

Regional Pest Management Plan 2022-2032

Pūronga ā-Tau mō te Mahere Mahi

# Operational Plan Annual Report 2023-24

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Prepared by Biosecurity Section, Integrated Catchment Management

# Rārangi kaupapa

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Evergreen buckthorn.

# He tīmatanga kōrero


## Introduction

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This annual report summarises all operational work completed, and progress made, against the objectives of the *Waikato Regional Pest Management Plan 2022-2032 (RPMP)* for the 2023/24 financial year (1 July 2023 to 30 June 2024).

It also highlights non-regulatory work undertaken by Waikato Regional Council (the council) aligned with the key regional priorities set out in the *Waikato Biosecurity Strategy 2022-2032*.

An annual report is a statutory requirement under section 100B (2) (a) of the Biosecurity Act 1993. Financial information is provided in summary form only.



Dama wallaby.

# Key stats 2023/24

15

Sustained control species

11

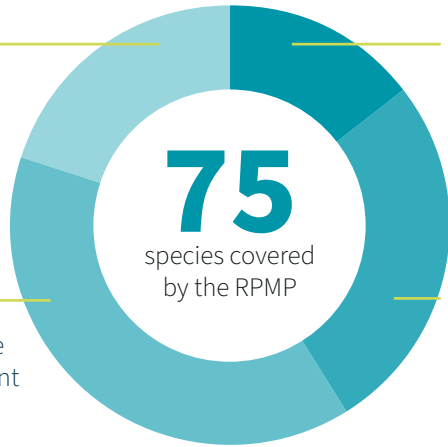
Exclusion species

29

Progressive containment species

20

Eradication species



80%

of programmes on track

23

community events attended

23,188km

covered during pest plant control and surveillance

88,074 hectares inspected for RPMP pest plants

>23,000



wilding conifers controlled at Matarangi Bluff Scenic Reserve

>900



marine vessel hull inspections for marine pests

6

new eradication sites found

1

new exclusion site found

29,771

website hits for pest plants species

26,355

website hits for pest animal species

985



hectares of Hamilton Halo possum and rat control

49.8

hours spent on website searches of all pest species

8

biocontrol releases

3 tradescantia spot fungus

2 tradescantia leaf beetle

3 green thistle beetle

135,048

hectares of priority possum control in PPCA

9669

hours on goat control



5429

kilometres walked or flown (drones) for wallaby surveillance outside of Containment Area



44

'Out of Containment' sighting reports received for wallaby

## Enforcement

8

notice of directions issued



2

notices of intention to act on default

27

programme reports and letters



101

non-programme letters

## Incidents and requests for service

408

incidents received and assessed



492

requests for service



# Financial summary

Revised budget:

## \$12,598,578

Actual expenditure:

## \$12,320,629

Expenditure	Revised Budget (\$)	Actual Expenditure (\$)	Difference (\$)
Pest plants	\$4,592,296	\$5,096,129	\$503,833
Pest animals	\$8,006,282	\$7,224,500	(\$781,782)
Totals	\$12,598,578	12,320,629	(\$277,949)

There is a \$277,949 variance, which equates to an only 2 per cent difference from the revised 2023/24 Biosecurity budget.

- The pest plant programme had an overspend of \$503,833 due to required control work at new alligator weed and velvetleaf sites, increased compliance costs related to the aquatic spray programme, plus continuing impacts of the weather events in 2022/23.
- The pest animal programme had an underspend of \$781,782, which was largely due to unspent labour, delays in implementation of the Clean Hull Plan, plus the deferral of one PPCA operation (Whenuakite) and carry overs for the final work in seven others.

Funds for any delayed direct control programmes, for example progressive containment pest plant work, were carried over with most of the work intended for completion in 2024/25.

Additional funding was received in 2023/24 from:

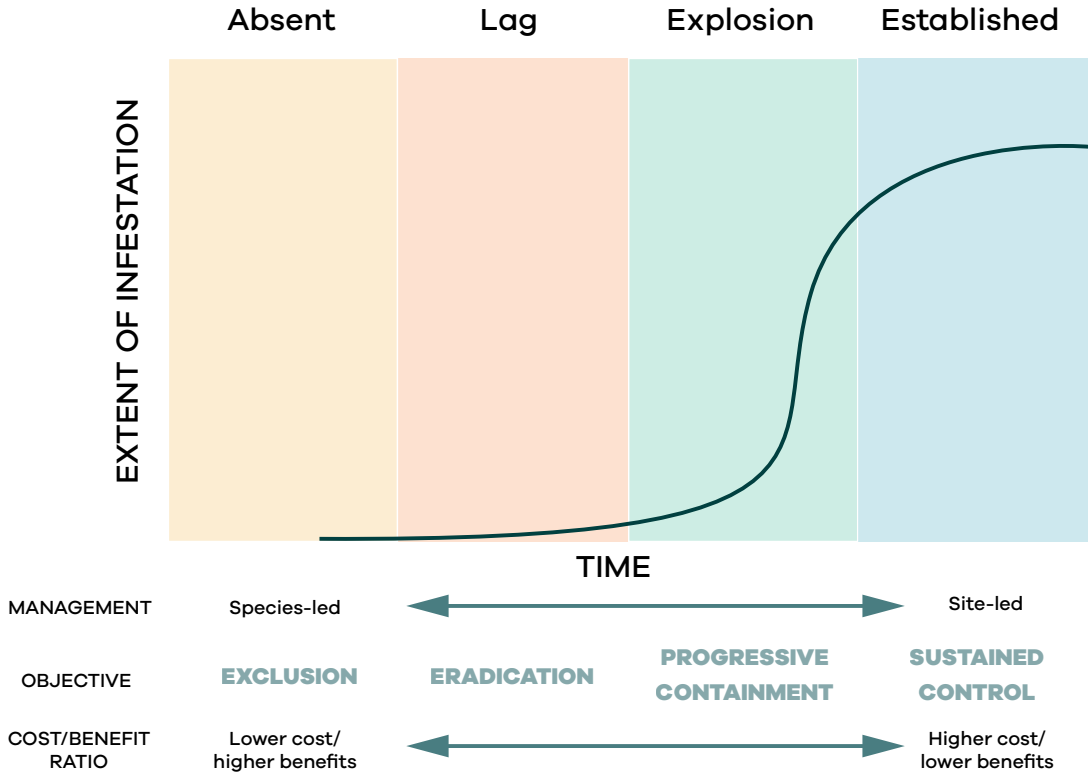
- The Ministry for Primary Industries (MPI) for the council's wilding conifer, kauri protection (as part of Tiakina Kauri) and wallaby (as part of Tipu Mātoro) programmes in the Waikato region
- Land Information New Zealand (LINZ) to manage infestations of RPMP pests in the Karapiro area
- Waikato River Authority as a contribution to the joint council/DOC/Te Riu o Waikato koi carp management programme, and yellow flag iris control
- Department of Conservation (DOC) for the joint programme to manage RPMP pests.



Manchurian wild rice site at Maungatautari

# RPMP programmes

Pests are managed within five programmes depending on their effects, distribution, density, control methods available and cost.



The council achieves practical pest management objectives using the following approaches.

### Service delivery

This is pest control that the council funds and undertakes, for example, for high threat, low incidence pest plants in a ‘pest-led’ management approach, or to protect specific values on private land in the region, under a ‘site-led’ approach. The council may also provide control tools, including the sourcing and distribution of biological control agents.

### Monitoring and surveillance

The council undertakes property inspections to determine where pests are present, and make sure RPMP rules are being adhered to. Monitoring is also undertaken to confirm the need for pest control (for example, pest animal trend monitoring) and that control targets have been achieved. Surveillance activities allow for new pest incursions to be promptly detected and appropriate responses initiated.

### Requirement to act

The RPMP has a set of rules that require occupiers or other persons to act, for example, the requirement to report a pest or undertake pest control, prepare and submit a biosecurity management plan, or to not spread a pest. Every effort is made to encourage and assist occupiers to achieve voluntary compliance. Appropriate enforcement action is taken against occupiers who fail to comply.

### Advocacy and education

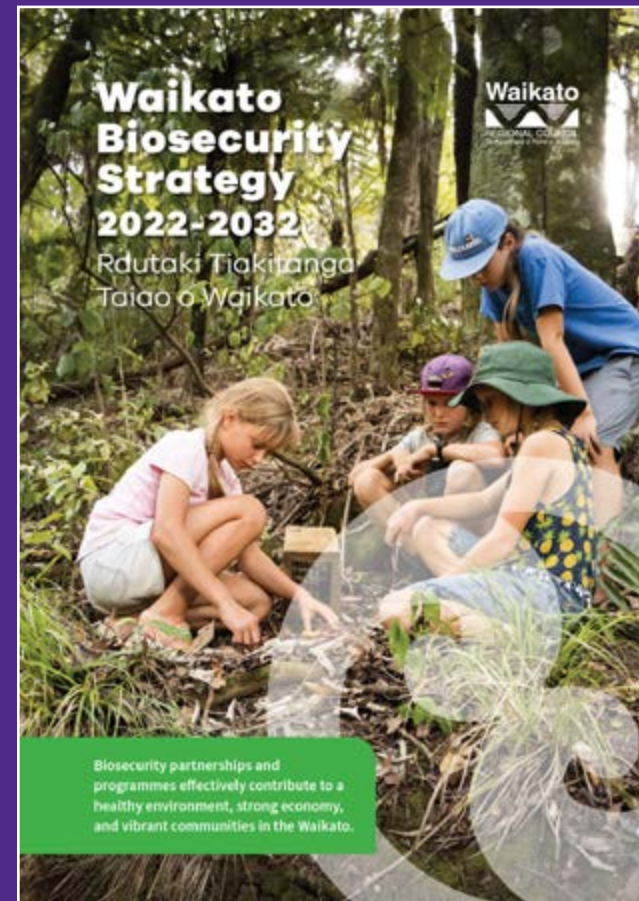
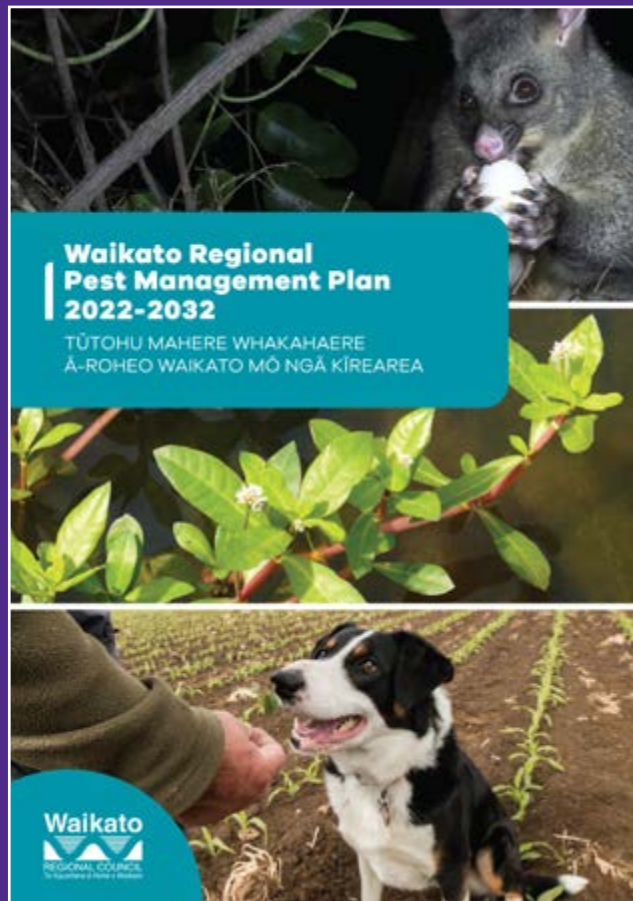
The council provides practical biosecurity advice, education and awareness through its website ([waikatoregion.govt.nz](http://waikatoregion.govt.nz)), factsheets, field days and its 24-hour freephone number (0800 800 401). The council also promotes industry biosecurity requirements and best practice and facilitates and commissions research on biosecurity issues.

# Report format

This annual report should be read in conjunction with the *Waikato Regional Pest Management Plan 2022-2032*, the *2022/2032 RPMP Operational Plan* and the *Waikato Biosecurity Strategy 2022-2032*.

The implementation of the RPMP is undertaken by the council's pest plant and pest animal biosecurity teams and a range of pre-approved contractors.

This report deals primarily with pest management projects under the RPMP pest management programmes. The objective(s) and outcome(s) for each management programme, and the status and results against key performance indicators in the operational plan for each species is included in this annual report.



# Happy Birthday Plantell

## Case study

Plantell, the council's pest plant data management system is turning one! Plantell has been a game changer for pest plant management. Staff and contractors are embracing its use, and more and better data is being collected. This allows for better reporting and a better understanding of pest plant distribution and status across the region.

2023/24 has seen some new features added, including an update to spray diaries and a biocontrol dashboard. Smaller updates and improvements have been made along the way, too.

Better weather over the past year has meant more field work has been undertaken. With more time in the field and more eyes on the ground, pest plant operational sites and infestations have actually increased for some species. But with consistent use of Plantell, we now accurately know where these are and will be ready to tackle them in the coming years.








# Part 1: Ngā whakamārama o te hōtaka whakahaere kīrearea Pest management programme reporting

This section provides an overview for each pest management programme, including the objectives and outcomes of each programme.

It also includes the status ratings of the management of each pest species within the programmes as follows.

Status	Description
	<b>On track</b> – pest management programme is considered on track to meet RPMP pest management programme objectives.
	<b>At risk</b> – pest management programme is considered at risk of not meeting some of the RPMP pest management objectives. <sup>1</sup>
	<b>More input required</b> – pest management programme did not meet any RPMP pest management objectives.

<sup>1</sup> Explanations for individual species status is provided under Part 3 'Species Pages'. Programmes may not meet all their Key Performance Indicators in the *Waikato Biosecurity Operational Plan 2022-2032* for a range of reasons, including severe weather events that impact on a season's pest control operations by limiting site access and contractor availability.

Mexican feathergrass.

# Exclusion programme

The exclusion programme covers pests that the council has opted to be the lead agency, or partner, in managing.

Most of these pests are present outside of the Waikato region, or have recently been eradicated from it, and have the potential to establish here or expand their range and become a problem.

<b>Objective</b>	Over the duration of this plan, preclude the establishment of pests in the exclusion programme within the Waikato region to prevent adverse effects and impacts as defined in the RPMP.
<b>Outcome</b>	No pests in the exclusion programme are established in the region.

Pest plant species	Status	Known infestations within the region	Infestations discovered 2023/24
Broom corn millet	●	0	0
Chilean needle grass	●	0	0
Freshwater eel grass	●	2	1
Fringed water lily	●	0	0
Horsetail (field/common)	●	2	0
Kudzu vine	●	0	0
Marshwort	●	2	0

Pest animals	Status	Animals reported or confirmed
Wallaby:	●	0
Bennett's wallaby		
Brush-tailed rock wallaby		
Parma wallaby		
Swamp wallaby		

## New freshwater eel grass infestation found

Freshwater eel grass (*Vallisneria australis*) was discovered in a small pond on a property near Taupō that staff were visiting to manage another RPMP pest plant. Staff spotted something unusual in the pond and a sample was taken on 5 October 2023.

The sample was confirmed as freshwater eel grass by Ines Schonberger, a botanist at Allan Herbarium, Manaaki Whenua Landcare Research. Manual control of the eel grass was undertaken on October 25 with all visible plant material removed from the pond and taken away for disposal at landfill.

At the first follow-up visit on 10 January 2024, only a single eel grass plant was found and removed. A second follow-up was undertaken on the 18 March 2024 and this time no freshwater eel grass was found. As the plant sets no seed and the site is small, our pest plant officer has been regularly revisiting the site once every two months to ensure eradication is achieved.



# Eradication programme

The eradication programme is used to manage pests that the council considers can be eradicated from the region over the period of the RPMP due to their low density and/or distribution.

The council has a lead role in the management of these pests through advocacy and education, inspection and service delivery. Comprehensive programmes of work are developed for all eradication pests. These programmes are high priority. Preventing eradication pests from becoming more widely established in the region will have huge benefits to the region's social, economic, cultural and environmental values.

**Objective** Over the duration of the RPMP, reduce the level of infestation of eradication pests within the Waikato region to zero density to prevent adverse effects and impacts as identified in the RPMP.

**Outcome** All known or new pest infestations are controlled to zero density within the duration of this RPMP.

Pest Plants	Status	Number of sites	Area managed (ha)	Area of plant cover (m <sup>2</sup> )
African feathergrass	●	20	308.4	518
Cathedral bells	●	22	69.4	101
Chilean flame creeper	●	6	1,333.8	122
Evergreen buckthorn	●	See species page for break down in results.		
Horse nettle	●	2	40.0	16
Horsetail (rough)	●	13	11.8	324
Knotweed (giant and Japanese/Asiatic)	●	23	16	111.3
Mile-a-minute	●	23	11.0	340
Nassella (fine stemmed needle grass/ Mexican feather grass)	●	7	1.8	39.1
Nassella tussock	●	6	15.5	24.4
Noogoora bur	●	13	295.5	12,736
Purple loosestrife	●	3	1.6	1

## Using X-Tree Basal to control evergreen buckthorn

Evergreen buckthorn control has been going on in the Waikato region for about 15 years. The main method of control has been cutting tree stems and treating the stump with herbicide gel. While this is an effective method of treatment, chainsaws and woodchippers need to be used when dealing with larger trees, which is expensive and time-consuming.

In recent years, we've started using a product called X-Tree Wet & Dry. This mix of herbicide and vegetable oil is applied around the stem and chemically ring barks the tree, killing the tree standing. This method is very quick and very effective on larger trees in low profile areas, significantly improving the speed and cost of control.



Evergreen buckthorn

Pest Plants	Status	Number of sites	Area managed (ha)	Area of plant cover (m <sup>2</sup> )
<i>Rhododendron ponticum</i>	●	4	13.7	42
Sagittaria/arrowhead	●	5	1,259	3
Senegal tea	●	5	157.8	495
Spartina	DOC are the lead management agency for most spartina sites in the Waikato region. They are working towards eradication of it in some sites (e.g. Raglan harbour where no spartina has been found for a number of years) and continued surveillance and control in others (e.g. Coromandel harbours). The council contributes financially towards the programme.			
Thistle (Variegated)	●	7	919.0	100,001
Water poppy	●	4	9.1	1,685
<b>Totals</b>		<b>162</b>	<b>4,589.8ha</b>	<b>242,576m<sup>2</sup></b>

Pest Animals	Status	Confirmed rookeries	Number of active nest sites	Active nest sites controlled	Nest sites abandoned (due to weather events)
Rook	●	4	7	5	2



Rook control contractors prepare for take off.

# Controlling mile-a-minute

## Case study

Mile-a-minute (*Dipogon lignosus*), originally from South Africa, is a vigorous climbing vine with pink, white or purple pea-like flowers. It can spread rapidly, forming blankets with its thick mat of stems that shade out and take over desirable vegetation.

There are currently few infestations of this pest plant in the wild in the Waikato, with the council undertaking any control required. In urban areas, it can quickly take over gardens and structures, like in the 'before' photo. Sites like this can be challenging for control as herbicide use can be restricted and the pest plants can be growing over desirable plants.

Luckily, this vine responds well to herbicide control, and at this site partial spraying of accessible vines with Associate (metsulfuron active ingredient) resulted in excellent overall control. Follow-up will be required to check for any regrowth, and determine whether any further control will be required.



Mile-a-minute flowers



Before



After

# Progressive containment programme

The progressive containment programme is used to manage pests that are well established but which can be feasibly reduced in geographic distribution and thereby impacts, in all or part of the region.

It is appropriate for the council to manage some of the pests in the progressive containment programme (for example, giant gunnera, alligator weed and climbing spindleberry), rather than rely solely on voluntary action, because:

- successful containment of these species requires co-ordination of action at a regional scale
- the benefits of the control of many of these pests accrue to a wider community than those directly affected by the presence of the pests on their property.

For some pests in the progressive containment programme, control is the occupier's responsibility to control (for example, control of lantana and chocolate vine). Occupiers may also need to produce biosecurity management plans if planning subdivision or land development activities where pest plants like alligator weed are present. The council provides advice and information on the identification, impacts and, where appropriate, the control of the progressive containment pest species.

<b>Objective</b>	Over the duration of the plan, contain and where practicable progressively reduce the geographic distribution or extent of progressive containment pests within all or specific parts of the Waikato region to pre-2022 levels to reduce further adverse effects and impacts as identified in the RPMP.
<b>Outcome</b>	<ul style="list-style-type: none"><li>• Reduction in extent and density of these pests.</li><li>• Areas that are clear of these pests will remain so.</li></ul>

## Golden dodder infestations in wetland areas

Golden dodder (*Cuscuta campestris*) is a parasitic plant that can grow up to five metres in two months. It is toxic to stock and can smother wetland plants. Its tendrils grow until they contact a suitable host, then develop root-like structures that suck nutrients and water from the host plant.

Golden dodder is a progressive containment pest plant in the 2022-2032 *Regional Pest Management Plan*. Control of infestations is being done by the council in collaboration with DOC. High water levels thwarted control efforts last year, with successful control undertaken this year on private land around the Whangamarino Wetland and Lake Whangape.



Golden dodder

Pest plants	Status	Number of operational sites	Total area of operational sites (ha)	Pest plant cover (m <sup>2</sup> )
Alligator weed	●	205	19,410	955,468
Banana passionfruit (Taupō and Rotorua districts)	●	3	96.6	378
Boneseed	●	21	1,338.0	923
Climbing spindleberry	●	85	2,985.5	5,778
Darwin's barberry	●	2	3,355.5	6,314
Giant gunnera	●	3	0.6	64
Golden dodder	●	12	251.2	7,108
Mexican water lily	●	2	54.0	195
Moth plant (Taupō and Rotorua districts)	●	0	0.0	0
Old man's beard	●	75	2,785.0	3,516.9
Velvetleaf	●	89	7,150.0	20,076.5
Wild kiwifruit	●	8	1.4	190
Woolly nightshade (Taupō and Rotorua districts)	●	1	513.2	91
Yellow flag iris	●	89	12,115	2,300,612
<b>Totals</b>		<b>609</b>	<b>57,845ha</b>	<b>3,300,714m<sup>2</sup></b>

Pest animals	Status	Public sightings reported	Total area of wallaby indicator dog and drone surveillance	Direct control
Dama wallaby (outside containment area)	●	44	49,145ha covered 5,429km walked or flown	Over 600 wallabies shot in the buffer area



Wallaby

# Velvetleaf spotted in the Waikato again!

## Case study

In April 2024, through the great work of a council contractor and landowner, new confirmed sites of velvetleaf were reported to council staff: one site was spotted in maize that was being harvested for sale, another site was found in another maize crop prior to harvest, and a third site was on a property where velvetleaf had not been seen for several years.

Dog surveillance was undertaken to confirm the extent of velvetleaf at each site. At this point, we have no clear idea where the new incursions came from as tracing has provided no obvious source. This means there are potentially other properties with incursions that are yet to be identified. It's vital that contractors, landowners and council staff remain vigilant in regard to velvetleaf.



Velvetleaf flowers.



A pest plant officer removing seed heads from velvetleaf at the new site in Taupō.



# Wilding Conifer Programme

## Case study

The Wilding Conifer Programme is a progressive containment programme that targets the control of exotic conifers, specifically 11 species that have established by natural means (wilding) and are not located within a forest plantation (defined as an area of more than one hectare).

Since 2019, MPI have provided funding to the council to undertake wilding conifer control operations, including on the Coromandel Peninsula.

### Coromandel control operations

One of these operations, which began in 2022, has focused on the removal of wilding pines from land on the southern side of the Whitianga harbour. Ground crews there have been drilling and filling wilding conifers in 92 hectares of heavily-infested public conservation land at the southwestern end of the harbour. This high visibility site, which supports a mix of coastal scrub and forest, has significant biodiversity values that will be protected and enhanced with the control of these wilding trees.

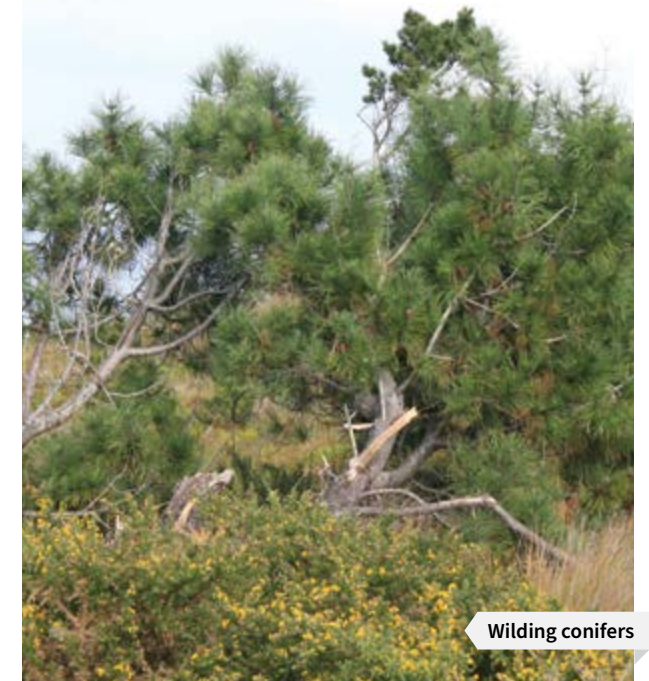
At Kuaotunu, ground crews have carried out a final round of maintenance work in the Matarangi Bluff Scenic Reserve (252 hectares) where in excess of 23,000 wilding pine tree seedlings and small trees have been successfully removed this financial year. In this reserve, wilding trees had previously been felled rather than controlled standing, leaving open areas to be reinfested with seedlings.

Work also continued on the final round of control work in the Black Jack Scenic Reserve (85 hectares) where there remains the risk of continuous reinvasion from as yet uncontrolled wilding pine trees and the soil seed bank.



Extensive hand pulling and hand sawing of wilding seedlings will now be required to support the initial control work carried out in 2019 and 2020.

MPI funding of this programme for 2024/25 has been significantly reduced. Going forward, the programme will rely on community groups to watch over and maintain the successful MPI-funded control work undertaken to date, at both the Matarangi and Blackjack sites. The scope of further wilding control work in the programme will be dependent on future funding levels.



# Sustained control programme

The sustained control programme is used to reduce the impacts of well established pest plants and animals on biodiversity and economic values, and their spread to other properties.

The council's role is to respond to complaints from members of the public, who are taking reasonable measures to control the pest plant and want an adjacent or nearby occupier to undertake control of the same to prevent spread across land they occupy. The RPMP has rules to prevent spread from transport corridors, cycleways and quarries. This includes to neighbouring properties and areas where control is already being undertaken. It also includes preventing spread from transport corridors, cycleways and quarries.

The council will work with land occupiers to help them comply with RPMP rules, providing advice and information, and taking enforcement action if necessary. To this end, all quarries within the region have received a letter updating them on their responsibilities in relation to sustained control species in the new RPMP.

## Objectives

- Over the duration of the RPMP, prevent the spread of sustained control pest plants to neighbouring properties where those pest plants are being actively managed. Ensure transport corridors and quarries reduce the risk of sustained control pest plants being spread around the region.
- Over the duration of the RPMP, sustainably control common brushtail possums within priority possum control areas and across the Waikato region to minimise adverse effects and impacts as identified in the RPMP and their spread to neighbouring properties.
- Over the duration of the RPMP, sustainably control feral rabbits to level 4 or below on the Modified McLean Rabbit Infestation Scale 2012 where they have been identified as having adverse effects on environmental, production, cultural and amenity values in the Waikato region, and to reduce their impacts on neighbouring properties.
- Over the duration of the RPMP, sustainably control magpies and common and German wasps within the Waikato region where they present a risk to public health to minimise adverse effects and impacts as identified in the RPMP.

## Outcome

- Impacts of these pests are managed to an acceptable level.
- The spread of these pests across boundaries are managed.
- Strategic investment in areas where it will support meaningful outcomes.



Possum

# Priority possum control

## Case study

The council undertakes maintenance possum control in priority possum control areas (PPCA) and at Hamilton HALO sites, covering over 500,000 hectares. This control work complements pest animal control undertaken by DOC, iwi, community groups and land occupiers across the region.

HALO sites are controlled annually, particularly for rats and possums. To identify when maintenance control is required within PPCA, the council undertakes trend RTC<sup>1</sup> monitoring to determine possum population levels. When a PPCA has a trend result above the 5% RTC index threshold, this triggers the need for maintenance control. Control is generally undertaken on a three-to-four-year cycle depending on the RTC results achieved and trend monitoring results overtime.

### Objective

Minimising the adverse effects and impacts caused by possums on economic and environmental values within Priority Possum Control Areas (PPCA) and prevent their spread to and impacts on neighbouring properties where they are being actively managed.

### KPIs

All PPCA ground control operations achieve a mean 5% RTC, and aerial control operations achieve a mean 3% RTC within the contract timeframes. Annual HALO ground control operations are completed by 30 September. Maintenance possum control is carried out to best practice standards and in accordance with relevant legislation.

## Results

### 2023/24 PPCA control operation (approx. 135,300 ha):

- \*Ngaroma 1 (underway)
- \*Tiroa (underway)
- \*Matira Farmland (underway)
- \*Waikaretu (underway)
- \*Whenuakite Farmland (deferred to 24/25)
- \*Pirongia West Buffer
- Aria – 1.67% RTC
- Waingaro – 1.09% RTC
- \*Oparau
- Mokauiti 2 – 1.18% RTC
- Naiki – 0.44% RTC
- Te Akau – 0.80% RTC
- Rangariri – 3.43% RTC
- Waikite Valley Farmland 2A – 1.33% RTC and 2B AT220 Blocks
- Mount Karioi South – 0.30% RTC
- Mokauiti 1 Farmland – 0.60% RTC
- Mokauiti Bush – 0.76% RTC
- Whareorino Bush (WRC/DOC) – 0.14% RTC
- Whenuakite Bush (DOC/WRC) – 0.00% RTI

### Hamilton HALO results (585ha)

- Johnstone's Block – 3.10% RTI
- Hope Bush – 3.21% RTI
- Pukemako – 0.00% RTI
- Te Miro – 3.33% RTI
- Tirohanga – 2.50% RTI

### 2024/25 PPCA planned control operations (approx. 146,000 ha):

- Whenuakite Farmland (deferred from 23/24)
- Rotowaro
- Whangape
- Whitehall/Te Miro
- Piopio East Farmland
- Piopio East Bush
- Piopio West
- Ngutunui
- Nukuhakari 1 Farmland
- Whareorino Farmland
- Ngaroma 2
- Mangakino
- Pukekawa
- Onewhero
- Hauhungaroa Bush (DOC/WRC)
- Paeroa Range (DOC/WRC/Tipu Mātoro)

### Hamilton HALO (585 ha)

- Johnstone's Block
- Hope Bush
- Pukemako
- Te Miro
- Tirohanga

\* RTC monitoring will be undertaken in these PPCA in 2024/25 with reporting of the results in the 2024/25 Annual Report.

1 The residual trap-catch (RTC) index is a method of determining relative possum density. Lines of 10 leg-hold traps, spaced 20 metres apart, are set for three consecutive nights in random locations within the treatment area, before and after control. The number of lines used is determined by the size of the management area. The standard performance target commonly set for a reduction in possum densities, is an RTC of < 5% (i.e. less than 5 possums caught for every 100 trap-nights).

## Audits

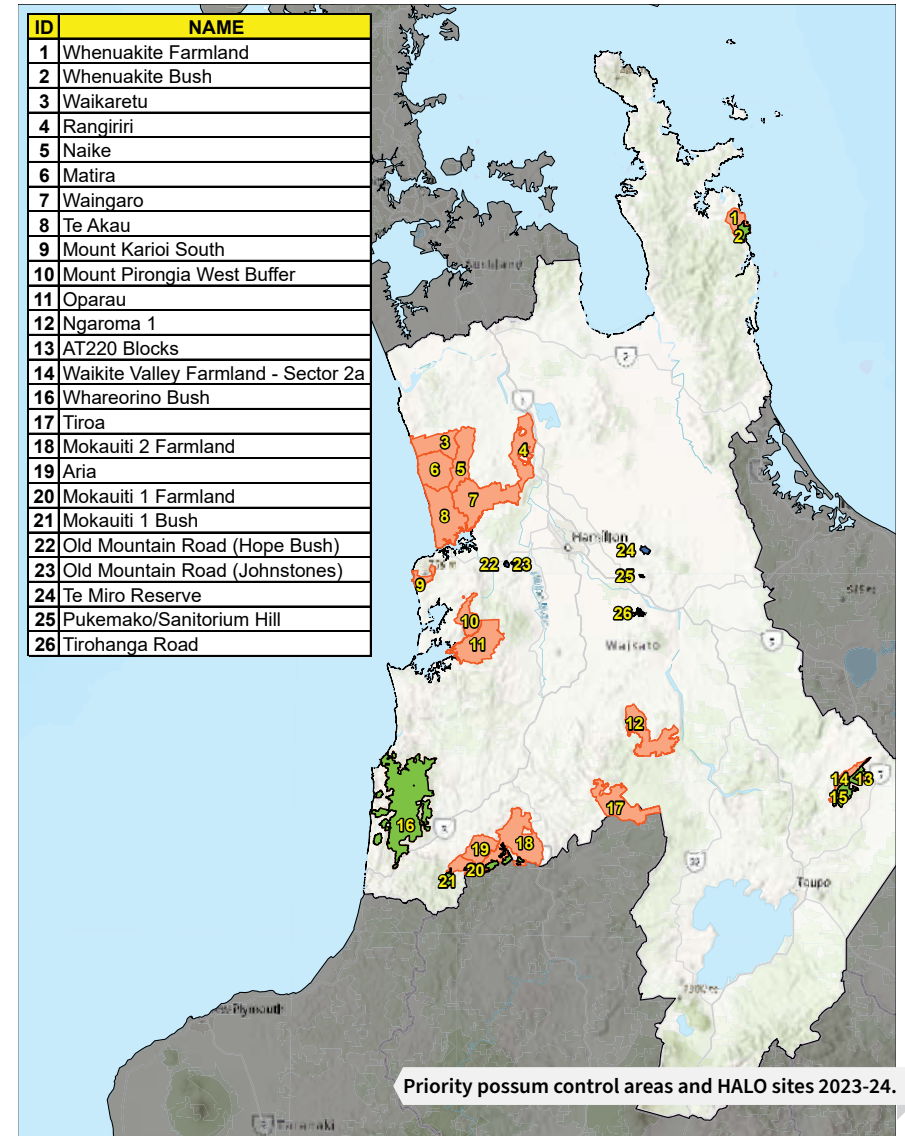
A selection of PPCA are audited each year using the council's auditing standard operating procedures, as follows.

- All aerial operations are audited.
- Every pest animal contractor is audited at least once every year.
- New pest animal contractors are audited on their first control.
- Any breaches identified in council audits are resolved by following SOP guidelines, within the timeframes of each PPCA project.

A total of 29 audits were completed in the 2023/24 financial year.

- Twenty audits of ground control operations (eight operational and twelve decontamination audits) in PPCA and HALO areas.
- Four audits of the four aerial control operations (two by council staff, two by DOC staff), one in the PPCA programme, two in the Rook programme and one external audit in the Wallaby programme.
- Five audits of the council's operational performance monitoring (result/trend RTC/RTI).

Audits are undertaken to identify areas for improvement in the delivery of the PPCA or HALO programmes. Contractors are always notified of any issues or breaches identified in audits, with follow up by council to ensure contractor processes and procedures are modified accordingly or improvements made. Our contractors exhibit a continuing commitment to health and safety practices in a high-risk industry, with all identified issues addressed and resolved this financial year.



# Site-led pest management programmes

Site-led pest management is about preserving the values of a place, rather than targeting a specific pest species.

Three site-led programmes have been identified in RPMP:

- the Hūnua Ranges Pest Management Area (programme administered by Auckland Council)
- Wetlands
- Project Yellow.

The pests targeted under a site-led programme vary, depending on the effects of pests on the site's values.

## Wetlands site-led programme

There are 24 pest plants and four pest animals (all turtles) included within the wetland site-led programme. These pests have the potential to impact wetland environments. If a wetland site meets the site-led RPMP criteria, then there are rules in the RPMP to support occupier or community-group led wetland restoration work. To date there are no wetland site-led programmes in the Waikato region.

<b>Objective</b>	Over the duration of the plan, the impacts of the pests listed in table 14 and 15 of the RPMP in wetland sites of high ecological value, or high value to the community or occupiers, are minimised.
<b>Outcome</b>	Community groups and stakeholders are supported in minimising the adverse effects of specified pests on the values of identified wetland sites.

## Yellow flag iris biological control

Yellow flag iris (*Iris pseudacorus*) is an invasive pest plant of riparian and wetland areas, forming dense infestations that outcompete desirable plants and alter waterways. It is difficult to control manually, with issues using herbicide when working near water.

Host range testing for potential yellow flag iris biocontrol agents has been underway in South Africa for a few years. This work is being driven by the Biocontrol Collective, led by Manaaki Whenua Landcare Research with support from Waikato Regional Council as part of the Biocontrol Collective. The Collective has been paying Rhodes University in South Africa to do yellow flag iris host range testing with a New Zealand focus.

However, despite numerous attempts, the university has been unable to cultivate plants from the genus *Libertia*, which are the closest related New Zealand native iris species to yellow flag iris.

Therefore, to progress host-range testing, 34 adults of the yellow flag iris flea beetle (*Aphthona nonstriata*) were imported into containment in New Zealand this year. The flea beetle will be released onto plants of *Libertia* species in a contained lab environment to see if they pose any risk to them.

Hopefully, this will be a significant step towards identifying a safe and effective yellow flag iris biocontrol agent that council can use in the Waikato.



Yellow flag iris beetle



Yellow flag iris

## Project Yellow site-led programme

Project Yellow targets three yellow-flowered, nitrogen-fixing pest plants: broom, gorse and tree lupin/yellow bush lupin.

Eight organisations, including Waikato Regional Council, work collaboratively to protect the unique natural values and natural vistas of the tussocklands of the Central North Island, between Rangipo in the north and Waiouru in the south, from the impacts of these pest plants.

In 2023/24, the council engaged experienced contractors to undertake ground control of these invasive legumes across multiple areas in the Desert Road. Hundreds of legumes were successfully removed. Emphasis this year was put on finding and controlling outlying plants to limit further spread.

**Objective** Over the duration of the plan, control of the pest plants listed in table 16 of the RPMP will be undertaken so that the environmental, social, cultural, amenity and recreational values of the Central North Island Desert Road tussocklands are protected from the impacts of these pests.

**Outcome** Community groups and stakeholders are supported in minimising the adverse effects of specific pests on the values of identified Desert Road tussocklands.

Activity	Cost
Ground control – Desert Road	\$4,995.90
<b>Total 2023/24 spend</b>	<b>\$4,995.90</b>

### Project Yellow partners:

- Department of Conservation
- Genesis Energy
- Horizons Regional Council
- Lake Rotoaira Forest Trust
- New Zealand Defence Force
- Transpower
- Waikato Regional Council
- Waka Kotahi NZ Transport Agency



Broom



Contractor drilling a wilding conifer.

# Part 2: Etehi atu mahi tiakitanga taiao

## Other biosecurity activities

### Waikato Biosecurity Strategy 2022-2032

The strategy sets out the council's blueprint for ensuring we operate and maintain a collaborative, cohesive and comprehensive biosecurity system within the Waikato region over the next 10 years.

The strategy, which is non-statutory, integrates the council's regulatory (RPMP) and non-regulatory biosecurity functions (all other biosecurity activities such as monitoring and surveillance, research, incursion responses and collaborative action). Strategic goals and key regional priorities are outlined to guide the delivery of our wider regional biosecurity activities.

Biosecurity work relating to these regional priorities are highlighted in this section of the annual report.



# Effective leadership and governance

The council undertakes a range of actions to provide effective leadership and governance for regional biosecurity.

## Whenuakite PPCA

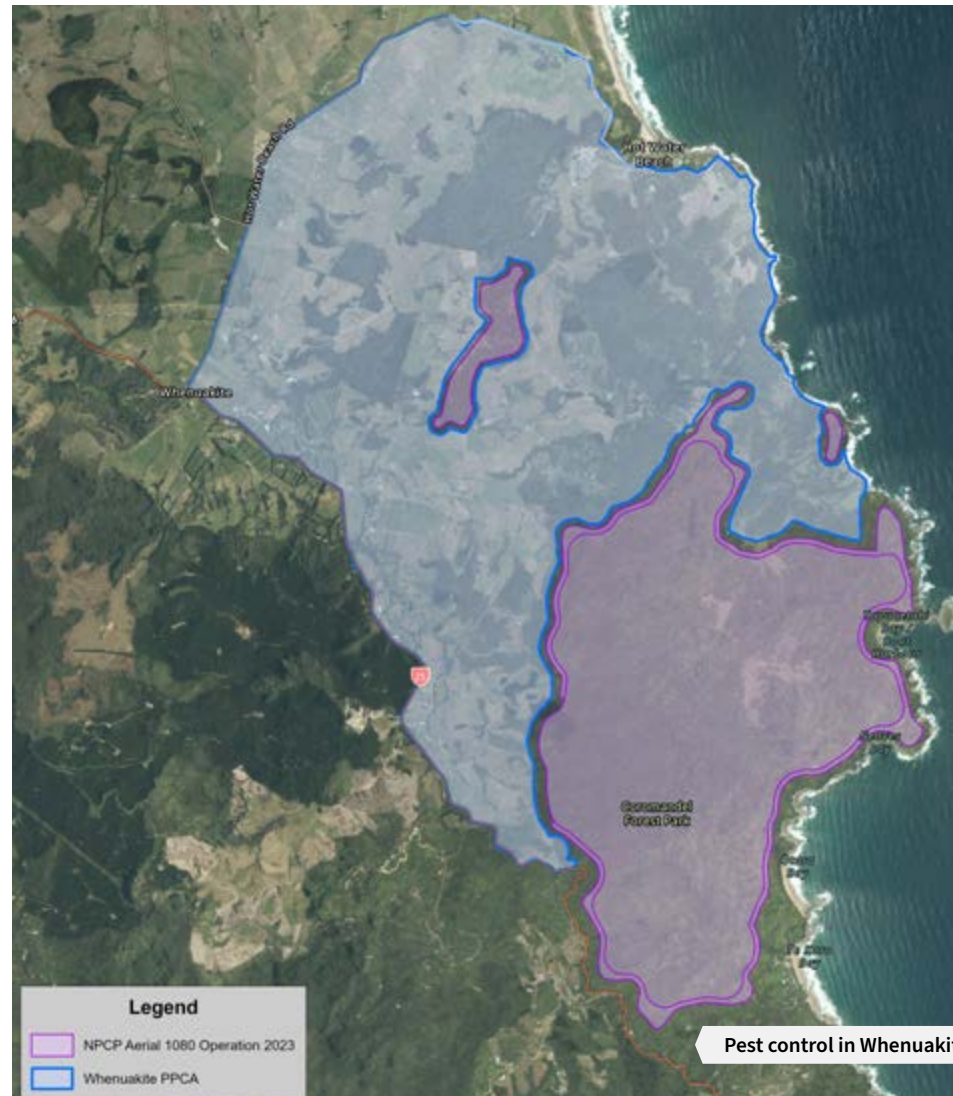
The council has added a new Priority Possum Control Area (PPCA) to its priority possum control programme, in Whenuakite on the Coromandel Peninsula. The area has a long history of council involvement through the funding of work to enhance the biodiversity and catchment integrity.

This has included funding for:

- possum control on private land as part of the DOC-led Whenuakite National Predator Control Programme (NPCP) Aerial 1080 Operation
- wilding conifer control
- fencing to protect kauri
- catchment fencing and riparian and wetland planting
- predator control through our contestable biodiversity funds to support local environmental community groups, for example, Whenuakite Kiwi Care Group.

A number of native forest areas on private land are also protected by QEII covenants.

The addition of a PPCA in Whenuakite will complement the predator control work already being undertaken by community groups in the area, and the DOC-led aerial operation that targets possums and rats.



As a result of existing predator control, residents of Hot Water Beach and surrounding farms have witnessed flourishing numbers of Coromandel brown kiwi, kererū, tūi and bellbirds. There are also more dotterels on the beach, and the reclusive bittern has been heard in the area's wetlands.

Council staff engaged with landowners and iwi between 2022 and 2024 to ensure there was sufficient support for the creation of a PPCA in Whenuakite, with more than 75 per cent in favour. Possum control for all landowners within PPCA boundaries is mandatory. The council's preferred contractor for the area, Rentokil Initial Ltd – EcoFX, was due to begin work there in July 2024. The contract is performance-based, with a target of  $\leq 5\%$  RTC (residual trap catch – an index to assess possum numbers).

The Whenuakite and Hot Water Beach area is a great example of synergies between the council's directorates, the Department of Conservation, local iwi and the community all working towards common biosecurity and biodiversity goals.



## Kauri Protection Programme

The council's award-winning kauri protection programme has six work streams:

- rural landowner stock fencing operations
- advocacy and education through schools
- engagement with community groups
- delivery of pest control adjacent to at risk kauri sites
- monitoring and surveillance programme
- further implementation of the Plants Buyers Accord Action Plan (Plant Pass).

### Rural liaison and fencing

Under this work stream, the programme delivered 9975 metres of high-quality stock proof fencing to protect 252 hectares of forest with kauri. Eight landowners were engaged with, and seven kauri protection plans were put in place.



Kauri fencing at Long Bay, Coromandel Peninsula.

### Advocacy and education

The agencies involved in the Kauri Programme took their kauri protection messages out to 14 community groups and 17 schools across kauri lands via the brilliant and innovative kauri tree model and trailer and VR experience, Kauri Pou Kaitiaki. The trailer and VR have also travelled to Bay of Plenty, Auckland and Northland to share messages about kauri protection, and were at Fieldays. Kauri messaging and stories were also shared widely through the council's website, Facebook posts, Instagram, newspaper articles and radio spots.



Students enjoying the VR experience.

### Delivery of pest control

The programme provided funding towards two DOC Feral Goat Control Operations on the Coromandel, which successfully removed a number of feral goats in at-risk kauri areas.

### Industry liaison – Plant Pass

Good progress was made on develop and implementation of the Plant Pass certification with the regional nursery industry. Plant pass certification is now being used as a weighted attribute for the council's plant supply contracts.

### Surveillance and monitoring

The council received 16 kauri health enquiries over 2023/24. Of those kauri, seven demonstrated symptoms of ill thrift suggestive of kauri dieback. However, in all cases, soil samples taken from the root zones and analysed had no PA (*Phytophthora agathidicida*) detected. One new PA positive site was detected by Tiakina Kauri on the Coromandel.

Drone footage was captured over PA positive sites on the Coromandel to compare tree health with footage from previous years and the extent of trees now exhibiting ill thrift.

### Awards

The council's Kauri Programme won the 'Eagle Technology Local and Central Government Award' at the 2024 New Zealand Biosecurity Awards.



Council's Team Leader - Pest Plants, with the programme's award

## National Interest Pest Responses (NIPR)

There are nine species of pest plants included in the NIPR programme. Two of these, Manchurian wild rice and white bryony, are present in the Waikato region, with the council undertaking the control work.

### Manchurian wild rice

The total infestation area of Manchurian wild rice (MWR) in the Waikato is continuing to reduce at known sites, with mostly positive changes made to 'site statuses' this year. The exception was the regrowth of two infestations thought to be nearing eradication status. Control achieved along the Piako River was particularly pleasing with most sites now at zero to low density compared to the large dense infestations that once occurred along this river's edge.

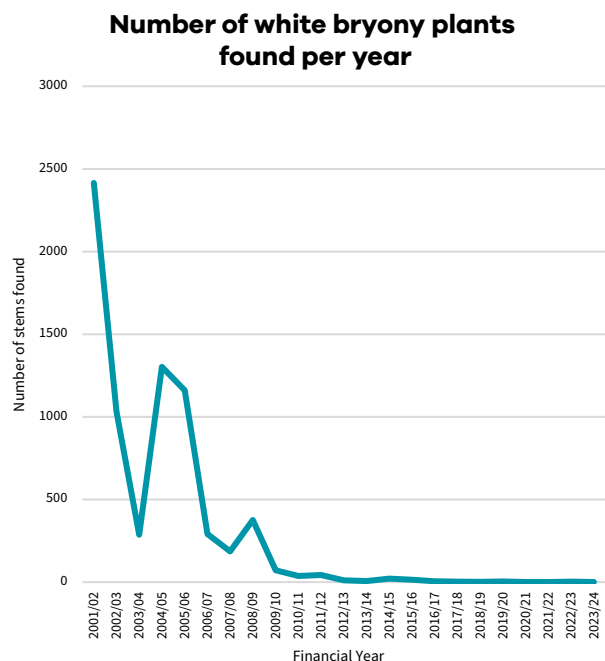
Changeability in weather continued to challenge operations, particularly as good weather had to coincide with contractor availability and suitable tides for control to occur at MWR sites on the Waihou River. For this reason, some infestations only received one round of control instead of the optimal two.

Waikato Regional Council, in partnership with MPI, has funded some research to investigate MWR rhizome viability, after at least five consecutive years of spraying, in an attempt to better understand why this pest plant is so persistent and hard to eradicate. The results of these findings will be reported in 2024/25.

### White bryony

White bryony is another high threat, low incidence NIPR species. The council manages a white bryony eradication programme in Aria and Mokauti. We provide staff resources for contract management, reporting services, and advice and information on the threats of white bryony to affected land occupiers and other interested parties.

The eradication programme began in 2001. Initially plant numbers were very high, with thousands of white bryony found and controlled. Since that time, effective annual control efforts have reduced the number of white bryony dramatically (refer graph below). No white bryony was found (again) during the 2023/24 season, as we work towards the goal of eradication at these sites.



White bryony being controlled by WRC contractors

# Working together as a region

The council undertakes a range of actions to promote and facilitate everyone working together to achieve regional biosecurity outcomes.

## Yellow flag iris control With mana whenua

The council is controlling yellow flag iris along the margins of the Waikato River, on river islands and around Lake Waikare with support from Waikato-Tainui and Waikato River Authority.

Yellow flag iris is a pest plant of damp terrestrial, riparian and wetland areas, that can form dense stands that displace native species. Rules in the RPMP require landowners to undertake control, with the council undertaking control in some high value areas.

Yellow flag iris is found around the shoreline of Lake Waikare near Rangiriri and on a series of islands within the Waikato River channel. The river islands include several sites that have been returned to Waikato-Tainui, and we're working together to improve the condition of the islands and the lake.

The first round of yellow flag iris control is near completion. Over 400 hours of control has been undertaken by contracted crews on the ground, from a boat, and via aerial application of herbicide from a helicopter. The active herbicide ingredient is metsulfuron methyl, which is applied with non-toxic penetrant Expedient®.

Already we are seeing some good results from this control work, especially along the margins of the Waikato River. Work will continue next financial year, with the hope that as these infestations are reduced, and we'll be able to expand our control efforts to include infestations down river towards Port Waikato.



## Caulerpa and gold clam incursions Supporting Biosecurity NZ

The council continued to support MPI-led responses to exotic caulerpa (invasive seaweed) and corbicula (invasive freshwater gold clams). Support has included being on governance groups, providing technical and operational advice, undertaking eDNA sampling and dive surveillance, undertaking permitted harvesting and treatment of gold clams to enable resin casting for educational materials, supplying spatial information and helping to disseminate key information or messaging.

Our Biosecurity staff teamed up with Maritime Services staff to run an information stall at Whitianga Boat Ramp, providing information on boating safety and how to prevent the spread of marine pests, including exotic caulerpa.



We had Check, Clean Dry advocates present at 32 freshwater events involving approximately 34,900 spectators and 24,400 competitors during 2023/24. These events included the Maadi Cup at Lake Karāpiro, the Koi Carp Bowhunters Classic held in the lower Waikato and the Tūrangawaewae regatta at Ngāruawāhia. The advocates delivered Check, Clean, Dry messaging to help educate water users on how to stop the spread of freshwater pests, including invasive freshwater gold clams.

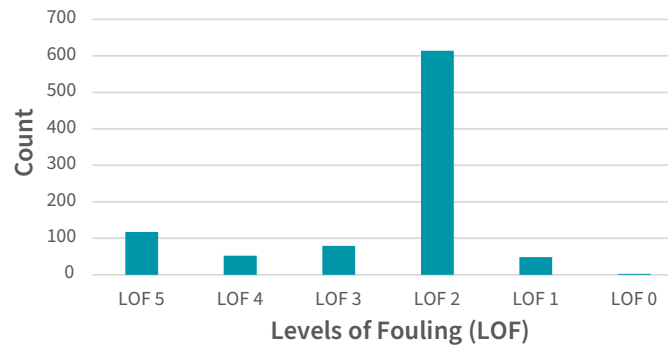
Biosecurity staff harvested and boiled over 100 clams under a permit from Biosecurity New Zealand. The resulting clam shells were provided to a resin caster to create resources for advocacy across the country, enabling people to see what invasive freshwater clams look like without creating a risk of transferring them to new waterways.

The council also undertakes marine vessel and structure inspections for marine pest species. This year's marine surveillance has included:

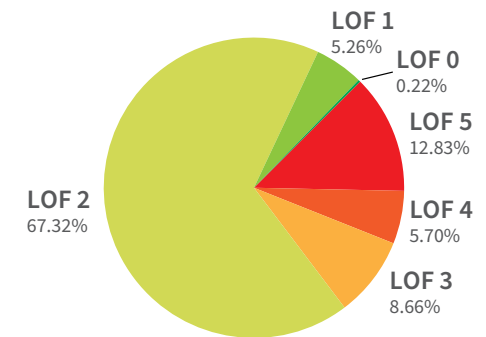
- over 900 marine vessel hull inspections
- 14,945 metres of pontoon inspected
- 1263 piles inspected
- 724 hectares of area surveyed for marine pests.

Below are the percentages of marine vessels with different levels of fouling (LOF). **Level 3 and above** indicates the vessel has macrofouling present that could present a risk of marine pest spread if the vessel was to be moved.

Levels of Fouling Count



Levels of Fouling (LOF) %



Levels of Fouling	Count	Percentage
LOF 5	117	12.83
LOF 4	52	5.70
LOF 3	79	8.66
LOF 2	614	67.32
LOF 1	48	5.26
LOF 0	2	0.22

Note: percentages have been rounded to two significant figures.

## Priority feral goat control with the Department of Conservation

Like all pests, feral goats don't respect property boundaries! They can have significant impacts on pasture and woody vegetation that is within their reach (see photo below). They damage young trees in exotic forests, and shrubs and trees in soil-conservation, riparian and restoration planting. Through their browsing and trampling, and with the impacts of other feral animals, significant and often permanent damage can occur to native vegetation; regeneration may be halted and palatable species completely lost from areas.



Feral goats are agile climbers.

To minimise these impacts, DOC and Waikato Regional Council have been working collaboratively for over a decade to control feral goats on high value public conservation land and through surrounding private land within the Waikato. Since 2015, this work has removed over 35,000 feral goats from our region. The benefits of this work are three-fold: protecting agricultural and biodiversity values on farms, protecting catchment restoration and hill country erosion works, and supporting DOC's work on public conservation land by reducing the risk of feral goats reinvading.

While there is a market for feral goat meat, their culled value is not comparable to the increase in production that a farmer can achieve if they aren't present. Any return on having them comes at a financial cost. Feral goats can affect the security of fences for stock, compete with stock for feed and can carry worms and parasites that can affect stock. They can also impact riparian and erosion control planting, and the integrity and regeneration of existing native vegetation.

Council and DOC fund control work within Priority Feral Goat Control areas, at no cost to the landowner. The contractors work around/with farming operations, and have well trained, fully vaccinated and wormed indicator and baling dogs. The use of professionally trained dogs to locate feral goats for the hunters adds to their efficiency and effectiveness. When on private land, the contractors only target feral goats.



Hunter's camp.



Hunters heading into the back country.

DOC undertakes feral goat control on private land under the Wild Animal Control Act 1977. Access and control agreements are established with participating landowners, which may change in nature over time. An example of this occurred this year. A new manager started on a block where the landowner had been allowing the contractor to transit through the property to access public conservation land. The new manager for the first time also allowed control of feral goats on the farm. Over 1500 feral goats were removed from the area! This control will have significant on farm benefits with more pasture for stock and reduce the impact those goats were having on the native forest. It is also a huge step towards achieving local eradication of feral goats from that area.

## Thwarting Chilean needlegrass movement

### With Hawke's Bay Regional Council

The council's pest plant team maintain good relationships with their counterparts in neighbouring regions. This proved extremely valuable this year when Hawke's Bay biosecurity staff phoned to warn our pest plant staff that a truck had driven on a farm with Chilean needlegrass in their region and was heading to the Waikato. Chilean needle grass is an exclusion pest plant in the Waikato RPMP, and one we definitely don't want here! Its seeds can easily hitch a ride in contaminated soil, thereby making vehicles and machinery high-risk pathways of potential spread.



A council response was immediately initiated, with urgent phonecalls made to track the vehicle's movement from the Bay. Council contactors were mobilised to intercept it and arrange a suitable site to undertake any cleaning required to remove potentially contaminated soil. Rules in our RPMP allowed us to stop the truck and require it to be cleaned thoroughly.

Our quick-thinking contractors applied an innovative solution at the cleaning site – weed matting under the truck to catch any organic material washed off during the cleaning. This ensured that no seeds were left at the clean-up site in the Waikato (while the weed mat was porous enough to let the washing water flow through).

The successful outcome of this incident highlights the value of knowing our regional council neighbours and having skilled contractors available on our books that are ready to rapidly support a biosecurity response.



Chilean needle grass stuck to mud on the truck's undercarriage.

# Valuing and building on our investments

The council undertakes a range of actions to protect regional investment into biosecurity programmes.

## Stemming the wallaby tide

The Tipu Mātoro National Wallaby Eradication Programme was established following a submission of a joint business case from regional councils, through MPI, to support the expansion of existing wallaby control programmes on mainland North Island and South Island.

Central government, in the 2020 budget, committed \$27 million over four years (2021-2025) to the national programme. MPI, and the respective regional councils, contribute funding to the programme. The councils have the primary role in managing and implementing the programme.

The Aotearoa New Zealand Wallaby Strategy sets out the direction and objectives of the national programme and provides a shared vision and agreed responsibilities and actions to improve wallaby management across Aotearoa.



The national programme vision is a wallaby-free Aotearoa New Zealand. By 2025, wallabies are contained within designated North Island and South Island containment areas that delimit the core of the two mainland wallaby populations. This will be achieved by:

- eliminating outlier populations
- reducing wallaby numbers within buffer areas inside containment
- developing innovation in wallaby detection and control methods.

Nationally, the aim is to eradicate (breeding populations of) wallabies from outside containment areas by 2025, with the programme then moving to focus on reducing population numbers within containment areas and shrinking the size of the containment areas over time.

The North Island Programme continues to focus on ‘stopping the spread’ outside of the North Island containment area. Control operations outside the containment and in a buffer area are informed by surveillance, detector dogs and trail cameras, and public sightings of wallabies. Physical barriers, in the form of wallaby-proof fences, have been established to prevent spread at key points within the containment area. Some limited control work has also been undertaken within the containment area to manage existing populations and shut down pathways of spread.

Control tools are limited, with the type of vegetation and terrain influencing what can be used effectively. Successful aerial 1080 and night shooting operations in 2023/24 have significantly reduced wallaby numbers in the northern Waikite Valley, Waio tapu and Kaingaroa Forest. The aerial operation reduced wallaby numbers in Kaingaroa Forest by 98 per cent, and night shooting over the last six months has removed over 600 wallabies! Together, these operations contribute to stemming the tide of wallabies into the Waikato!



Thermal drone surveillance.



Contractor undertaking a night shooting operation.

# Better surveillance and intelligence systems

The council undertakes actions to improve surveillance and intelligence in regional biosecurity, so ensure the right information is available to the right people, and to add confidence to biosecurity decisions and actions.

## NIWA aquatic pest plant course

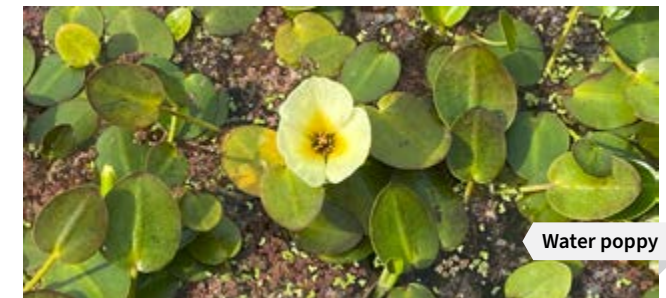
A big part of effective surveillance for any pest plant is knowing what you are looking for! And then once you find it, knowing what you can do to control it!

With this in mind, a small group of council staff joined representatives from other regional councils and central government agencies at NIWA's new building in Hamilton to hear from the country's leading aquatic weed expert, Paul Champion. The two-day course gave participants an insight into the proactive management of aquatic weeds in New Zealand, including getting close and personal with actual specimens.

A field trip was then taken around several sites in the Waikato to explore the environments that the plants inhabit. We visited a Manchurian wild rice site in Maungatautari, water poppy and sagittaria sites at the Cambridge golf course, and admired the restoration work a community group has done in a once neglected gully system.

We then headed north to Huntly where we looked at the turbid Lake Waahi and Lake Puketirini, which is in much better condition. The last stop was under the Tainui bridge, checking out an alligator weed infestation with an alligator weed beetle biocontrol agent present.

We all learnt a lot from the course and benefited from our time with Paul, a 'walking encyclopaedia' of aquatic plant knowledge.



Water poppy



Water hyacinth



Visiting a Manchurian wild rice site in Maungatautari.



# Bright ideas and better ways

The council undertakes actions to encourage innovation in regional biosecurity.

## Broom gall mite biocontrol

Broom (*Cytisus scoparius*) is a significant pest plant in the Waikato region, especially in the Taupō district.

The broom gall mite (*Aceria genstae*) is a biocontrol agent which forms galls on broom plants. It causes stunting, reduces flowering and can kill whole bushes. Broom gall mite was imported into New Zealand in 2006 following rigorous host testing. The first releases were made in 2008, with the first of 16 releases carried out in the Waikato occurring in 2009.

The broom gall mite has been very successful in the South Island since its release there, but for many years it was thought not to have established in the North Island. However, in the past few years, the gall mite has been discovered in the Taupō district. Numbers appear to be increasing with three new sites found in 2023/24, alone. This is a sign that the broom gall mite is finally establishing and becoming more widespread in the Waikato, with the council hoping it will begin to reduce the impacts of broom here, too.



Deformed broom buds.

## Efficacy of new alligator weed herbicide mix

NIWA has been undertaking research into controlling alligator weed, a significant pest plant of aquatic areas and agricultural land in northern New Zealand.

One of NIWA's research findings in relation to different herbicide efficacies, after undertaking control of alligator weed at Te Otamanui Lagoon, Te Kowhai was that a low rate of metsulfuron (about 1-2g/10L) mixed with glyphosate and Expedient was more effective at controlling alligator weed in an aquatic environment than just using metsulfuron.

Tumate Mahuta Park in Huntly has ponds that are connected to the Waikato River. The area has long had infestations of alligator weed and during the 2022/23 flooding events the infestations became far worse. Control couldn't be undertaken because of the high water levels and inclement weather, so, in the absence of control, large clumps of alligator weed grew. These were picked up in the flood waters and dumped at other locations around the park.

In 2023/24, we started using the new herbicide mix proposed by NIWA's research at the park with very positive results. The park has gone from having parts overrun with alligator weed to only having a small amount at the time of the last round of control in March. The new herbicide mix appears to be the main reason for the considerable increased control efficacy.

This new mix gives our pest plants biosecurity team a renewed optimism that their efforts to control aquatic alligator weed in future will produce really promising results.



Alligator weed prior to spraying at Te Otamanui Lagoon, 2024.

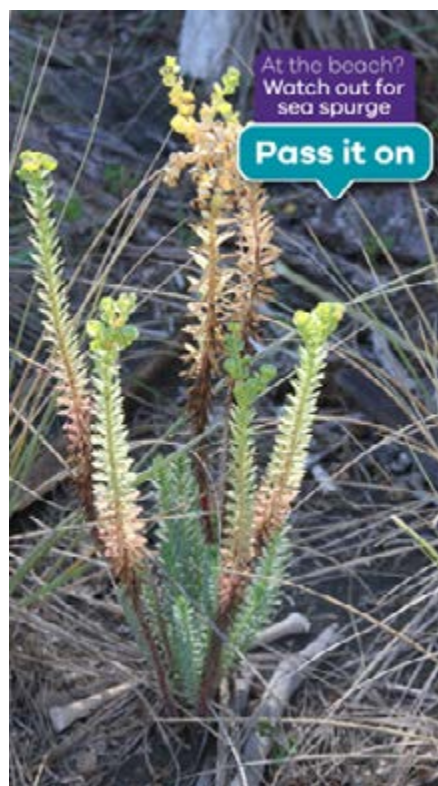
## Successful media campaign - Pass it on!

Biosecurity teams use social media to spread important biosecurity messages and achieve positive behaviour change. As part of the council's Pass it on social media campaign, we ran three biosecurity social media ads for six weeks from 1 January to 11 February 2024, geotargeting everyone in the Waikato region on Facebook and Instagram.

The ad on sea spurge was the best performing ad from the campaign, which included 12 different ads in total. It generated a reach of 213,663 unique viewers over six weeks, and was shared by 408 times – *pass it on* being the intent of the campaign.

The other two biosecurity ads promoted kauri protection. The shoe cleaning image reached 194,292 unique viewers and prompted 74 shares over four weeks, and the kauri canopy image reached 23,617 unique viewers and prompted 68 shares over two weeks.

The campaign was highly successful, quickly reaching thousands of the people in the community. Hopefully this will translate to more eyes at the beach spotting sea spurge, and more people cleaning footwear to protect our precious kauri.



Advert	Reach	Ad run length	Cost
Sea Spurge	213,663	6-weeks	\$1,200
Kauri Protection – Shoe cleaning	194,292	4-weeks	\$800
Kauri Protection - Kauri canopy	23,617	2-weeks	\$400



German wasp.

## Part 3: Whakahaere momo Species management

The following pages provide a summary of the status and progress of the management of each pest species against the key performance indicators and objectives of the *Waikato Regional Pest Management Plan 2022-2032* and *Biosecurity Operational Plan 2022-2032*.

We have operational sites that we actively monitor for pest plant management. Within these operational sites we may have one or more 'infestation parent points', which are each given a management status. There status may be:

- **Treatment:** Infestation parent points with live foliage where control work (physical/chemical) was undertaken/treatment applied.
- **Interim:** Infestation parent points with no present green foliage. NOTE: When an area has no green foliage for more than two consecutive years it moves to 'monitoring' status. Absence of foliage is assessed twice a year, and if foliage is detected the area defaults back to treatment status.
- **Monitored:** Infestation parent points being 'monitored' are those where no green foliage has been present for at least two years but fewer than 10 consecutive years, but the species is not yet considered to be 'eradicated'. Absence of foliage is assessed annually, and if any foliage is detected the area defaults back to 'Treatment' status.
- **Eradicated:** Infestation parent points where the pest plant has been completely removed, with no live foliage recorded for at least 10 consecutive years (the point at which eradication is achieved however, is species specific).

Our pest plant data for 2023/24 is in many cases quite variable to that recorded in 2022/23. This is partly due to an improvement in the quality of data being captured by the council's data management system, Plantell, but also because extreme weather significantly reduced the amount of work the council was able to complete in 2022/23. In 2023/24, with better weather conditions, more time in the field and more accurate data collection, infestations of pest plants may appear bigger.

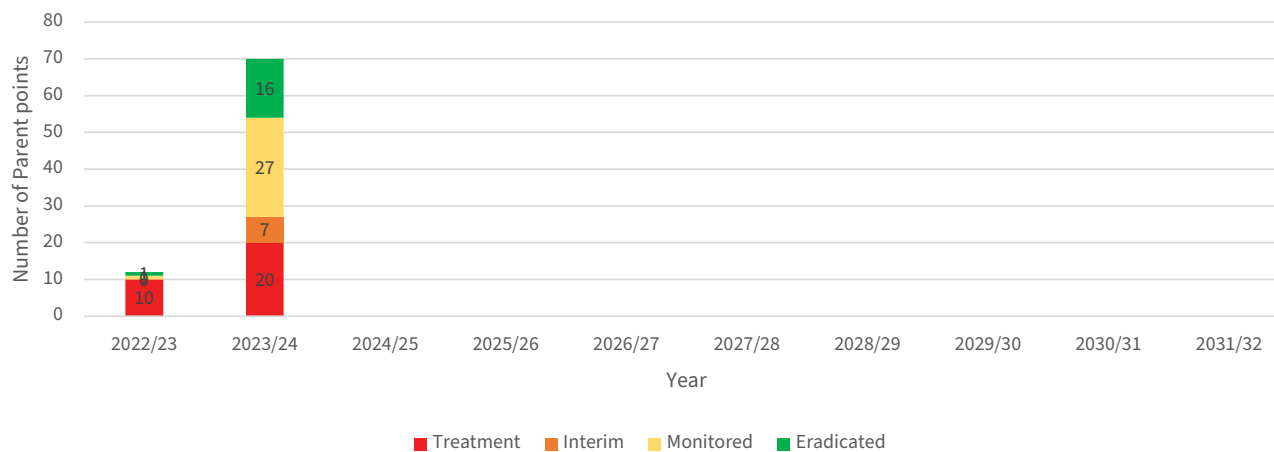
## African feather grass (*Cenchrus macrourus*)

RPMP classification	Area	Programme status
Eradication	Whole of region	On track

Programme summary	Results
Number of operational sites	● 20
Total area of operational sites	● 308.4ha
Infestation parent points	● 70
Pest plant cover	● 518m <sup>2</sup>
Comments	The number of operational sites has increased but the total infestation area within those operational sites has decreased. This is due to another year of successful control and data captured in Plantell improving. This programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> .



### African feather grass

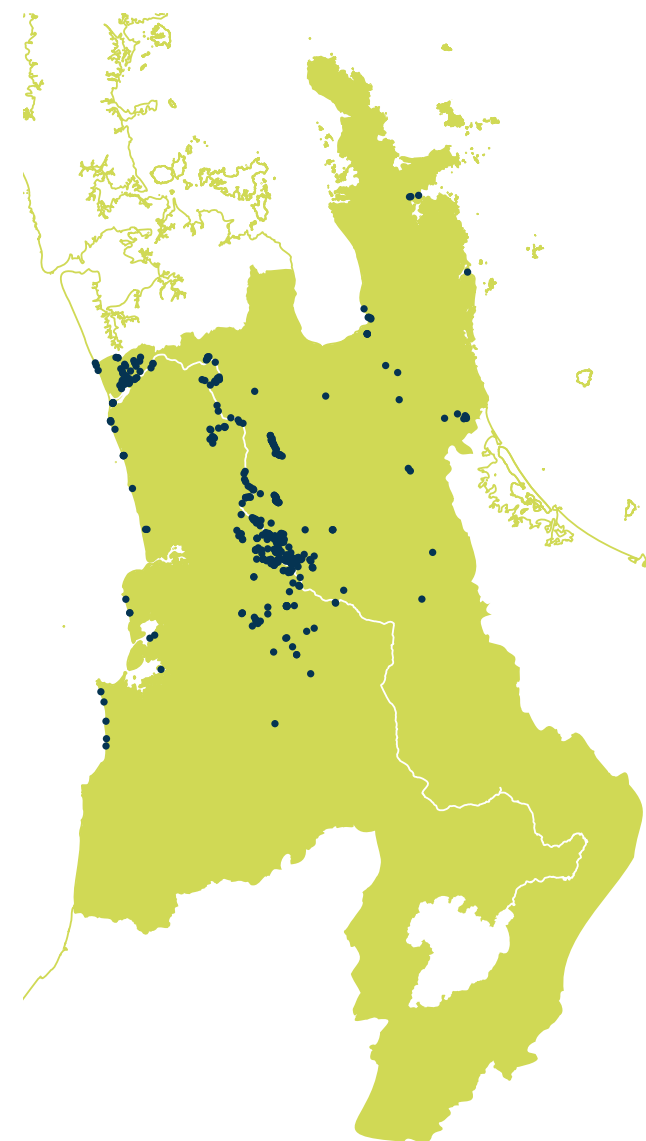
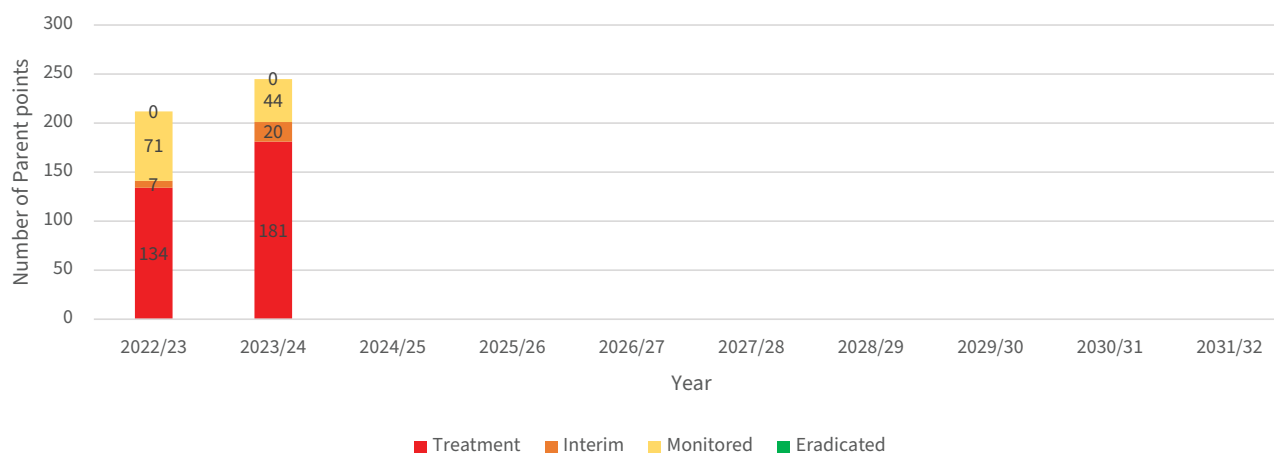


## Alligator weed (*Alternanthera philoxeroides*)

RPMP classification	Area	Programme status
Progressive containment	Whole of region	At risk

Programme summary	Results
Number of operational sites	● 205
Total area of operational sites	● 19,410ha
Infestation parent points	● 245
Pest plant cover	● 955,468m <sup>2</sup>
Comments	Alligator weed is one of our most significant pest plants and not all sites have received the service delivery required this financial year to meet all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> .

### Alligator weed



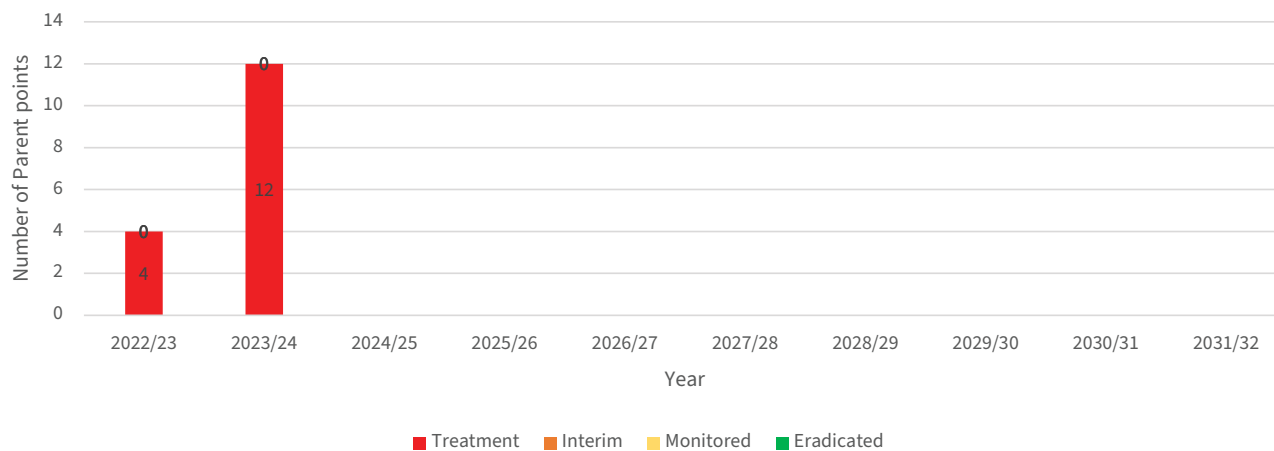
## Banana passionfruit (*Passiflora tripartita*)

RPMP classification	Area	Programme status
Progressive containment	Taupō and Rotorua districts	<b>On track</b>

Programme summary	Results
Number of operational sites	● 3
Total area of operational sites	● 96.6ha
Infestation parent points	● 12
Pest plant cover	● 378m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> .

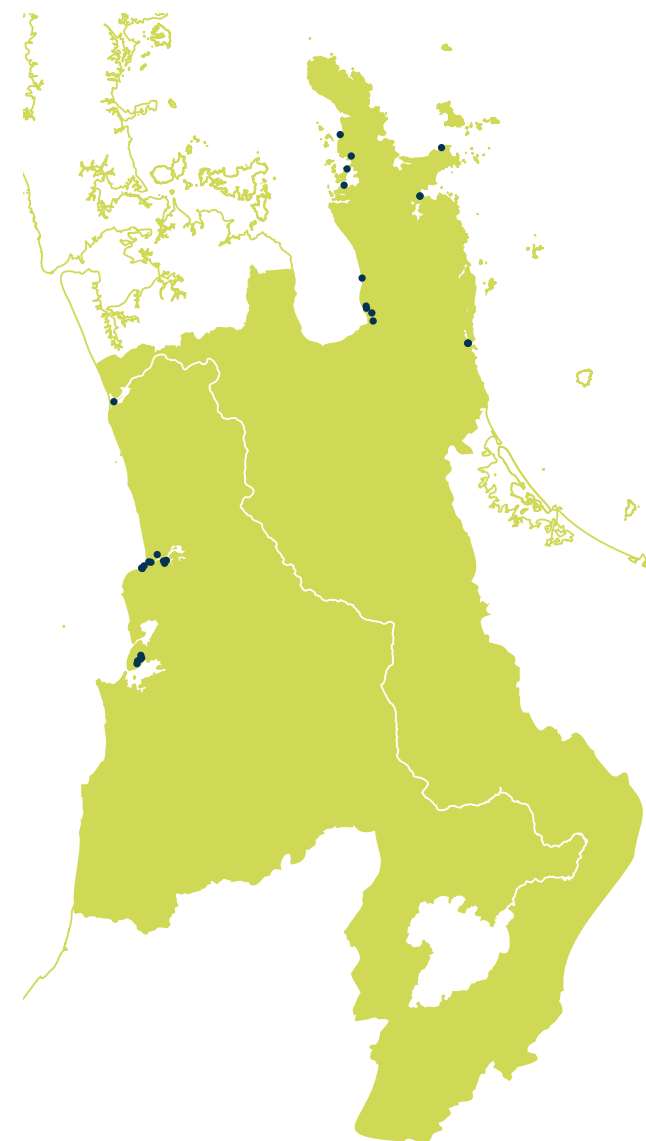
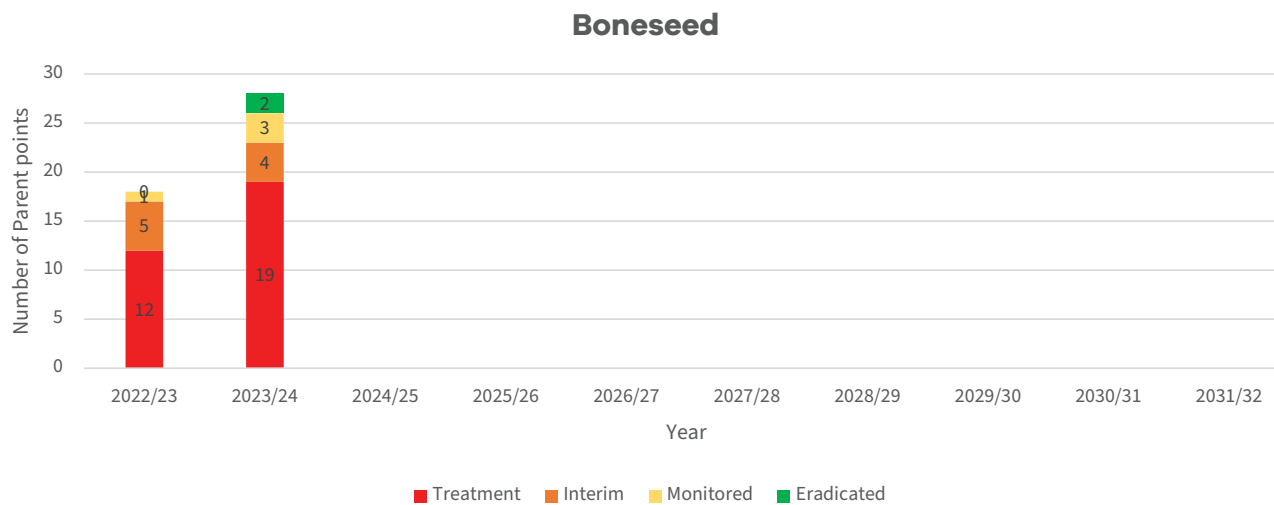
### Banana passionfruit



## Boneseed (*Chrysanthemoides monilifera*)

RPMP classification	Area	Programme status
Progressive containment	Whole of region	<b>On track</b>

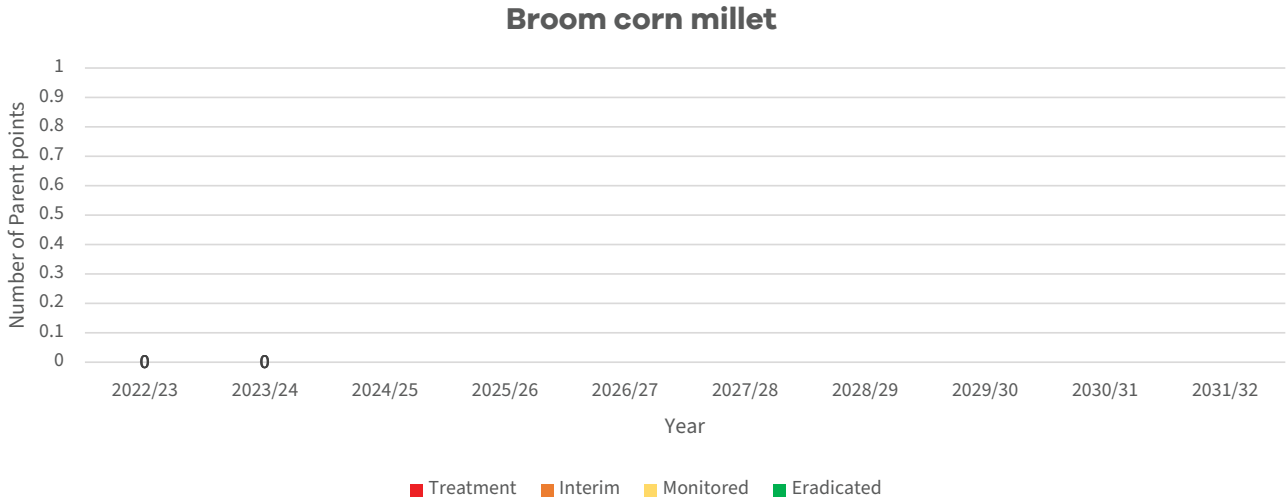
Programme summary	Results
Number of operational sites	● 21
Total area of operational sites	● 1,338ha
Infestation parent points	● 28
Pest plant cover	● 923m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i> .



# Broom corn millet (*Panicum miliaceum*)

RPMP classification	Area	Programme status
Exclusion	Whole of region	On track

Programme summary	Results
Number of operational sites	● 0
Total area of operational sites	● 0
Infestation parent points	● 0
Pest plant cover	● 0
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i> .



Broom corn millet

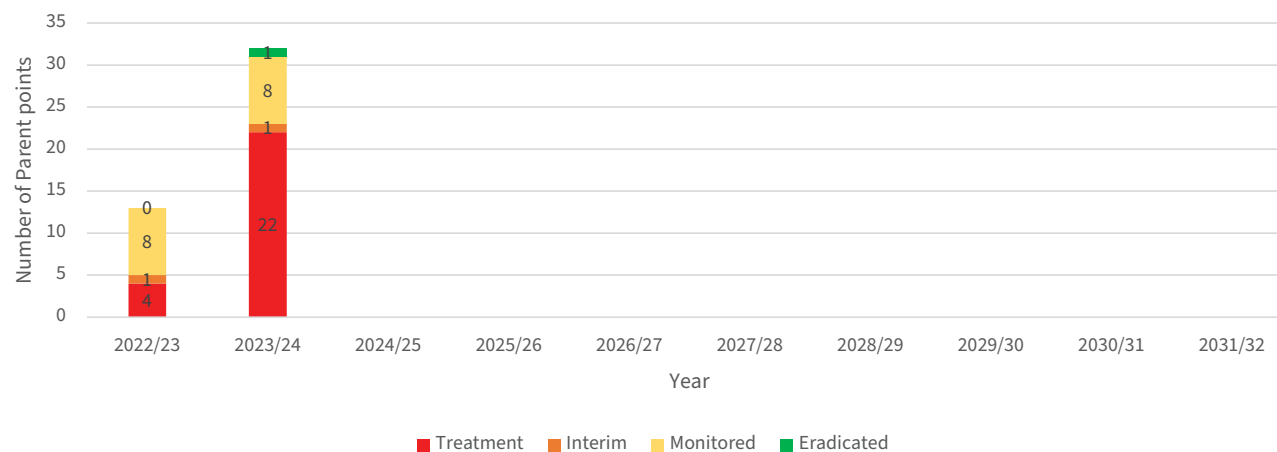


## Cathedral bells (*Cobaea scandens*)

RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 22
Total area of operational sites	● 69.4ha
Infestation parent points	● 32
Pest plant cover	● 101m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i> .

### Cathedral bells

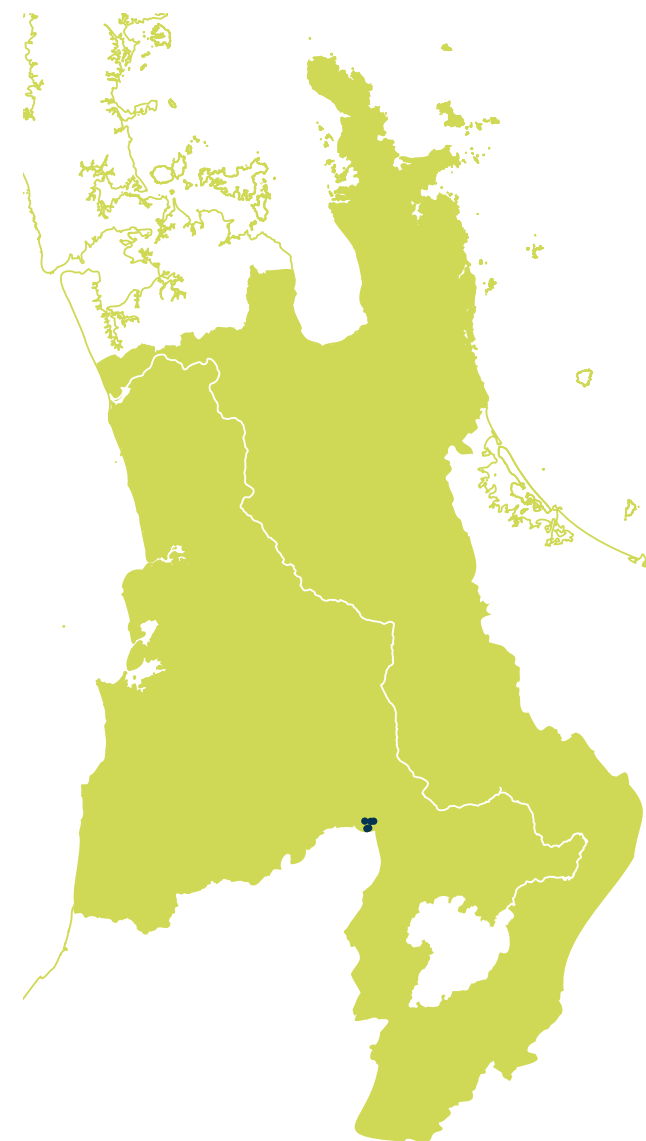
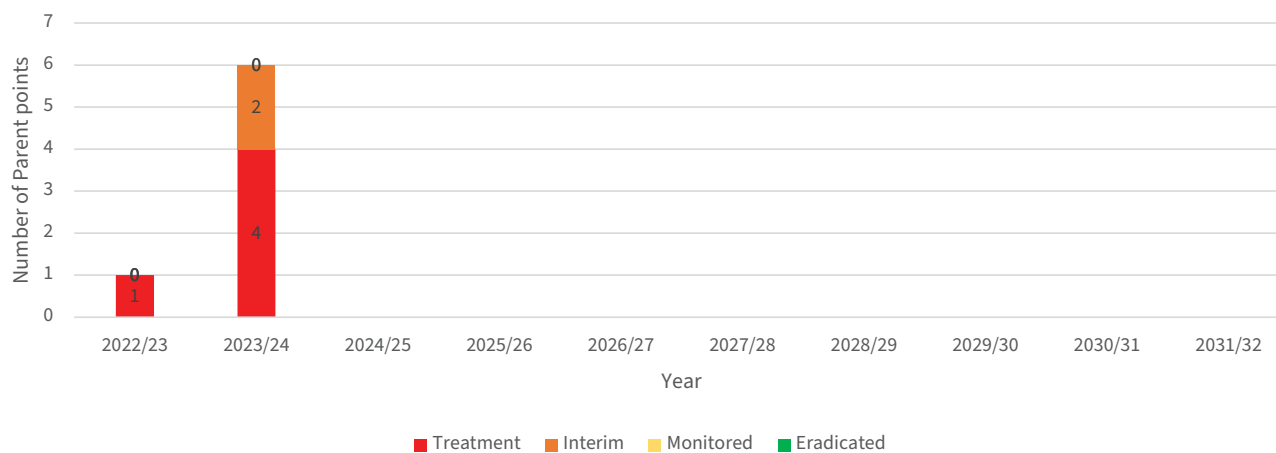


## Chilean flame creeper (*Tropaeolum speciosum*)

RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 6
Total area of operational sites	● 1,333.8ha
Infestation parent points	● 6
Pest plant cover	● 122m <sup>2</sup>
Comments	The number of operational sites has increased but the infestation area has reduced. This programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> .

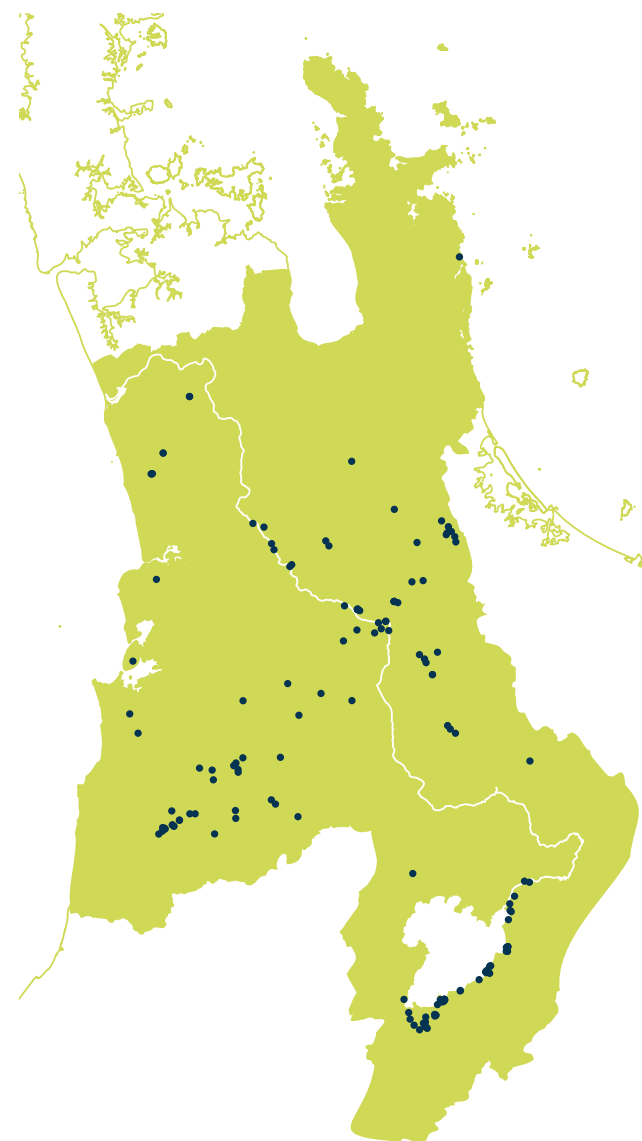
### Chilean flame creeper



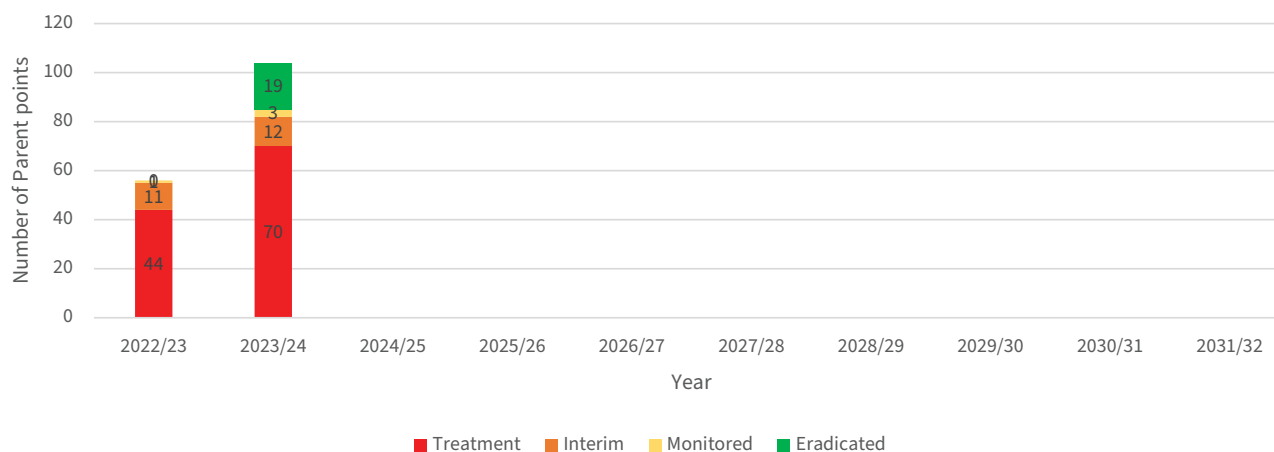
## Climbing spindleberry (*Celastrus orbicularis*)

RPMP classification	Area	Programme status
Progressive containment	Whole of region	At risk

Programme summary	Results
Number of operational sites	● 85
Total area of operational sites	● 2,985.5ha
Infestation parent points	● 104
Pest plant cover	● 5,778m <sup>2</sup>
Comments	<p>Not all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> have been met.</p> <p>Climbing spindleberry is a significant pest plant in the Waikato region.</p> <p>Not all sites are able to be visited annually due to the large number of climbing spindleberry sites in the region. A subset of sites are prioritised for surveillance and control each year.</p>

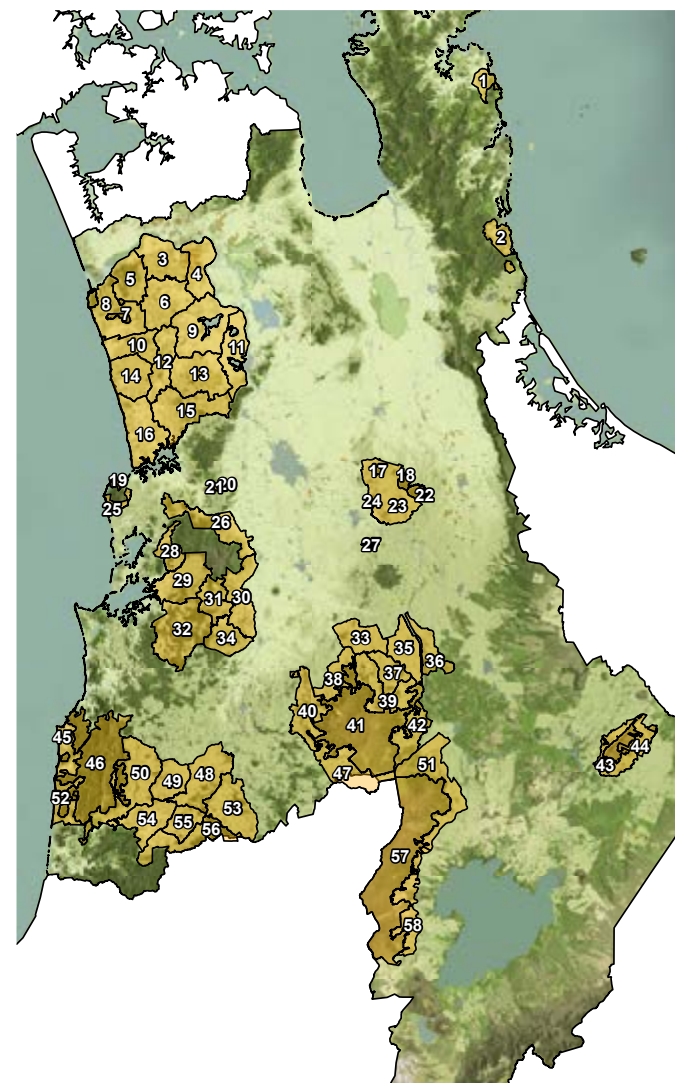


### Climbing spindleberry



## Common brushtail possum (*Trichosurus vulpecula*)

RPMP classification	Area	Programme status
Sustained control	Priority Possum Control Areas (PPCA) Whole of region – Good Neighbour Rule	<b>On track</b>
Programme summary		Results
Number of enquiries/complaints received	IRIS – 37 Direct calls & emails – 3	
Number of properties requiring Good Neighbour Rule enforcement	● None required.	
PPCA & HALO areas controlled	● 135,300ha ● PPCA – 18 control operations ● Hamilton HALO – 5 control operations	
Number of operations that met RTC or RTI targets	100% of control operations completed met their performance targets.	



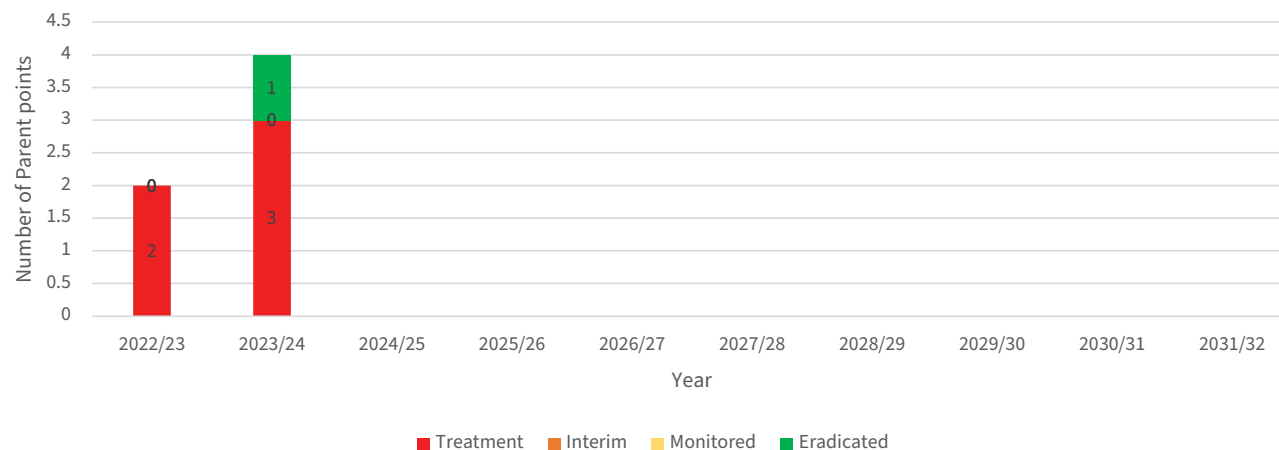
Locations of PPCA in the Waikato region

## Darwin's barberry (*Berberis darwinii*)

RPMP classification	Area	Programme status
Progressive containment	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 2
Total area of operational sites	● 3,355.5ha
Infestation parent points	● 3
Pest plant cover	● 6,314m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> .

**Darwin's barberry**



## Evergreen buckthorn (*Rhamnus alaternus*)

RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 22,904
Total area of operational sites	● 6,330ha
Total plants controlled	● 1,600
Number of plants controlled	● 1,610

**Comments**

Most of the evergreen buckthorn surveillance and control work was carried out in Hamilton city, lower Waikato and Coromandel Peninsula, with a small proportion occurring in the Taupō area.

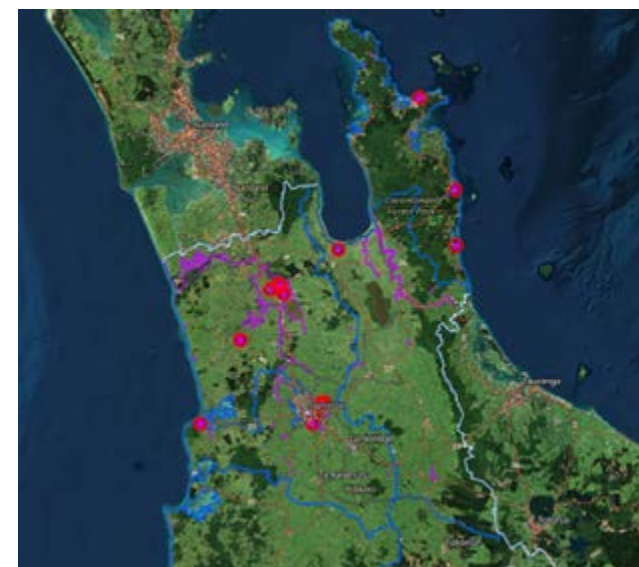
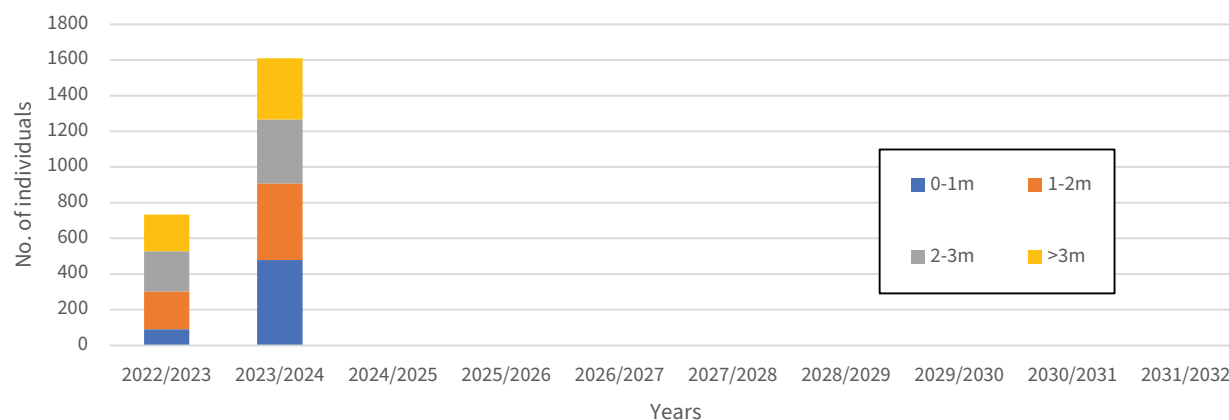
The evergreen buckthorn data is captured in size classes. This allows for targeted planning of required follow up monitoring and control.

This programme has met all Key Performance Indicators included in the *Waikato RPMP Operational Plan 2022-2032*.



Evergreen buckthorn

### Evergreen buckthorn



## Feral rabbit (*Oryctolagus cuniculus*)

RPMP classification	Area	Programme status
Sustained control	Whole of region	<b>On track</b>

Programme summary	Results
Number of enquiries/complaints received	<ul style="list-style-type: none"> <li>● IRIS Enquiries – 18</li> <li>● IRIS Complaints – 5</li> </ul>
Site inspections undertaken	● 5
Enforcement actions taken	● None required
Service delivery undertaken	● None undertaken
Comments	<p>The council's Rabbit Site Assessment Tool was utilised when undertaking site inspections this year.</p> <p>The Site Assessment Tool was shared with other regional council's to trial in their RPMP Rabbit programmes, e.g. Greater Wellington and Otago regional councils. Awareness and education material was sent out or delivered to surrounding landowners in areas where high feral rabbit numbers were observed during the site inspections.</p> <p>Field images were captured to illustrate different levels of rabbit infestations on the Modified McLean's Rabbit Scale<sup>1</sup>.</p>

<sup>1</sup> The Modified McLean Scale, used by councils to help determine the extent of an infestation of feral rabbits at a site, takes into account a number of different signs of rabbit presence, including the number and size of buck or dropping heaps. In the Waikato region, land occupiers need to keep feral rabbit numbers at or below level 4 on the McLean Scale. This is the level set in the RPMP, and enforcement options are available to the council if properties exceed this level.



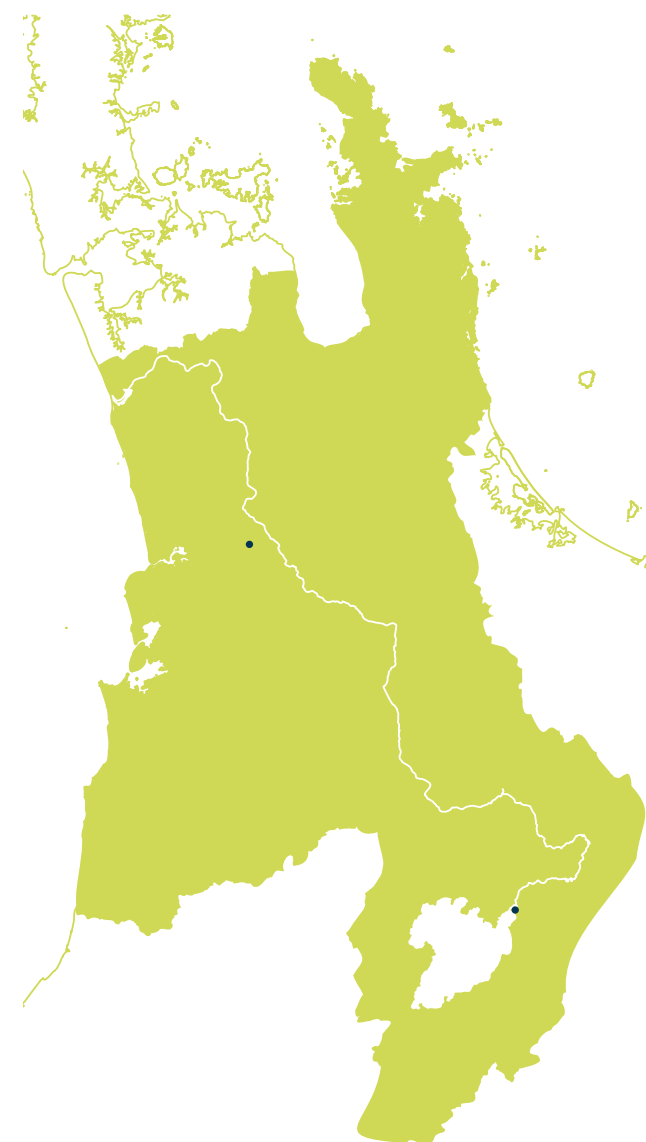
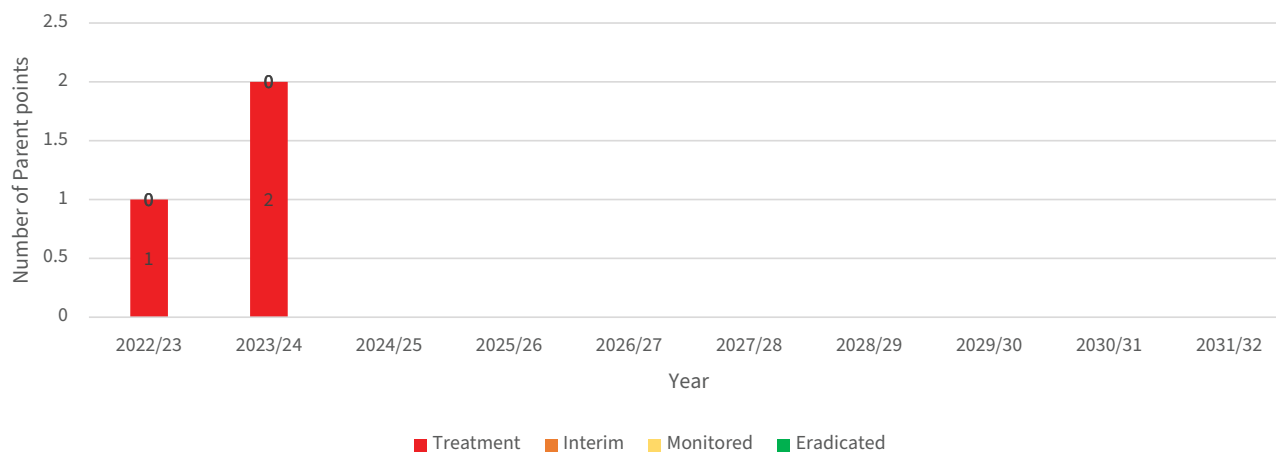
## Freshwater eel grass (*Vallisneria australis*)

RPMP classification	Area	Programme status
Exclusion	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 2
Total area of operational sites	● 0.2ha
Infestation parent points	● 2
Pest plant cover	● 314.1m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> .

### Freshwater eel grass





## Fringed water lily (*Nymphoides peltata*)

RPMP classification	Area	Programme status
Exclusion	Whole of region	On track

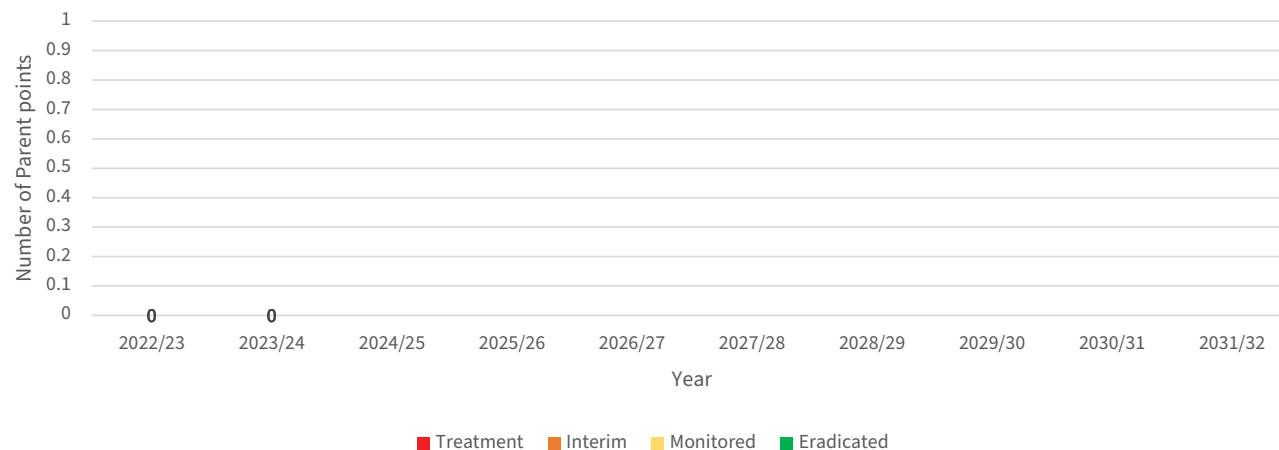
  

Programme summary	Results
Number of operational sites	● 0
Total area of operational sites	● 0
Pest plant cover	● 0

Comments	This programme has met all Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i> .
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### Fringed water lily

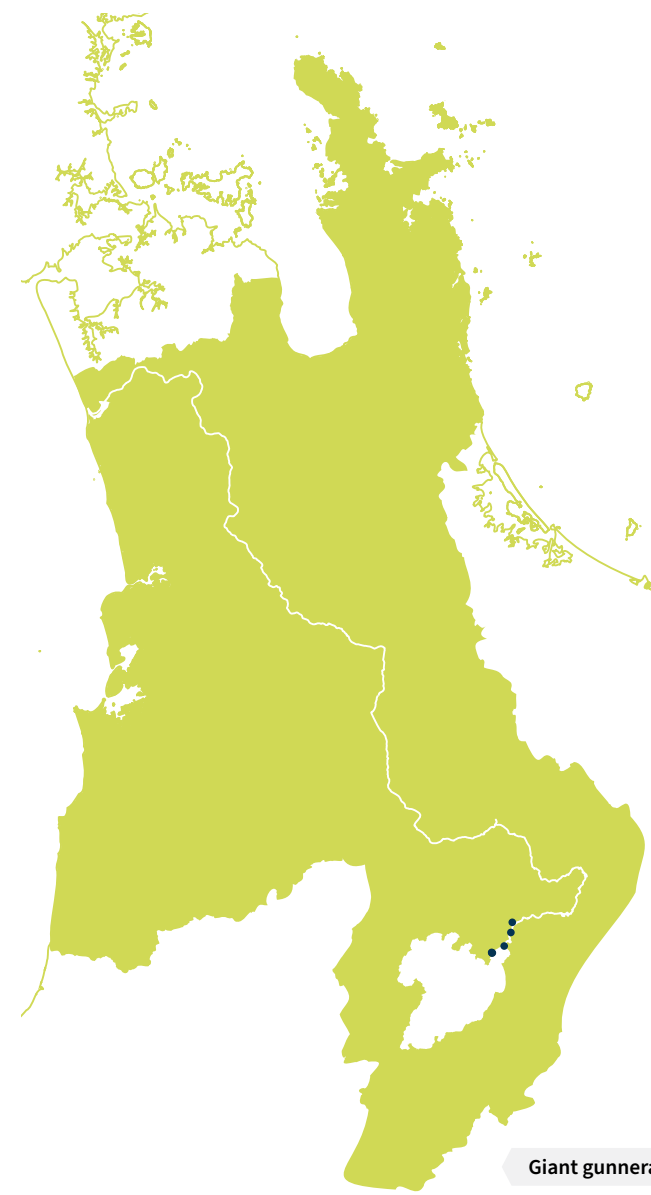
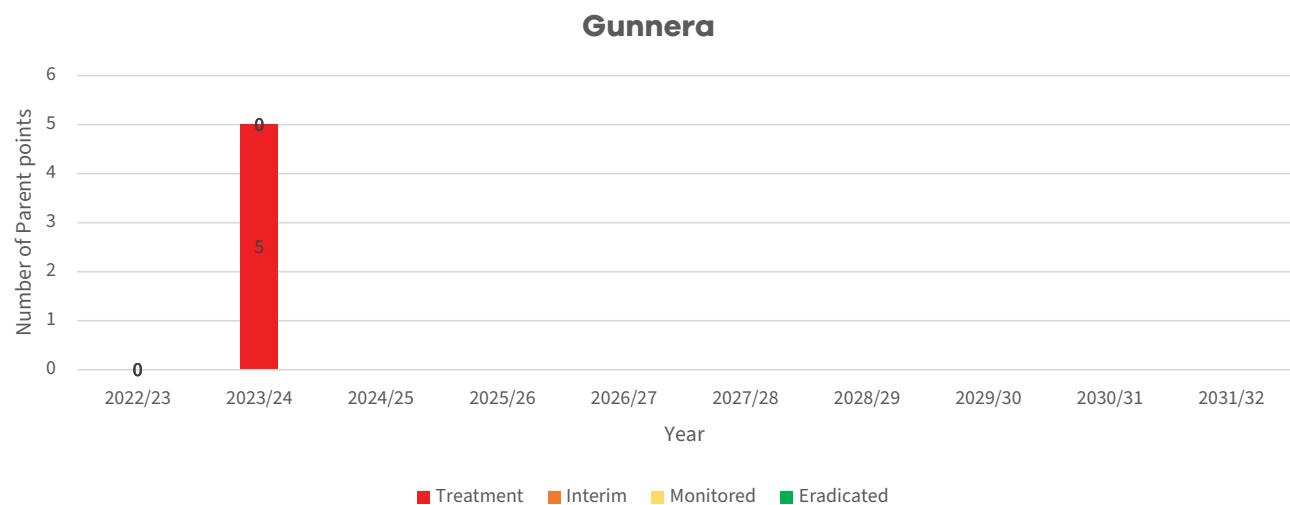


Fringed water lily

## Giant gunnera (*Gunnera tinctoria*, *Gunnera manicata*)

RPMP classification	Area	Programme status
Progressive containment	Whole of region	More input required

Programme summary	Results
Number of operational sites	● 3
Total area of operational sites	● 0.6ha
Total infestation parent points	● 5
Pest plant cover	● 64m <sup>2</sup>
Comments	<p>New sites of giant gunnera were identified this year through proactive, targeted surveillance.</p> <p>Further targeted surveillance is needed to meet all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i>.</p>

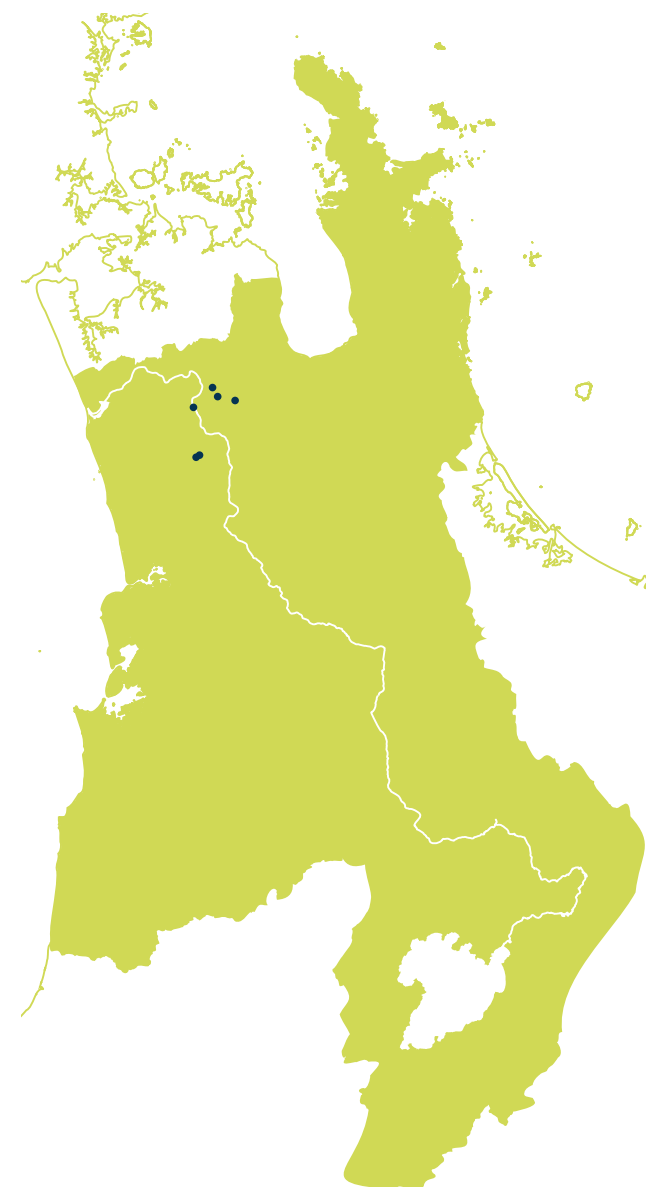
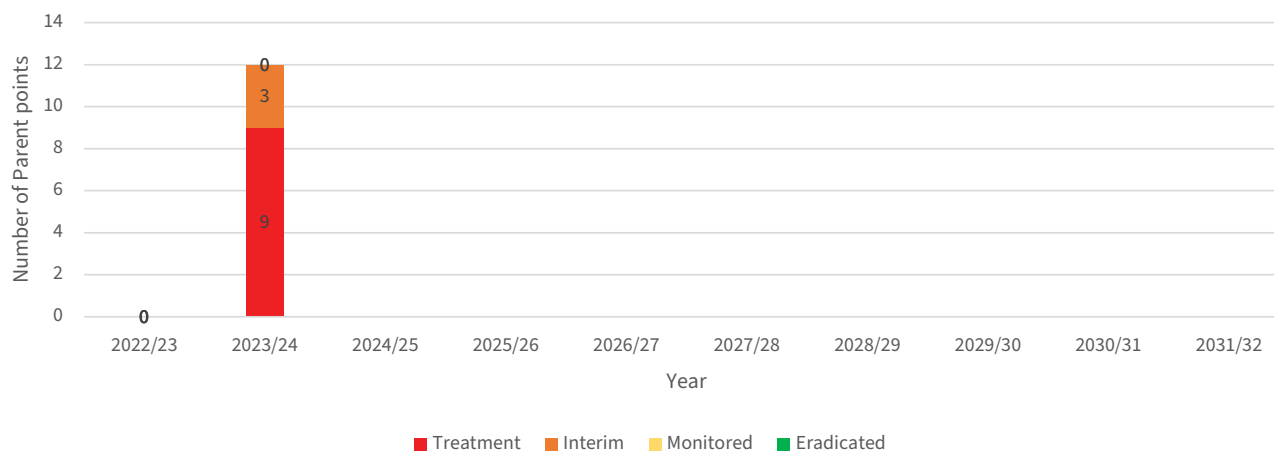


## Golden dodder (*Cuscuta campestris*)

RPMP classification	Area	Programme status
Progressive containment	Whole of region	On track

Programme summary	Results
Number of operational sites	● 12
Total area of operational sites	● 251.2ha
Total infestation parent points	● 12
Pest plant cover	● 7,108m <sup>2</sup>
Comments	<p>In 2022/2023, all the operational areas were flooded, meaning no golden dodder and no ability to carry out control if there was.</p> <p>WRC worked with DOC to identify sites and ensure service delivery was carried out as required to meet all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> in the new financial year.</p>

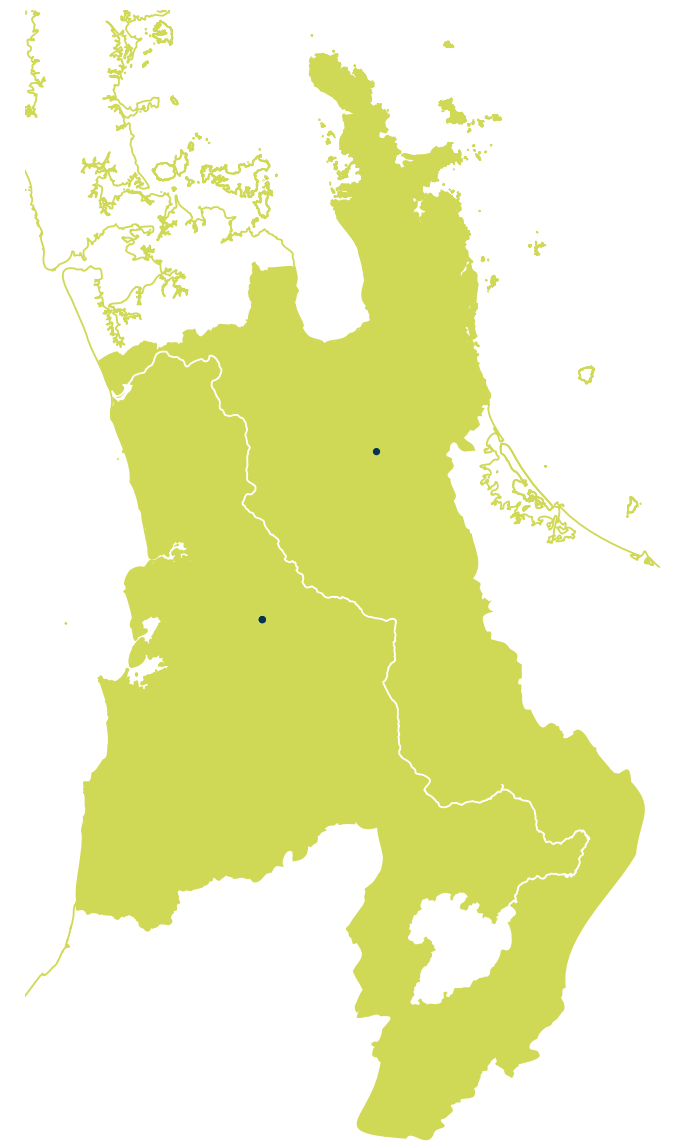
### Golden dodder



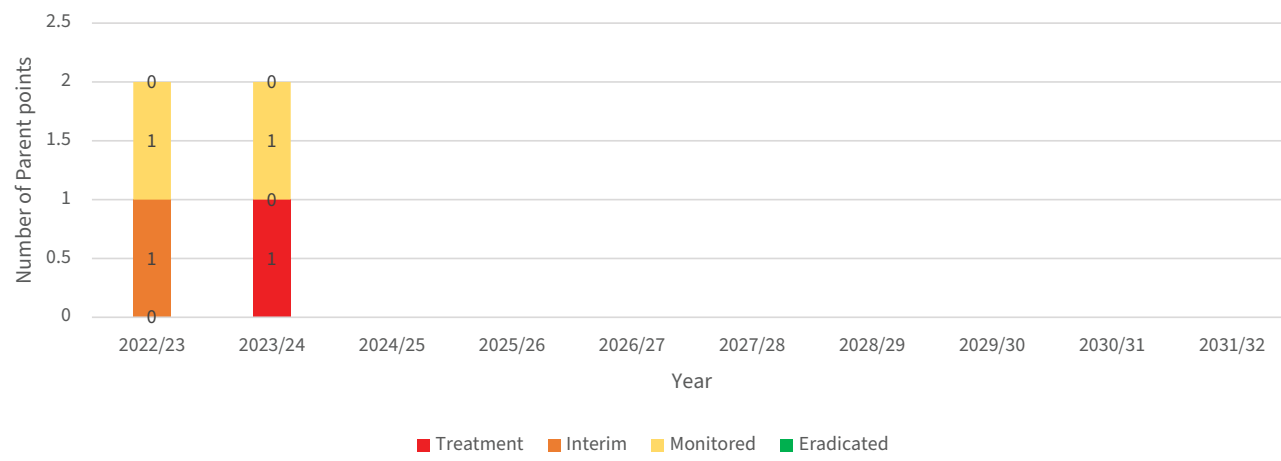
## Horse nettle (*Solanum carolinense*)

RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 2
Total area of operational sites	● 40ha
Total infestation parent points	● 2
Pest plant cover	● 16m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i> .



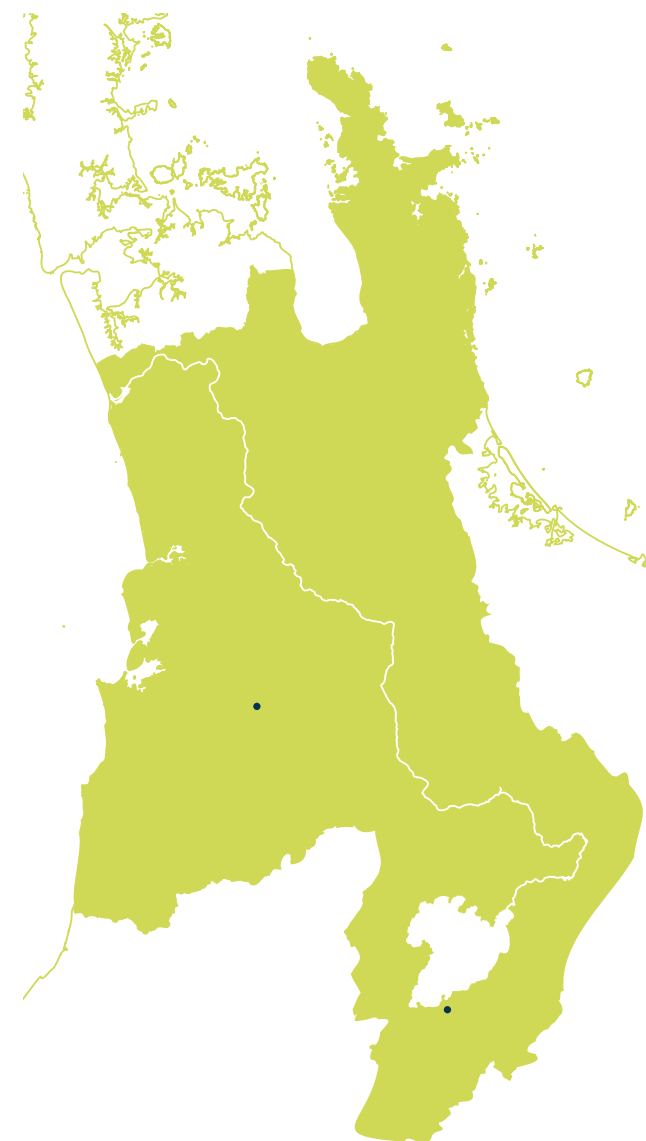
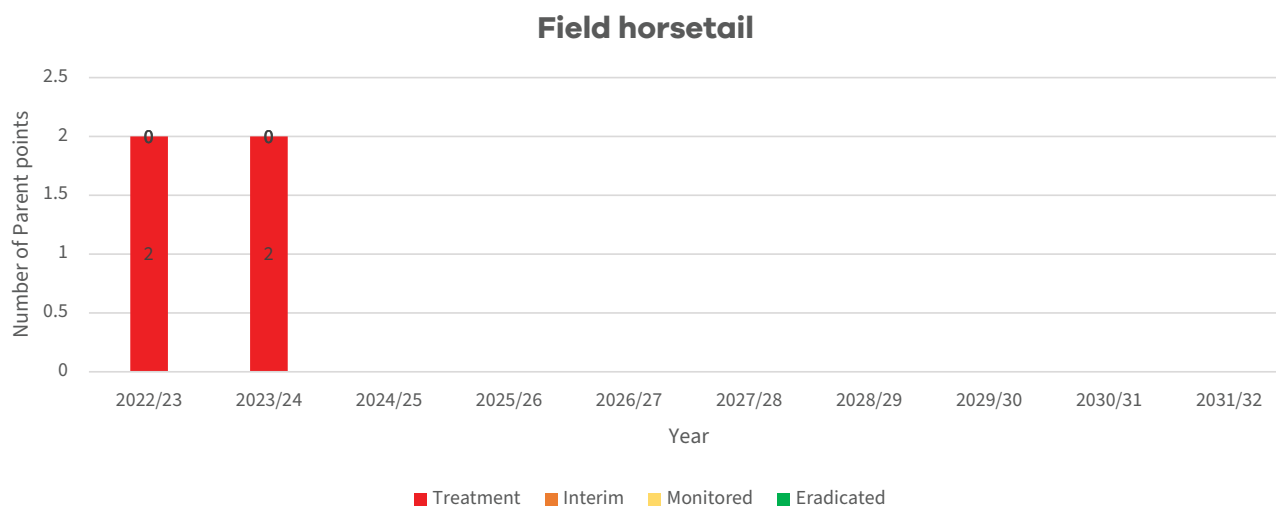
**Horse nettle**



## Field horsetail (*Equisetum arvense*)

RPMP classification	Area	Programme status
Exclusion	Whole of region	On track

Programme summary	Results
Number of operational sites	● 2
Total area of operational sites	● 0.7ha
Total infestation parent points	● 2
Pest plant cover	● 19m <sup>2</sup>
Comments	<p>Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> have been met.</p> <p>Unlike in the 2022/2023 financial year, contractors were able to undertake control at both operational sites in 2023/24.</p>

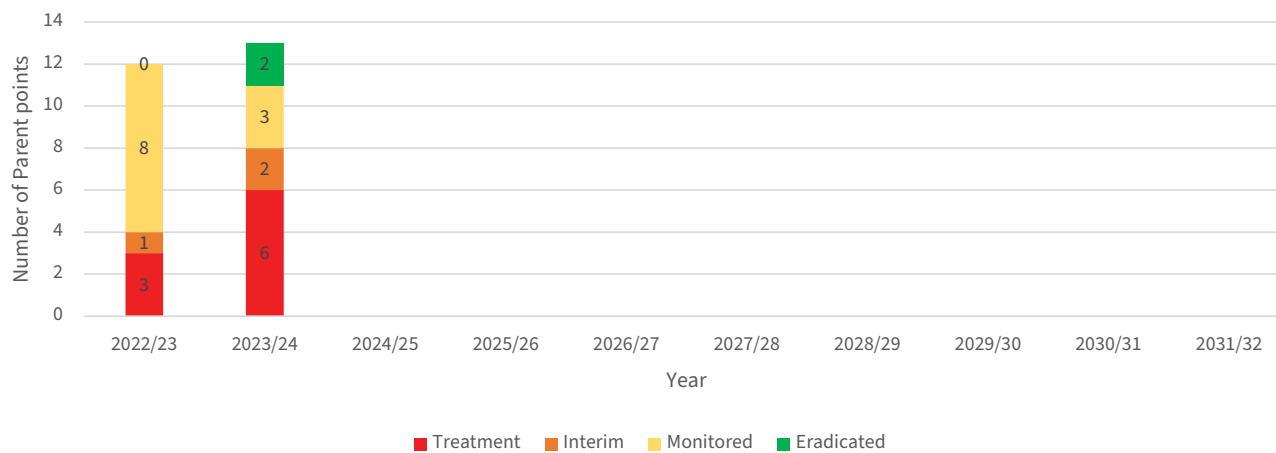


## Rough horsetail (*Equisetum hyemale*)

RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 13
Total area of operational sites	● 11.8ha
Total infestation parent points	● 13
Pest plant cover	● 324m <sup>2</sup>
Comments	The programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> .

### Rough horsetail



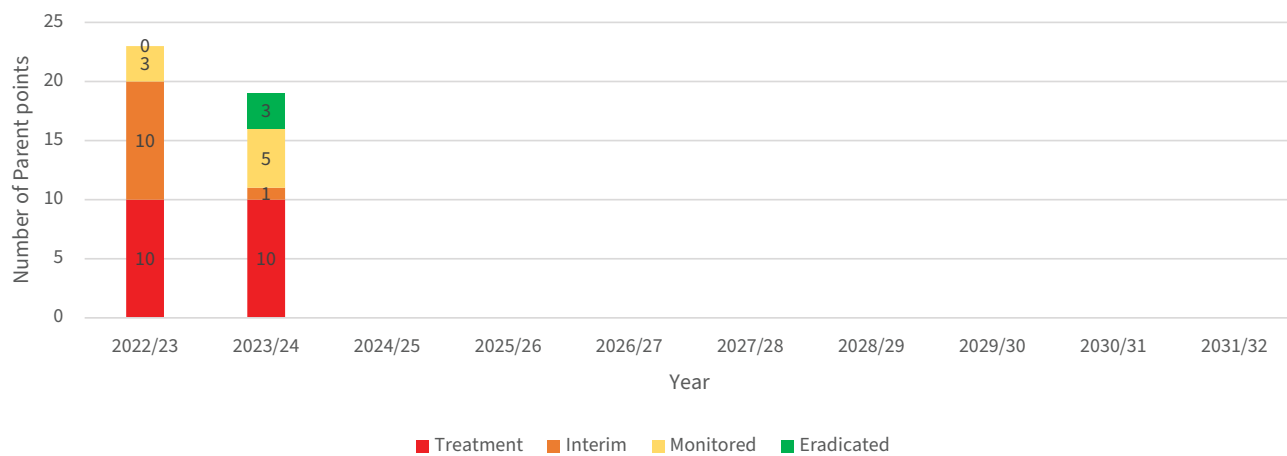
## Knotweed (giant and Japanese/Asiatic knotweed) (*Fallopia sachalinensis* and *Fallopia japonica*)

RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 23
Total area of operational sites	● 16ha
Total infestation parent points	● 22
Pest plant cover	● 111.3m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i> .

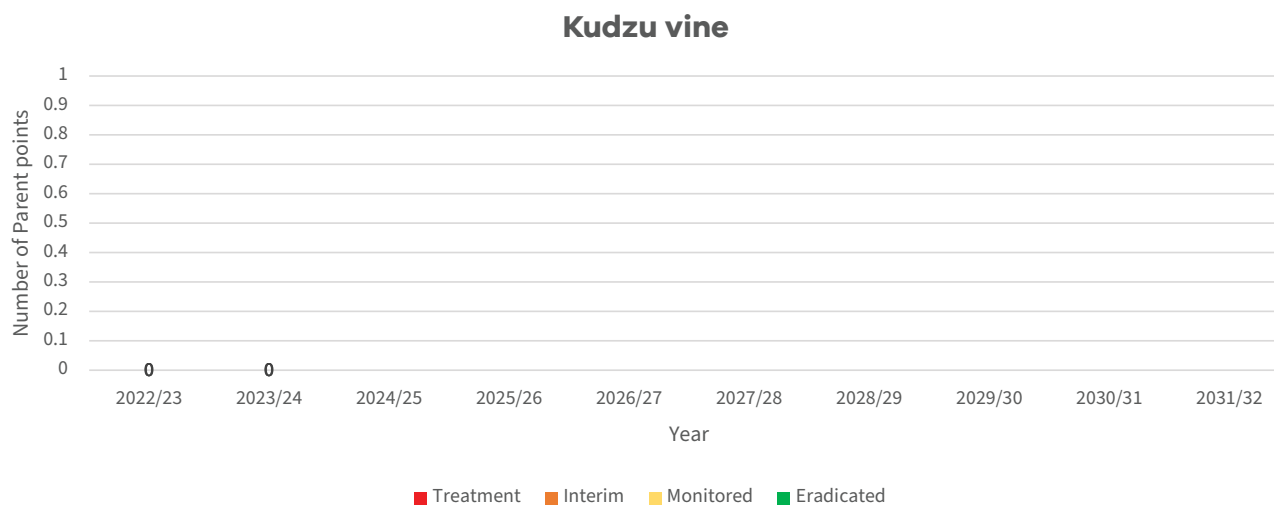
### Japanese and giant knotweed



## Kudzu vine (*Pueraria lobata*)

RPMP classification	Area	Programme status
Exclusion	Whole of region	On track

Programme summary	Results
Number of operational sites	● 0
Total area of operational sites	● 0
Total infestation parent points	● 0
Pest plant cover	● 0
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i> .



Kudzu vine



## Magpie (*Gymnorhina tibicen*)

RPMP classification	Area	Programme status
Sustained control	Whole of region (human health)	On track

Programme summary	Results
Number of enquiries/ complaints received	IRIS – 19
Site visits undertaken	0
Verbal requests for action made	0
Enforcement actions taken	0
Service delivery undertaken	0
Comments	<p>Public safety concerns for magpie relate to swooping attack's during the breeding season.</p> <p>Occupier responsibly for control. Council provides advice and may undertake direct control for landowners if there are significant infestations that are causing a threat to human health and safety.</p> <p>Some district councils have magpie trapping programmes and install warning signage during spring.</p>

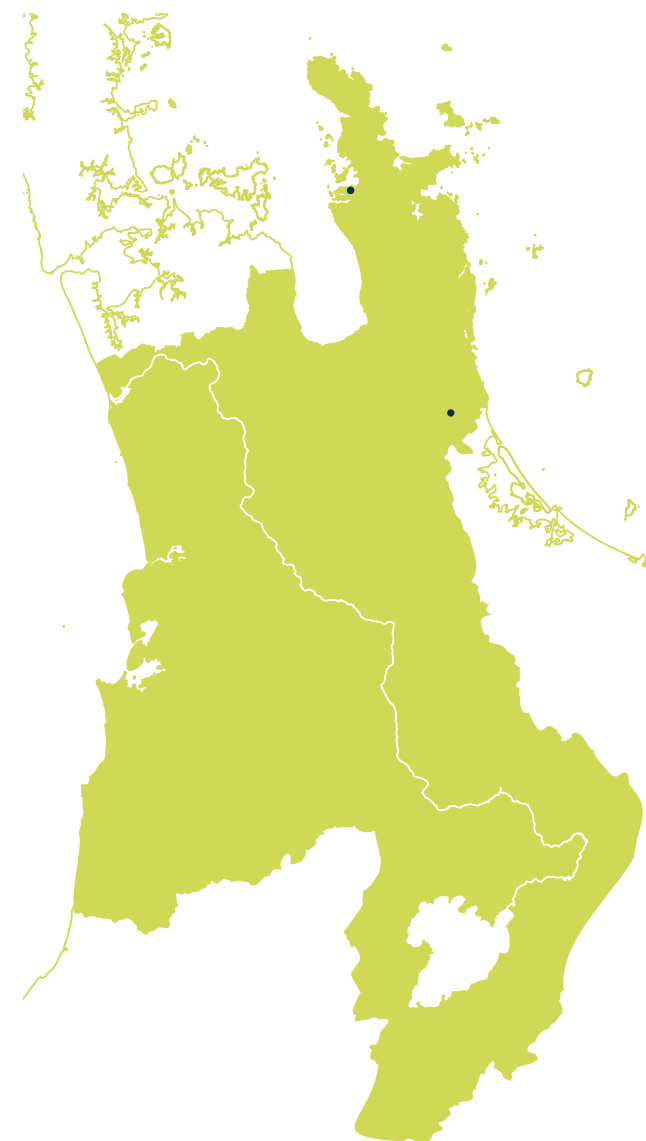
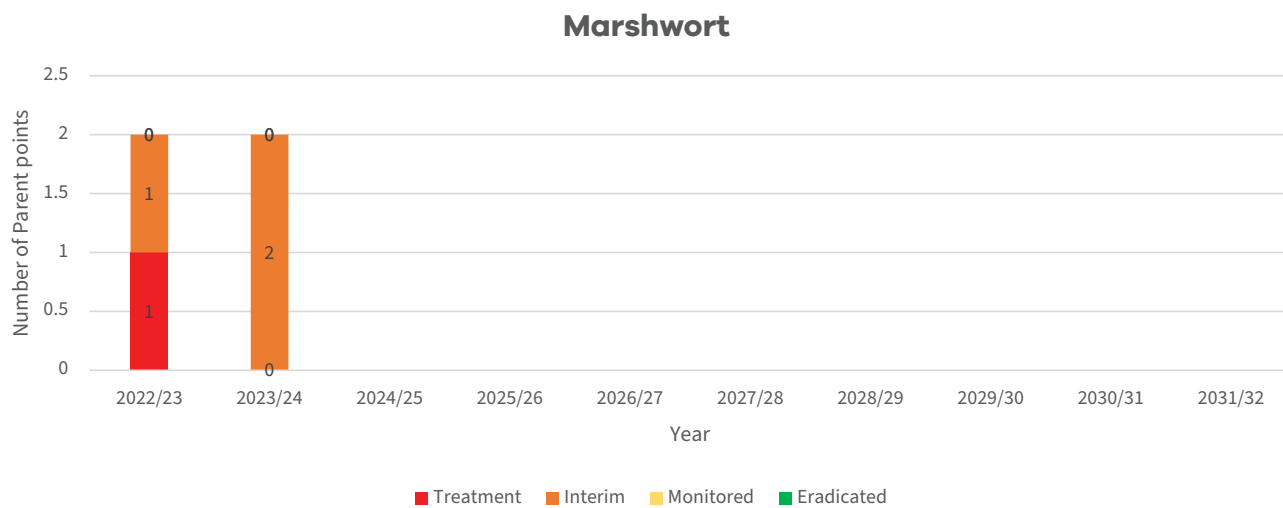


Magpies are extremely territorial birds and can show aggression to anything that may pose a threat to their territory, mainly during their spring nesting season. They can be a nuisance, mostly via their swooping, especially towards children and cyclists who pass near to where they are nesting. To avoid being swooped, you can change your route to avoid the nesting area, avoid the nesting area, stay calm, and keep moving if you see a magpie approaching.

## Marshwort (*Nymphoides geminata*)

RPMP classification	Area	Programme status
Exclusion	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 2
Total area of operational sites	● 0.3ha
Total infestation parent points	● 2
Infestation area	● 0m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i> .

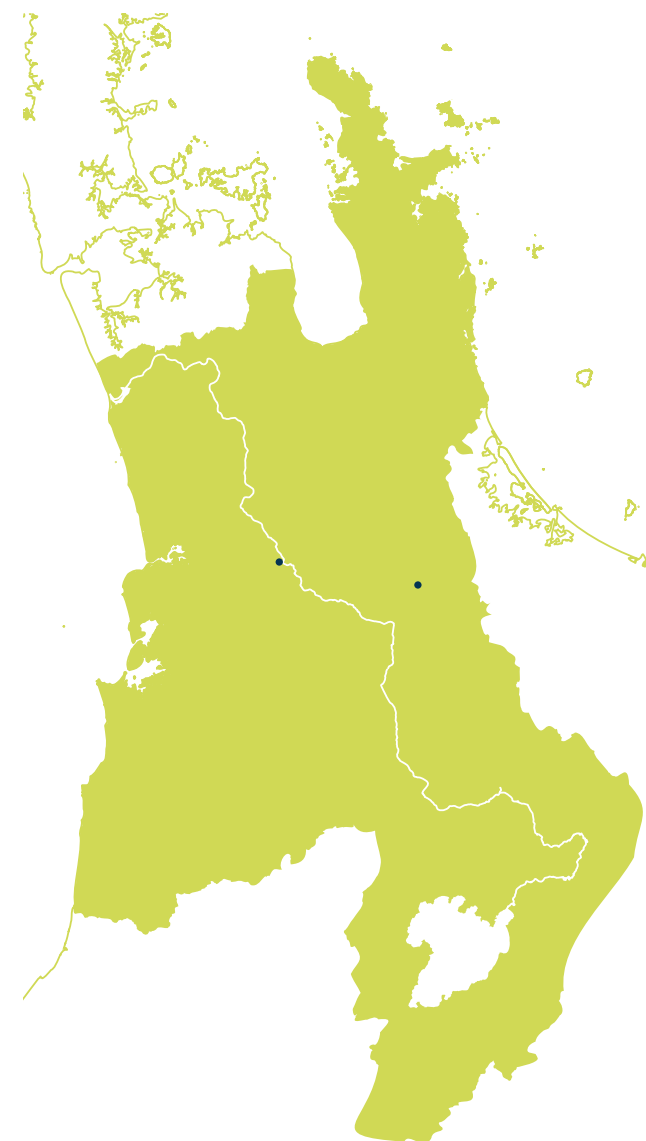
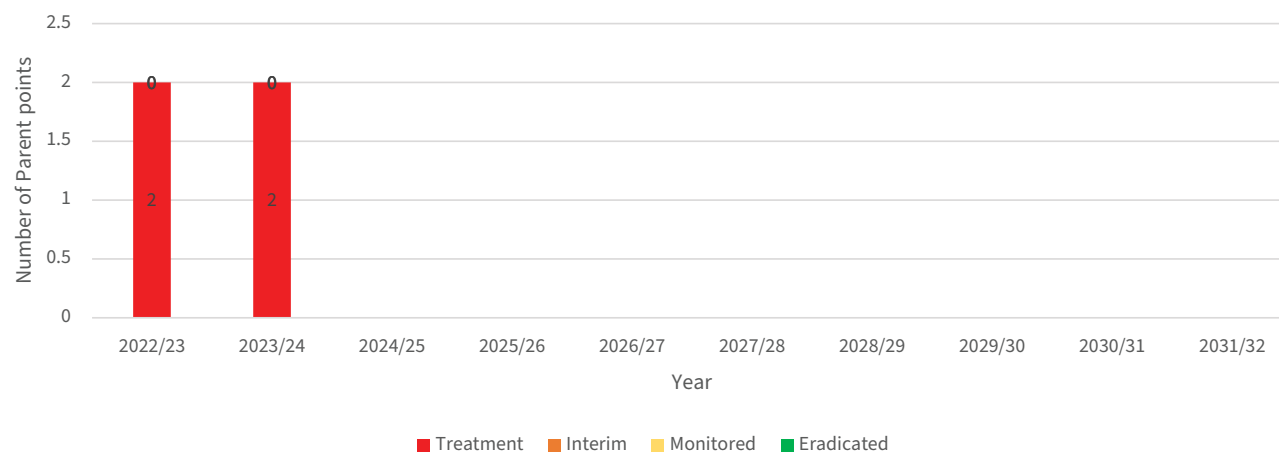


## Mexican water lily (*Nymphaea mexicana*)

RPMP classification	Area	Programme status
Progressive containment	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 2
Total area of operational sites	● 54ha
Total infestation parent points	● 2
Infestation area	● 195m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> .

### Mexican water lily



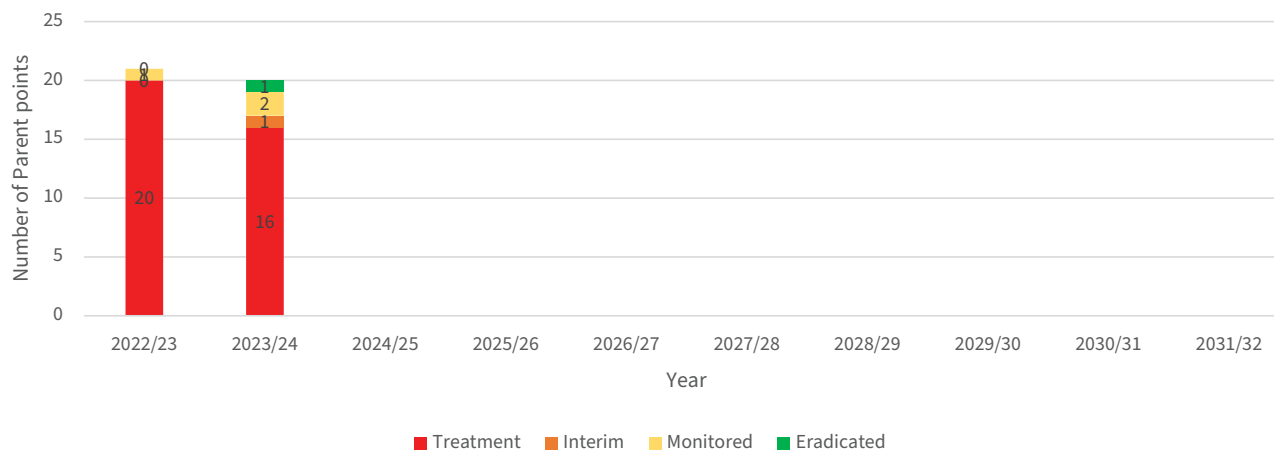
## Mile-a-minute (*Dipogon lignosus*)

RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 23
Total area of operational sites	● 11ha
Total infestation parent points	● 20
Infestation area	● 340m <sup>2</sup>
Comments	All Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> have been met in 2023/2024.

**Mile-a-minute**

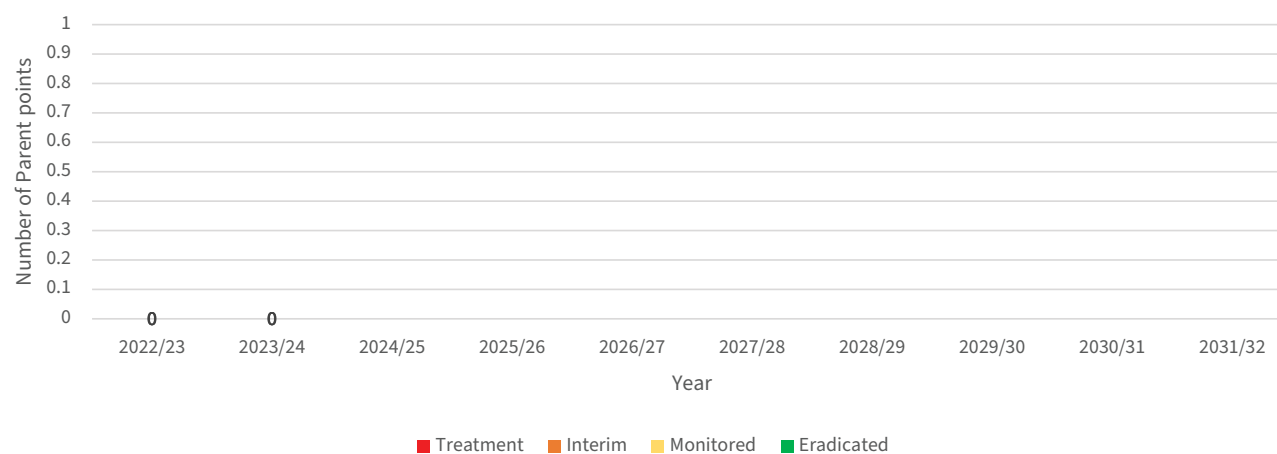


## Moth plant (*Araujia hortorum*)

RPMP classification	Area	Programme status
Progressive containment	Taupō and Rotorua districts	On track

Programme summary	Results
Number of operational sites	● 0
Total area of operational sites	● 0
Total infestation points	● 0
Pest plant cover	● 0
Comments	<p>All Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i> have been met.</p> <p>Moth plant is a sustained control pest for the rest of the region therefore statistics for this species outside Taupō and Rotorua districts are reported under the key statistics section.</p>

### Moth plant



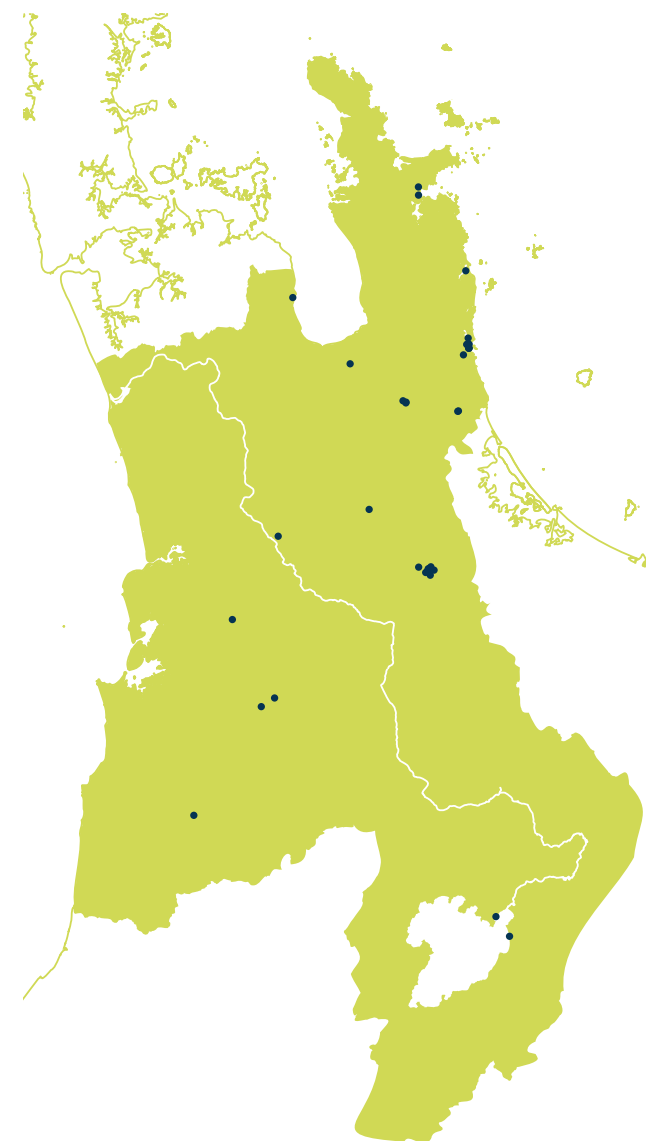
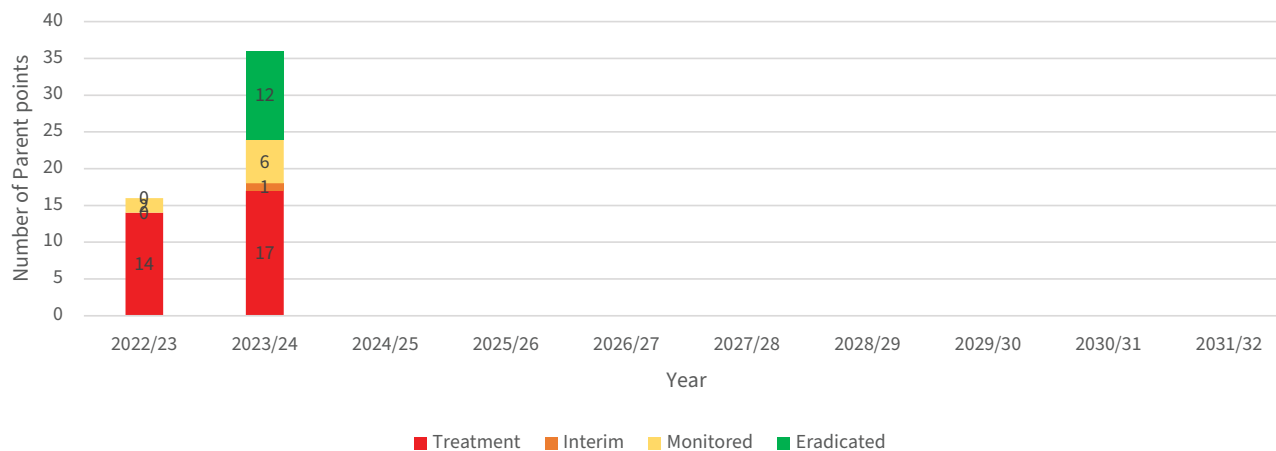
Moth plant

## Nassella/Fine stemmed needle grass/Mexican feather grass (*Nassella tenuissima*)

RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 7
Total area of operational sites	● 1.8ha
Total infestation points	● 35
Infestation area	● 39.1m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i> .

### Fine stemmed needle grass



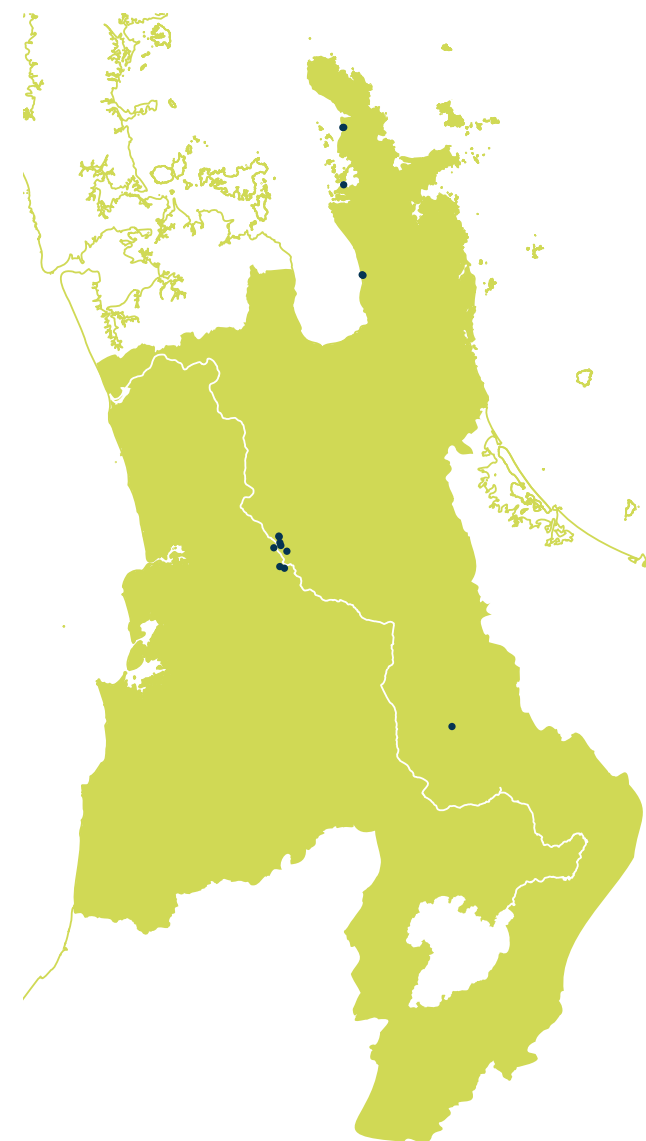
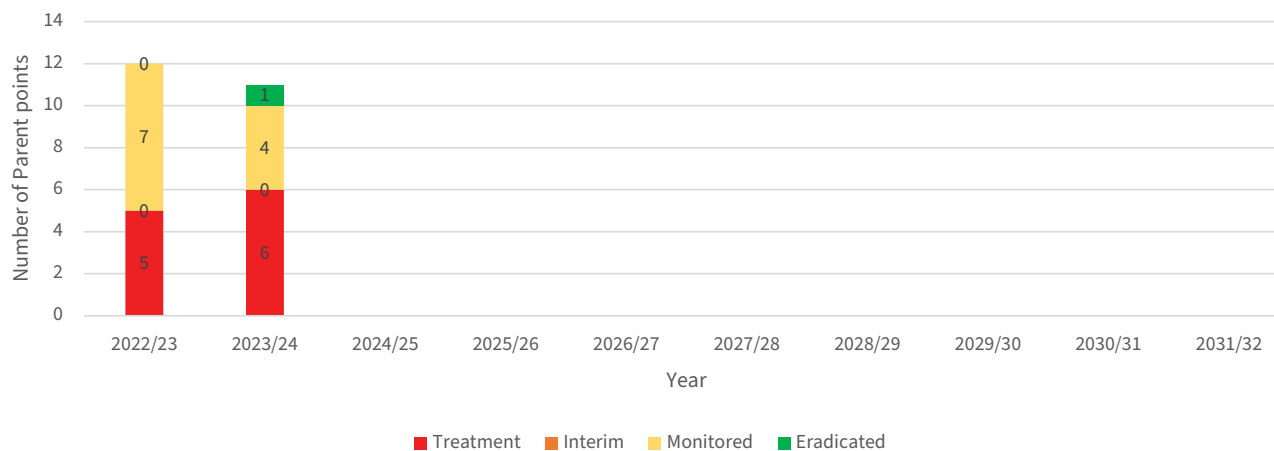
## Nassella tussock (*Nassella trichotoma*)

RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 6
Total area of operational sites	● 15.5ha
Total infestation parent points	● 11
Pest plant cover	● 24.4m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i> .

### Nassella tussock

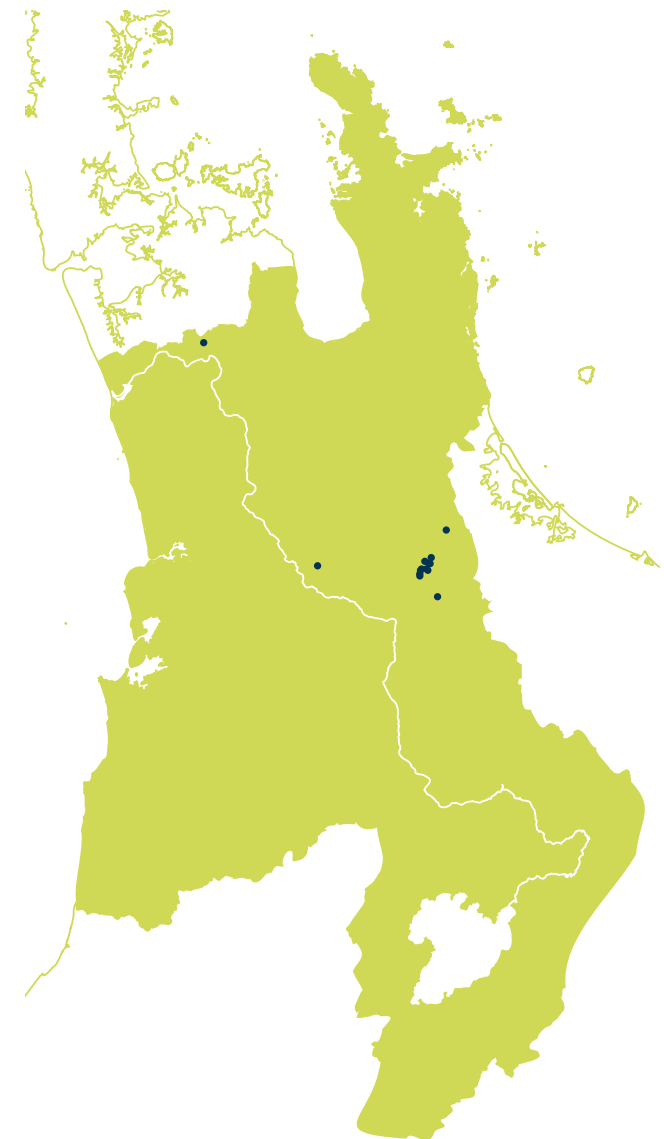


## Noogoora bur (*Xanthium strumarium*)

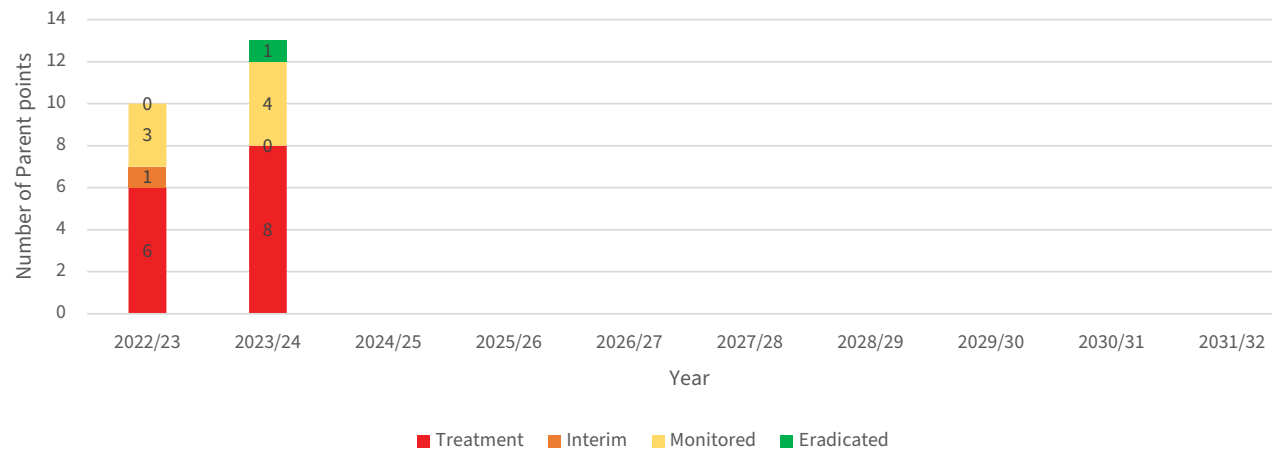
RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 13
Total area of operational sites	● 295.5ha
Total infestation parent points	● 13
Pest plant cover	● 12,736.4m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i> .



**Noogoora bur**



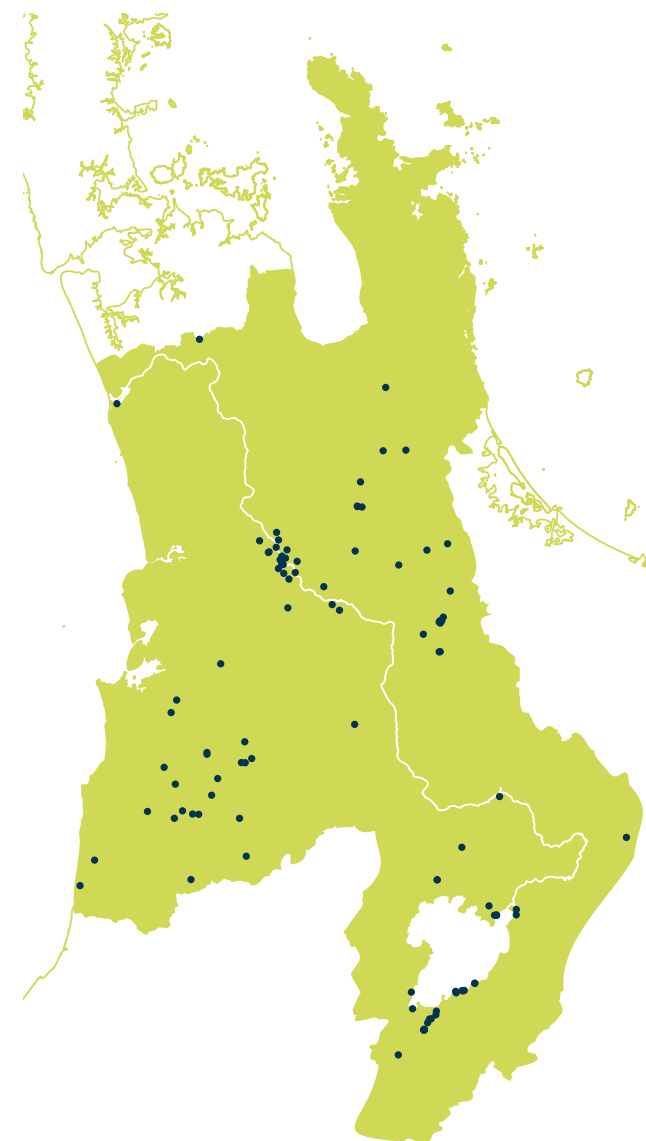
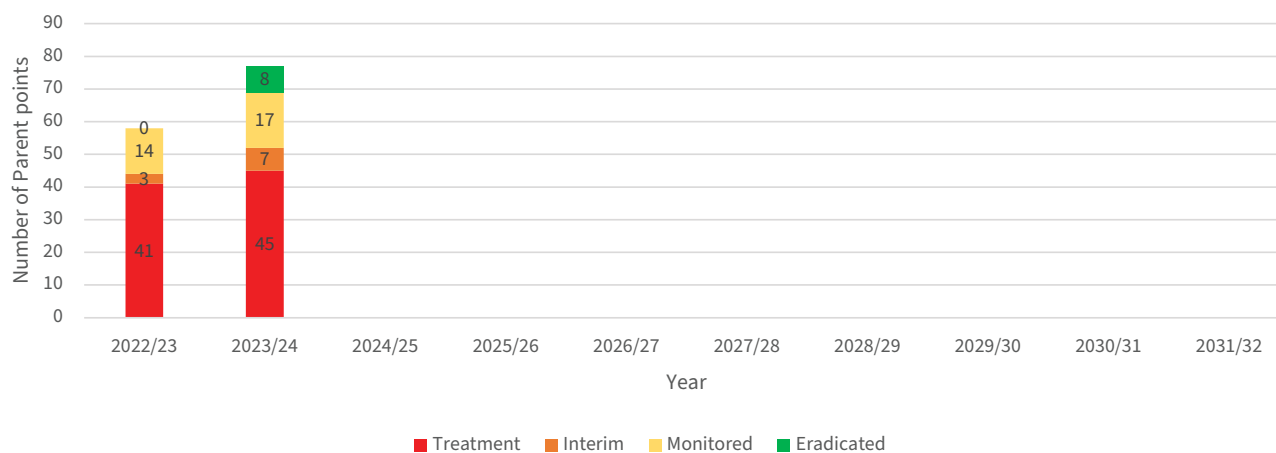


## Old man's beard (*Clematis vitalba*)

RPMP classification	Area	Programme status
Progressive containment	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 75
Total area of operational sites	● 2,785ha
Total infestation parent points	● 77
Pest plant cover	● 3,515.9m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> .

### Old man's beard



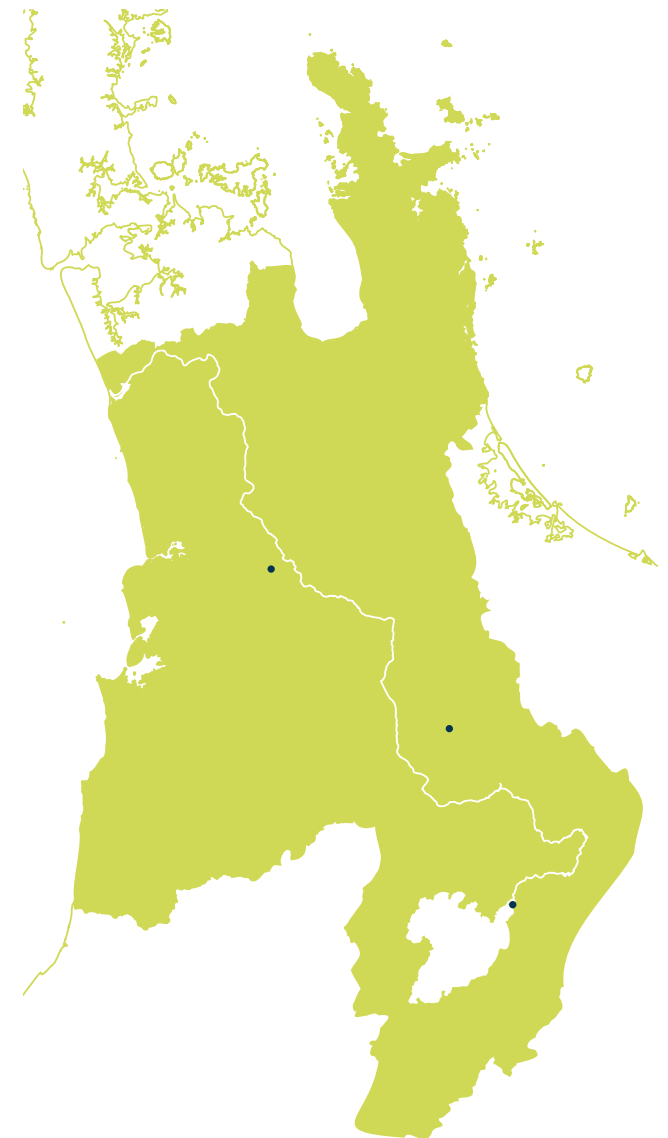
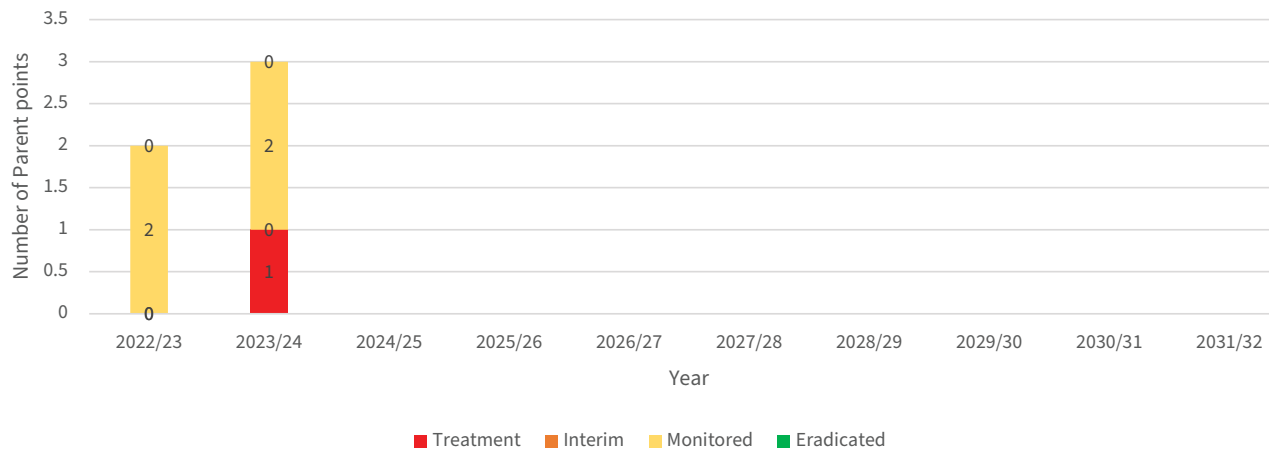
## Purple loosestrife (*Lythrum salicaria*)

RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 3
Total area of operational sites	● 1.6ha
Total infestation parent points	● 3
Infestation area	● 1m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i> .

### Purple loosestrife

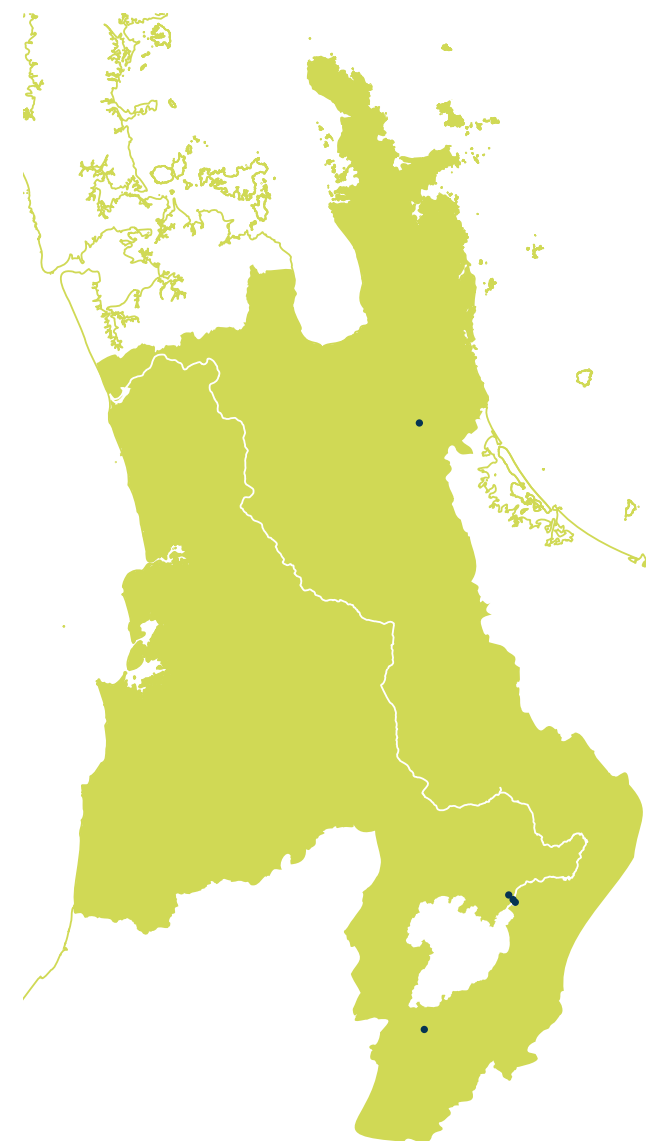
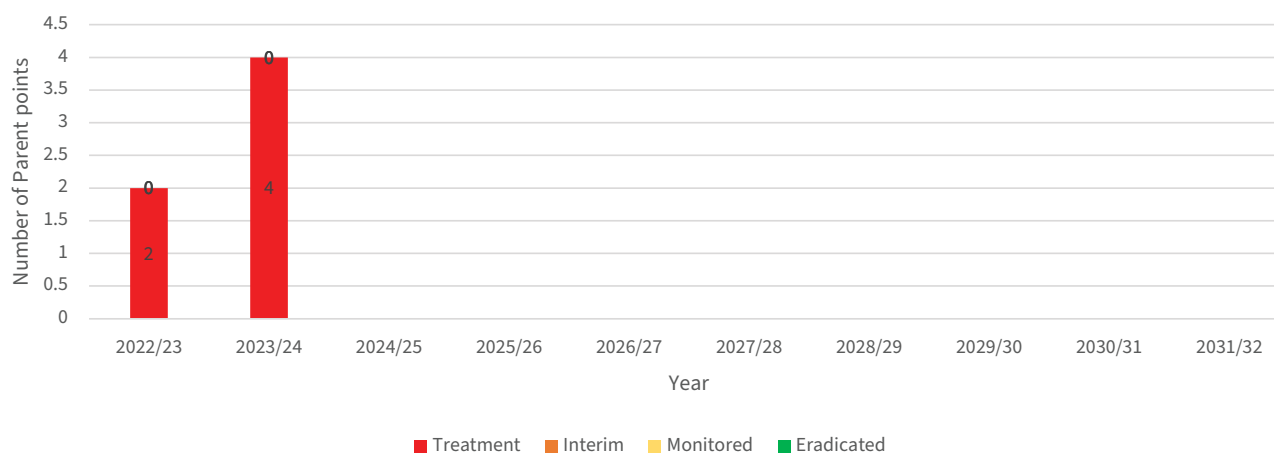


# Rhododendron ponticum

RPMP classification	Area	Programme status
Eradication	Whole of region	At risk

Programme summary	Results
Number of operational sites	● 4
Total area of operational sites	● 13.7ha
Total infestation parent points	● 4
Infestation area	● 42m <sup>2</sup>
Comments	This programme has not met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> . <i>Rhododendron ponticum</i> can be very difficult to distinguish from other <i>Rhododendron</i> species and cultivars, especially when not flowering. This means there are likely infestations in the region that have not yet been identified.

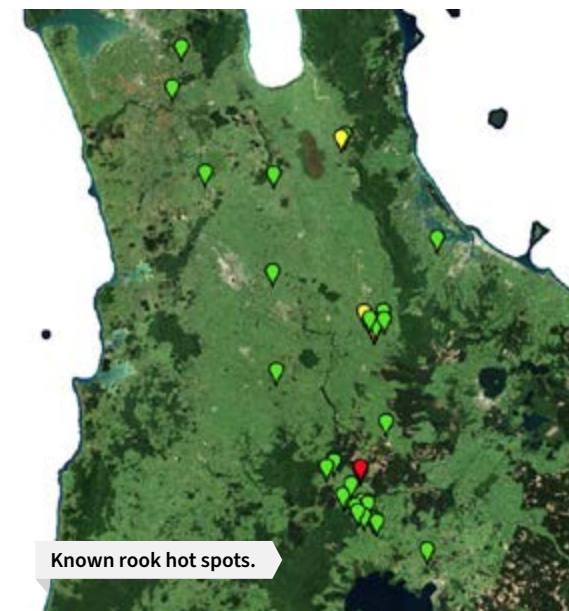
## Rhododendron ponticum



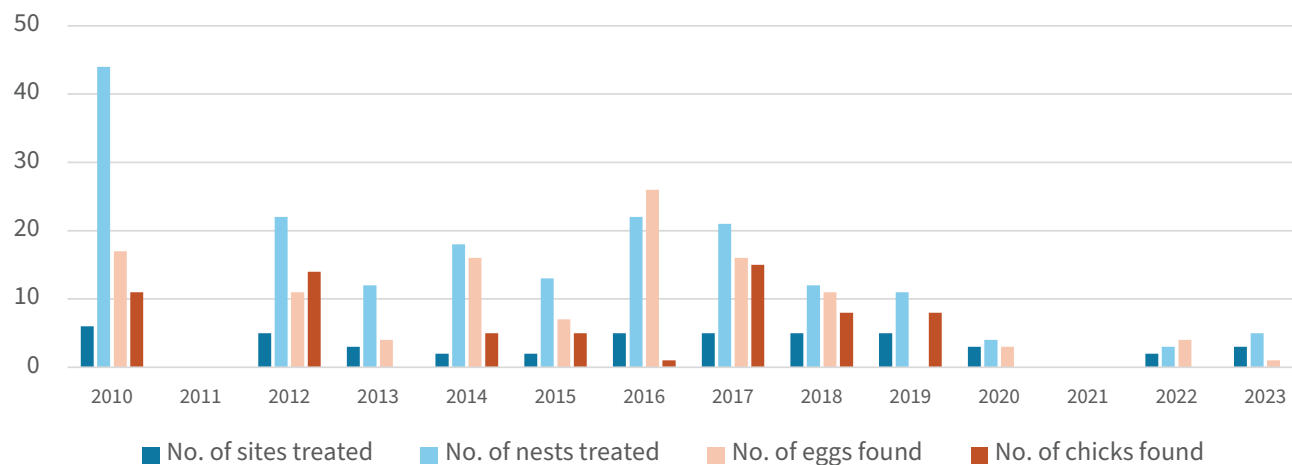
## Rook (*Corvus frugilegus*)

RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of sightings received	IRIS – 25 Direct calls and emails – 45
Surveillance undertaken	Multiple properties from Paeroa to north of Taupō.
Number of known rookery sites	Four confirmed rookeries in 2023/24
Nest sites controlled	Seven nests found/five nests controlled, two abandoned.
Comments	Surveillance and control work undertaken in spring each year. 38 confirmed sightings of rooks. Control work undertaken with helicopter (DRC1339 application) to four nests: two in Marotiri, two in Tapapa. Physical removal of one nest (branch removed) in Paeroa. Two nests abandoned in Putaruru due to bad weather. Low density populations. Liaison with neighbouring regional council's biosecurity counterparts about rook surveillance and control. Using Rook GIS Online Surveillance Application. Review of Council Rook Programme underway.



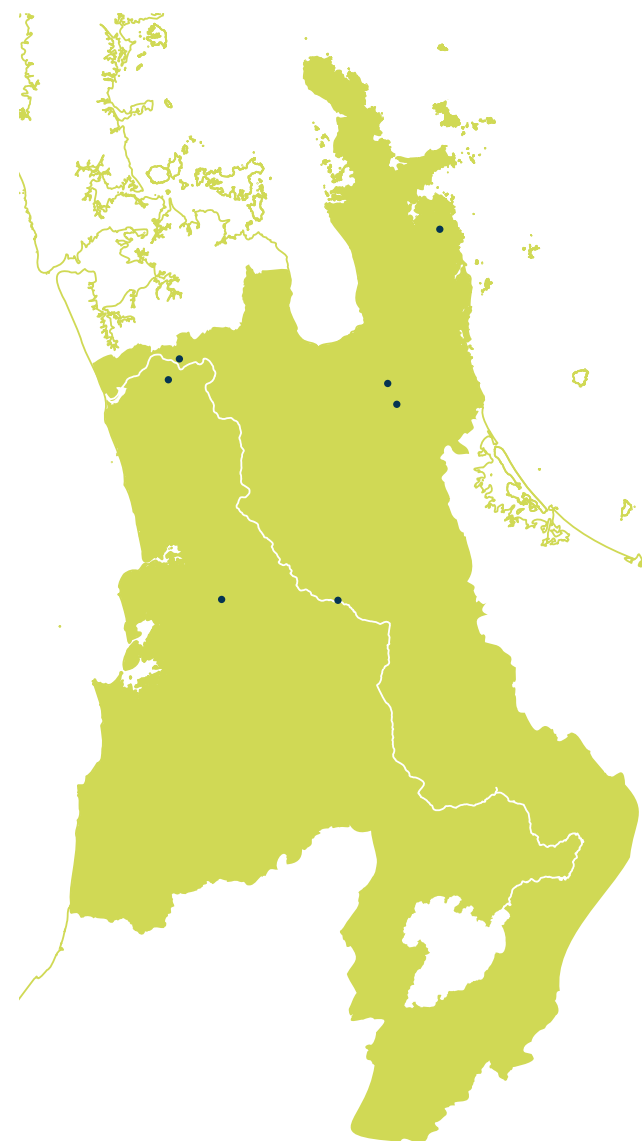
### Rook control in the Waikato region 2010-2023



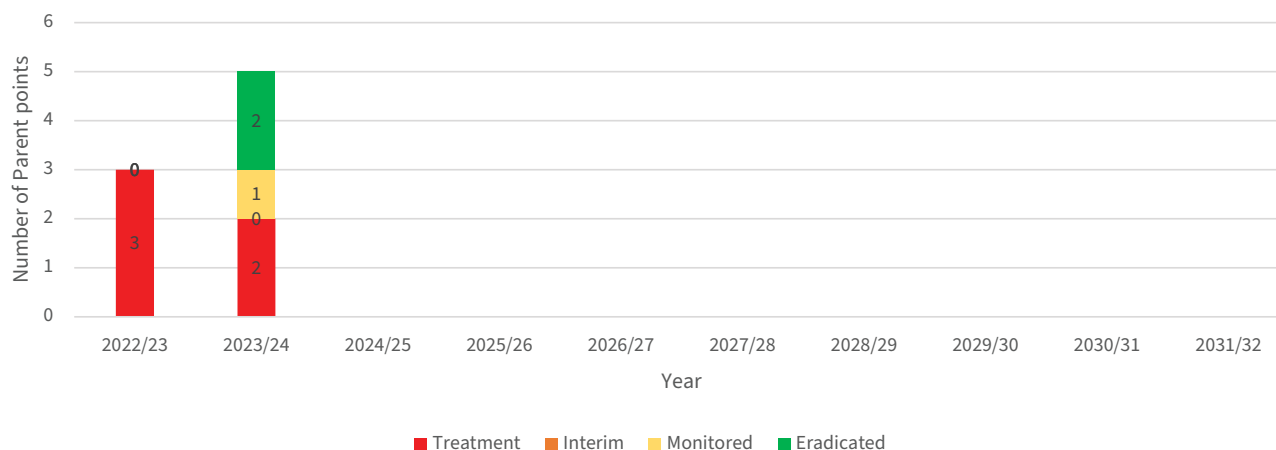
## Sagittaria/arrowhead (*Sagittaria montevidensis*, *S. sagittifolia* and *S. platyphylla*)

RPMP classification	Area	Programme status
Eradication	Whole of region	At risk

Programme summary	Results
Number of operational sites	● 5
Total area of operational sites	● 1,259ha
Total infestation parent points	● 5
Infestation area	● 3m <sup>2</sup>
Comments	<p>This programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i>.</p> <p>There are couple of species of sagittaria that were not listed in the new RPMP, with pending amendments to correct this to ensure the programme is on track.</p>



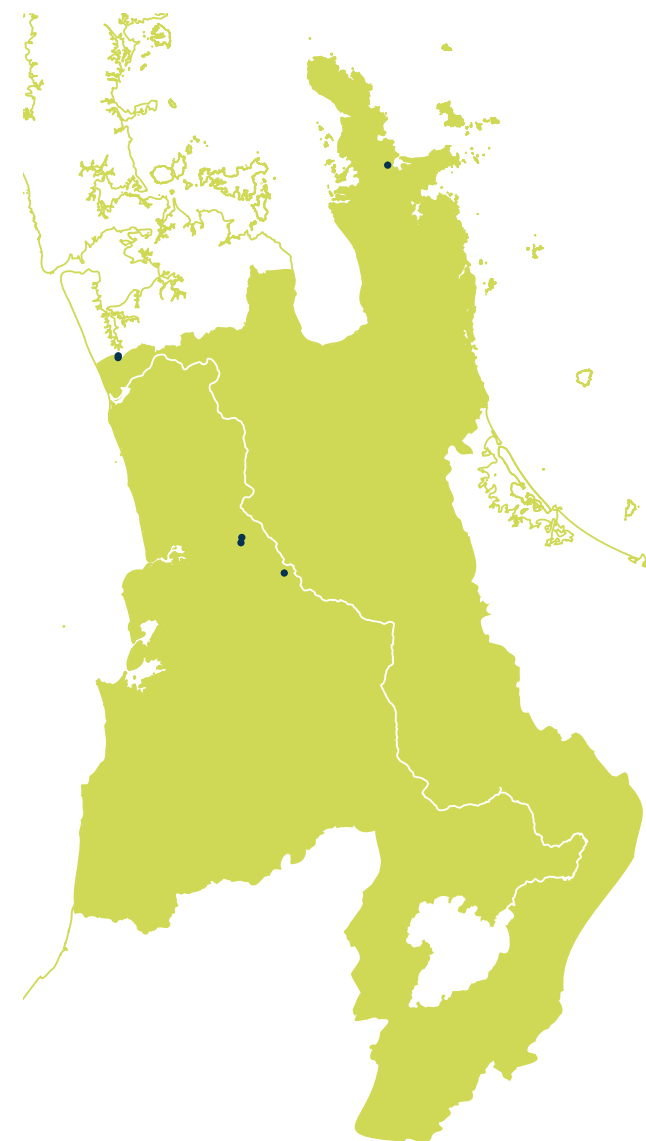
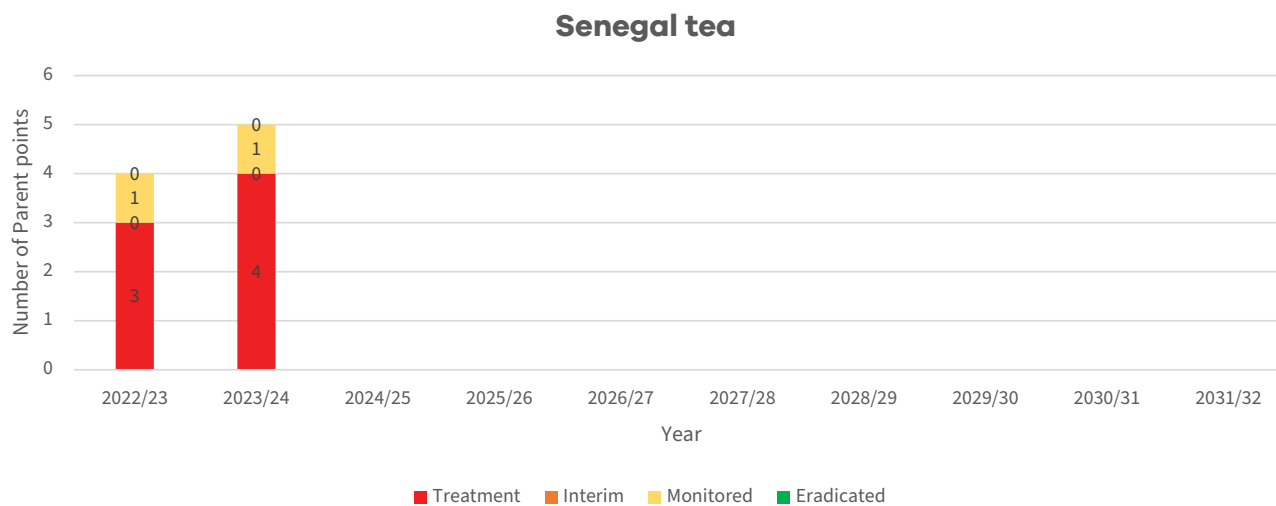
### Sagittaria



## Senegal tea (*Gymnocoronis spilanthoides*)

RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 5
Total area of operational sites	● 157.8ha
Total infestation parent points	● 5
Infestation area	● 495m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i> .

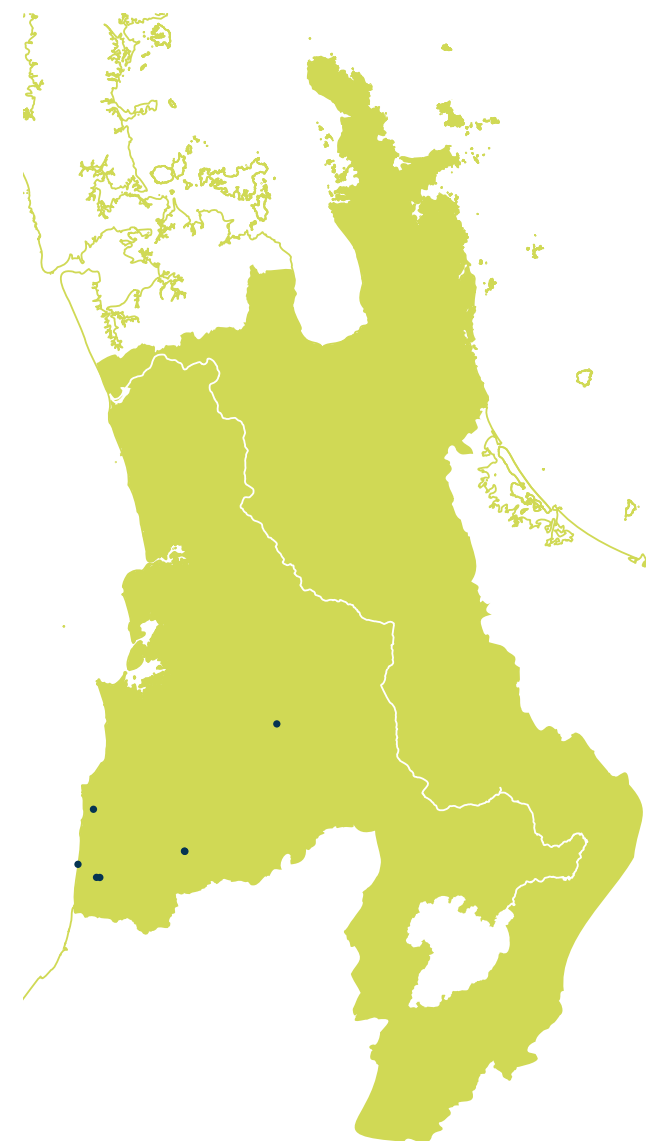
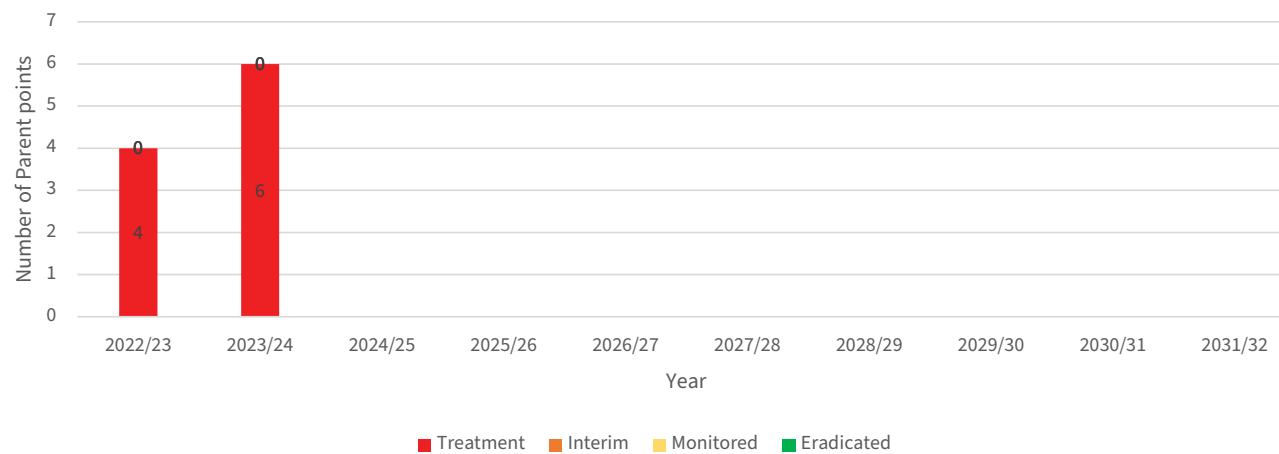


## Thistle (variegated thistle) (*Silybum marianum*)

RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 7
Total area of operational sites	● 919ha
Total infestation parent points	● 6
Pest plant cover	● 100,001m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> .

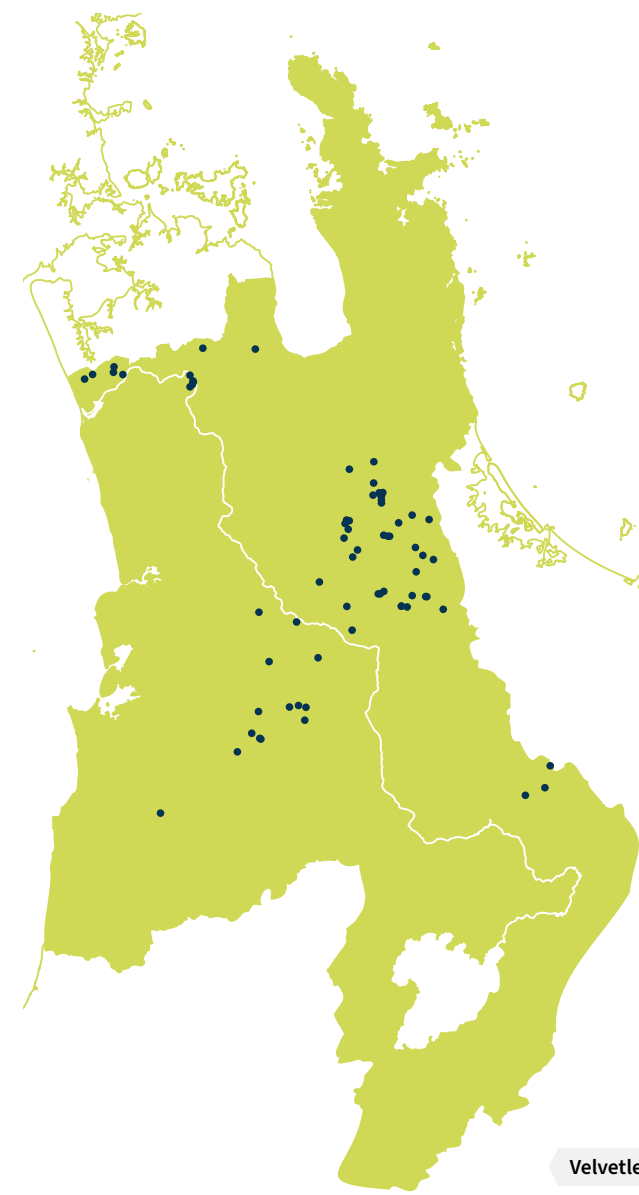
### Variegated thistle



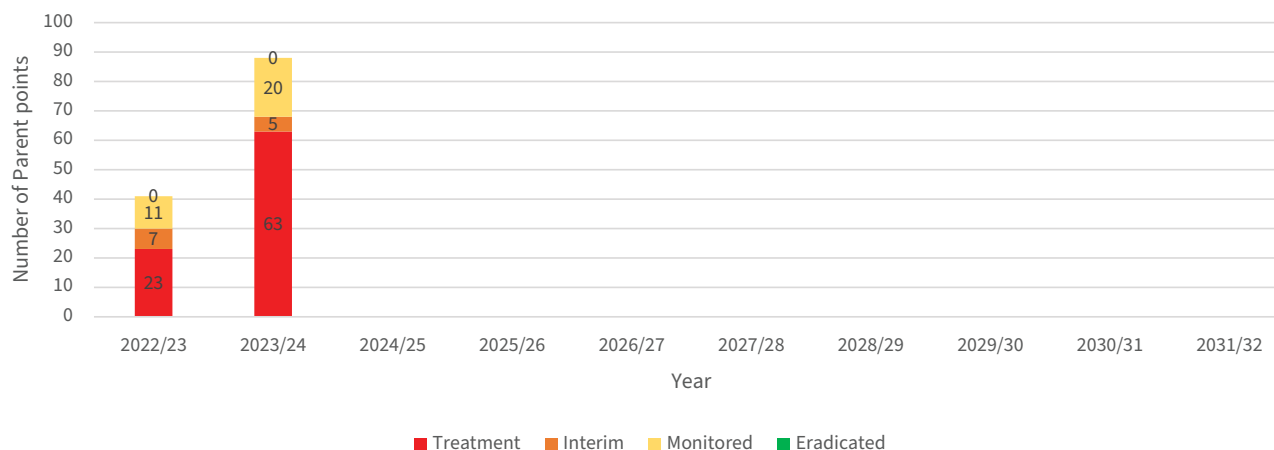
# Velvetleaf (*Abutilon theophrasti*)

RPMP classification	Area	Programme status
Progressive containment	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 89
Total area of operational sites	● 7,150ha
Total infestation parent points	● 88
Infestation area	● 20,076.5m <sup>2</sup>
Comments	This programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> . There were three more infestations found and more operational sites created through tracing.



## Velvetleaf





## Wallaby (Bennett's, brush-tailed rock, parma and swamp wallaby) (*Macropus rufogriseus*, *Petrogale penicillate*, *Macropus parma*, and *Wallabia bicolor*)

RPMP classification	Area	Programme status
Exclusion	Whole of region	<b>On track</b>

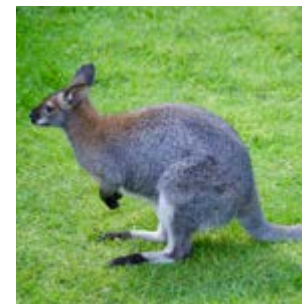
Programme summary	Results
Number of sightings outside of the Containment Area received	● 0
Number of responses required	● 0
Comments	No occurrences of Bennett's, brush-tailed rock or swamp wallaby were recorded in the Waikato region this financial year. This programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> .

### And then there were parma!

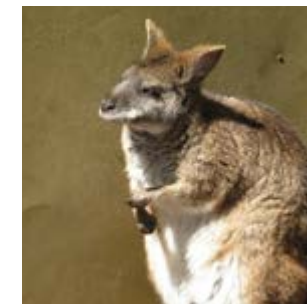
Four species of wallaby are classified as exclusion pests in the Waikato region, with the aim of preventing them from ever establishing here.

Bennett's wallaby, which are only found in the South Island, are the largest of these species at 80 centimetres in height and 20 kilograms in weight. They are a major pest animal problem in the Canterbury and Otago regions and are the South Island focus of the Tipu Mātoro National Wallaby Eradication Programme. Swamp and brush-tailed rock wallabies are only found on Kawau Island.

In the Waikato, it had been thought that dama wallabies were the only wallaby species present, but recent genetic studies by Manaaki Whenua Landcare Research has determined that parma wallaby are also in the region, and may have been here for some time. The fact they have never been identified before may be because they are of similar size and appearance to dama wallaby. Distinguishing features between the two species include differences in fur colour and slight differences in ear and face shape.



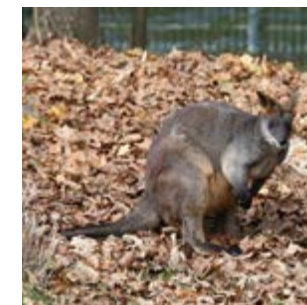
Bennett's wallaby  
Photo: Nasser Halaweh  
Licence: Creative Commons



Parma wallaby  
Photo: Mitch Ames  
Licence: Creative Commons



Brush-tailed rock wallaby  
Photo: Doug Beckers  
Licence: Creative Commons



Swamp wallaby  
Photo: Rufus46  
Licence: Creative Commons

## Wallaby (dama) (*Macropus eugenii*)

RPMP classification	Area	Programme status
Progressive containment	Whole of region – <i>outside of Dama Wallaby Progressive Containment Area</i>	<b>On track</b>

Programme summary	Results
Number of complaints/enquiries received	● IRIS – 8
Number of ‘out of containment area’ public sighting reports received	● WALL-IS – 44 reports or sightings <sup>1</sup>
Wallaby Indicator Dog and Drone Surveillance	● Total 49,145ha covered
	● 5,429km walked or flown
Direct control: <ul style="list-style-type: none"> <li>• Night shooting</li> <li>• Aerial control</li> </ul>	● Over 600 wallaby shot
Tipu Mātoro National Wallaby Programme outcomes met	● Yes
Comments	<p>Priority surveillance and control work undertaken in response to sightings, and proactively outside of the containment area.</p> <p>Contributed to:</p> <ul style="list-style-type: none"> <li>• development of a National Wallaby Sighting Protocol</li> <li>• monthly dama wallaby updates</li> <li>• provide advice to neighbouring regional councils on out of containment sightings</li> <li>• communication strategy to encourage reporting of public sightings.</li> </ul> <p>This programme has met all Key Performance Indicators included in the <i>Waikato Biosecurity Operational Plan 2022-2032</i>.</p>



<sup>1</sup> Public reports or sightings submitted via [www.reportwallabies.nz](http://www.reportwallabies.nz) and captured in WALL-IS, the data management system administered by LINZ for the Tipu Mātoro National Wallaby Eradication Programme.

## Wasp (common/German) (*Vespula vulgaris* and *Vespula germanica*)

RPMP classification	Area	Programme status
Sustained control	Whole of region (human health)	On track

Programme summary	Results
Number of enquiries/complaints received	IRIS – 18
Number of inspections undertaken	● None undertaken
Service delivery required	● None required
Comments	Council contributed \$20,000 to the National Wasp Biocontrol Programme in collaboration with Manaaki Whenua – Landcare Research. This programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> .



New Zealand has some of the highest densities of common and German wasps in the world; there are none of their natural enemies here, we have milder winters and we have an abundance of food for them.

The council is supporting Manaaki Whenua – Landcare Research’s Wasp Biocontrol Programme in their search to find safe and effective biocontrol agents amongst these wasp species’ natural enemies overseas.

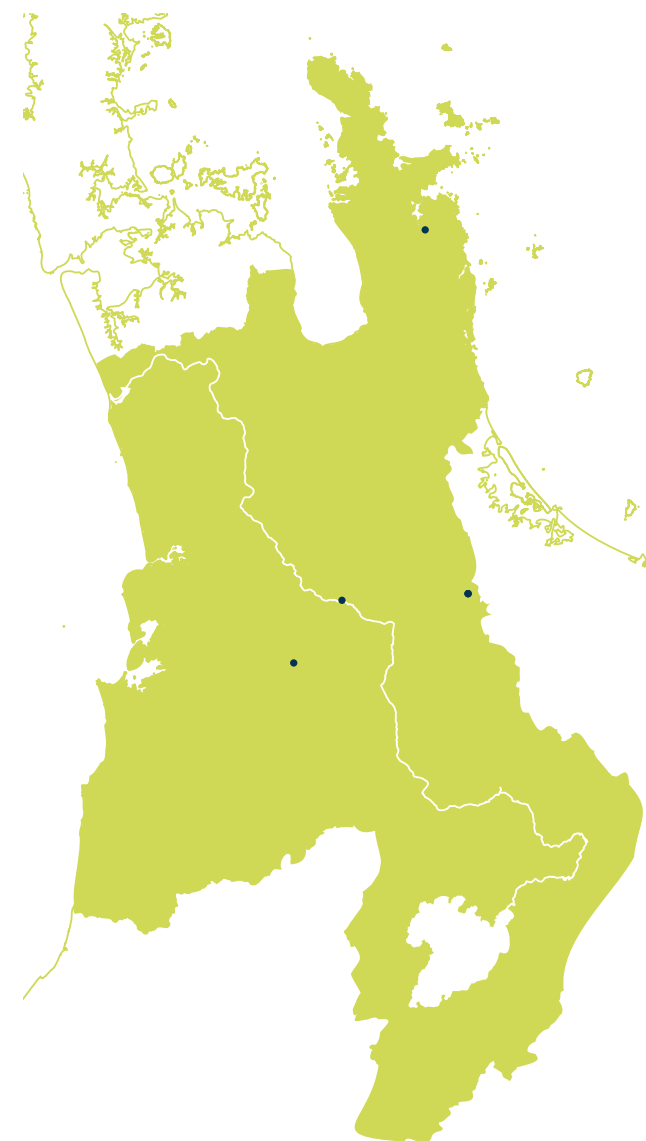
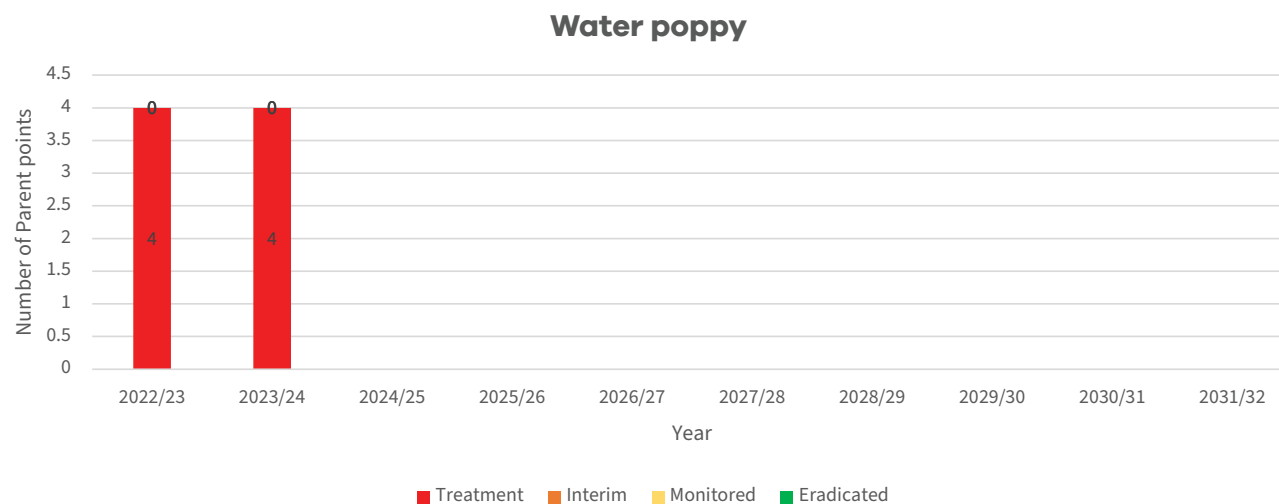
Several potential agents have been identified, with host testing of a *Volucella hoverfly* (pictured) occurring in the United Kingdom now due to difficulties in rearing and breeding the species in captivity in New Zealand.



## Water poppy (*Hydrocleys nymphoides*)

RPMP classification	Area	Programme status
Eradication	Whole of region	<b>On track</b>

Programme summary	Results
Number of operational sites	● 4
Total area of operational sites	● 9.1ha
Total infestation parent points	● 4
Pest plant cover	● 1,685m <sup>2</sup>
Comments	<p>This programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i>.</p> <p>This programme has had some challenges. Council has begun control on the largest known water poppy site in the country.</p>

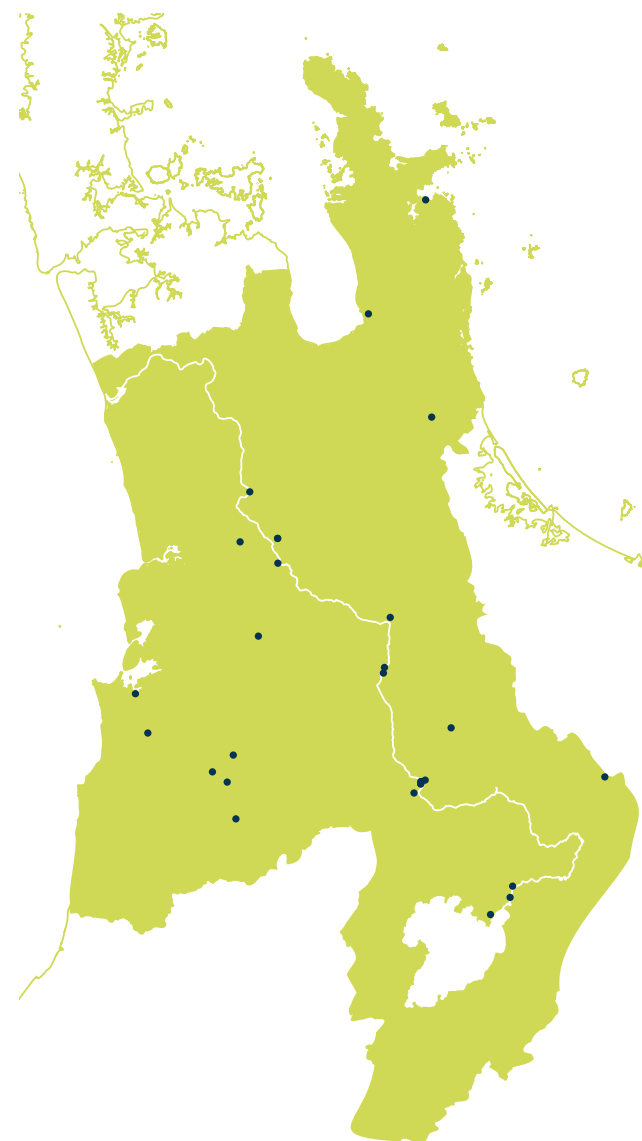


## Wild kiwifruit (*Actinidia* spp.)

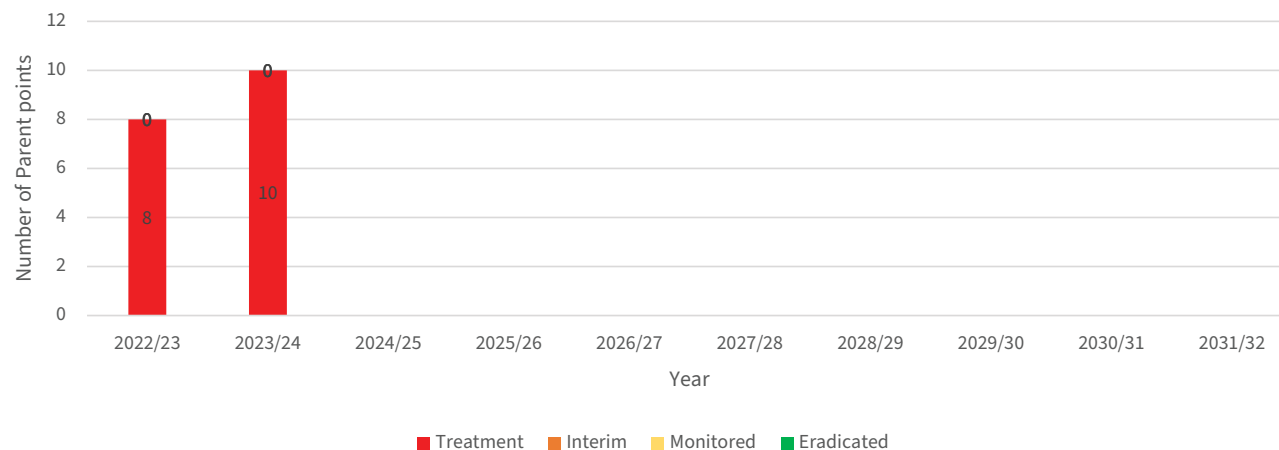
RPMP classification	Area	Programme status
Progressive containment	Whole of region	At risk

Programme summary	Results
Number of operational sites	● 8
Total area of operational sites	● 1.4ha
Total infestation parent points	● 10
Infestation area	● 190m <sup>2</sup>
Comments	There are a number of wild kiwifruit sites that have been identified but not yet defined in Plantell. This work, and any control required will be completed once a contract has been established with Kiwifruit Vine Health (KVH). Programme at risk while a contract with KVH is being set up.



### Wild kiwifruit

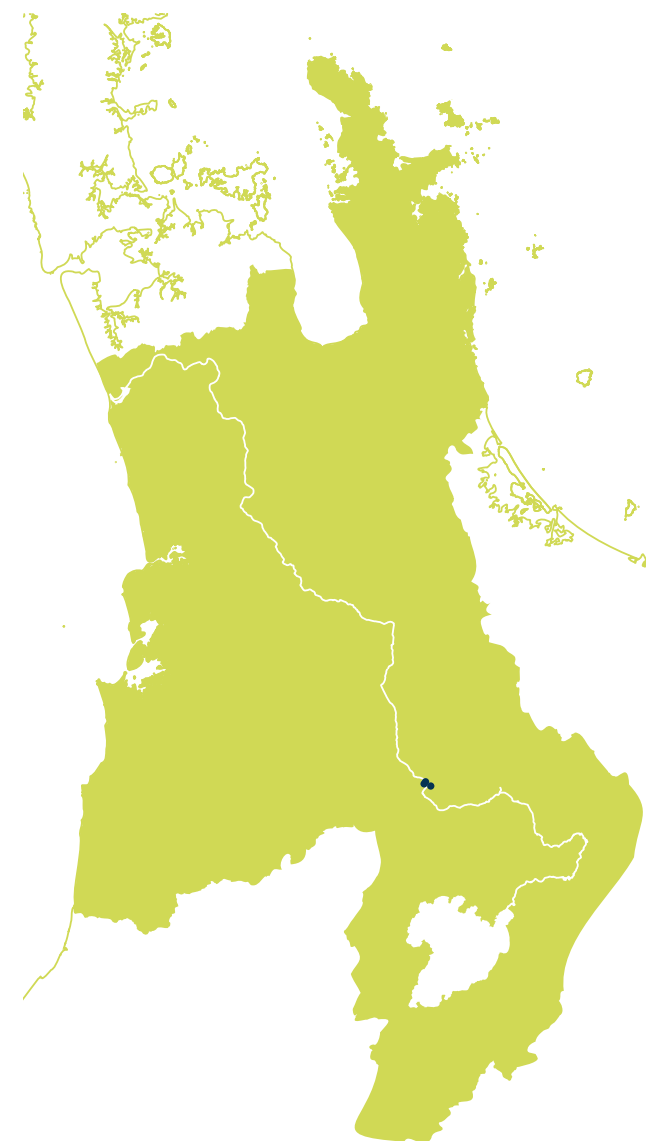
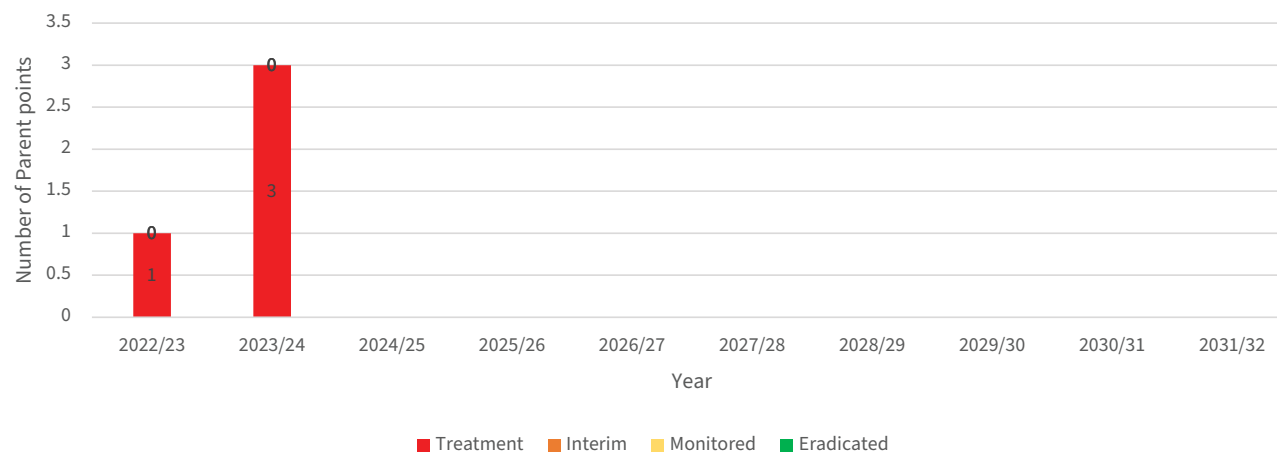


## Woolly nightshade (*Solanum mauritianum*)

RPMP classification	Area	Programme status
Progressive containment	Taupō and Rotorua districts	<b>On track</b>

Programme summary	Results
Number of operational sites	● 1
Total area of operational sites	● 513.2ha
Total infestation parent points	● 3
Infestation area	● 91m <sup>2</sup>
Comments	<p>This programme has met all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i>.</p> <p>Woolly nightshade is a sustained control pest for the rest of the region therefore statistics for this species outside these areas are reported under the key statistics section.</p>

### Woolly nightshade

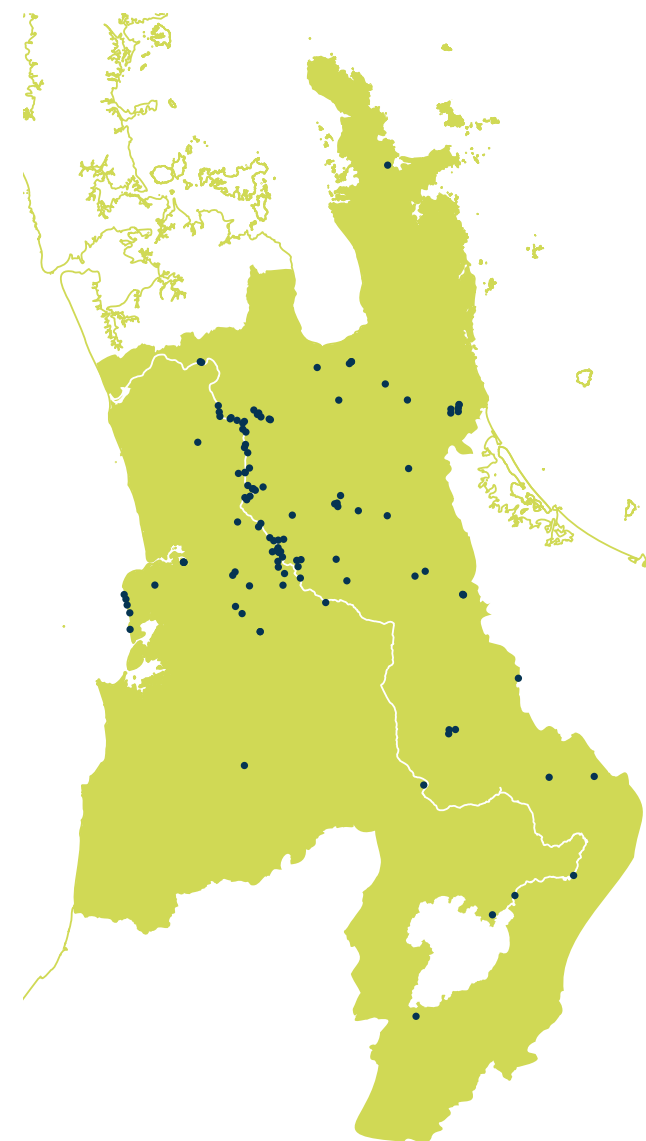
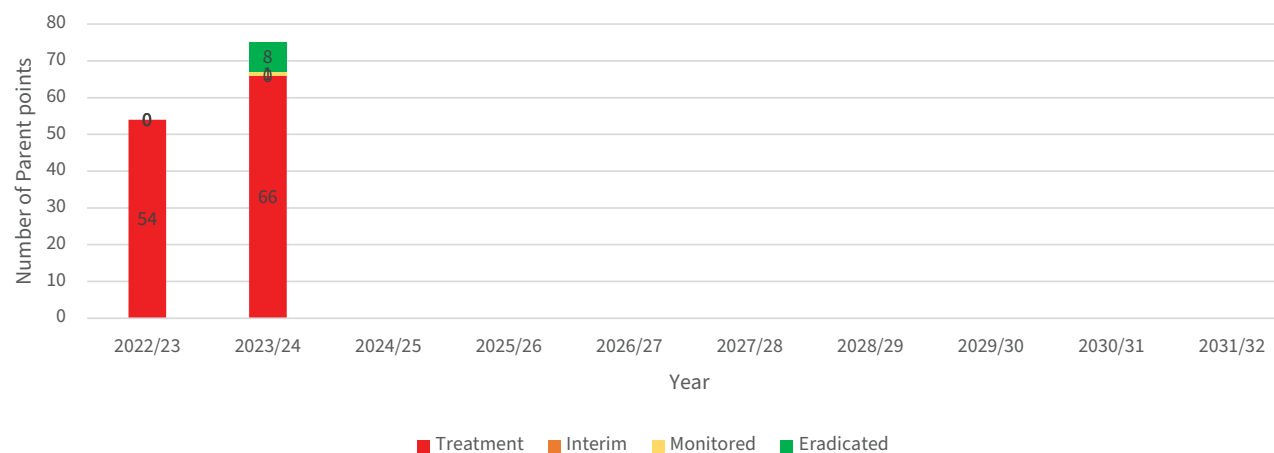


## Yellow flag iris (*Iris pseudoacorus*)

RPMP classification	Area	Programme status
Progressive containment	Whole of region	At risk

Programme summary	Results
Number of operational sites	● 89
Total area of operational sites	● 12,115ha
Total infestation parent points	● 74
Infestation area	● 2,300,612m <sup>2</sup>
Comments	Yellow flag iris is one of our most significant pest plants and not all sites have received the service delivery required to meet all Key Performance Indicators included in the <i>Waikato RPMP Operational Plan 2022-2032</i> .

### Yellow flag iris



# Ngā kupu whakamārama

## Glossary

Key performance indicators	The performance targets set out for each pest management programme within the <i>Waikato Biosecurity Operational Plan 2022-2023</i> , to help determine whether RPMP objectives are being met.
Modified McLean Scale	A scale used by councils to determine rabbit levels. The <i>Waikato Regional Pest Management Plan 2022-2032</i> (RPMP) has set the scale for sustainable rabbit control across the Waikato region at level 4 or below. Occupiers must manage their rabbit numbers to ensure they are below that level.
Monitoring	To observe, measure and record the population levels and trends of a particular pest population.
Operational site	The area that immediately surrounds an infestation of a pest plant(s), that is most at risk of spread or invasion from that pest. The size of the site is dependent on the pest's reproductive and growth form characteristics, site land use and pertinent environmental factors.
Residual trap catch	The residual trap catch (RTC) index is a method of determining relative possum density in an area. Lines of 10 leg-hold traps, spaced 20 metres apart, are set for three consecutive nights in random locations within the operational area, before and after control. The number of lines used is determined by the size of the management area. The standard performance target commonly set for a reduction in possum densities in ground control operations in the region is an RTC of < 5% (i.e. less than 5 possums caught for every 100 trap-nights) and < 3% for aerial operations (i.e. less than 3 possums caught for every 100 trap-nights).
Surveillance	To survey areas to establish the absence, presence, or extent of pests.

African Feather Grass





He taiao mauriora ▲ **Healthy environment**

He hapori hihiri ▲ **Vibrant communities**

He ōhanga pakari ▲ **Strong economy**

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