions Limited (BBSL) was engaged by HRC to assess progress on implementing the RPMP. The purpose of the project concerns producing an evaluation report answering the following questions:

1. Is the Plan effective? (Are the current set of issues and options still relevant, and have new issues and options arisen? Are the issues and options being adequately addressed?)
2. Is the Plan efficient? (Are the costs in line with what was anticipated? Are there additional costs/risks/time and resource implications created as a result of the Plan? Is the workload implicit in the Plan manageable?)
3. Has Horizons done what it said it would?
4. Is the Plan consistent with national policy and statutory context? (includes the National Policy Direction for Pest Management 2015, or NPD). If there are changes made to the Act during the evaluation period, these need to be considered in the evaluation.

[1] Hereafter referred to as Horizons Regional Council, HRC, Horizons or the Council depending on the context. The Manawatū-Whanganui region is also referred to as the Horizons region.
[2] Other key responsibilities include flood control, monitoring air and water quality, facilitating economic growth, leading land transport planning and coordinating responses to natural disasters.
[3] 2017-2037-Regional-Pest-Management-Plan.pdf (horizons.govt.nz)

1.3 Context

The purpose of the RPMP is to outline the regulatory framework for the efficient and effective management of specified animal and plant organisms in the Horizons region, to:

- Prevent, reduce, or eliminate the adverse effects of those organisms and their management; and
- Maximise the effectiveness of individual pest management action by way of a regionally coordinated approach.

There are many organisms in the region that are undesirable or a nuisance. However, it is only where a subject is capable of causing adverse effects, and where a regionally planned approach would be more effective than voluntary management (and where the benefits of a regional plan outweigh the costs of that plan) that regional intervention is warranted. The Act contains criteria to justify regional intervention.

The RPMP lists which organisms are classified as pests and managed based on these criteria (refer to the categorised list in Appendix 1).

Having met various tests and prerequisites prior, the RPMP has been operative for almost seven years. Under section 100D of the Act, Horizons must initiate a review of its RPMP, by making a proposal to amend, revoke, revoke and replace, or leave unchanged the Plan or part of the Plan, by September 25th, 2027, as it will have last been reviewed more than 10 years previously. To inform the scope for the review, Horizons requires an evaluation of the RPMP.

1.4 Pest Plant Update 2020

In October 2020 the Strategy and Policy Committee of Council was provided with an update on managing the 55 pest plants[4] listed in the three RPMP categories (Horizons Regional Council, 2020). It was noted that Horizons assumed management responsibility for 34 species described in the Plan, while 8 were the full responsibility of land occupiers and 13 were shared between Horizons and occupiers, including DOC. For species that occurred on non-rateable or Crown land, the goal was to minimise the spread via Good Neighbour Rules and for larger control programmes via Approved Management Plans or Memoranda of Understanding.

Two years into RPMP implementation the report identified that 46 of 55 (84%) of species were on track to meet Plan objectives while nine (16%) were not on track (refer to Table 1 following). The nine 'likely low achievers' included: Chinese pennisetum and purple loosestrife (eradication); old man's beard and evergreen buckthorn (progressive containment – mapped); and five aquatic weeds (eelgrass, egeria, hornwort, lagarosiphon, reed sweetgrass) in the unmapped, progressive containment category.

[4] Progress on pest animal management was not part of this report.

Table 1: Potential levels of success for different designations

	Potential Level of Success			
Designation	**High**	**Likely**	**Low**	**Total**
Exclusion	11			11
Eradication	9	7	2	18
Progressive Containment - Mapped	8	1	2	11
Progressive Containment - Unmapped	10		5	15
Totals	38	8	9	55

Reasons for these nine species not being on track included: difficulty in accurately locating areas of occupancy (because of wide bird dispersal of seed), difficult site access, differing whims of other partners, lack of occupier engagement and restricted methodologies.

The 2020 report provided options to address potential Plan objectives not being met for these species, some of which are still valid and are covered further in this report. Importantly, the 2020 update served as a baseline point for this evaluation process, especially when comparing progress on managing these pest plants again four years later, as shown in Tables 3, 4 and 5 in the bulk of this report. Some of these pest plants continue to be problematic while other issues have arisen in the intervening period.

1.5 Report structure

- Section 1 has outlined the project's purpose and provided both wider and more recent context.
- Section 2 explains the methodology followed (data analysis, and seeking staff, contractor and stakeholder feedback).
- Section 3 provides an overview of Biosecurity Annual Plan targets and performance measures, providing high-level answers to the effectiveness questions posed.
- Sections 4 and 5 are the main body of the report, detailing the progress in achieving RPMP objectives, by programme, for pest plants and pest animals, respectively.
- Section 6 covers NPD legal matters and addresses RPMP support programmes.
- Section 7 summarises the consultation feedback received from a range of respondents.
- Section 8 summarises key findings, pulling together the main points for discussion, with some future options suggested.
- Recommendations are made in Section 9 which will help guide the next iteration of the RPMP.

2. Methodology

2.1 Overview

What Horizons wants to know is whether the current RPMP is working, does it have the correct policy settings, are the rules appropriate and are the outcomes meeting Plan objectives. The project was approached using and analysing information from three sources:

- Internal HRC data;
- HRC staff and contractor views through their knowledge and thoughts; and
- Perceptions of key stakeholders with wide ranging interactions and backgrounds.

Insights and guiding principles

The following insights characterise the report's findings:

1. Aspects of the RPMP where HRC is being effective in achieving stated objectives.
2. Aspects of the RPMP where HRC is not being effective in meeting objectives and describing how and where improvements could be made.

In describing the above insights the evaluation was guided by two principles:

- How on track is HRC to deliver on the objectives?
- To date, how effective is HRC at achieving the objectives?

Timeline of review

The following summarises the key steps and timelines involved.

Actions / milestones	Timing
• Research – identify key issues, identify data requests and review prior reports	Mid-April - mid-May 2024
• Undertake data interrogation – assess, analyse and seek staff verification	June – August 2024
• Develop consultation approach – including across a range of stakeholders, develop bespoke questionnaires	Concurrent with above
• Undertake targeted consultation - stakeholders	July and August 2024
• Summarise key stakeholder / contractor feedback	August 2024
• Prepare draft evaluation report	August – September 2024
• Senior staff workshop - test findings and review recommendations	27th September 2024
• Finalise report - presentation to Council workshop	30th October 2024
• Presentation to Strategy and Policy Committee	12th November 2024

2.2 Data analysis and interpretation

Data interrogation for pest plants contained in the Eradication and Mapped Progressive Containment categories (only) was undertaken by Lambie Ecology (Lambie and Lambie, 2024). The methodology involved requesting relevant database information held by Horizons for the analytical period 1 July 2018 to 30 June 2024 (including any known limitations of data) and determining a practical process to interrogate and interpret the data. The sources included:

- An extract of raw data from Horizons' WEEDs database supplied to Lambie Ecology on 27 February 2024, supplied in an Excel-readable (CSV) format;
- An extract of filtered (2023-2024) data from Horizons' WEEDs database supplied to Lambie Ecology on 29 August 2024, supplied in an Excel format;
- The 2024 annual summary spreadsheet that staff use to track and report performance to Council.

The full data analysis and report (Appendix 2) outlines data limitations; the process of building up datasets for interrogation and describes how interpreting changes in site status over time and changes in a plants' area of occupancy over time was achieved.

No data were available to assess progress against objectives for the suite of non-mapped Progressive Containment pest plants, including several aquatic species. For the evaluation of these species, along with Eradication and Sustained Control pest animals (rooks, and then possums and rabbits, respectively) qualitative rather than quantitative assessments were made based on available feedback.

In terms of practically reporting against the project's purpose (i.e. how on track Horizons is in delivering on RPMP outcomes?) a generic 'traffic light' approach was adopted, as used in 2020, to report on interim progress (Horizons, 2020). The following key is used in sections 4 and 5 of this report, which is also useful in comparing pest plant outcomes and statuses between 2020 and 2024.

Traffic light key used to describe RPMP progress for each category

	Programmes that are on track to achieving the aims of the RPMP.
	Programmes where the aims might not be achieved as stated, but may be achieved over a longer term.
	Programmes where aims are unlikely to be achieved within the life of the RPMP based on current trend[5].

[5] This could be a result of different issues depending on the categories pests are in. 'Not achieved' status is determined based on the pests and policies as written in 2017.

2.3 Staff, contractor and stakeholder feedback

Analysing trends in pest infestations and tracking progress through data analysis is important but only tells part of the story. Gauging effectiveness includes receiving 360-degree feedback from the people involved in regional biosecurity, e.g. those implementing the RPMP (staff), those executing the RPMP on HRC's behalf (contractors) and those who benefit from the work or are impacted by control obligations (key stakeholders).

Key questions to determine effectiveness included asking the above people:

1. What has worked well to date (and should be continued or enhanced)?

2. What has not worked, is not working, or is surplus to requirements (and could be dropped)?

3. What the future holds (for the relevant sector that stakeholders are working in) and what are the opportunities? And, where are the gaps currently?

Staff responses

Pest plant team members and selected pest animal team members were met with and their opinions canvassed, at Taihape and Taumarunui, respectively. A survey questionnaire was developed for these teams (based on the stakeholder questionnaire outlined below) but modified to seek more feedback around their:

- Understanding of their roles and responsibilities.
- RPMP key activity they are involved in and their view on their own effectiveness.
- Relationships with key stakeholders (especially Crown and Crown agencies) and levels of cooperation received.
- For pest plant staff, they were specifically asked for their views on the Clear Land Rule and Active Management Zone concepts, and progress on each species.
- For pest animal staff there were specific questions on the Good Neighbour Rule for the possum control programme, effectiveness of possum monitoring and urban pest amenity work.

Contractors' responses

- Bolt Contracting Ltd – pest plants and pest animals
- Kahikatea Contracting – pest plants
- Rangitikei Helicopters Ltd – pest plants

A survey questionnaire was developed for selected contractors, based around the staff survey form above but modified to find out more about their HRC interactions, in particular contract negotiation, project management (e.g. workflow, dispute resolution) and contract review and evaluation processes.

Stakeholder perceptions

Stakeholders with specific pest management interests were identified by Horizons. These organisations were contacted and surveyed, as follows:

- Ernslaw One Ltd – Karioi pulp mill (contorta pine management).
- Federated Farmers – Whanganui and Ruapehu reps at Ohakune.
- Department of Conservation – Ohakune.
- Rangitikei Environment Group – Marton.
- New Zealand Defence Force – Ohakea Airforce Base.
- New Zealand Transport Agency – Palmerston North.
- Manawatu District Council (as representative of general TLA issues) – Feilding.
- Rangitikei Rivers Catchment Collective – Online and email responses.
- KiwiRail – Auckland (email response).
- Forest and Bird – Wellington (email response).

A tailored questionnaire to aid stakeholder discussion was developed (refer to Appendix 3) based around issues raised in the project scope. Nine questions were asked, as summarised below:

1. General – nature of relationship with HRC, RPMP understanding and rating progress.
2. What they like about the RPMP – tools, approaches, processes.
3. What is not working in the RPMP or is surplus to requirements.
4. Specific questions – pests that pose the most risk and policy feedback on these pests.
5. What could be done differently?
6. How proactive their sector is on biosecurity issues.
7. What the future holds regarding biosecurity (for their sector).
8. Does the RPMP provide the level of biosecurity assurance the region needs?
9. Further comments and observations.

A summary of all survey feedback is contained in a separate report – refer to Appendix 4.

3. Meeting performance targets – Operational Plans and Annual Plans

3.1 Introduction

Horizons' Biosecurity Operational Plans contain several strategic level performance measures that need to be achieved on an annual basis. The performance measures differ between the pest plants and pest animals programmes and are, in effect, the Annual Plan Levels of Service reported to Council and made available to the regional community to inform them on matters of efficiency and effectiveness regarding biosecurity.

This section provides a high-level analysis of the performance measures used over recent years, slightly prior to and including the current RPMP operative period. It is useful to present this information as a pre cursor for the more detailed analysis to follow[6].

3.2 Pest plant outcomes

Pest plant performance measures are represented through the following:

- Exclusion pests - numbers of incursion response plans produced and acted upon.
- Eradication pests - the number of managed sites at zero levels, and comparisons with prior years.
- Progressive containment (mapped) pests – same targets as above, but only in relation to Council's active management zones for each plant.
- Biocontrol programme – Council support provided, reporting to Council and monitoring of releases sites (to determine establishment success of agents).
- Enquiries made to council – response times and general satisfaction with the service.

Table 2a following provides a summary of the last seven years of targets documented for the pest plant programme and the outcomes achieved. Several conclusions can be drawn:

- Response plans and actual responses have in general not been required, but when needed, one each was produced on time for two years running.
- Achieving increasing zero levels of managed sites for eradication and progressive containment plants, as stated, were met for the first three years (for eradication plants only), after which actual levels plateaued. This target was achieved, less so, for progressive containment pests. Overall, for both categories, comparisons between the last two years saw the percentage number of sites at zero density fall (data analyses and explanations are provided in the next section).

[6] Horizons' 2024-34 LTP included a review of levels of service and performance measures. There have been some recent changes as a result of this exercise.

- Biocontrol targets were met but these measures are essentially 'yes / no' responses. Staff stated that all monitoring was carried out according to performance measure requirements (refer to section 4.4.3 for more on biocontrol).

- Regarding enquiries, the timing aspects of the targets have not always been met but all enquiries had been followed up (refer also to section 6.2).

3.3 Pest animal outcomes

Pest animal performance measures are represented through the following:

- Possum control operation (PCO) areas – possum densities are maintained at or below a 10 per cent residual trap catch index (RTCI).

- Bovine TB 'roll-off' programme – that additional hectares of OSPRI controlled areas (once deemed to be TB free) are added into the PCO.

- Annual treatment of known rookeries carried out.

- Amenity pest management advice service provided - including enquiries made, response times and general satisfaction with the service (incidental to the RPMP).

Table 2b provides a summary of the last seven years of targets documented for the pest animal programme and the outcomes achieved. Again, various conclusions are drawn:

- Average RTCI results across PCO areas controlled in each year are well under the 10% target, ranging between 1.8% and 3.6%.

- OSPRI's transfer of TB areas into the regional programme saw large areas transition in three of the first four years. It is possible that Covid-19 affected year three transitions, while this measure was not applicable for the last three years, as no transitions to the programme were made.

- A measure around the number of rookeries treated doesn't readily inform readers if the treatment was successful (although acknowledging that this is difficult to calculate). Treatment of all rookeries in two years was less than 100 % due to access issues and landowner permissions.

- An amenity service was provided every year of the reporting period, although it is difficult to establish how useful this service was. However, it does support the PCO and rook work as enquiries come in through this means. A customer satisfaction survey would be useful.

Our assessment: Overall, several of the performance measures during the evaluation period were rather vague and output related (rather than outcome focused) which made it difficult to tell if the services provided were being delivered efficiently and effectively. They probably were but it is hard to gauge at this high level. The RPMP review provides an opportunity to further refine these, as a result of policy changes.

Table 2a. Pest plant outcomes over a seven-year period

Pest plants		Outcomes						
Performance measure	Target	Yr 1 17/18	Yr 2 18/19	Yr 3 19/20	Yr 4 20/21	Yr 5 21/22	Yr 6 22/23	Yr 7 23/24
Any exclusion category pest plants that are found in the region are promptly managed, with an initial response plan completed within two weeks and then enacted (if not enacted before two weeks).	Percentage where a response plan has been produced within two weeks (target 100%).	-	NA	Yes, 1	Yes, 1	NA	NA	Yes
	Number of response plans enacted with specified timeframes (target 100%).	-	NA	Yes, 1	Yes, 1	NA	NA	Yes
Number of managed sites at zero-levels increases for pest plants identified for eradication in the RPMP.	Overall percentage of managed sites at zero-levels (ZL) increases by 10% per annum, from the start date of the RPMP.	Target 59% Actual 58%	Target 63% Actual 77%	Target 67% Actual 84%	Target 71% Actual 83%	Target 75% Actual 85%	Target 79% Actual 86%	Target 83% Actual 83%
Number of managed sites at zero-levels increases for pest plants identified as progressive containment – mapped in the RPMP.	Overall % of managed sites at zero-levels increases by 10% per annum from the start date of the RPMP.	Target 58% Actual 64%	Target 62% Actual 78%	Target 66% Actual 73%	Target 70% Actual 73%	Target 74% Actual 74%	Target 78% Actual 75%	Target 82% Actual 71%
	Financial support	Y	Y	Y	Y	Y	Y	Y

Financially support the national bio-control agent development programme and report annually to Council.	Annual report to Council	Y	Y	Y	Y	Y	Y	Y
Monitoring of some released biological agents will be completed to assess establishment and host damage (using the national protocol).	20 assessment plots will be monitored	100%	100%	100%	100%	100%	100%	100%
Pest plant enquiries received are responded to within three working days.	95% of enquiries will be responded to within 3 working days		94%	95%	98%	97%	100%	100%

Table 2b. Pest animal outcomes over a seven-year period

Pest animals		Outcomes						
Performance measure	Target	Yr 1 17/18	Yr 2 18/19	Yr 3 19/20	Yr 4 20/21	Yr 5 21/22	Yr 6 22/23	Yr 7 23/24
Possum densities are maintained at/below 10% RTC in all existing and new possum control operations. To enhance production, biodiversity, disease protection, and amenity values.	<10% RTC	1.86%	3.6%	2.9%	3.0%	2%	3.6%	2.38%
All additional hectares released from OSPRI control are included in the PCO programme.	N/A	55,941 brought in	184,555 brought in	Not met	69,320 brought in	NA	NA	NA
All known rookeries are treated annually to reduce crop losses and damage.	100%	100%	100%	100%	100%	98%	100%	98%
Provide an urban/peri-urban animal pest management service to assist ratepayers with specialist advice and equipment. All enquiries responded to within two working days.	100%	100%	100%	100%	100%	100%	100%	100%

4. Progress on achieving RPMP objectives – pest plants

This section details the progress being made in achieving RPMP objectives in the pest plant programme. It covers the three highest priority programmes first, in the order they are listed in the RPMP. The programmes are: Exclusion pests, Eradication pests and Progressive Containment pests (mapped species).

A generic approach is taken to describe progress / achievements:

- ✓ Introduction;
- ✓ Data interrogation;
- ✓ Findings, including a summary table with each species' status recorded;
- ✓ Discussion / further observations; and
- ✓ Our assessment overall, including suggested matters to address in the RPMP review.

Other pest plants are then considered, e.g. unmapped progressive containment species, (clear land rules and good neighbour rules), a summary of progressive containment aquatic species and additional matters, e.g. biocontrol for pest plants and landuse change issues.

Note to readers: In tables 4 and 5, for some pests, there are differences in statuses and commentaries provided by Lambie Ecology (Appendix 2). This is because the data on its own does not always portray the real situation that is occurring. HRC staff have provided a more rounded assessment of each species in these tables.

4.1 Exclusion pest plants

Introduction

Exclusion pest plants are organisms known in other parts of the country but were not thought to exist in Horizons as at November 2017. The objective of the Exclusion Programme is to exclude 11 pest plants from the region and prevent them establishing and impacting on regional values. In 2023/24 the programmed expenditure was $32,000 (60% spent on staff time and the balance on contractor and activity costs). A surveillance plan is in place, outlined in Horizons Regional Council (2023). Prior discussion, at the October 2020 Strategy and Policy Committee (SPC), noted that none of these exclusion species had been found and that management was 'on track'.

Data interrogation

Exclusion plants are not managed through data. Response plans are created then pests managed to eliminate them or to bring them into long-term management. Comments made, including costs, are noted below where appropriate[7].

Findings

Table 3 summarises the current situation regarding progress in these species management, especially since the 2020 (SPC) report. Regarding five species highlighted in 'red status' (except Sagittaria), these were removed from the operational programme during 2023/24 for reasons explained below. Staff report that they are unlikely to have programmes renewed in the future unless there is a change in the current regime of management from MPI, or new tools become available.

[7] It was noted that a new finance system recently implemented made it difficult to retrieve prior invoices.

Table 3: Exclusion species summary

Species / status	Conclusions
Humped bladderwort	No control tools available according to NIWA, therefore dropped from programme.
Californian bulrush	Eradicated from one site in Taumarunui. Wider surveillance found this pest when controlling alligator weed. Targeting of effluent ponds and west coast estuaries.
Chilean needle grass	No known infestations in the region. Surveillance of dryland farms, however, is required. Targeted media campaigns reminding rural contractors of their biosecurity obligations. Horizons also supports an important CNG gravel extraction (pathway movement) project that HBRC is leading.
Heath rush	Very difficult to locate and identify. More likely to be discovered on DOC managed land, so active management to be undertaken by DOC, not Horizons.
Manchurian wild rice	MPI National Interest Pest Response (NIPR) target. Low risk of dispersal from Waikanae, Paeroa or Dargaville sites.
Noogoora bur	Social media campaign rolled out, particularly in Ruapehu District where cropping landowners should be on the lookout. Some sites are found in the Waikato region.
Phragmites australis	NIPR species and well controlled in Hawkes Bay, with little/no spread risk[8].
Saffron thistle	Same approach adopted as for CNG, as both are present in the same areas and affect the same land use type.
Sagittaria platyphylla	Has been found in two waterway systems in region, therefore RPMP objective has technically not been achieved. Plants have been found and actively controlled. Recommended to be moved to eradication category as control will be long term. Surveillance of garden/amenity ponds required.
Sweet pittosporum	Passive surveillance only carried out. Overall, low risk of moving into Horizons.
Tussock hawkweed	More likely to be discovered on DOC managed land, so active management to be undertaken by DOC, not Horizons. Impacts not fully known.

Further observations

Another highly invasive aquatic plant, fringed water lily (*Nymphoides peltata*) was discovered and eradicated in 2024, a good example of a plant not discovered when the current RPMP was created. The occupier agreed for control work to occur so there was no need to implement Biosecurity Act Sections 100V and 100W action[9].

Our assessment: Overall, excellent progress seems to being made in preventing these pest plants establishing, despite the challenges with this work. The ability to target new potential threats to the region is quite limited under NPD / BSA processes. Undertaking a partial RPMP review to include new species, or section 100V actions are the only ways. This aside, HRC could establish a more targeted active surveillance (not passive) programme for general pest plant threats. This could be implemented through a separate, dedicated contractor resource, with potential overlap in activities between neighbouring regions.

[8] Staff noted: April 2024 - *P. karka* is abundant enough to make *P. australis* rather irrelevant.
[9] Council may declare a small scale control programme for organisms outside of an RPMP. Control criteria must be met.

4.2 Eradication pest plants

Introduction

Eradication pest plants category has a strategic aim, to reduce the levels of infestation within the region over a specified time frame. There are 18 plants or classes of plants in the eradication category. Sixteen species have specific aims to reduce the known infestation to zero-levels (i.e. all known sites no longer have adult plants) by 2027, with the exception of Chinese pennisetum and woolly nightshade where the date to achieve zero-levels for all known infestations is 2037.

Data interrogation

The infestation inspection data for these plants can be tracked sequentially over time, providing a means to assess progress toward the above aims and objectives. A summary of progress for each pest is presented on the basis of the number of known sites moving toward zero-level and the change in the area of occupancy between July 2018, and June 2024. The analysis is independent of, and a slightly different approach to, that undertaken by staff for RPMP annual reporting. Through the analytical process, it became evident that this approach yielded different results compared to the staff report. However, the authors do not believe the differences materially affect the overall interpretation of progress to date[10].

Findings

Figure 1 shows the percentage of eradication species at zero levels, as at the 2023-24 year end, is 83 per cent, slightly lower than previous years.

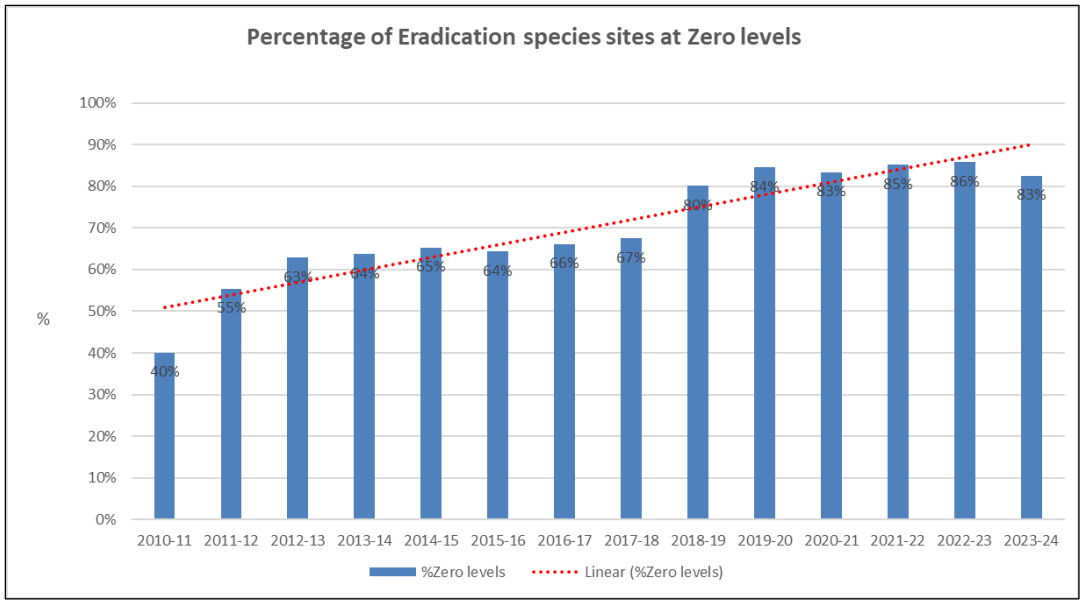

Figure 1: Eradication species (%) at zero-levels between 2010-11 and 2023-24. Source: HRC.

Table 4 summarises conclusions reached for each of the eradication species. It also compares 2019-20 zero-level data, as presented prior to council, with 2023-24 zero-level data, with discussion points following. Full analysis of these data is in Appendix 2.

[10] In reality, staff have had to rationalise the AMZ to fit the staff and funding resources available.

Table 4: Eradication pest plant species summary

Species	Conclusions	% of all sites at zero levels 2019-2020	% of all sites at zero levels 2023-2024
African feather grass	While there has been modest progress since the inception of the RPMP, ground has yet to be regained after a recent significant setback. DOC's programme not being fully completed has impacted this work, with continual reinvasion from the lower Whanganui River. With concerted effort, it is quite possible that this species can be reduced to zero levels within the life of the RPMP but might not be possible to achieve zero levels by 2027.	90%	88%
Alligator weed	It is quite possible that this species can be reduced to zero levels by 2027. Response to new infestations has been swift.	50%	80%
Arrowhead	The aim of the RPMP has been achieved, despite plants remaining at the Levin site. The task now is to continue surveillance and control in order to move this species to the Exclusion pest plant programme, although it will remain in 'Eradication' for some time yet.	100%	100%
Blue passion flower	The increasing trend in the number of new sites occurred around 2017-2018 and is likely a consequence of increased surveillance effort. It is unlikely zero levels can be achieved by 2027. However, once a site is discovered, it is responded to swiftly. With concerted effort, it may be possible to achieve zero levels by 2037.	98%	82%
Cathedral bells	The increasing trend in the number of new sites occurred around 2020-2021 and is likely a consequence of increased surveillance effort. It is unlikely zero levels can be achieved by 2027. It is difficult to determine whether this species can be reduced to zero levels by 2037.	76%	47%
Chilean rhubarb	Ground was lost in 2021-2022. However, there are indications that the programme is back on track to achieve zero levels by 2027, though this might be somewhat optimistic.	90%	89%
Chinese pennisetum	The programme is well on track to achieve zero-levels by 2037. Primarily rural focus with proactive farmer control.	45%	89%
Climbing alstromeria	The trendline fitted to the staff data indicates that the programme is well on track to achieving 100% zero levels by 2027. This might be optimistic, but not unrealistic if there is concerted effort to reduce the occupancy area.	25%	80%
Climbing spindleberry	Analysis supports the indication that the programme is on track to achieving 100% zero levels by 2027. However, a setback indicated for 2023-2024 may cause a delay in achieving this target. With concerted effort, it is quite possible that this species can be reduced to zero levels within the life of the RPMP.	76%	74%
Himalayan balsam	The longer-term trend remains optimistic, but indications are that zero-levels could be achieved by 2027. It is difficult to determine whether this species can be reduced to zero-levels by 2037, although it has a short seedbank life and recent discoveries through surveillance proved helpful.	83%	63%

Knotweed (Asiatic and giant)	Indications are that this species is still on track to be at zero-levels by 2027. However, this may be optimistic.	94%	94%
Nassella tussock and Mexican feather grass	Based on trends over the last three years, the indications are that it may be difficult to achieve zero-levels by 2027. However, trends are now tracking in the right direction, the levels of infestation are very small and it appears they are reasonably well contained. Infestations tend to come from urban and garden spread, so are found when plants are mature.	76%	82%
Purple loosestrife	The indications are that this species is unlikely to achieve zero levels by 2027 or over the life of the RPMP. Note that the level of infestation is very small.	82%	65%
Queensland poplar	The long-term trend is optimistic and indicates zero levels could be achieved by 2027. However, this includes a period of rapid increase in the efficacy of control at the beginning of the programme. Ground was lost in 2022-2023 and is yet to be regained. Based on the trend since 2018-2019, the indications are that zero levels by 2027 might be achievable, and that this species can be reduced to zero levels within the life of the RPMP.	78%	91%
Rum cherry	This is a single site with a couple of mature ornamental trees. The site is being monitored to check that spread does not occur and this appears to be the case. Achieving zero levels by 2027 depends on occupier willingness to have the trees removed.	100%	0%
Senegal tea	Based on current trends it is unlikely zero levels can be achieved by 2027. It is difficult to determine whether this species can be reduced to zero levels by 2037. Note that the level of infestation is very small.	75%	55%
Spartina	This species made a comeback in 2023-2024 after a five-year period of being at zero density. This new infestation is very small and could be managed to zero levels by 2027 with concerted effort, by DOC (with dedicated inputs and secured funding).	100%	0%
Woolly nightshade	Based on current trends, the indications are that this species is unlikely to achieve zero-levels by 2037. Control effort by land occupiers has essentially flat-lined.	85%	82%

Discussion

- Eight species are on track to meet zero density aims, arrowhead is almost there. For others there is cautious optimism but it relies on continued or increased funding and stepped-up surveillance efforts. Currently, these matters are largely unknown.

- Six species are identified as partially on track, with projected timelines now pushed out, but potentially still within the RPMP 2037 duration. Numerous setbacks have occurred with these plants (e.g. funding, time input, resources and increased infestation locations).

- Four species will very likely not meet 2037 targets and it is too difficult to determine yet when or if this may occur. Except for woolly nightshade these species are difficult to control.

The 'Palmerston North factor' is important. Palmerston North City and Feilding's urban area were previously under a community led programme but has been fully serviced by HRC since 2020. Staff have been filling the knowledge gaps which existed particularly around eradication species. This has increased some pests areas of occupancy (AOO) and reduced the percentage of sites at zero levels.

Prior analysis, presented at the October 2020 SPC, noted that 16 of 18 species were '*on track to reach the Plan eradication objective'* (being, nine likely to achieve objectives, seven had potential to but there were issues, while only two were not expected to be achieved). Their status four years on is not as rosy. Overall, eight species have seen their indicator status worsen, four have stayed the same (including purple loosestrife which was not on track for both periods[11]) and five have improved (including Chinese pennisetum which has gone from 'red' to 'green', indicating that landowner efforts and HRC collaboration have combined together well.

Our assessment: For the Council (and DOC) managed plants some signs are there that progress is being achieved. However, more effort and funding is needed for the majority of listed pests, which will likely have downstream impacts on being able to undertake other species control and management activities. Further, it seems that DOC has had to refocus its priorities, which has included drastic cuts to budgets. An example is spartina which has been low in abundance for some years but appears to be re-establishing. The eradication programme overall is probably too ambitious (with the current level of resources) and a better grasp on the full extent of infestations and effort is required.

Further observations

During research into understanding the philosophy behind the occupier-led woolly nightshade (WNS) and Chinese pennisetum (CP) rules for achieving eradication, staff were asked about the origin and effectiveness of this approach, as it is at odds with other eradication approaches (being council-led). Staff responses were:

- *The concept was based around sharing the load and ensuring that occupiers are invested in eradication outcomes, e.g. WNS is spread by birds, so it is highly likely that seeds will reappear. CP is a production pest and will effectively increase production costs if nothing is done, so this is a good motivator among farmers.*

- *HRC is involved in CP management as it's only found in the Whanganui River valley and populations need to be (and can be) highly suppressed. WNS, however, is very resource heavy and we are constantly surprised at the distance of bird dispersal, and town sourced garden dumping leading to new discoveries in outlying places. WNS is also low on peoples' radar, so motivation overall is poor.*

- *The idea of occupier led control is great in theory, but generally creates more work for staff. The time required to meet landowners, educate, enforce and audit the work is generally greater than just doing the work yourself. For every proactive landowner, met there are many more that will 'drag the chain'. However, there is some merit in*

[11] A case study of issues managing purple loosestrife was highlighted in Horizons Regional Council, 2020, paragraphs 11.4 to 11.12.

the approach as it is a great way to promote HRC's work. Using a joint-responsibility plant (like WNS) as a promotional vehicle for the RPMP (especially in a large urban area like Palmerston North) is useful as we can both promote the work but also put the onus back on occupiers so all the effort doesn't just fall back to Council.

Our assessment: We conclude that progress on Chinese pennisetum is well on-track to achieve zero density as it is limited in extent, not bird spread and farmers are well motivated to control it. Woolly nightshade, we suggest, is in the wrong category and it is recommended to move to Progressive Containment or Sustained Control (subject to a regional delimiting/mapping survey), full occupier control, with stepped up awareness campaigns followed by enforcement action (being HRC's input). Alternatively, there could be a mixed approach based on density/distribution – HRC led in very low-density places and occupier control in widespread situations.

4.3 Progressive containment pest plants - mapped

Introduction

The mapped Progressive Containment Pest Plants covered in this analysis are banana passionfruit; boneseed; Darwin's barberry, evergreen buckthorn; grey willow; moth plant; old man's beard; and contorta, dwarf mountain, mountain, and Scots pines. These species have the less specific aim of reducing levels of infestation within their respective management zones. While the general intent is to reduce these infestations to zero-levels at some time into the future, the primary focus is on preventing their spread.

Data interrogation

Refer to section 4.2 above on data analysis. The same approach, constraints and issues as noted for eradication pests were apparent for the mapped progressive containment species.

Findings

Figure 2 shows the percentage of mapped progressive containment species at zero levels, as at the 2023-24 year end, is 71 per cent. The graph shows that there has been progress towards reducing spread over the long term (i.e. that older sites are being reduced in extent, hence being contained). However, it also shows that this progress has plateaued since 2018-19, possibly as a result of the discovery of new sites.

What the graph doesn't portray is the effect of 'walking away' from sites within the AMZ for some species. For example, the programme is underfunded to meet the targets of the RPMP for old man's beard, boneseed, evergreen buckthorn and banana passionfruit and staff have had to prioritise which areas to work in within the AMZ according to the landscapes and values being protected.

Table 5 following summarises conclusions reached for each of the mapped progressive containment species. It also compares 2019-20 zero-level data, as presented prior to council, with 2023-24 zero-level data, with discussion points following.

A fuller analysis of these data is included at Appendix 2, contained in a separate report.

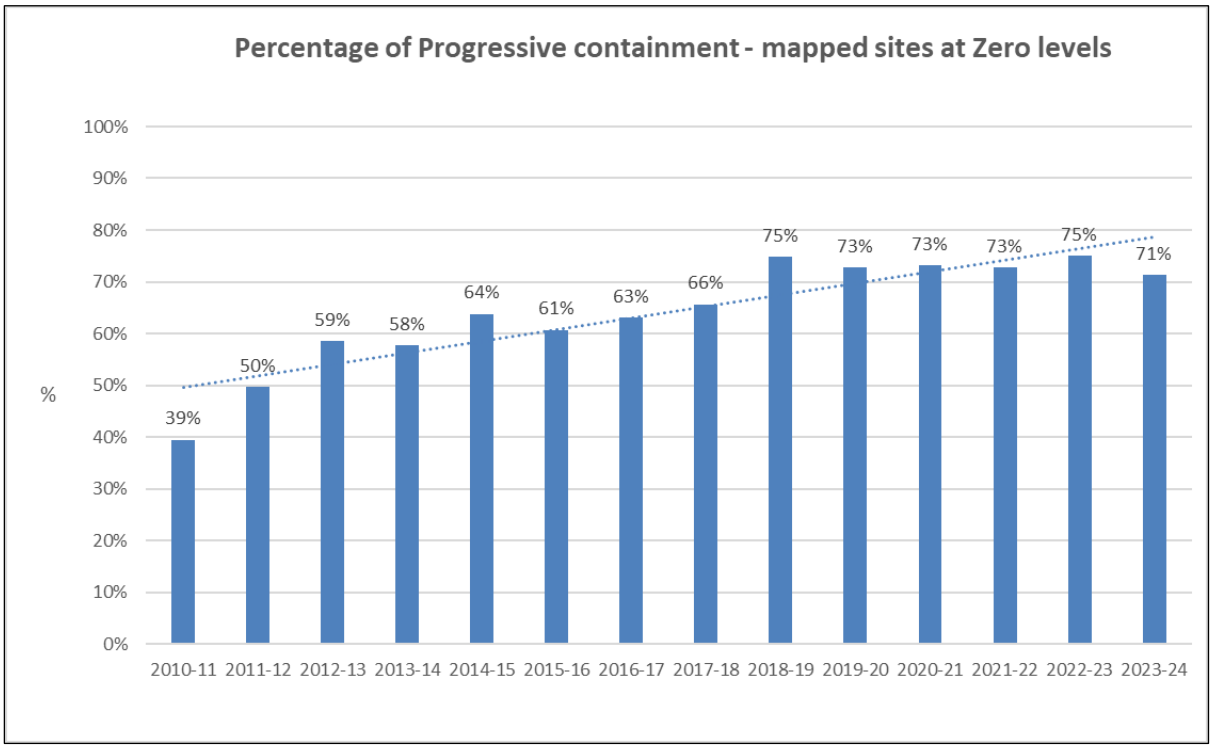

Figure 2: Mapped Progressive Containment species percentage at zero-levels between 2010-11 and 2023-24. Source: HRC.

Table 5: Progressive containment - mapped species summary

Species	Conclusions	% of all sites at zero levels 2019-2020	% of all sites at zero levels 2023-2024
Banana passionfruit	Despite the setbacks and fluctuations, the longer-term trend is positive. There is a consistent pattern of progressive control and containment after each setback. Even though recent setbacks are material, it is quite possible for the programme to regain lost ground by 2037 thus preventing spread.	68%	67%
Boneseed	The programme is not presently on track, although the long-term pattern is a consistent one of progressive control and containment after each setback. It is possible for the programme to regain lost ground by 2037 thus preventing spread. However, the southern Waitarere Forest infestation is unfunded and staff have rationalized the AMZ to match resources and what is realistic to achieve.	100%	88%
Darwin's barberry	The programme is presently making up for lost ground. The long-term pattern is a consistent one of progressive control and containment after each setback. It is quite possible for the programme to regain lost ground by 2037, thus preventing spread.	65%	67%
Evergreen buckthorn	Analysis indicates that the programme had been making progress despite setbacks having a material effect on the speed at which the occupancy is reduced. It was felt that this species could get back on track, thus preventing spread. However, increased surveillance has discovered large infestations in	75%	83%

	Horowhenua, Tokomaru and Palmerston North. The programme cannot be fully funded and the AMZ has been greatly reduced, so is not now on track.		
Grey willow	The programme has achieved 100% zero levels within the active management zone. There is potential for reinvasion from outside the active management zone and the job now is to maintain the zero level state over the life of the RPMP.	0%	100%
Moth plant	The programme is not on track due to a series of setbacks that occurred between 2021 and 2023. It is difficult to determine whether the programme will regain lost ground by 2037, but the recent reduction in occupancy suggests it is possible.	92%	75%
Old man's beard	Analysis indicates that the programme is making progress in some areas despite setbacks having a material effect on the speed at which the occupancy is reduced. However, progress overall is not on track. Large tracts of the Rangitīkei AMZ have been retreated from due to lack of funding for a full programme and staff have closed the buffer down to achieve zero levels protecting the Ruahine Range.	76%	75%
Contorta*	Programme is on track despite data analysis and the programme suffering several recent setbacks. There are now fewer overall sites due to amalgamation of several but AOO have increased as more rigour is applied to data. The exception is contorta control in Karioi Forest which remains an uncertainty due to the closure of two mills in the area.	70%	62%
Dwarf mountain pine	The programme is presently on track, despite the comparison between reporting years, and is expected to regain any lost ground by 2037. Data capture for this species was not ideal.	100%	33%
Mountain pine	The programme has achieved 100% zero levels within the active management zone. There is potential for reinvasion from outside the active management zone and the job now is to maintain the zero level state over the life of the RPMP.	100%	100%
Scots pine	Slow progress is being made to regain lost ground in terms of the percentage of sites at zero levels but little progress has been made to reduce occupancy. It remains possible to achieve zero density for this species by 2037.	38%	57%

**Contorta control considered in this analysis is work carried out on rateable land and not part of the Karioi Forest Zone programme of work.*

Discussion

- Four species are thought to be on track to meet RPMP objectives, based on current information available. Maintaining these situations will be the main focus.

- Four species are identified as being partially on track, with several identified as having had recent setbacks but with the ability to regain lost ground assuming adequate time and resources were provided. Banana passionfruit and Darwin's barberry control remain of concern due to current resourcing issues.

- Three species are unlikely to meet objectives, due to available funding, and their AMZs have been reduced.

Prior analysis, presented at the October 2020 SPC, noted that nine of 11 species in this category were on track to reduce their respective AMZs to zero levels. Two species (evergreen buckthorn and old man's beard) were unlikely to meet their objectives due to the number of sites increasing, requiring greater resourcing to achieve objectives. Little has changed for these two species in the last four years.

Further observations are made in relation to other matters affecting mapped Progressive Containment pest plant outcomes.

4.3.1 Active Management Zones (AMZ)

For each species managed in this category an Active Management Zone (AMZ) is defined within which the pest plant is controlled. The programme's aim is to contain over time these species back to the Good Neighbour Process Zones (GNPZ) identified, to reduce adverse effects on the environment. Coordination with TLAs and central government agencies is a key component of success for pests listed in this category. HRC assumes management for these pests on rateable land, while relying on the Crown and territorial organisations to undertake control on lands they respectively manage.

The SPC report in 2020 noted that:

"Many of the target species are managed towards what are aspirational goals, however community support and a desire to contain the more damaging risks to the region keep these programmes going. During the development of the RPMP, Horizons modified AMZs for a number of species due to the adjusted work programmes of other agencies. In future, we may need to reconsider where we work based on the inability to control spread and this would impede our ability to achieve the Plan goals".

In the last four years, while a lot of good work has occurred, progress on working towards the RPMP objectives has slipped. Candid staff feedback notes:

- *We are being successful (i.e. suppression is achievable) with many of the sites managed. The difficulty is that more sites are occurring in the AMZs. It is now appreciated that several AMZs were drawn with haste and limited knowledge and that there are now tracts of land which are realistically uncontrollable.*
- *The need to be able to fully service (i.e. people time and funding) AMZs. Even though some areas have been reduced there are still many unserviceable areas. Survey and control of some species (e.g. OMB, Darwin's barberry, banana passionfruit, and evergreen buckthorn) is beyond current staff resources and contractor funds. Staff spend their time controlling known sites, with most having programmes on 2-3 year revisits. This means they cannot prioritise finding new sites within known areas, as they are too busy working on the sites known about. Plants remain undiscovered for long periods so when found they create a lot of extra work and the cycle continues.*
- *In many AMZs work is strongly compromised by DOC[12] not doing their work alongside them (and staff find DOC estate increasingly not managed at all). Weeds don't*

[12] Readers should note that this dissatisfaction with the Crown, particularly DOC, is a reoccurring theme throughout this evaluation. Section 7 summarises all feedback received in one place, instead of repeating the concerns in these sections.

respect boundaries and to be successful in this programme staff need to take a landscape scale view, commit to their programmes and have other agencies do their work in a timely manner.

Our assessment: The RPMP needs to reflect reality. It must be achievable, costed and funded appropriately and reflect the changing landscapes of organisations. There has been increasing uncertainty around the cost and effort required to contain these mapped pests, coupled with partner agencies considerably reducing their inputs into programmes which had been agreed prior. These situations will necessarily require an overhaul of the AMZ/GNPZ concept, particularly answering the 'why' (are we doing this work), fully delimiting infestation extents and densities and establishing the 'who' (is responsible for undertaking control work)?

4.3.2 Approved Management Plans (AMP)

The intent of having AMP (refer RPMP, s. 4.9) is to facilitate and better align annual pest plant control by the public agencies. HRC has AMPs in place with all seven TLAs and with NZTA and Kiwi Rail. Table 6 summarises AMP development. AMPs rely on ongoing relationship building and review and maintenance. Again, staff feedback on progress to date has been frank:

- *AMPs work to pragmatically manage pests on reserves and transport corridors. However, there are many instances of expectations not being met and the relationships are more one-way than a shared and appreciated approach to dealing with the obligations the RPMP imposes on land managers.*

Table 6: Approved management plans developed – years 1-6. Source: HRC.

	No. issued (new)	For which pests?	No. completed (EOY report received)	Comments
Year 1	Building template	NA	NA	-
Year 2	5	All	8	-
Year 3	7	All	6	Added Kiwi Rail and NZTA, no Rangitikei DC (staff change) no PNCC (staff change)
Year 4	7	All	NA	No PNCC, otherwise all as expected
Year 5	5	All	NA	No Rangitīkei DC (staff change)
Year 6 (22/23)	8	All	NA	No PNCC, set up required
Year 7 (23/24)	7	All	NA	No PNCC or Ruapehu DC, staff change and Horowhenua, staff illness

- *There appears to be a general lack of understanding about the obligations and requirements of the RPMP for the parties involved. The attitude seems to be that the work requested of them is optional and can be carried out if and when they choose.*

Many landowners have anecdotally said they've given up complaining as the work is not done proactively, and usually done poorly reactively.

- *If considered more seriously it would make their jobs easier. However, pest plant work is often seen as a lower priority and the multiple contractor chains of command (i.e. the devolved contractor to sub-contractor model) is complex and inefficient to work through (especially with NZTA[13]). This model is not conducive to effective or efficient control (i.e. the mentality appears to be "if they can't spray it from the cab of the truck, it isn't done").*

- *There is a lack of ownership of pest plants in these corridors, as the organisations are mostly focussed on the pavement/rail lines, vegetation sight clearances, signage and drainage. The rest of the transport corridor (verge areas) can be large. Also, road works and maintenance are carried out in a way that in many cases promotes the growth of weeds which should be controlled (e.g. gravel spreading, mowing).*

- *It is acknowledged that there are structural challenges within agencies to represent the many land managers within their organisations; parks/reserves, water treatment areas and the roading managers all needing to be part of AMP conversations. Many are also understaffed and obtaining information, and timely reporting, is challenging.*

Our assessment: The AMP concept is sound, and it is acknowledged that it takes a lot of staff energy and time to make them work across the nine entities. Whether they continue in the current form is up for discussion. An alternative is stepping up enforcement with these agencies and ensuring that non-compliance consequences are written strongly into each AMP (e.g. that multiple Notices of Direction could be issued for each location of a pest where control is not happening, as agreed prior[14]).

Horizons could actively do more in this space too, which will take more time and effort, including greater engagement at political/executive levels; establishing an annual RPMP stakeholders forum (and include the nine agencies as key members); model the successful Manawatu District Council approach with others; scheduled network drive-overs with the right staff to document agreed works prior to annual AMP submission and, overall, more education (weed ID workshops and explain the mandatory nature of RPMPs and consequences of inaction). Finally, in our opinion, AMPs will never fully work as intended unless there is more 'enforcement teeth' to them, to ensure they become an integral part of transport corridor management.

[13] A recent experience saw a sub-contractor of the sub-contractor of the contractor to NZTA go with staff on a road survey to identify sites that needed control. Discussion revealed that the work was "outside the scope" of the main contract, so special work plans and budgets would need to be put in place to cut down one 3 year old contorta 2.5m from the road. Three months on, the wilding pine was still very alive.

[14] Staff advise that for Kiwi Rail alone there are hundreds of sites which would trip good neighbour rules which are not done, despite being consistently pointed out over a number of years.

4.3.3 Karioi Forest Zone (KFZ)

Introduction

The statuses of wilding conifers in the Plan were summarised in section 4.3. HRC assumes control on rateable land in the AMZ and Crown agencies are responsible for control on lands they manage. In addition, the RPMP contains specific rules for occupiers of the Karioi Forest Zone - to destroy named species at time of harvest, maintain zero levels in these areas and in wetland/stream margins, inspect certain areas regularly and provide annual reports to HRC.

Ernslaw One Limited (EOL) is the current occupier of the forest and is responsible for all forestry operations, including the management of wilding conifers (and is accountable for meeting the requirements of the RPMP). EOL actively controls wilding conifers through a 10-year plan (Williamson and Caldwell, 2022) and costs of control come off rent paid to iwi owners. Although much work remains to be done, the various parties have expressed satisfaction with progress to date.

Ngāti Rangi are the iwi who hold mana whenua over the majority of Karioi Forest. Following their Deed of Settlement with the Crown in 2018, Ngāti Rangi became majority owners of Karioi Forest. In the future, Ngāti Rangi may opt to occupy the land and therefore will be responsible for managing the wilding conifer control programme as it stands. Ngāti Tūwharetoa hold mana whenua over a 950-hectare area in the north-east of the Forest and shares the same wilding conifer management issues as Ngāti Rangi.

Discussion

As land is progressively harvested (approx. 350 ha. p.a.) it is handed back to iwi. Some 1,500 ha. of 11,500 ha. have already transitioned. Ngāti Rangi have expressed the wish to not be subject to the KFZ rules. A review of the Plan is requested due to the changing environment, mostly as a result of their Treaty of Waitangi settlement. Also, Ngāti Rangi (and Ngāti Waewae) have no revenue streams to control contorta pine and essentially see the trees and resulting generations of seedlings as being a Crown legacy issue to address. Adequate funding remains the biggest issue to address, on an annual basis. Longer-term funding, locked in, is required.

More recent and serious concern surrounds the Karioi Mill closures at Tangiwai (October 2024) and a potential departure of EOL from Karioi Forest if they decide not to sign up for the next rotation of pine forest (i.e. there being no processing plant to supply logs to). This would have significant implications for the *Pinus contorta* eradication project.

Our assessment: The responsibility of Ngāti Rangi and Ngāti Tūwharetoa as forest owners may become so onerous that the good work achieved in contorta control will be seriously compromised. There needs to be some urgent consideration of future contorta management options along with a review of the suitability of current RPMP rules in light of Treaty settlements, the continuous transfer of harvested forest compartments back to iwi and now the closure of the mills in the area.

4.4 Other pest plant policy/operational considerations

This section covers other (lower priority) pest plant management activities. A similar format as used prior is followed to describe the situations found, provide an assessment of progress and to identify potential points to address.

4.4.1 Progressive containment pest plants – unmapped production species

Introduction

This grouping includes 10 species, generally pests of productive land, which are managed via both Clear Land Rules (CLR) and Good Neighbour Rules (GNR). While they are generally widespread, some parts of the region are clear of these pests, and it was seen as desirable to keep them clear. The clear areas were not able to be reliably mapped at the time of Plan development, hence the name for this group. Since the Plan came into effect Horizons has recorded very little activity under the clear land rule. Boundary control issues are managed by GNR, essentially based on complaints received, and is similar to the previous Strategy's boundary rules. These too have been seldom used. The 2020 interim report to Council noted that these unmapped pest plants were on target to meet their RPMP objectives.

Data interrogation

Little useful data exists except for recent summaries provided to the Integrated Catchment Committee (ICC). Table 7 shows that very few complaints were received and actioned, and even fewer clear land notices issued and actioned, over the last five years. Actions were required mostly for tutsan and gorse on private land and other species along roading corridors, such as blackberry and broom.

Table 7: Summary of unmapped PC compliance activity – last five years. Source: HRC.

Year	2019-20	2020-21	2021-22	2022-23	2023-24
Boundary complaints received and actioned - GNR	7	8	11	14	20
Required to clear notices issued - CLR	1	1	3	2	1
Notices of Direction (NOD) issued – s.122 of the Act	0	0	0	1	0
NODs resolved	1	0	2	3	1

Findings/discussion

The 'unmapped pest plant' designation is Horizon's approach to pest plant management rather than using the Sustained Control category. It is a unique policy which isn't found anywhere else around the country in RPMPs. However, the GNR rules have been only lightly used over the period, although they are useful as a backup tool to protect proactive occupiers from neighbours who are less inclined to undertake control work. The wording of the rule has

caused some confusion within the Pest Plant Team. For example, it could unfairly favour a smaller occupier (with land under 4 ha.), as they would not technically have to be a "good neighbour" even if they are causing issues for their larger (over 4 ha.) neighbour. However, if the situations were reversed the larger occupier would be required to undertake work. This seems counter-intuitive as the rule is intended to protect productive land, greater than 4 ha.

The CLR has not been used often in rural land (although it has been in some urban areas). At the time of its development, it was proposed to use the rule to suppress tutsan in the mid-lower Whanganui River catchment. The aim was to 'nip issues in the bud' to stop tutsan, and other species, spreading to new locations. The reality proves more difficult as it relies on staff being in the right place at the right time. Staff reported that they have used the CLR for tutsan and gorse in other areas, but usually ended up doing the actual control and using the rule as the excuse for doing it. Going through enforcement of the rule was seen as being counterproductive with regards to landowner relationships.

Our assessment: The above examples highlight the conundrum between staff being fully hands-on undertaking control versus greater occupier control of these pests and enforcing rules. It is our view that the level of, or willingness for, enforcement action is the issue that should be addressed (politically and operationally) as opposed to changing the rules. We believe the fallback role of this category is required, as there is no other mechanism for externality issues to be addressed between neighbours. Also, the clear land rule concept is sound and we see no need to remove it. Likewise, the GNR process is rather 'clunky' but the philosophy around it is also sound. The issue of occupiers being over or under the 4 ha. threshold requires reviewing. An increased enforcement regime is suggested. The Biosecurity Act and the Horizons RPMP contains robust processes to support this. An alternative view is that these pests may be better moved to Sustained Control or Site-led.

4.4.2 Progressive containment pest plants – unmapped aquatic species

Introduction

Eelgrass, egeria, hornwort, lagarosiphon, and reed sweetgrass are part of the suite of unmapped pest plants, grouped in the RPMP on the basis that they are managed in the same way for the same objectives. Their distributions cannot be mapped with any certainty (and this has not been a priority since). The objective is to progressively contain and reduce sites across the region. Three aims are noted, with aspirations to control new incursions '*where resources are available*[15]'.

Data interrogation

No useful data exists to identify whether the objectives for this grouping are being met. There is good data for other aquatic plants, e.g. an incursion of Sagittaria[16]. Initial knockdown was successful however it is too early to tell if the sites are eradicable. There was also one recent (2023-2024) bladderwort record (also in the 'exclusion' category) and it is also too soon to tell if eradicable. There are no other data for the five named pests.

[15] Costs of intervening depend on the water body size, ownership, infestation size/physical location, available tools and having experienced contractors.

[16] However this pest plant sits in the 'exclusion' category but may be moved to 'eradication' in due course.

Findings

The first evaluation of overall progress in 2020 noted that the five aquatic pests had a low likely hood of achieving Plan objectives:

'Eradication of aquatic weeds at sites is difficult to achieve due to late discovery and low probability of success. There are challenges with control operations in freshwater environments including cost and restricted methodologies available for use in aquatic environments'[17].

Four years on, the situation has not changed. Key measures such as collaboration with others (principally DOC) which has not occurred, and feasible biocontrol options remain elusive. Advocacy / awareness activities appear to be low key and while there is a non-dispersal rule for these plants, no compliance monitoring action has occurred.

Our assessment: We question listing pest plants in the Plan for which there is little or no ability to effectively manage (contain) them, especially for species where HRC's key partner is absent. In the upcoming review this grouping needs to be reassessed. One option is to drop those that are essentially issues for the Crown to manage (along with pest fish). Another option would be to list them as 'organisms of interest' on the basis that if anything changes in the ability for them to be controlled then at least they are on HRC's radar (but they would have to be reinstated to the list again through BSA processes). A third option could be to retain this grouping in the RPMP, but in the Sustained Control category for sections 52 and 53 of the Biosecurity Act application to their management (e.g. to make it an offence to sell, propagate, dispose of them as named pests). A specific non-dispersal rule, as currently written, would further reinforce their inclusion.

4.4.3 Additional matters

Biological control

Two LTP/Annual Plan performance measures relate to biological control (biocontrol) of pest plants, with reports required for council and monitoring to be carried out at 20 assessment sites. However, biocontrol is not specifically mentioned in the RPMP other than being one of a suite of principal measures (under service delivery) to assist achieving some objectives. More detailed information is contained in RPMP Operational Plans – expenditure for 2023/24 was $190,000 (e.g. covers agent releases, contribution to national collective and staff time).

It is difficult to assess progress on this initiative or the value added to the region from the investment made, other than anecdotal knowledge of the authors from prior experiences working closely in this programme. No data were forthcoming, but staff advised that 'w*e have floating assessment sites depending on the maturity of the release programmes. Some of the sites are not enduring. It started with broom gall mite assessments but we're agile and release a lot of agents. However, without more staff resources we only monitor various locations but ensure we keep [reporting on] performance measures up to date. This is about all staff can do to maintain this level of investment.*

17 Horizons Regional Council, 2020 (paragraphs 13.11 – 13.13) highlighted the example of hornwort found in Lake Namunamu and the costs and difficulties involved.

Our assessment: Biocontrol, while not specifically a key part of the RPMP 'rule-book' approach, could be afforded higher profile due to general interest and the significant council input into the national programme over many years. This profile lift could either be within the RPMP itself or a supporting Biosecurity Strategy document or statement. Other councils have a dedicated contractor resource (not full-time) to manage biocontrol, and there are models around that could be considered. Having a more robust science strategy around monitoring the efficacy of bio-control agents once released is also suggested.

Land use changes and implications for RPMP work

While changes in land use are ongoing across the country, a notable increase has occurred in Horizons with the conversions of pastoral farms to plantation and permanent (carbon) forestry (Figure 3). These forests mostly comprise planted radiata pine, providing suitable habitat for possums and potential source areas of pest plants. Other land retirements and riparian fencing, where grazing is removed, also create more weed friendly areas.

Land use change (small and large scale) is already having a large impact on HRC programmes[18]. This type of land use change will see species that were relatively easy to control become more difficult, with a reduction in grazing pressure, access becoming restricted and not being able to use some tools such as aerial spraying. This also greatly increases the areas staff have to survey, which puts a further strain on resources. There seems to have been little, or no thought given to these issues when retirement/landuse change policies were enacted and consents granted. In many cases it will be too late to prevent future issues occurring.

One solution could be that control of some pests needs to be put back on to occupiers especially where they are causing issues for areas that are presently clear. Without policy/rule changes, and as this large scale land use change keeps happening, Horizons will not be successful with achieving the goals of the RPMP.

While carbon farming is probably the biggest exacerbator of this issue, it isn't limited to this sector, or to the scale that they operate at. Some operators have been engaging and are now aware of the situation, as they were naïve to many issues prior. However, the operators don't have long term strategies on how to deal with pest plants at scale, and once the pines get older it will be nearly impossible to obtain physical access through them.

Our assessment: This is a key issue which already sees whole properties being planted up with little or no access or thought for pest control. Over time it will become impossible to undertake pest plant control (and expensive for possum control) and the region will end up with intractable infestations of many RPMP weeds. The RPMP will need to be amended to create new rules specifically for these types of land use changes, where grazing ceases, and impose mandatory Approved Management Plans on occupiers in situations where new forests are established.

[18] As an example, in the Tararua District, often the only bit of un-grazed land was the strip of TLA owned trees above or below a road. These strips often had banana passionfruit (BP) growing through them, but the farm land usually did not. Now these farms have all converted to carbon farms, and the BP is spreading into them rapidly. Staff do not have the resources, time or techniques available to appropriately survey these blocks, and therefore will fail in the goal of eradication of these species within AMZ's.

The sensible process is to ensure these management plans are given effect prior to the land being planted. Conversations need to be urgently had where wholesale land use change occurs, and prior work was being funded by ratepayers.

Figure 3: Landuse change evident with marginal hill country block recently planted in pines, Raetihi-Pipiriki Road, September 2024. Photo source: BBSL.

5. Progress on achieving RPMP objectives – pest animals

This section details the progress being made in achieving RPMP objectives in the pest animal programme. It covers four species, or groups of species, in the order listed in the RPMP (wallaby species, rook, possum, rabbit). A same generic approach as for pest plants is taken to describe progress and achievements:

- ✓ Introduction;
- ✓ Data interrogation (where data exist);
- ✓ Findings, including a summary table with each species' status recorded;
- ✓ Discussion / further observations; and
- ✓ Our assessment overall, including suggested matters to address in the RPMP review.

Other pest animal considerations are made in relation to the amenity pest service provided.

5.1 Exclusion pest animals – wallaby species

Introduction

The objective of the Exclusion Programme is to exclude all wallaby species from the region and prevent them establishing and impacting on regional values.

Data interrogation

No data exist as there are no established populations. Quarterly reports are made to Council, and also to MPI. Comments below include noting surveillance costs where appropriate.

Findings

Wallaby species	No infestations have been detected, although there is concern over increased potential sightings in the region and range expansion occurring in Waikato and Bay of Plenty regions.

Horizons is a partner in the National Wallaby Eradication Programme - Tipu Mātoro. Between September 2019 and June 2024 at least five dog searches were undertaken (Mangaweka, Ongarue, Dannevirke and Whanganui, and Pipiriki/Jerusalem prior) using contractors with certified wallaby detection dog teams. Costs to Horizons have been approximately $22,000. If a verified population of wallabies in the region was identified, MPI would bear the costs of any control operation. As of April 2024, MPI was developing a more supportive programme for regions (subject to funding availability).

Our assessment: Excellent and timely efforts are being made to prevent wallabies establishing in the region. Promoting the adverse impacts caused, if they were to establish, is key along with encouraging reporting of any sightings as soon as they are seen. During 2023/24 DNA work confirmed parma wallabies occurring in the Bay of Plenty/Waikato regions. The next RPMP needs to include all wallabies found in New Zealand to be excluded from the region, currently the RPMP only refers to dama and Bennetts wallabies. Note also that their Latin names have also changed or are different to just *Macropus* species.

5.2 Eradication pest animals - rooks

Introduction

The objective of the Eradication Programme is to eradicate all breeding rookeries from the region and progressively contain or reduce rook numbers and effects on regional production values. The aim is to have fewer than 50 active rookeries by 2027 and zero density of breeding rookeries by 2037. Rookeries are all located south of Mount Ruapehu and mostly in the Tararua district. A map of the most recently treated (and historic) rookeries is shown at Appendix 5. The annual rook budget has been around $187,000 including staff salary costs.

Data interrogation

Table 8 below shows annual rookery control activity for the last seven years, depicting treated rookeries, the numbers of nests and a nest/active rookery ratio[19]. The trend in progress over this time is difficult to establish as the number of rookeries treated has varied. However, the last year of control (2023-24) saw a big reduction (72, from 190 prior). Staff advised that this number has further reduced to 54 known active rookeries in 2024-25. These data suggests that rook control is on target to be below 50 rookeries in three years' time, provided the current levels of decline are maintained.

Historical context is also important to illustrate the successes had over time. Figure 4 shows a dramatic reduction in active rookeries and nests since 2005, and especially since 2020 when increased funding allowed for second flights/treatments to occur[20].

Year	Active rookeries	Active Nests	Nest / Rookery
2017	135	664	20%
2018	152	678	22%
2019	94	342	27%
2020	138	491	28%
2021	116	289	40%
2022	190	504	38%
2023	72	316	23%

Table 8: Active rookeries and nests treated. Source: HRC**.**

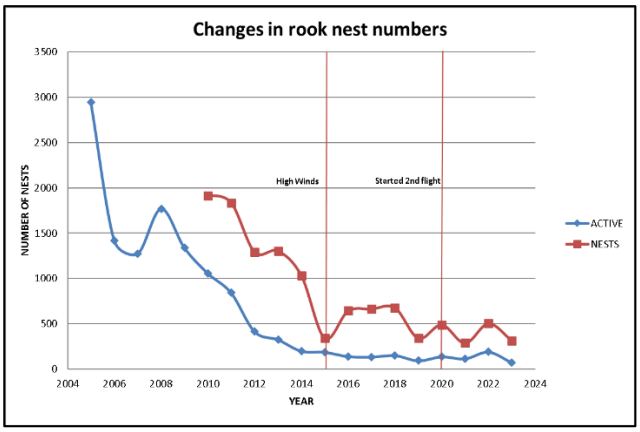

Figure 4: Changes in rookeries and nest numbers, 2005 – 2023. Source: HRC.

Findings

Rooks	Based on data supplied and staff feedback it appears that progress in eradicating rookeries (to the 2027 objective) is well on target.

[19] It is not immediately clear the value of the nest/active statistic.

20 A 'blip' in the graph for 2015 is associated with high winds making control difficult that season.

Discussion

At the current state of 'eradication progress' staff, when questioned, were not sure of the value of undertaking an annual rook census, as the active nests (nests with rook pairs) versus nests with a single male provide enough evidence of progress. Similarly with documenting crop damage by rooks, it was felt unnecessary at this stage in the programme. Staff further advised that control costs were expected to reduce over the next two years and then an evaluation of next steps would be considered. The general feeling of staff and contractors is that "… *we are starting to see a big decrease in active sites with a number of usual strong-hold rockeries not having birds or nests present".*

Regarding new or different approaches, staff intend to target rooks with methods other than aerial nest treatment to try and eradicate areas with small numbers of rookeries that are (presumably) all males but require inspecting every year to confirm or otherwise. Drone technology has been investigated but currently has limited usefulness. The use of eDNA for such a mobile animal would have to be quite targeted to be useful. DNA sexing ratio work has been discussed and will be considered in the future when a good ground control outcome occurs and rook bodies can be recovered. The most useful technology may be GPS tracking of captured birds to better understand their distribution patterns. Data is also collected to help target known sites for control, such as walnut trees, oats and pea crops.

Our assessment: Rook control is on target, chiefly on the back of recent successes. Pressure needs to be continued including the trialling and adapting of new technology when opportune, especially the possibilities around GPS tracking if that technique becomes available. Of most benefit will be continuing, and stepping up, support for the North Island inter-council rook forum and essentially liaising more with neighbouring councils that manage rooks, e.g. Hawkes Bay, Waikato, Wellington and to a lesser extent Bay of Plenty. Shared knowledge and database approaches (e.g. through the proposed 'Rook Dashboard' development) is paramount in the fight against rooks. It may be time to consider developing a National Rook Management Strategy[21] instead of relying on numerous regional efforts which is not the most efficient or effective way to manage pests with much commonality across the country.

[21] Pers. comm. Juliet Brebner, BOPRC Biosecurity Officer (terrestrial animals and plants), September 2024.

5.3 Sustained control pest animals

5.3.1 Possums

Introduction

Possums are widespread throughout the region but their current densities have been kept in check for 30+ years by a successful regional possum control programme and the national bovine tuberculosis (TB) control programme managed by TBfree NZ Ltd through OSPRI (and the Animal Health Board prior)[22]. It is a credit to Horizons that they were early adopters of the 'maintain the gains' philosophy of the former TB management programme's transition to regional control, to ensure possum control remained ongoing as densities were very low in many places. It was never going to be cheaper or more efficient than to carry on with possum control as TB work was completed in areas, but for a range of regional benefits rather than primarily animal health purposes.

This history is reflected in the current RPMP policy, the objective of which is to control possums across the region to reduce adverse effects on economic well-being and the environment. The aim is to control possums on rateable land through the Horizons' Regional Possum Control Operation (PCO) programme and maintain possum densities below 10 percent regional trap catch index (RTCI), or equivalent measure, for the lifetime of the Plan.

The PCO comprises 153 operational areas totalling 1.57 million hectares. Appendix 6 shows the entirety of the PCO programme (first map) followed by the operations undertaken over the last two years. There are still OSPRI funded TB control operations in the region, targeting possums. As the disease is progressively controlled, these areas too will transition into the PCO[23]. NZDF has a separate possum control programme operating across its own lands as access and safety are major issues. This programme is not currently aligned with PCO work.

Possum control is undertaken by a mix of staff (the Regional Response Team) carrying out 70-75% of work, with the balance by external contractors (Figure 5). Work is carried out on an inputs basis on an approximate cycle of once every 18 months to two years and trend monitoring is carried out every four years for each PCO area. A small number of contractor audits are carried out, along with low key advocacy and education programmes. In 2023-24 the PCO was budgeted at approximately $4.5M, including monitoring and some infrastructure costs, making this by far the most expensive biosecurity programme undertaken in the region.

Figure 5: PCO signage from Horizons contractor in the Raetihi Pipiriki area. Photo source: BBSL.

[22] At its height OSPRI's TB programme in Horizons covered 400,000 hectares. A phased withdrawal of operations, once TB freedom was achieved, was part of the long-term plan and transition into the regional programme where councils agreed.
[23] No ex-OSPRI programmes were eligible for inclusion during 2023/24, but were anticipated to be for 2024-25.

A GNR exists (at least on paper) for occupiers of non-rateable land (e.g. DOC managed PCL) and occupiers who opt out of the PCO treatment regime, usually through denying access for control. A nominal 200m boundary rule applies for these occupiers to undertake their own control (to achieve the 10% RTCI target). Having Approved Management Plans in place, as agreed with HRC, are alternatives to the GNR.

Data interrogation

Table 9, summarises the last six years of PCO operations, showing the number of PCOs monitored each year and average RTCI results, to gauge success against the RPMP targets. The monitoring confidence levels (plus or minus) are also shown. When averaged results are (graphically) compared against the 10% RTCI objective (Figure 6) this target is easily achieved.

Year	Monitors each year	Average yearly RTCI	Confid. levels (+/-)
2018-19	38	3.1	1.1
2019-20	53	2.8	1.1
2020-21	36	3.0	1.2
2021-22	39	2.1	0.9
2022-23	39	3.6	1.2
2023-24	35	2.4	1.02

Table 9: RTCI monitoring and averages achieved, 2018/19 to 2023/24. Data source: HRC.

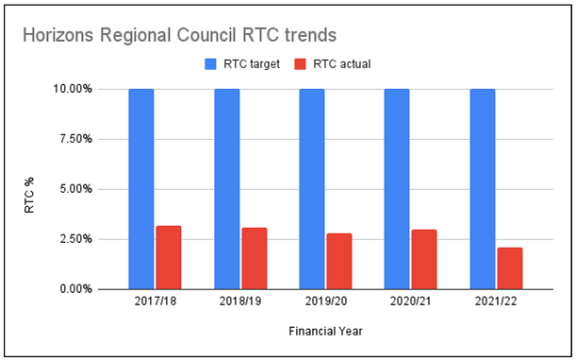

Figure 6: RTCI averages 2018 – 2022 against the 10% RTCI target. Image source: Place Group.

Findings

Possums	The RTC averages are all well below the 10% RTCI for the evaluation period and on the face of these data the programme is well on track. We believe the PCO can be improved and better aligned, and therefore requires review.

Around 250 separate monitors have been carried out to determine possum densities over the last six years. Assuming these have all been carried out following national protocols, 96% of areas recorded below the 10% target, with many well below that figure. This is an excellent result. On only nine occasions during the evaluation period were individual PCO area monitoring results in excess of the 10% RTCI (ranging from 10.7% to 22%).

Discussion

The long-standing possum control work is admirable. Staff reflect that the PCO is a 'simple' model to implement, that the 10% RTCI target is adequate, and overall, the programme is well received across rural communities. However, although the programme has been reviewed since its development and implementation (Gormley and Warburton, 2018 and Latham, Warburton and Latham, 2020), it is a 'big budget item' for Council and it is timely

that a more strategic review be carried out (before or as part of the full RPMP review) Operational approaches also should be reviewed (including recommendations from the 2018 and 2020 reports) to ensure it remains valid and, importantly, cost effective for the future. A number of observations and suggestions are made:

- There seems to be no close links of the PCO to Predator Free 2050 Ltd aspirations for landscape scale predator control despite many commonalities. The PCO approach, and others like it in the North Island, are fore-runners of PF 2050 programmes. Currently, PF 2050 Ltd does not support any large scale projects in the region and we wonder why this is.

- Further, on biodiversity values, the 10% RTCI is easily reached, and bettered in many PCO areas, every year. At this level possum control achieves conservation benefit for fauna and flora (e.g. general forest health is improved), while some species require much lower RTCs (e.g. mistletoe and bats). It would seem logical for Council to strive towards lower densities over time[24], particularly in high value places, to provide for even greater benefit (i.e. return on investment). It would be a more complex programme to operate, and potentially more costly, but there may be other spinoffs and collaborative possibilities, for example with PF 2050 Ltd.

- It is apparent that the GNR approach is neither effective nor practicable to administer and inaction has left 'gaping holes' in the PCO which undermines the integrity of the whole programme. Possums can wander many kilometres over consecutive nights therefore the 200m boundary distance of the GNR defies biological reality[25]. Also, DOC's absence from the programme in general has created large reservoirs of possums (from PCL) to continually reinfest areas. Farmer stakeholders have voiced concerns that by not including DOC managed land in PCOs this may give rise to TB potentially reoccurring in some areas in the future.

- Regarding occupiers opting out and the non-treated PCL, staff note that these situations will be having 'some effect' on the overall programme but they are not measured. GNR situations are not tested or monitored and staff suggest that enforcing the GNR could 'backfire' on Council as they do not have the resources to treat/cover the land, e.g. in the case of the DOC land much of it would be considered suitable only for aerial control (in the interests of achieving cost efficiencies). The question of adequately controlling possums (and the proliferation of wild ungulates) on Crown land remains the greatest obstacle for achieving long-term aims of the PCO/biodiversity programme.

- On comparing possum control delivery models adopted and used nationally, Palmer and McKenzie (2023) noted in their business case that the mixed model approach (internal and external providers) was Horizons' preference, being a contractor/staff (25 %/75 %) split which essentially operates currently.

[24] It is understood that HRC had been considering adopting a 5% RTCI target for former bovine TB operations entering the regional programme.
[25] It is acknowledged that Horizons, like other councils, was bound into accepting this position during Crown RPMP liability and GNR negotiations over a decade ago.

- Horizons, through the above process, identified that refinement was needed to their current delivery model. This has more or less happened with only minor change needed regarding FTE numbers. However, Council needs to be sure that cost considerations are equitable when comparing staff and contractors. For example, the full HRC overheads (e.g. rate collection, and corporate and governance management costs) need to be factored in. Further, there may be changes to best practice around using the toxin brodifacoum (possum bait) and that decontamination of bait stations anywhere that brodifacoum is used could become mandatory. It is understood that this is not current practice and if it were to become binding then labour costs would be significantly higher than at present[26].

- In considering opportunities to refine the current PCO approach there are some key matters to investigate in a review. These are alluded to in Palmer and McKenzie (2023) and include:
  - ✓ increasing return on expenditure (and reducing risk around costs of delivery);
  - ✓ improving the level of service (e.g. lower RTC targets, targeting of other pests);
  - ✓ improving capacity and capability and providing for succession planning (i.e. ensuring skilled people can be attracted to the industry and retained); and
  - ✓ how relationships with occupiers can be obtained and enhanced.

Our assessment: The concept of maintaining the gains of prior control is applauded. However, it is likely that PCO efficiency (level of input relative to output) and effectiveness (level of success relative to input) may have reduced over time. At the time of its inception DOC land was not included in the PCO and we believe this was a flaw. PCL was likely excluded because of cost and the ongoing effort required. There is no doubt this issue is even more significant to address now. Nevertheless, the Crown being unable (and/or unwilling) to adequately address possum control on PCL remains of prime concern.

A review should investigate whether lower and more variable RTCI targets are justified and should include dialogue with PF 2050 Ltd around their aspirations for control projects in the Horizons region. Targets above 5% risk not being able to deliver on PF 2050 goals. A review would also signal that some better processes are required, e.g. targeting those who opt out, so they don't impact on their neighbours and the wider PCO. Stepping up enforcement on negligent individual occupiers is one of the key actions staff should implement.

Increased dialogue with NZDF over their control work is also vital. They have indicated they need assistance with controlling high numbers. More regional collaboration would be ideal (again a stakeholders forum would be a great vehicle for these conversations). Regarding rapid land use changes, afforestation will create more possum habitat. It is not too late to open dialogue with new occupiers in this space on their pest obligations, and ensure these are bound into future Approved Management Plans. Finally, there are still TB 'roll-off' areas yet to be included in the PCO. Council needs to advocate for increased funding commensurate with a larger PCO as well as addressing general cost of living increases.

[26] At least one third dearer, if two bait stations filling phases have occurred, a third visit would be required to decontaminate them (removing all bait and disposing of it at approved sites).

5.3.2 Rabbits

Introduction

The objective of the Sustained Control Programme for rabbits is to facilitate control by occupiers to reduce adverse effects on production and environmental values. The aim is that rabbits are kept below an acceptable level (McLean Scale level 4 and below). Limited night count monitoring is carried out annually on pre-determined routes across the region and a GNR may be triggered on complaint where McLean scale thresholds are exceeded. HRC was involved in a minor role, prior, in releasing the rabbit haemorrhagic disease (RHD).

Data interrogation

A history of night count data extending back over many years but is less useful for this exercise.

Findings

Rabbits	It is less important to know that the rabbit policy is on track based on an evaluation, compared with the intended low-level outcome, that is, that a fall back rule exists for those who exacerbate issues for their neighbours. On this basis, the rabbit policy is adequate.

Discussion

Staff reported only one recent complaint (in March 2023) when DOC approached Horizons near Owhango / Tongariro National Park (TNP) regarding rabbits on iwi owned land attracting high ferret numbers in the TNP area. Inspections occurred and advice was provided and later a ground poisoning operation was carried out with varying results. No formal enforcement notice was issued.

There is still a need for HRC to keep up with knowledge on rabbit management groups and issues nationally. Rabbits are still a hot topic in certain areas and it is unknown what climate and land use changes will eventuate for rabbit populations within the region.

Our assessment: Regional rabbit management is a very minor part of the RPMP programme and the only reason to continue to have regulation available is when voluntary action does not address unreasonable spread between neighbours. We question the value of continuing night counts. They seem to serve little useful purpose other than to provide some comfort for the rural community where rabbits seem to be 'a hot topic' in some areas (e.g. light, sandy soils in Ruapehu and Horowhenua Districts). However, there is no other agency or tool that can address cross boundary rabbit issues, therefore it should remain as a useful but low-level policy.

5.4 Other pest animal considerations

Amenity pests

The amenity pest programme provides a pest animal advisory service for ratepayers with pest animal issues in any areas across the region. Horizons provides advice and in some cases loans traps and supplies bait to enable landowners to undertake their own control. Enquiries are responded to within two working days of being lodged and typically address issues with possums, rabbits, mustelids and magpies. This service costs just under $200,000 per annum.

Biodiversity animal control

The Regional Response Team supports Horizons' biodiversity work programme at specific sites by carrying out pest animal control, typically possums, mustelids, rodents, feral cats, and hedgehogs. In 2023-24 a total of 2,382 hours were spent on this work (approx. 300 person days). Staff note that they would like to develop more on monitoring and impact assessments overtime but are hamstrung by available resources.

Our assessment: These programmes are well received by the public and are an opportunity for ratepayers and community groups to access a useful service for which they can receive direct benefit. The amenity pest programme is often fully subscribed and it makes sense to continue with it. Over time, if or when the biodiversity programmes expand this work will require more resources.

6. Legislative, regulatory and administrative processes

6.1 Consistency with Biosecurity Act and NPD

Horizons was one of the first regional councils to instigate an RPMP review under, and following, the National Policy Direction for Pest Management 2015 (NPDPM). While it was a new process to follow at the time, many prior aspects relating to RPMP development were incorporated into the NPDPM[27]. In 2016/17 Horizons undertook an in-depth analysis of NPDPM requirements, followed by legal review. Council was satisfied that all steps were followed. In the intervening time there has not been any changes to the Biosecurity Act or NPDPM that require consideration in this evaluation.

However, in 2020 the Biosecurity Working Group (BSWG) commissioned a survey (Palmer, 2020) of regional and unitary councils experiences and adoptions of processes and guidance material developed for the current RPMPs. Analysis and feedback received, and in particular lessons learned from the process, are summarised below to help inform future Horizons reviews. Key findings include (with observations made in italics following):

- Horizons was one of four councils that diverged the most from suggested guidance, template and the general look/feel of the RPMP. *Not necessarily a bad thing, there will always be regional variances.*
- A number of councils included their Biosecurity Strategy overview in their RPMP to provide greater context. *Worth considering, several stakeholders felt there was something missing with the HRC RPMP around regional biosecurity leadership.*
- All funding related to dollar figures should be kept out of RPMPs, as they quickly become outdated. Programme funding should all be set out in Annual Plans and/or RPMP Operational Plans. *HRC has achieved this*.
- There was some confusion around the NPDPM categorisation of some pests. Progressive containment pests were the most problematic and lead to blurring of definitions. *In Horizons, some stakeholders questioned why widespread (but unspecified) pest plants were not listed in the sustained control category.*
- Concerning organisms not accorded pest status, many councils adopted the concept 'Organisms of Interest' (OOI), as providing a watchlist (in an appendix) to help keep at the forefront issues to consider for the next review. *May have merit, many stakeholders offered 'pests' in their view for future RPMP inclusion.*
- Better guidance around rule structuring was noted, which related to the willingness of councils to enforce rules. A legally tested 'grab-bag' of rules would be welcomed. *National guidance would help improve HRC rules.*
- More guidance around monitoring of programme progress against RPMP objectives was seen as important (high effort but also high value). *More detailed guidance would make this evaluation process easier.*

[27] The primary aim of the NPDPM was to improve alignment and consistency of RPMPs across New Zealand, including setting a prescribed framework of pest designations and clarifying other Biosecurity Act and Good Neighbour Rule requirements.

- Undertaking CBA work in developing RPMPs was seen as maximum effort for little value. Recommendation was for regions to simplify this process, share data between regions better to avoid duplication of effort and seeking more qualitative than quantitative data. *Potential for greater Lower North Island collaboration effort, although review timings will be an issue.*
- Good neighbour rules (GNR) were confusing to develop and socialise with affected parties. In some cases they do nothing to help manage pest problems (e.g. 200m boundary rule distance for control of possums on PCL). *More focus on MOUs than inserting GNRs for Crown partners is suggested.*
- Site-led programmes were not included in many RPMPs as development of them was usually difficult – hence comments that "site-led programmes should not be a driver for site-based management and should only be included in RPMPs where regulation is needed". *Merit still in reconsidering the place of site-led programmes.*
- For future RPMPs think more carefully around questions asked during consultation, having an engagement plan in place and ensure Proposed RPMP is as close to 'where you would like it to land as possible". *This lends more weight to establishing a more formalised interagency Biosecurity forum to discuss issues between reviews.*

In conclusion, there will be several legislative related matters for Horizons to consider in the near future. At the time of writing MPI was consulting on proposals to improve the Biosecurity Act[28]. Although it has been a lengthy process to get to the current point (and subject to Cabinet approval) MPI will be consulting on a package of proposals across different parts of the Act, including aspects related to RPMPs and application of the NPDPM. Any resulting changes to the Act would still be some time away (timeframe unknown).

6.2 Other matters

Complaints register and actions

While not a major aspect of evaluating performance and effectiveness, it was still deemed useful to understand the nature of enquiries received and how these are dealt with, particularly as this activity relates to two high-level performance measures (refer section 3). Requests for data from the *Frontline* database were made for the period 2019/20 to 2021/22 in particular. These data were not available due to the nature of how it is stored, the number of them (600+) and the mix of non-RPMP and wider ranging plant related enquiries included. Staff, however, provided the following commentary.

The Frontline tool is used by front desk staff to record enquiries. At the outset it was decided to be objective in the measure of this target if challenged. It was also thought to have a relatively high potential for failure (to reach the target response time) e.g. due to recording errors, untrained staff fielding enquiries, wrong phone numbers given/recorded and key staff being away on leave. Staff modified the target and approach to ensure better success rates.

Now, all enquiries for plants and animals respectively are sent to an individual from each team. These are then 'responded to' immediately or within the three day timeframe by closing out

[28] Pers. Comm. John Sanson, MPI, September 2024. MPI carried out an initial review of the NPDPM during 2023/24 and identified several opportunities for improvement.

the system response when completed. The team lead 'triages' the request and emails the appropriate staff member who then responds in a timely and proactive, not reactive, fashion. The reporting of this measure has changed over the years, from a collated 'numbers by type' breakdown, to a target 'yes/no' approach.

Our assessment: It seems that staff have some difficulty in interrogating the Frontline enquiries database. Accordingly, it has proven difficult to determine how significant this monitoring of customer service is and how much staff time is expended on addressing concerns received. It would appear that a workaround process has been adopted by staff but there may be wider, fundamental problems with using this clunky tool. A better, web-connected system is needed. Horizons may move to IRIS in due course which may bring about better outcomes.

Exemptions

A register of exemptions is required pursuant to s78(7) (b) (i) and (ii) of the Act. Staff advised that there is no register held by Horizons as no exemptions have been applied for or granted under the current Plan. Two exemptions had been approved under the prior Regional Pest Plant Management Strategy (RPPMS) but their status is unknown. Similarly, there was an exemption granted under the former (most likely) Regional Pest Animal Management Strategy (RPAMS) for an occupier to hold wallaby. Likewise, the status of this exemption is unknown and corporate knowledge has been lost over time.

Our assessment: A simple council template/database should be developed to satisfy this legal requirement even though there are no current exemptions held. Other councils will have a comparable file to share with Horizons. The register should be held in official council records which would survive staff turnover.

Awareness and advocacy programmes

The aim of these programme is to alert the community to the issues, threats and solutions for pest management and to promote region-wide best-practice. This includes responding to enquiries from the community and undertaking collaborative projects. Staff partner with MPI for the Check Clean Dry (CCD) programme to advocate for behaviour change by freshwater users. Work is also carried out with HRC's communications department to promote weed species through 'weed wizard' videos and also a particular focus on exclusion plants to reinforce the importance of the public reporting these plants if they find them.

There are no data or specific measures around advocacy and awareness programmes carried out. Campaigns carried out are reported to Council and these sit in the monitoring and operational reports. Typical annual funding for this work is $124,000, mostly staff time.

Our assessment: is that more can always be done on this aspect of RPMP implementation. Rural advocates wish to see more engagement from HRC, and while some occupiers receive direct benefit from weed/possum control there are many others who have no interactions with Council's biosecurity work. This is a consequence of a having a large region-wide biosecurity programme with finite funding. Typically, when there are time and budget constraints advocacy activity tends to fall away.

Pest pathway considerations

Horizons' central North Island location makes the region high risk for the movement and flow of people and goods, and at risk of 'bringing the next biosecurity incursion'. Typical vectors[29] in which pests are caught in and spread include:

- Machinery (e.g. vehicles, earthmoving machinery).
- Equipment (e.g. tools, nets).
- Substrates (e.g. soil, compost, roading aggregate).
- Harvested crops (e.g. stock feed, human food crops).

Pathway pest management should be seen as a preventative and proactive measure. Taranaki region instigated a pest pathway risk assessment (Willems, 2020) for these very reasons, by identifying high risk candidate species (plants and animals) and preparing an inventory to inform their future management. The role of the neighbouring Horizons region is closely related to recommended actions to protect Taranaki, including:

- Undertaking specific planning and advocacy activities.
- Stepped up surveillance and response (preparedness).
- Ensuring strong interagency partnerships.
- Increased awareness, education and engagement.

Our assessment: The aquatic pest grouping, if retained with the current 'non-dispersal rule' is already a quasi-pathways approach and the RPMP is used as a default management tool. This is rather 'clunky', however this approach is how many councils address human vectored pest spread. Managing pathways of pest spread will likely become more important, especially for an area like Horizons which is very central and has four neighbouring rural regions with high traffic flows and volumes. Issues like managing Chilean needle grass spread may well be suited to having an inter-regional pathway plan developed. This and other potential pathways should be explored as part of progressing the next RPMP iteration and being more strategically focused.

[29] Naturally, little can be done to manage environmental / wild vectors such as winds, floods, seed spread by birds.

7. Staff, contractor and stakeholder feedback

7.1 Summary of staff responses

Pest plants team

Roles and responsibilities of members were very well understood, especially direct control, project management and stakeholder liaison tasks. Naturally the staff were very familiar with the RPMP and the level of understanding was high, however general comments included they found it confusing at times (e.g. RPMP sections jump around) and it contained some ambiguous wording.

Overall progress (ratings from 1 low - 5 high from their perspectives) in meeting objectives for each RPMP category is averaged out, as follows:

- Exclusion 3.8 - have done well, despite more inputs required.
- Eradication 3.2 - some good success, others not so good (variable).
- Progressive containment 2.4 – have had to pull back, needs others to engage.

Staff wanted to see the following things continued and thought these were going well:

- Hands on direct control / service delivery carried out (strong consensus).
- Joint projects but want to see more of these.
- Ability to enforce rules (good processes) but needs greater follow through action.
- Clear land rule provides some flexibility – needs more understanding and promotion.
- Approved management plans - great for Crown/TA partners but need to be enhanced with some extra rules (e.g. consequences of not complying).

Accordingly, there were several matters/issues not liked and their future was questioned:

- Clear land rule hardly used – cumbersome, not well known.
- GNR doesn't go far enough – not enforced.
- AMZ, get locked in, hard to change and to meet expectations, let down by others.
- Not fulfilling financial requirements to meet Plan expectations.
- Numerous species need review and policies need resetting.
- Plan not strategic enough – related to not knowing full extent of issues.
- Overall awareness is low, and advocacy work is hardly carried out.

In terms of honest assessments as to their own effectiveness, all noted they could make quick and efficient progress on known sites that they had hands-on control with. However, they were not always dealing with knowledge of the full picture, i.e. they were missing key material on location / extent of pest issues and decisions were often made based on incomplete information.

On the clear land rule, most liked the concept in theory but the reality was quite different. There was incomplete knowledge of relevant sites, it was not promoted well enough to occupiers and the trigger levels were at times confusing, for different species. As a result, some had not actually enacted this rule.

Feedback regarding AMZs was unanimous. Despite much good work carried out, some plants seemed doomed to failure from the outset (i.e. would never meet objectives). Incomplete knowledge of infestations was the most significant comment. The AMZ development approach seemed to rely heavily on programmes developed 5 - 10 years ago (principally with DOC) but cooperation and joint funding of control with DOC had fallen woefully short since. A complete rethink of the AMZ approach (and species to include in the RPMP) was needed.

On AMPs, all had implemented programmes but most end users still showed a lack of understanding and lack of work. Most agencies did not seem to take them seriously, overall, (thinking work was voluntary rather than obligatory) and reporting back on work carried out was below par. There was the odd exception (e.g. Manawatu District Council's approach).

Much feedback was received on biosecurity policy in general and rules. The most serious issue noted was the 'lack of grit' shown to enforce rules. It was commonly stated that there was *'no point having programmes in place that were then compromised by lack of follow-up if work was not completed'*. More awarenesses was needed around the Plan overall and there seemed to be no way to address large-scale land use changes, or other changes, during the lifetime of a plan (e.g. the rise of carbon farming).

Each staff member saw relationships as being vital to the success of their work and they were clearly proud of those established, despite the trials and tribulations of stakeholders meeting ongoing obligations. Overall, agencies were much more difficult to work with (e.g. competing or different priorities, lack of understanding of the obligatory nature of pest control) compared with private occupiers. In summary:

- TLAs were a mixed bag.
- DOC was singled out especially for consistently poor performance, poor communications and non-existent delivery.
- NZDF was seen as having closer links now and more willingness to collaborate than prior.
- NZTA and Kiwi Rail generally were very difficult to deal with (only the occasional 'win' with these two agencies. More often it was highly frustrating for all concerned).

It is worrying that pest plants managed on PCL are crucial to the success of the Plan. From the outset DOC signed up to very significant obligations but have never been funded adequately (in effect diminishing funding has occurred over the review period) and continue to have different priorities. DOC seldom acknowledged that they are exacerbators of pests through virtue of occupying land and while staff on-the-ground seem to understand this, those higher up in management do not understand this basic philosophy, or otherwise have their hands tied on funding any work.

As an additional task staff were asked to rank which species they felt were doing well (with control) overall and those not doing so well. Many reasoned observations were recorded which will greatly assist in the discussion and decision making for the RPMP review. Those species with consistently poor ratings included purple loosestrife, woolly nightshade and all of the aquatic species. In contrast, those that were generally seen to be doing well were most of the eradication species and the four wilding conifer species.

Future opportunities lie in addressing many of the issues raised above. In particular:

- Greater surveillance and knowledge of the full extent of issues and infestations.
- More joint projects.
- Using the enforcement powers that are available.
- Naturally, having greater funding was a strong, common theme (but not more staff).
- Reviewing current categories of pests – for a better fit with objectives.
- Being nimbler on addressing new issues as they arise e.g. carbon farming.

Finally, the views of Michael Beech, Pest Plant Team Leader, sum up observations made. *"Overall, I think we do pest plant management well. In the past we may have been too aspirational with some of our goals for particular species and we made decisions based on anecdotal evidence rather than hard evidence. The conundrum is, if you start looking for a pest that you weren't looking at before you'll find more and more of it. I think we've picked a good mix of species that are transformative - the challenge is to adapt to the many 'sleeper' species that we could nip in the bud now for them not to be a problem later'*.

Pest animals team

The HRC regional response internal team comprises 18 staff, including 14 field staff, who undertake pest animal control, including the majority of PCO work (with contractors delivering the balance). The PCO programme is explained as simple and workable by the team. The annual spend on this programme is $3.8M. Monitoring activities consume another $400,000 p.a. (which includes rabbits), rook control accounts for $200,000 and $175,000 is allocated for general pest animal (for amenity value and on an enquiries/complaints basis).

Staff liked several aspects of the RPMP, including that it wasn't over-reached in terms of the pest animals included and that the rook targets looked achievable. As with any pest management programme 'several 'work-ons' were identified, including having a process for occupiers that won't allow voluntary access to control rookeries and dealing more constructively with occupiers who, for whatever reasons, opt out of control in the PCO.

HRC is congratulated for being early adopters of the policy of inserting large-scale possum control into their RPMPs following control under the bovine TB programme. It will always be cheaper and/or more achievable to carry on with possum control while densities are still very low than to start afresh once numbers rise again. The landscape scale possum control coverage has also been well received in rural communities.

The PCO has been reviewed prior but it is unknown to what extent. As it is one of Horizon's 'big spend' items it's timely for a full review, ahead of the RPMP review, of the strategic and operational approaches to ensure it remains valid and, importantly, cost effective for the future. A number of suggestions are recommended, including: reviewing the key drivers/purpose, the DOC land (GNR) conundrum and stepping up enforcement for those that opt out of HRC funded control. Finally, future policy requires responses to issues not envisaged prior for the PCO (e.g. changing land use and the rise of carbon forestry). As possum habitat expands it won't be sustainable for HRC to continue funding all control work. Other options need to be explored to compel obligations on occupiers including plantation and permanent forests, and DOC.

7.2 Summary of contractors' responses

Three service providers were invited to give feedback:

- Pest plant ground contractor,
- Possum and pest plant contractor, and
- Aerial spray operator - pest plants.

Although not a large pool of responses were received, there were several interesting and similar themes to emerge. As with pest plant staff, concern was raised regarding the current AMZ boundaries and that there were unachievable goals for several species that had been developed prior but were now out of date in many places. The sense of controlling some wide-scale infestations is questioned as a result. Other comments related to enforcement, or the lack of it carried out, and lack of action by the agencies (DOC features again strongly within the latter) Positive comments included an acknowledgment that there are some strong relationships in place enhanced by excellent planning from the outset.

Challenges of adequately resourcing (pest plant) work saw two different responses:

- Contracting out for more ground control teams, as more personnel could cover greater areas, and/or
- Develop and use more technology, such as multispectral cameras mounted on drones to better and more accurately map weed infestation extents. This would be a far more efficient use than spending contractor valuable time and money searching[30] large areas.

On PCO work, there were several key observations made and opportunities for improvement, noted. Some of the comments mirrored what Federated Farmers responded with, including:

- Investigating reducing the 10% RTC target downwards as more progress is made.
- Tightening up landowner 'opt out' circumstances which leaves 'holes' in PCO areas.
- Toxin use and different options available for occupiers to agree be used.
- Better ways to conduct monitoring.
- Auditing and more direct feedback.

Overall, contractor relations with HRC were very good, although more auditing (of ground teams) and feedback was requested (on the basis that they want to know how they are going and how they could improve)[31]. Relations could also be enhanced by bringing contractors into workshop discussions to discuss issues, reflect on past approaches and celebrate the work being done and the collective achievements. Finally, it was noted that it was important that One Plan iterations in the future did not increasingly stifle the ability to undertake aerial herbicide applications, where this approach is the most cost effective and efficient means of controlling infestations. New Zealand's unique pest issues are not always allied with world trends of using less herbicides and pesticides.

[30] Noted that this had limited application for environmental weeds, and would be costly to set up, and that greater focus prior had been on agricultural weeds.

[31] Interestingly, Rangitikei Helicopters noted incessant auditing by all their clients was out of control as their robust safety management system was a 'gold standard' in relation to aerial works and health and safety.

7.3 Summary of stakeholder responses

Table 10 lists stakeholder engagement carried out, followed by a summary of conversations had, reflected through a standard SWOT analysis of the RPMP and/or the council's approaches.

Table 10: Summary of stakeholder consultations undertaken

Organisation / group	Key contact person	Date surveyed	Method
Ernslaw One Ltd	Keith Wood	18 July 2024	In-person
Federated Farmers – Whanganui and Ruapehu	Ben Fraser and Gail Gray	19th and 31st July 2024	In-person and email response
Department of Conservation – Tongariro District	Dan Van de Lubbe	14th August 2024	In-person
Rangitikei Environment Group	Neil Gallagher	14th August 2024	In-person
New Zealand Defence Force	Steve Phillipson and Alison Beath	15th August 2024	In-person
New Zealand Transport Agency – Palmerston North	Alex Drover and Wayne Keightly	15th August 2024	In-person
Manawatu District Council	James Adamson	15th August 2024	In-person
Rangitikei Rivers Catchment Collective	Julie Ireland, Louise Totman, Mike Cranstone	16th August 2024	Online and email response
Kiwirail Ltd	Ruth Brittain	21st August 2024	Email response
Forest and Bird – Wellington & Horizons	Angela Geary	30th August 2024	Email response

<u>Strengths</u>

- Landscape scale approach taken to weeds management.
- Collaborative, inter-agency projects, e.g. Project Yellow.
- Excellent staff relations overall, pest plant team and the PCO team.
- Hands on approach of the pest plant team – making progress where they are directly involved.
- Council is not over-reached on [the list of] pest animals included.
- Dedicated responses of Manawatu District Council to weed management [essentially led by one person].
- Rook targets are achievable.
- Support of landowners for possum control (staff are often the only interaction with Horizons where they see something tangible for their rates).

Weaknesses

- Funding and resource constraints overall – budgets for most parties have not increased at the rate that new situations arise and new habitat is created.
- RPMP is too standalone – does not provide a strategic enough biosecurity context for the region.
- General advocacy around the RPMP and awareness activities on pest plant threats have suffered – lack of $ and resources to undertake this work.
- Staff hands-on pest plant approach, while commendable, invariably sees other activities not get as much attention e.g. biocontrol and advocacy/awareness.
- HRC does not seem to be overly proactive or strategic [on biosecurity future thinking] or is too hamstring by bureaucratic time frames.
- There does not seem to be a process for dealing with emerging issues [between RPMP review cycles] or steadily increasing problems, or prior issues e.g. proliferation of peacocks and *Phragmites karka*.
- Crown agencies in general, and DOC specifically, suffer from acute staff churn, lack of funding/diverted funding and have other priorities, which are impacting on all facets of regional pest management, especially with the amount of public conservation land that requires managing [DOC does not seem to understand that it has RPMP obligations that may not be their priorities].
- Active management zones were developed in the absence of full knowledge and planned when DOC was much better resourced to be a partner.
- GNR process and boundary distances for possum control in the PCO programme are insufficient in relation to the DOC land managed. However, control work in these areas is not even happening (perceived threat of bovine Tb resurfacing).
- Lack of commitment to enforcement using Biosecurity Act provisions / regulations.
- Process to follow for landowners opting out of the PCO – how are/will these gaps be adequately addressed?
- Contractors are not utilised enough – there are gaps in pest plant control activities and delivery could be done more efficiently [e.g. dedicated resource to surveillance, biocontrol etc].
- Pest plant control (priorities) in roading corridors barely exist beyond the water table. Usually, work by transport agencies is characterised by 'radio silence' and under delivery.
- Tackling one willow species while other willow species proliferate. Why has this happened?

Opportunities

- Instigating a regional biosecurity leaders forum (of stakeholders) who would meet twice a year and discuss strategic and policy issues relevant to region.
- Review/revise the categories of pests – move some species to sustained control or site lead management (tied in also with reduced active management zones).

- Build in [as part of the RPMP] a Biosecurity Strategy to provide overarching context of – 'why are we doing this?'.
- More farmer dialogue – with farm discussion groups and tie in with greater advocacy and promotion of regional biosecurity (e.g. reference/support to the New Zealand Farm Assurance Programme).
- Greater active surveillance programme – having a dedicated resource, including stepped up pathway management with others/neighbours.
- Promote more the clear land rule concept (e.g. it has merit but is not widely used or understood).
- Approved Management Plans are good but could be strengthened, e.g. building in consequences of not following the plan.
- Review of the Karioi forest zone wilding conifer rule in light of Treaty of Waitangi settlements, land use changes and changes in circumstances for this zone's future management.
- Consider developing a new suite of rules and planning approaches to deal with the rise of carbon farming.
- Actively seeking more community group involvement in pest management/biodiversity projects, e.g. the REG model.
- Workshop more / involve more HRC's contractors – they have good ideas to share and discuss.
- Step up enforcement overall, e.g. send DOC, NZTA and Kiwi Rail s. 122 Biosecurity Act Notices of Direction to instigate action, sooner.
- NZTA and Kiwi Rail should be working much closer together on pest plant issues (e.g. via a regional forum). They have similar type transport corridors (e.g. long and narrow) and overall needs (e.g. safety and sightline related).
- Review the PCO approach - while good it could be greatly improved and better aligned, e.g. with PF2050 aspirations and with NZDF operations.
- Keep NZTA to their word over their new (less divergent) contract model and dial into their three-year LTP funding cycle (occurs at same time as HRC).
- More peer review / audit of NZDF biosecurity operations.
- Use technology more to drive efficiencies – e.g. drones to map infestations accurately.
- Stepped up wilding ungulate control – site-led and in partnership (requires review of WAC Act).

<u>Threats</u>

- Further funding reductions (real-time or not CPI linked) in core programmes by agencies in general.
- Rapid rise in carbon farming with occupiers seemingly oblivious to their obligations.
- Continued DOC management failure to grasp the philosophy of RPMP obligations, with resulting flow on effects.

- Crown continued reluctance to honour legacy management of wilding conifers.
- PCO too ambitious – PCL not covered, not even the 200m boundary requirement.
- Some/many farmers view the state of DOC PCL with trepidation for the future (e.g. Tb may come again and weeds out of control).
- Continued decline of DOC as a relevant and present partner in biosecurity.
- Unimpeded proliferation of deer, goats and pigs. HRC unambitious over ungulates.
- Capacity issues for weed contractors – retaining staff without losing quality.

7.4 Tangata whenua views

The relationships between Māori, their culture and traditions and their ancestral lands, waters, sites, wāhi tapu, and taonga are among the specific values to protect from the effects of pests under the Biosecurity Act, as well as being important considerations under the Local Government Act 2002, RMA, and Treaty settlement legislation. The RPMP is one avenue to build synergy and co-operation between Māori organisations and Horizons as partners in managing the region's natural resources.

In early March 2024 invitations were sent to Māori organisations in the region seeking feedback and requesting input into the RPMP evaluation, as per the list below.

- Ngāti Hāua
- Rangitāne o Tamaki nui a Rua
- Ngai Te Ohuake
- Ngāti Hauiti
- Te Rūnanga o Tūpoho
- Ngāti Patutokotoko
- Muaūpoko
- Ngāti Kahungunu
- Ngā Wairiki Ngāti Apa
- Ngaa Rauru Kiitahi
- Tuhua Hikurangi Management Komiti - (Maniapoto Hapū)
- Ngāti Tamaūpoko
- Ngāti Rangi
- Ngāti Tamakōpiri
- Ngāti Whitikaupeka
- Ngāti Whakatere
- Rangitāne o Manawatū
- Te Tūmatakāhoki
- Ngāti Waewae
- Ngāti Patutokotoko
- Ngāti Kauwhata
- Te Nehenehenui Settlement Trust
- Ngāti Pareraukawa
- Ngāti Tamakōpiri

"Horizons is seeking to understand the extent to which you wish to be involved in this process, whether that is to be kept informed, to provide written feedback or to discuss:

- *The Biosecurity Act requirements and the process we are undertaking, and*
- *Any considerations you would like Horizons to have throughout the review process.*

At the time of writing this report Horizons had received no feedback on the extent to which iwi/hapū would like to be involved in this process. Engagement is still in the early stages and efforts will be ongoing throughout the review process.

8. Discussion

Since the RPMP became operational there have been numerous issues for Horizons to navigate, for example Covid-19 disruptions, organisational changes, LTP reviews, finite budgets, priority and funding challenges of key partners (especially DOC), change in elected representatives on Council and, overall, increasingly scarce resources to implement the Plan. Despite these complexities, Horizons has achieved a lot of positive outcomes and there is much to celebrate.

Invariably, evaluations tend to focus on where improvement is needed. This section provides a strategic summary of our findings. It reflects on and discusses the key matters that pose future efficiency and effectiveness (and sustainability) challenges for the region. They became obvious as the evaluation progressed.

- Progress on eradication and progressive containment of named pest plants seems to have plateaued, and for some, stalled. There appears to be two major constraints - lack of region-wide knowledge on extents and densities of infestations (a regional delimiting survey is essential) and lack of funding to resource the staff/contractor requirements to meet control demands. The latter point includes the ominous state that DOC is in from a key partner viewpoint, which is now impacting on Horizons' operations and reputation. There are also apparent limitations highlighted from our analysis of plant pest databases held by HRC. The databases were at times difficult to interrogate and draw comparative information on progress of eradication / progressive containment, although identifying trends proved useful. This may be a (historical) quirk of how information is expected to be presented to Council, or it may highlight a systemic problem around data collection at regional government level that should be addressed.

- Similarly, there seems to be prior council pressure to retain the schedule of pest plants despite staff concerns that they are unable to adequately service the regional community to make headway on managing many species. This creates a conundrum at annual reporting time as many RPMP objectives cannot be achieved. Several factors limit the effectiveness of the RPMP, namely:

    - Lack of full knowledge on the extents of some species infestations, both sites and levels/densities.

    - There are probably too many plant species in the Plan.

    - Inadequate resources to manage the programme – it has never been fully funded.

    - Staff spending most of their time on direct control work in-the-field, probably at the expense of surveillance, awareness and compliance activities.

    - Limited surveillance programme in place and even less time spent on pest pathway spread matters. Some work occurs but is 'watered down' when other pressures mount. There is a lack of a dedicated and proactive approach.

- An overall unwillingness to enforce non-compliance, leading to an absence of enforcement actions.

- Lack of full stakeholder buy-in to regional biosecurity - note comment from RRCC: "*HRC will never be successful managing our regional pests without the support of and cooperation with [all] landowners*".

➢ As the largest expenditure item within the Biosecurity programme (c. $4.5M per annum), the Possum Control Operation needs a re-think, to integrate better with the regional biodiversity strategy and national Predator Free 2050 aspirations. Control work should be more focused on areas of priority to achieve biodiversity outcomes, rather than just continuing with the previous bovine TB *modus operandi*. Further to this is a lack of transparency in the way control is implemented - most work is undertaken via internal staff, and the balance via contractors. From feedback received it is apparent that the PCO would benefit from a review to deliver the following outcomes:

- To maintain the gains achieved from the bovine TB programme, to at least 5% RTCI, or lower.

- Identify high priority areas and reduce the RTCI targets to 2%, for example, to realise biodiversity benefits, using RTCI (or robust equivalent) monitoring to assess contractor performance. Also, consideration of other predator control needs at these places is required.

- Lesser priority areas could have increasingly lowered RTCI targets, e.g. 10% to 7% to 5%, to ensure more gains are maintained over time.

- From stakeholder feedback there is a substantial level of frustration over the lack of control on DOC land and reinvasion of possums onto neighbouring land. This creates 'large holes' in the PCO and impacts on its overall effectiveness.

- Enforcing the GNR with DOC (where it makes sense to drive more DOC effort, rather than expecting to cover all DOC estate) to ensure that identified PCL land is treated to the same standard as private land (we also note that the 200m boundary rule is 'a nonsense' and at least 500m, and greater, buffers should be negotiated with DOC).

- Pre operational monitoring could be adopted as standard practice to ensure efficient delivery is achieved and areas are only treated when threshold RTCIs are triggered.

- Do not accept occupiers' wishes to 'opt out' entirely of any control as they compromise the programme's integrity, and increase staff efforts to resolve disputes, leading to more landowners wishing to 'opt out'. A robust process (and an enforced 'consequences' rule for those occupiers) is required if opting out cannot be avoided.

- Carbon forestry growth has been significant within the HRC region, and Approved Management Plans with forest owners needs to be mandatory to ensure adequate possum (and possibly wild ungulate control) programmes are established and audited as part of RMA resource consent processes. HRC should curtail any expectation that these areas will roll automatically into the PCO and be fully funded (see also point below re pest plants in these forests).

- Council needs to focus on better negotiating with the Crown over their RPMP obligations, particularly in relation to DOC PCL to ensure that GNRs are complied with. A very high level of staff and landowner frustration has arisen from lack of progress with both possum control and pest plant eradication on DOC managed lands. One option is for HRC to assume responsibility for work on DOC land, however a new equitable funding model would need to be developed[32].

  This issue requires debate at a high level between regional and central government, with a view to procuring a transfer of funds to regional councils so that biosecurity work can be undertaken irrespective of property tenure. Given the DOC, NZTA and KiwiRail reluctance to make serious commitments to biosecurity programmes nationally there is merit in regional councils taking responsibility to manage biosecurity programmes on Crown lands to ensure the work is done, and ratepayer frustrations are eased.

- Further to the point above, regarding Crown agencies not taking their RPMP responsibilities seriously, this needs intervention at executive management level to ensure these agencies plan, budget and execute the necessary control on land they are responsible for. HRC should seek legal advice on enforcement of the Biosecurity Act powers on Crown agencies and departments, starting with s. 122 Notices of Direction, through to enforcing non-compliance and cost recovery.

- An emerging issue for pest plant control is the establishment of carbon forests on moderate to steep hill country (LUC class 6 and 7 land). Where whole properties are being planted up with little or no access it becomes impossible to undertake pest plant control and the region will end up with intractable infestations of old man's beard, tutsan, Darwin's barberry, climbing spindleberry, banana passionfruit, blackberry etc.

  The RPMP may need to be amended to impose mandatory Approved Management Plans on landowners and occupiers in situations where carbon forests are established, in order that such pest plant species are managed in accordance with the RPMP, by occupiers. The sensible process is to ensure these management plans are given effect prior to the land being planted, and this may require a condition on resource consents and Overseas Investments Office approvals.

- TLAs need to be treated similarly to the Crown regarding their RPMP obligations. Many appear not to have implemented AMP's appropriately or in timely ways and constantly 'pass the buck' to contractors or subcontractors. While the partnership approach is admirable, and should be pursued wherever possible, the Biosecurity Act provisions

[32] HRC/DOC memorandum of understanding exists, to have a single entity manage a landscape approach to old man's beard in the Ruahine Range, paid for on a pro-rata basis.

should be used more to obtain and increase the necessary buy-in from these public agencies. We believe the majority of ratepayers would support this.

- Ratepaying landowners consistently express frustration with TLA's and NZTA, that as neighbours they should be compliant with the RPMP in the same manner that ratepayers are. One issue identified is around reporting from the Frontline enquiries database, which may lead to difficulty in determining how significant this area of customer concern is, and how much staff time is expended on addressing concerns.

- The concept of defining Active Management Zones (AMZ) is worthy and was useful at the outset. However, things have changed and this approach requires reviewing. The AMZ identified for Progressive Containment (mapped) pest plants comprise very large areas for reasons that are pragmatic, however the practicality of servicing such large areas pose problems (e.g. where there are knowledge gaps). The primary concern is that infestations of many species have, as noted above, never been fully delineated by survey and new infestations keep showing up[33].

  A key consideration for review would be to undertake a delimiting survey of all species as a priority, then redraft the boundaries to areas that are considered more achievable in the medium term. Overlaid with this approach is the need for direct and meaningful dialogue with DOC about their priorities and funding for the future. A lot of future pest plant work in the two main RPMP categories will hinge on DOC's involvement or otherwise.

  The above actions would better meet the objectives of the Progressive Containment category and directly address efficiency and effectiveness requirements. A suggested process to rectify these issues could include:

  - Establishing a pause period on operational activities and direct staff resources to undertake delimiting surveys of all AMZ areas to map/re-map all infestations.

  - Identify criteria for future control and the outcomes sought, i.e. sites of high conservation value (biodiversity), low density infestation (easy control/easy wins), core areas (difficult to control), high risk sites (in terms of spread potential) and actual versus potential support from partnering agencies.

  - Then, re-define the AMZ around higher priority, practical sites and build a progressive containment control programme around these revised outcomes.

  - Promote the programme and make landowners aware of their obligations.

- There is a fundamental issue with the HRC RPMP that creates some difficulties - the overall lack of landowner/ occupier responsibility for many pest plant species. In most RPMPs there are rules that define a landowner responsibility to control or remove

[33] The issue is with large infestations found in the uncontrolled zones and constant spillover due to propagule pressure, which will only increase requiring a large amount of surveillance and constantly having to manage and revisit new sites, increasing the funding required. Situations will get to a point where the spillover is so great it becomes unfeasible to control and retreating is preferable. Therefore, all that is being achieved is the slowing down of the invasion in the long term.

certain pest species that occur on their land. HRC seems to have taken the view that the majority of pest species control rests with the Council to control via staff or contractors. While this is great for some landowners the majority of ratepayers are funding this activity. This may be inequitable, unless it is argued that all the pests managed this way by Horizons are done so for clear regional benefit[34].

Staff seem to justify a universal hands-on approach through the 'stitch in time saves nine' adage, which is applicable for some species in the eradication category (high risk / low incidence), but may not be sustainable for more widespread species. Tough conversations are also required with DOC. DOC signed up to the Good Neighbour Rules within the Biosecurity Act amendment in 2015, and their obligations should not be permitted to be dismissed because of financial and staff retrenchment. Their responsibilities as a land occupier and guardian for the State are paramount. Further, while many like the concept of the clear land rule (CLR) it has hardly been applied and appears to be confusing for both staff and stakeholders. A review of this CLR approach is suggested, including whether some pests in this progressive containment category are better suited to other categories, e.g. sustained control and/or site-led.

- Concern has been expressed through the interview process about the lack of a process and inability of HRC to consider or include other pest species in the Plan, viz. feral cats, peacocks, feral pigs and deer, mustelids, and several other plant species. It is suggested that HRC needs to be more responsive to landowners concerns and provide for reviewing / considering / amending the RPMP on a more regular basis (although there are limits on reviews imposed by the Act). There is both an interest and demand for more interaction with the regional council on biosecurity issues.

  Numerous stakeholders expressed the desire to be able to meet and interact with HRC on a regular, more strategic basis (via a Biosecurity Forum) to understand their roles in regional biosecurity, the actual policies, and to provide feedback on policies and operational issues. Council should embrace this suggestion as it can form a powerful mechanism for councillors (and staff) to appreciate issues facing constituents and assist in budgeting allocation for rating funds, raise awareness and form more biosecurity partnership projects (which is also sought by stakeholders). In short, this forum approach can only be a good thing for Horizons and biosecurity in the region.

- A feature of the RPMP noted by some stakeholders is that it lacks (in some places) specific, quantifiable performance measures or target pest reductions which makes it difficult to evaluate the effectiveness of the plan and its implementation. This leads to a low level of assurance that biosecurity protection for the region is adequate. Horizons has not publicly produced a Biosecurity Strategy which sets out the higher level aims and objectives for biosecurity in the region (although more detail is provided in annual operational plans).

  This is a missing element which some stakeholders would like to see developed (e.g. via a Biosecurity Forum would be opportune) to provide context around the 'why' this

[34] It is acknowledged that great regional benefit comes from protecting areas of natural significance which benefit all ratepayers, such as coastal dunes, Tongariro National Park, freshwater values.

work is important and what is at stake if not done or done poorly. Most regional councils have an overarching Biosecurity Strategy, either separately or as a summary within their RPMP. It is suggested that Horizons follows suit. There are many good examples around the regions to provide guidance.

- More recent and serious concern surrounds the pending Karioi Mill closures at Tangiwai and the potential departure of Ernslaw One Ltd from Karioi Forest, which may have significant implications for the *Pinus contorta* eradication project. Furthermore, the responsibility of Ngati Rangi and Tūwharetoa as forest owners may become so onerous that the good work achieved in contorta control will be seriously compromised. There needs to be some urgent consideration of future contorta management options along with a review of the suitability of current RPMP rules in light of Treaty settlements and the continuous transfer of harvested forest compartments back to iwi.

9. Recommendations

In concluding this report, a number of recommendations are made which address the overall efficiency and effectiveness of Horizons' biosecurity programmes, and accordingly will assist with the development of the RPMP's next iteration.

Strategic

1. Consider developing a Biosecurity Strategy concurrently with the RPMP review, to provide greater regional context for biosecurity and assist in developing strengthened region-wide relationships. Actions include reviewing the *Draft Horizons Biosecurity Strategy and Programmes (2015)* and adopting an appropriate new format based on assessments of other councils' strategies.

2. Performance measures used to determine progress in meeting RPMP aims need a refresh. The catalyst for this action is through the RPMP review. Outcomes should be more SMART orientated and these should then flow through to refreshed Long Term Plans and Annual Plans. Collaboration with other councils, on biosecurity measures used by these organisations, is recommended.

3. A clear process needs to be developed and socialised regarding how residents and stakeholders can raise with Horizons emerging pest issues of concern to them, or to reconsider 'old' issues where new information may have come to light[35].

4. Accelerated land use changes (e.g. from hill country farming to plantation or permanent forestry) require an urgent response now and as part of the RPMP review. AMPs need to be developed as soon as practicable[36] with these new occupiers prior to planting, and ideally at time of land purchase or through RMA consenting. New RPMP rules will likely be needed to support AMPs, compelling occupiers to work closely with HRC, to safeguard the region from increased costs of land use changes that create more potential pest habitat.

5. Investigate the merits of inter-regional pathway pest management plans, with immediate neighbouring councils, focusing on managing spread of specific pest plants (e.g. Chilean needle grass, yellow bristle grass).

6. A new, dedicated (pest plant) surveillance programme and resource (e.g. contracted by HRC) should be considered, focusing on an active (not passive) surveillance programme, and one that does not rely on current staffing levels to implement.

7. Increased collaborations with others for mutual benefit. Project Yellow was cited by many stakeholders as a key (the only) collaborative project involving multiple parties and they wondered why there couldn't be more joint projects like this. Refer also to recommendation on establishing a Biosecurity Stakeholders Forum.

35 HRC may have such a process in place already, but stakeholders seem unaware if there is and are frustrated that there is no apparent forum to raise their concerns (e.g. the proliferation of feral ungulates, wild peacocks).

[36] See also recommended changes to AMPs noted under 'Operational matters'.

Significant programmes

8. Safeguard investment in the Possum Control Operation programme. Instigate a review of the PCO, prior to the formal RPMP review, to inform the latter. Review parameters should consider how it can be improved (effectiveness) and how it could be better delivered (efficiency). Matters to consider include:
    - ✓ Identification of a new set of RTCI targets (e.g. 2% for biodiversity HVAs, 5% for farmland and 10% for intractable areas, such as along DOC PCL boundaries).
    - ✓ Collaboration and alignment with PF 2050 Ltd and NZDF on their work programmes and opportunities in the region.
    - ✓ Assessment of methodologies used (e.g. continued reliance on brodifacoum).
    - ✓ Treating large tracts of PCL which harbour high possum densities.
    - ✓ Addressing landowner indifference – introducing a 'tougher process' for those thinking that they want to opt out of the PCO.
    - ✓ Awareness raising, especially among the new generation of farming occupiers (e.g. they have grown up not previously exposed to the impacts of bovine TB).
    - ✓ Sustainable funding – that PCOs are funded commensurate with increased areas and demands.

9. Review of all current and potential pest plants for inclusion in the revised RPMP. This may already be the main purpose of the upcoming RPMP review. Regardless of the review's agreed purpose:
    - ✓ Current Eradication and Progressive Containment species need special attention, to assess their reasons for inclusion, that accurate delimiting surveys of infestations extent and densities are carried out and determining reliable partner (funding) organisations. Revised Active Management Zones can then be drawn. Options include increased funding for these revised categories or retrench and focus on more achievable species and/or high value areas.
    - ✓ Allied to the current Clear land Rule and Good Neighbour Rule concept, Horizons should consider the merits of using other NPDPM categories to manage pests, for example Sustained Control for widespread pest plants, or Protecting Values in Places (or site-led) pest management programmes.
    - ✓ Many individual species require reassessment, e.g. woolly nightshade is perceived to be in the wrong category; Sagittaria should transfer from exclusion to eradication; the future of all aquatic species inclusion; wilding pine management rule within Karioi Forest. It is anticipated this process may see several changes of categories or omissions.
    - ✓ Overall, we consider there are too many pest plants included in the current RPMP and not enough onus is placed on occupiers to be responsible to manage them.

10. Regarding reviewing pest animals, it is important to name all wallaby species in New Zealand as Exclusion Pest Animals.

Relationships

11. Investigate the development of a Biosecurity Stakeholders Forum to coincide with the RPMP review. Matters to consider:
    - ✓ Membership drawn from Crown organisations (NZDF, DOC, NZTA, Kiwi Rail), TLAs (all or some), farming and forestry sectors, environmental and catchment sectors, iwi and selected HRC politicians and senior staff.
    - ✓ Terms of reference would include: shaping Biosecurity Strategy development, connecting the agencies, considering new and emerging threats, stepped-up engagement through members own sectors, alignment of annual work programmes, testing new policy settings and having proactive conversations.
    - ✓ Other: to meet once or twice annually. Assess the Environment Canterbury model for appropriateness for Horizons' situation.

12. Reassess all policies and programmes that rely on the involvement of DOC as a partner in regional pest management (e.g. spartina, Darwin's barberry). So much rests on the future of pest control on public conservation land, including the eradication and progressive containment programmes and their alignment with HRCs Active Management Zones. Dialogue between the two organisations needs to be at senior executive level, including clearly setting out DOC's RPMP obligations, not just having an understanding of 'what are DOC's priorities?'

13. Maintain and enhance all existing relationships with key stakeholders through one-to-one dialogue (e.g. farming groups and promotion of the NZ Farm Assurance Programme, which includes on-farm biosecurity measures). Individual relationship maintenance is separate to but linked with the recommended Biosecurity Stakeholders Forum.

Operational matters

14. Delivery of the biosecurity programme through a mix of staff and contractors should be further examined. For example, there are tradeoffs between having hands-on pest plant service delivery by staff and resources being freed-up for more contract/contractor management, dedicated surveillance of new threats/pathways, auditing and monitoring and provision of awareness and education campaigns (these latter actions seem to be under resourced).

15. The above service delivery principles should be extended to PCO delivery and whether the 75% staff and 25% contractor mix is cost effective when considering all the costs involved. The mixed model approach seems to be favoured around the country. It is important to get this mix right.

16. Regarding handling of enquiries, the Frontline database may need a revamp to make it more user friendly and allow for better real-time reporting.

17. Enforcement of RPMP rules should be stepped up across the board (pest plants and pest animals). The Biosecurity Act and RPMP contain robust processes[37]. Non-compliance or 'feet-dragging' on pest issues should not be tolerated.

18. A rules exemptions register needs to be developed (e.g. a basic spreadsheet reporting template) even if there are no current exemptions. Prior exemptions appear to have been 'lost'.

19. The Approved Management Plan (AMP) template/format requires reviewing and strengthening to include the consequences of inaction or poor treatment. AMPs could be treated more like contracts with agencies, with more audit and follow up and dialogue around priority settings (including more joint staff 'drive-overs' to identify and document issues that need addressing).

20. Better alignment of NZTA and HRC long term planning processes will help alleviate misunderstandings. These processes occur at the same time (and is an example of better alignment sought through a Stakeholders Forum).

21. Follow up on the new NZTA contractor model to be rolled out in 2025/26, where asset management functions are set to be brought back much more in house.

22. Continue applying pressure on active rookeries in the region, through trialing new technology (e.g. GPS tracking of birds to find rookeries) and ensure that the North Island inter-regional rook forum maintains momentum.

Finally, 'sizing the RPMP' into the future and understanding the region's 'preparedness to pay' is the key challenge ahead for the RPMP review. There is a constant stream of new pests to consider along with those transitioning from Government support to long term management requiring regional investment. Horizons Regional Council has achieved a lot of commendable pest management over the past seven years. The future will see new challenges and issues to emerge which will require nimble responses and enduring relationships.

[37] Notwithstanding any legislative changes resulting from the Biosecurity Act review which was instigated during this evaluation.

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- James and Suzanne Lambie – Lambie Ecology.

Appendix 1: Pests and their RPMP classifications

Pest plants

Exclusion pests	Responsibility for control
Humped Bladderwort - *Utricularia gibba*	Horizons*
Californian bulrush - *Schoenoplectus californicus*	Horizons
Chilean needle grass - *Nassella neesiana*	Horizons
Heath rush - *Juncus squarrosus*	Horizons
Manchurian wild rice - *Zizania latifolia*	Horizons*
Noogoora bur - *Xanthium strumarium*	Horizons
Phragmites - *Phragmites australis*	Horizons *
Saffron thistle - *Carthamus lanatus*	Horizons
Sagittaria - *Sagittaria platyphylla*	Horizons *
Sweet pittosporum - *Pittosporum undulatum*	Horizons
Tussock hawkweed - *Hieracium lepidulum*	Horizons *
Eradication pests	**Responsibility for control**
African feather grass - *Cenchrus macrourus*	Horizons
Alligator weed - *Alternanthera philoxeroides*	Horizons
Arrowhead - *Sagittaria montevidensis*	Horizons
Blue passion flower - *Passiflora caerulea*	Horizons
Cathedral bells - *Cobaea scandens*	Horizons
Giant and Chilean rhubarb - *Gunnera tinctoria, G. manicata* and all varieties	Horizons
Chinese pennisetum - *Cenchrus purpurascens*	Occupier / Horizons
Climbing alstromeria - *Bomarea caldasii*	Horizons
Climbing spindleberry - *Celastrus orbiculatus*	Horizons
Himalayan balsam - *Impatiens glandulifera*	Horizons
Knotweed (Asiatic and giant) - *Fallopia japonica* and *Reynoutria sachalinensis*	Horizons
Nassella tussock and Mexican feather grass - *Nassella trichotoma* and *N. tenuissima*	Horizons
Purple loosestrife - *Lythrum salicaria*	Horizons
Queensland poplar - *Homalanthus populifolius*	Horizons
Rum cherry - *Prunus serotina*	Horizons
Senegal tea - *Gymnocoronis spilanthoides*	Horizons
Spartina - *Spartina* (all species and hybrids)	Horizons / DOC
Woolly nightshade - *Solanum mauritianum*	Occupier / Horizons
Progressive containment pests - mapped	**Responsibility for control**
Banana passionfruit - *Passiflora tripartita* (all varieties), *P. tarminiana, P. mixta, P. pinnatistipula, P. x rosea*	Horizons
Boneseed - *Chrysanthemoides monilifera*	Horizons

Darwin's barberry - *Berberis darwinii*	Horizons / occupier
Evergreen buckthorn - *Rhamnus alaternus*	Horizons / occupier
Grey willow - *Salix cinerea*	Horizons / occupier
Moth plant - *Araujia sericifera*	Horizons / occupier
Old man's beard - *Clematis vitalba*	Horizons / occupier
Wilding conifers: - Contorta pine - *Pinus contorta* - Dwarf mountain pine - *Pinus mugo* - Mountain pine - *Pinus uncinata* - Scots pine - *Pinus sylvestris*	Horizons / occupier
Progressive containment pests - unmapped	Horizons
Australian sedge - *Carex longebrachiata*	Occupier
Blackberry - *Rubus fructicosus agg*	Occupier
Broom species (exotic) - *Cytisus scoparius, Calicotome spinosa, Genista monspessulana, Spartium junceum*	Occupier
Field horsetail - *Equisetum arvense*	Horizons / occupier
Gorse - *Ulex europaeus*	Occupier
Nodding thistle - *Carduus nutans*	Occupier
Tutsan - *Hypericum androsaemum*	Occupier
Variegated thistle - *Silybum marianum*	Occupier
Yellow bristlegrass - *Setaria pumila*	Occupier
Yellow ragwort - *Jacobaea vulgaris*	Occupier
Progressive containment pests - aquatic	**Responsibility for control**
Eelgrass - *Vallisneria australis*	Horizons
Egeria - *Egeria densa*	Horizons
Hornwort - *Ceratophyllum demersum*	Horizons
Lagarosiphon - *Lagarosiphon major*	Horizons
Reed sweetgrass - *Glyceria maxima*	Horizons

**Denotes removed from work programme in 2023/24 (for various reasons)*

Pest animals

Exclusion pests	**Responsibility for control**
Wallaby species - *Macropus* species	Horizons/MPI
Eradication pests	
Rook - *Corvus frugilegus*	Horizons
Sustained control pests	
Possum - *Trichosurus vulpecula*	Horizons
Rabbit - *Oryctolagus cuniculus*	Horizons/occupiers

Appendix 2: Summary of data analysis – eradication and progressive containment (mapped) pest plants

The following report is a full analysis of the above pest plants and is contained in a separate document.

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Interrogation of the HRC Pest Plant Data for Eradication and Mapped Progressive Containment Species

For the Manawatu-Whanganui Regional Council

September 2024

Appendix 3: Stakeholder questionnaire

Evaluation of Horizons Regional Pest Management Plan

We are seeking your feedback on whether we are delivering what we said we would

Background

It has been seven years since the Regional Pest Management Plan (RPMP) became operative. Horizons Regional Council (HRC) has contracted Better Biosecurity Solutions Ltd (BBSL) to liaise with key stakeholders in the Manawatu-Wanganui region to help with an evaluation of the RPMP ahead of its formal review in 2027.

The evaluation will answer the following questions:

1. Is the Plan effective in protecting production, environmental and cultural values in the region (and have new issues arisen)?

2. Is the Plan efficient - are costs in line with what was anticipated and are there additional costs/risks/time/resource implications created as a result of the Plan?

3. Has Horizons done what it said it would?

4. Is the RPMP consistent with legislation and national policy?

Your organisation's insights and thoughts on the following questions are important. We value all feedback – '*good*' through to we '*need to pull our socks up.'* You may also have thought of issues from your sector's perspective that have not been considered prior.

It would be much appreciated if you could fill it out, and if we don't meet up in person, scan or email your survey back.

Regards, Peter Russell
Director Better Biosecurity Solutions Ltd

1. General questions:

a. Explain the nature of, and reason for, your pest management relationship with HRC?

High level views – i.e. who with, why, how often, key issues, key successes or wins achieved.

b. Using the scale below, describe your understanding of the RPMP?

1	2	3	4	5
Don't know, never seen	*Some, not well*	*Neutral*	*Somewhat familiar*	*Very familiar*

Add comments:

c. From your perspective and using the scale below, rate overall progress on the four pest programmes: exclusion; eradication, progressive containment and sustained control?.

1	2	3	4	5
Poor	*Less than ideal*	*Neutral*	*Good*	*Excellent*

Programme	*Rating*	*Add comments:*
Exclusion		
Eradication		
Progressive containment		
Sustained control		

2. List 3 things (e.g. tools, approaches, processes) that you like about the RPMP and you'd want to see maintained or enhanced.

1.
2.
3.

3. Correspondingly, list 3 things that in your opinion have not worked, are not working, or are surplus to requirements (and could be dropped).

1.
2.
3.

4. **Specific pest questions:**

   a. Which RPMP pest species most interest your organisation/group?

   b. Which species pose the greatest risk to your sector?

   c. Provide feedback on RPMP policy, rules and processes relevant to the above species.

5. **List the top 3 things that if you had the power to change you would (about any RPMP related tools / processes / approaches).** *What would you like to see done differently?*

   1.
   2.
   3.

   Add comments:

6. **Is your sector proactive on Biosecurity issues? Please illustrate how.**

7. **What do you think the future holds for your sector regarding pest management? Where are the gaps?**

8. **In your opinion does the HRC RPMP provide the level of Biosecurity assurance that the region needs?**

9. **Have you any further observations or comments about pest management in the region, including pests, relationships, policy etc ?**

Appendix 4: Summary of stakeholder responses

The following is a full report of the consultation and engagement carried out and is contained in a separate document.

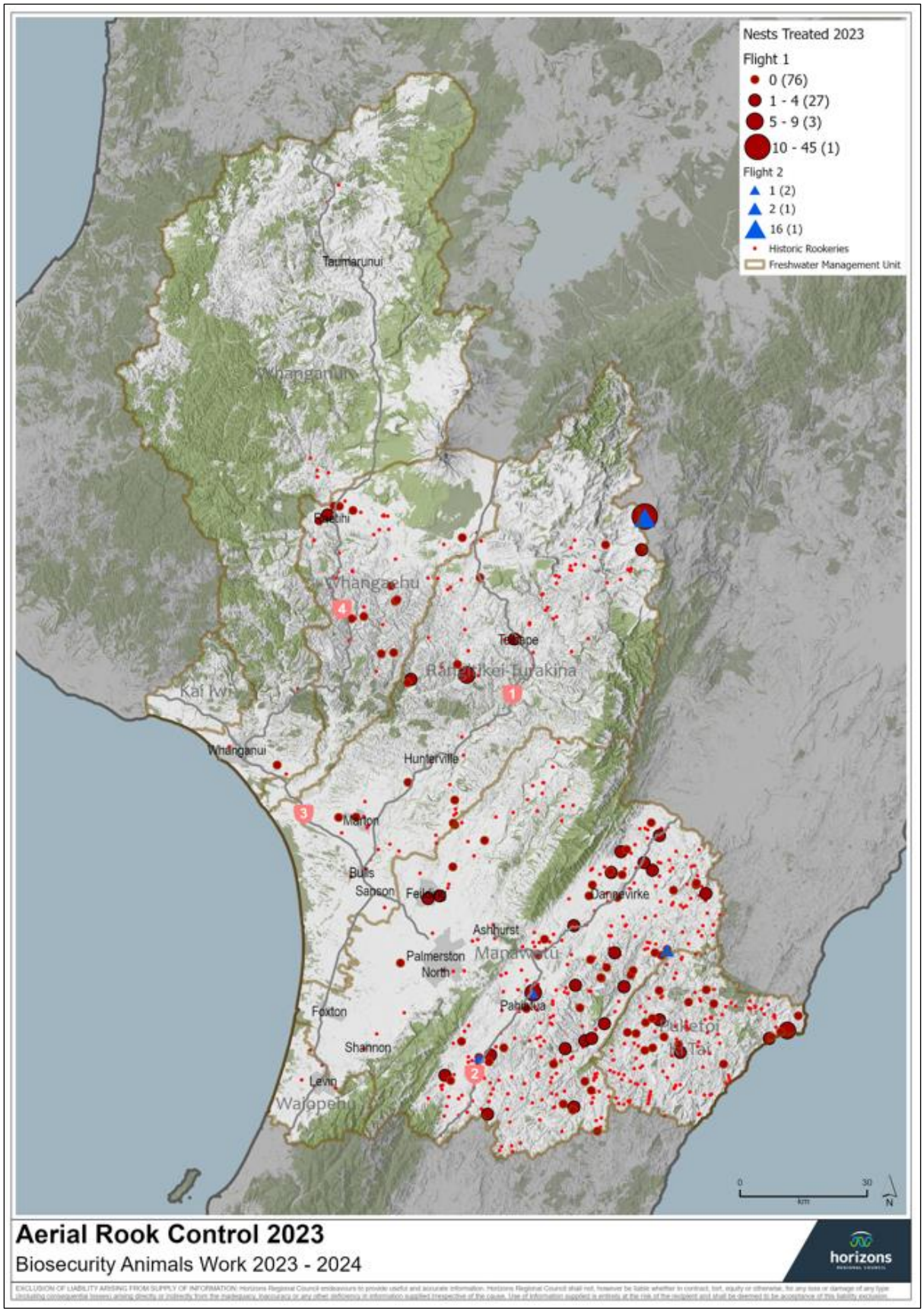
Summary feedback on Horizons RPMP

(from staff, stakeholders and contractors)

The following tables summarise key engagements held with various players involved in the Horizons RPMP's operation, including those implementing it (staff), executing it (contractors) and obligated by it (land occupiers and groups - stakeholders). Summaries are presented in a generic format, in the following order in which consultation took place:

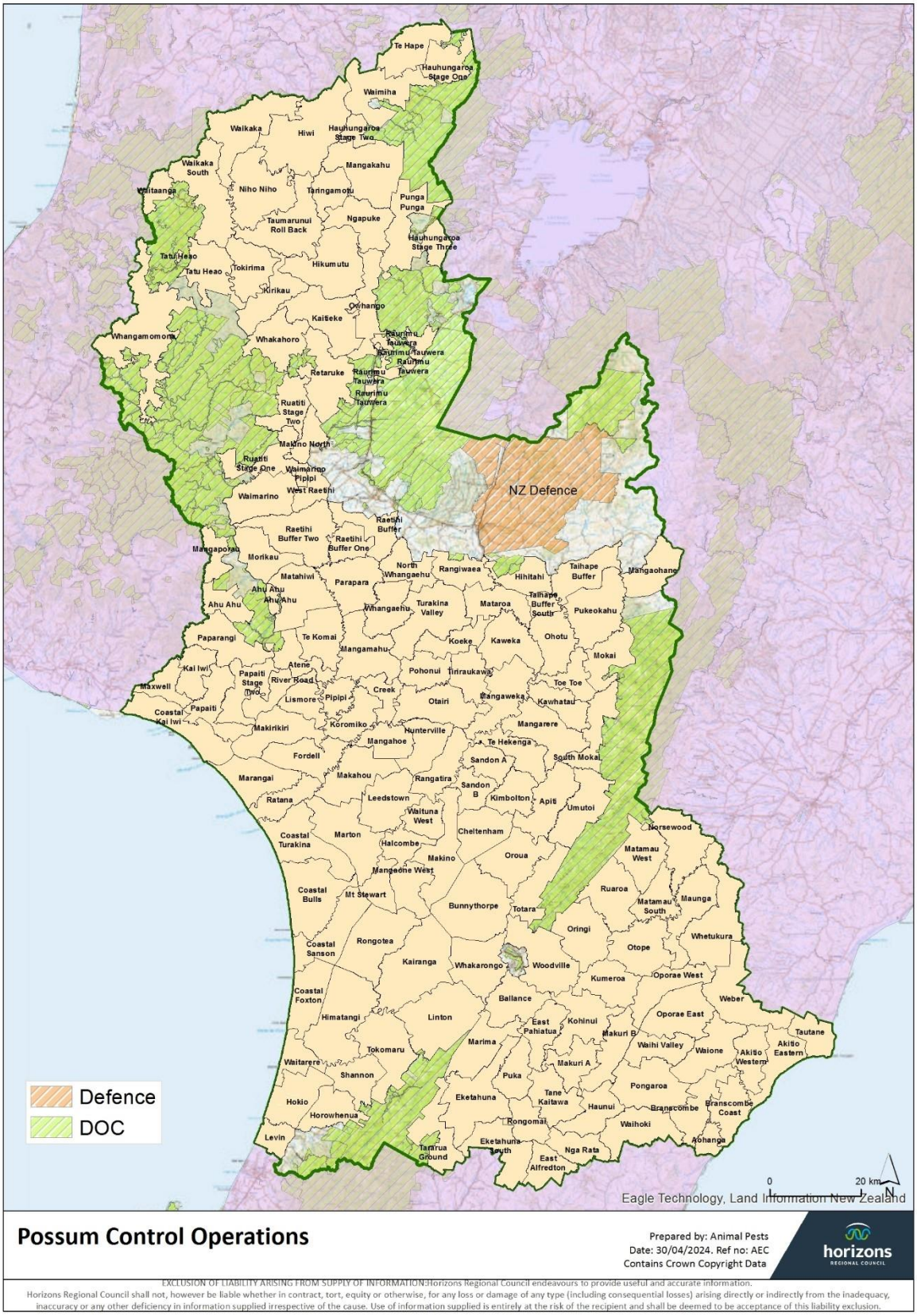
1. **HRC pest animal staff – Taumarunui**
2. **Ernslaw One Ltd – Karioi pulp mill**
3. **HRC pest plant staff (all) – Taihape**
4. **Federated Farmers – Whanganui and Ruapehu reps (incl. email response)**
5. **Bolt Contracting Ltd – Invercargill (conference) and email response**
6. **Department of Conservation - Ohakune**
7. **Rangitikei Environment Group - Marton**
8. **New Zealand Defence Force – Ohakea Airforce Base**
9. **New Zealand Transport Agency – Palmerston North**
10. **Manawatu District Council (as representative of TLA issues) – Fielding**
11. **Rangitikei Rivers Catchment Collective – Online and email response**
12. **Kiwirail – Auckland (email response)**
13. **Forest and Bird – Wellington (email response)**
14. **Kahikatea Contracting**
15. **Rangitikei Helicopters Ltd**

Appendix 5: Active rookeries treated in 2023-24

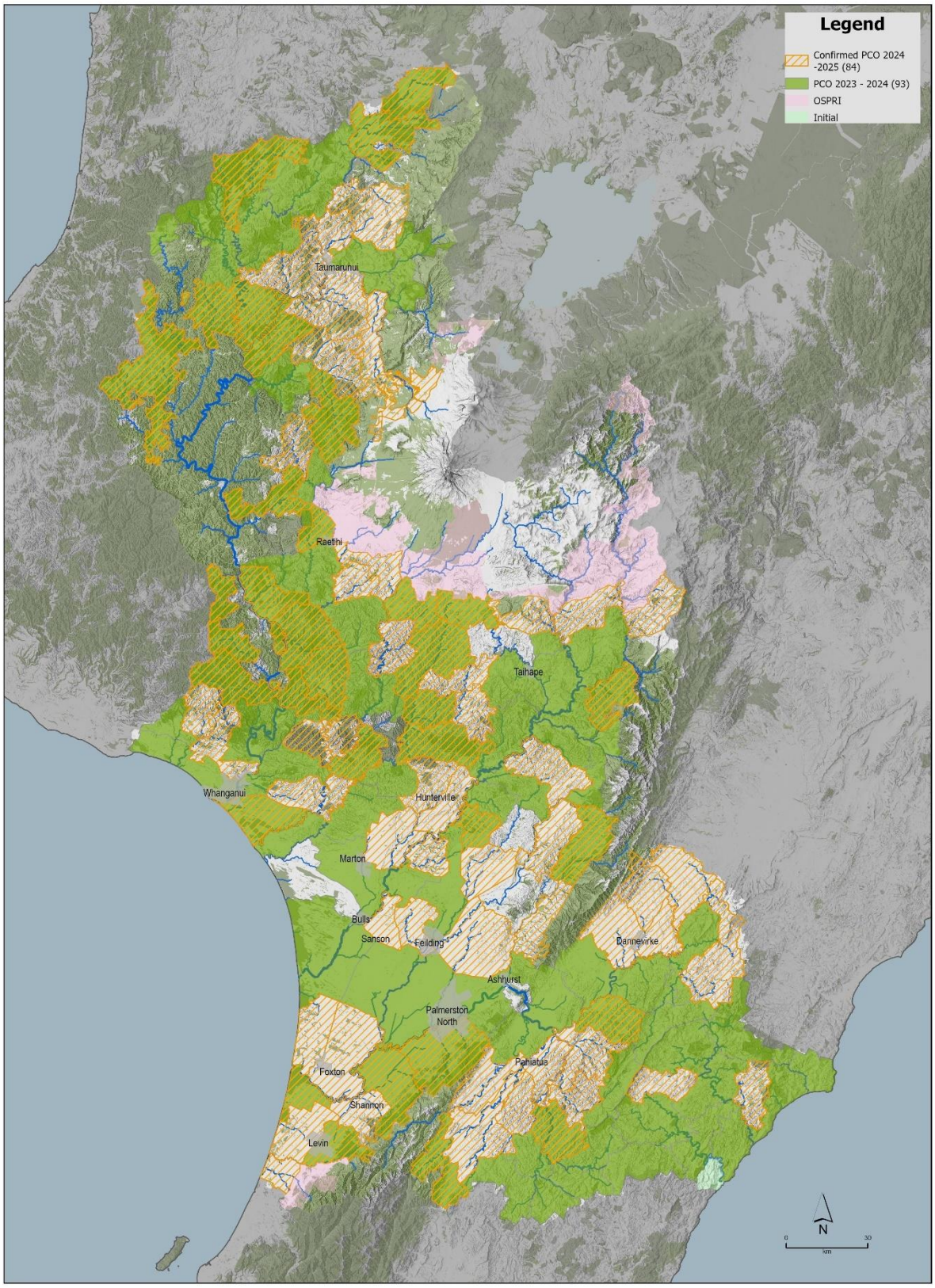


Appendix 6: PCO management areas

PCO areas showing connections with DOC land (green), NZDF land (orange) and OSPRI Tb areas (blue). These areas are not all worked concurrently, refer following map for last 2 years.



PCO work carried out last year (2023-24) and current year (2024-25).



Draft PCO Control Plan

Prepared by: Biosecurity Animal Pest Team on: 14/05/2024