

Biosecurity and Biodiversity Working Party

Wednesday 21 May 2025 at 1:00 pm

AGENDA

Biosecurity and Biodiversity Working Party Agenda

Meeting to be held in the Council Chamber
36 Water Street, Whangārei
on Wednesday 21 May 2025, commencing at 1:00 pm

Please note: working parties and working groups carry NO formal decision-making delegations from council. The purpose of the working party/group is to carry out preparatory work and discussions prior to taking matters to the full council for formal consideration and decision-making. Working party/group meetings are open to the public to attend (unless there are specific grounds under LGOIMA for the public to be excluded).

MEMBERSHIP OF THE BIOSECURITY AND BIODIVERSITY WORKING PARTY

Chairperson, Councillor Jack Crow

NRC Chair Geoff Crawford

Councillor John Blackwell

Councillor Marty Robinson

TTMAC Representative,
Michelle Elboz

Te Ruarangi Representative,
Mira Norris

TTMAC Representative, Niki
Conrad

TTMAC Representative, Nyze
Manuel

KARAKIA

RĪMITI (ITEM)

Page

1.0 NGĀ MAHI WHAKAPAI/HOUSEKEEPING

2.0 NGĀ WHAKAPAHĀ/APOLOGIES

3.0 NGĀ WHAKAPUAKANGA/DECLARATIONS OF CONFLICTS OF INTEREST

4.0 REPORTS

4.1	Record of Actions – 12 March 2025	4
4.2	Receipt of Action Sheet	11
4.3	Caulerpa Update	16
4.4	Invasive Asparagopsis taxiformis status	36
4.5	Regional Pest Management Plan Update	38

Karakia

Ka tū i te waonui a Tāne Ka tupu ake rā Te rākau roa Te rākau nui Te rākau rangatira Ko te Kauri Ko te Tōtara Ko te Manuka Ko te Kahikātea Ko te Pūriri Ka toro atu rā ngā peka kia hono ki tētahi Haramai te toki Haumie hui e TAIKI E!	Stand strong in the realm of Tāne Where the tree develops, endures, grows and where prominence reveals itself Tis the Kauri Tis the Tōtara Tis the Manuka Tis the Kahikātea Tis the Pūriri Reach out far, bind together Bring forth unity Tis done!
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TITLE: **Record of Actions – 12 March 2025**

From: Sandra Harris, Personal Assistant - Pou Tiakai Taiao

Authorised by Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 13 May 2025
Group Manager/s:

Whakarāpopototanga / Executive summary

The purpose of this report is to present the Record of Actions of the last meeting (attached) held on 12 March 2025 for review by the meeting.

Attachments/Ngā tapirihanga

Attachment 1: Record of Actions - 12 March 2025 [↓](#) 

Biosecurity and Biodiversity Working Party
12 March 2025

Biosecurity and Biodiversity Working Party Record of Actions

Meeting held in the Council Chamber
36 Water Street, Whangārei
on Wednesday 12 March 2025, commencing at 1:00 pm

Tuhinga/Present:

Chairperson, Councillor Jack Craw
Councillor John Blackwell
TTMAC Representative, Niki Conrad (online) 1.34pm exit
NRC Chair Geoff Crawford; 1.57pm exit
TTMAC Representative, Nyze Manuel (online)
Te Ruarangi Representative, Mira Norris (online)
Councillor Marty Robinson

I Tae Mai/In Attendance:

Nathan Arcus, Biosecurity Officer Pest Plant
Nicky Fitzgibbon, Biosecurity Manager - Incursions and Response
Jonathon Gibbard, Tāhūhū Rangapū - Chief Executive Officer 2.02pm exit
Sandra Harris, Personal Assistant Pou Tiaki Taiao
Nicola Hartwell, Kaiwhakahaere Moana Ora
Leon Keefer, Policy Specialist - Freshwater
Janice Kirk, Personal Assistant GM Biosecurity
Kaeden Leonard, Biosecurity Marine Manager
Councillor Amy Macdonald (online)
Don McKenzie, Pou Tiaki Pūtaiao - GM - Biosecurity
Dai Morgan, Biosecurity Partnerships Manager
April Nordstrom, Kaitātari Kaupapa Wai Māori
Joanna Skyrme, Biosecurity Specialist - Tiakina Whangarei Project Lead
Meloney Tupou, Kaiāwhina Tari
Ruben Wylie, Pou Tiaki Taiao | GM Environmental Services

The meeting commenced at 1pm with karakia by Cr Craw and a mihi to all present..

Ngā Mahi Whakapai/Housekeeping (Item 1.0)

Ngā Whakapahā/Apologies (Item 2.0)

TTMAC Representative, Michelle Elboz

Biosecurity and Biodiversity Working Party
12 March 2025

Record of Actions – 5 November 2024 (Item 4.1)

Presented by: Chairperson, Councillor Jack Craw

Discussion and Agreed action points:

1. Myrtle rust

- deferred to future working party

Caulerpa –

- Additional funding has been allocated by Ministry for Primary Industries (MPI). A tender process for a submersible dredge has been arranged, with input from NIWA, MPI, and engineers.
- Extraction Progress, several hundred tonnes of Caulerpa is expected to be removed each day and there is a challenge determining what to do with the extracted Caulerpa, with various options being explored.
- There are contracted report writers – Cawthron Institute, who are completing independent reports in conjunction with Auckland University.
- Further funding is being investigated to help with survey and will be discussed in the upcoming council meeting.
- Improving Communication. A presentation requested by Biosecurity through MPI has been received and should be available by the end of the week.

2. Wetland mapping

- no additional information to add

3. Sea spurge

- Working with hapu and entities and surveys ongoing. Voluntary groups are working and ongoing with support from hapu, council and Te Oneroa a Tōhe board (TOATB)

4. Gold clam

5. met with KDC last week to discuss closing of kai iwi boat ramp, constructive conversations were held and was directed to send paper through to council 30 April for decision, which will help prepare for July. Taharoa Domain Governance Committee paper to be prepared for 25 March meeting. EDNA surveillance is being conducted through Wilderlab for comprehensive testing. In the Waikato gold clams are having an effect on power companies by blocking intake screens and pumps. Blockage of waterways feeding into river has a much bigger issue.

6. Deer

- In Russell forest hunters have identified a remaining 2 stags and a hind. There is a concern for the hind with potential of dropping a fawn. Work to locate and cull these animals is ongoing. The next area will be around kai iwi lakes where there have been past records of fallow deer. Liaison with iwi and communication via a letter drop to the community is underway.

Biosecurity and Biodiversity Working Party
12 March 2025

Receipt of Action Sheet (Item 4.2)

Presented by: Chairperson, Councillor Jack Craw

Agreed action points:

Urban Pest Control (Item 4.3)

Presented by: Dai Morgan, Biosecurity Manager - Partnerships and Joanna Skyrme, Biosecurity Specialist - Tiakina Whangarei Project Lead

Discussion and Agreed action points:

- A presentation was delivered to encourage urban conservation, highlighting that a high majority of the population lives in urban areas. This is a community-led initiative. Trap NZ is used for tracking and uploading data to Tiakina Whangarei. A partnership with Men's Shed to build traps, which are distributed for free at farmers markets. Many people are unaware of the importance of urban conservation.
- Workshops are provided to schools to help teachers include urban conservation in the curriculum. Communities are assisted with best practices to keep themselves and volunteers safe. Traps are monitored to understand their impact, and bird monitoring has been conducted on 5 minute bird count since 2015. Business as usual (BAU) activities continue with a focus on education values. Ongoing communication with local communities is being maintained.
- Protecting Forest Fragments - Efforts are ongoing to protect large forest fragments. The Whangarei District Council (WDC) Long Term Plan (LTP) for pest control around Parihaka has been successful in securing funding.
- Predator Free Onerahi - Staff work with coordinators from each group and feed information to volunteers. Te Kamo pest control is also underway, with a larger focus in the coming weeks. The role of NRC is to listen to voluntary groups and provide support from the groups direction and include best practice. NRC is investigating opportunities to maintain the momentum of engagement with established communities groups.

Direction to continue as per report and agreed actions

1. That the Biodiversity and Biosecurity Working Party note the contents of this report.

Mid and Far North Biosecurity Partnerships Update (Item 4.4)

Presented by: Dai Morgan, Biosecurity Manager - Partnerships

Discussion and Agreed action points:

- Discussed Partnerships Programme - Biofund, PCA, HVA - Providing comprehensive support for community groups. East Coast Coverage - Higher investment received by the east coast. Community Partnerships - Includes in-kind or additional funding to support initiatives.
 - Te Aupouri Restoration - The partnership needs to leverage funding. Pest plants and weed controls underway and completed infrastructure. Acknowledgment - Thanks and recognition for the unique habitat work with Nicki Conrad. This work was

Biosecurity and Biodiversity Working Party
12 March 2025

displayed with Waioira wananga, and highlighting the continued partnership.
Suggested for consideration was for this work to be published as a feature story.

- Te Ohonga o Mahuri – Employment consisting of Te Korowai Arahi Charitable Trust involving Ngāpuhi, Ngāti Kahu, and Ngāti Hine – 10 kaimahi and 1 lead. Additional funding from MSD and Sky City, to fully resource the funding this year. Reinvasion Prevention efforts are being undertaken. Video of the Taheke work to be sent to members. Support to leverage funding through networks and supporting projects.
- Member discussion on Foundation North, government agencies or philanthropic partners to fully fund the project. Members acknowledged the massive recognition for those working on the ground.

Direction to continue as per report and agreed actions

1. That the Biodiversity and Biosecurity Working Party receive the report

Regional Pest Management & Marine Pathways Plan Update (Item 4.5)

Presented by: April Nordstrom, Kaitātari Kaupapa Wai Māori and Leon Keefer, Policy Specialist - Freshwater

Discussion and Agreed action points:

- Draft to be finalised this year for Plan review 2026. First round of consultation completed, with further communities and entities still to be heard from. Māori Relationships Team to provide additional feedback from mana whenua. Discussions on methodologies by NRC and individual hapu/community groups to continue.
- Established groups from previous Plan change have had their input considered. Thorough review of spending and priorities for weed management underway.
- Pet Accord yet to be finalised- this would regulate the sale of unwanted pests from pet shops. Internal strategies are being aligned through the fish passage and biosecurity strategies. Each species is being evaluated to ensure alignment with the RPMP, with potential adjustments to management regimes.

Direction to continue as per report and agreed actions

1. That the working party support an adjusted timeframe to complete the Plan review during 2026 rather than 2025 as originally described thus enabling a more comprehensive and meaningful outcome.
2. That the Biosecurity and Biodiversity Working Party receive this report.

Madagascar Ragwort Update (Item 4.6)

Presented by: Don McKenzie, Pou Tiaki Pūtaiao - GM - Biosecurity

Discussion and Agreed action points:

- Noted continuing collaboration with industry stakeholders, acknowledging that this initiative will incur costs. The goal is to achieve effective control, and that the industry

Biosecurity and Biodiversity Working Party
12 March 2025

will contribute to this effort. Staff to report back to the working party with a future paper detailing the progress and effectiveness of these contributions

Direction to continue as per report and agreed actions

1. That the working party note the information
2. That staff prepare a paper seeking council funding for the preparation of a business case that sets out the funding needs, predicted impacts and costs of inaction.

Dune Lakes Update (Item 4.7)

Presented by: Ruben Wylie, Pou Tiaki Taiao | GM Environmental Services

Discussion and Agreed action points:

- Discussion for request to obtain before and after maps illustrating the condition of the lakes with pests and weeds. Noted there is a need to enhance our communication strategies. This effort is part of broader work in science communication. Report back to the working party with a future paper detailing the progress and effectiveness of these initiatives.

Direction to continue as per report and agreed actions

1. That biodiversity staff bring a progress report on dune lakes to the working party meeting in August 2025.

Operational Planning - looking to the year ahead (Item 4.8)

Presented by: Don McKenzie, Pou Tiaki Pūtaiao - GM - Biosecurity

Discussion and Agreed action points:

- Noted that we are in a transition year and reviewing the regional pest management strategy which includes an operational plan. This review will lead to the transition of operational plans for the next year. The operational plan outlines our methods and implementation strategies. This serves as an early notification of the upcoming process.

Direction to continue as per report and agreed actions

1. The Working Party note the contents of the agenda item.
2. The Working Party support the carry forward of the current Biosecurity Operational Plan performance measures for 2025-2026.
3. That the Working Party note any minor amendments to the performance measures will be brought to a future working party and prior to council adopting the Operational Plan 2025-2026.

Secretariat note: Working Party Members congratulate the team on the mahi that has been completed.

Whakamutunga (Conclusion)

Biosecurity and Biodiversity Working Party
12 March 2025

The meeting concluded at 3.13pm karakia closed by TTMAC Representative, Nyze Manuel.

Unconfirmed

TITLE: **Receipt of Action Sheet**

From: Sandra Harris, Personal Assistant - Pou Tiakai Taiao

Authorised by Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on
Group Manager/s:

Whakarāpopototanga / Executive summary

The purpose of this report is to enable the meeting to receive the current action sheet.

Nga mahi tutohutia / Recommendation

That the action sheet be received.

Attachments/Ngā tapirihanga

Attachment 1: Biosecurity & Biodiversity Working Party Action Sheet [↓](#) 

Biosecurity and Biodiversity Working Party – Schedule of Actions

Meeting date	Item	BABWP action	Responsible staff	Status	Notes
1 December 2023	Myrtle Rust (Item 4.5)	Dr Beccy Ganley's presentation deferred till 2025	GM	Pending	A date for this presentation will be confirmed for a future working party meeting.
Caulerpa	Marine Biosecurity Update (item 4.6)	An update on progress with Ngāti Pāoa engagement for business case for research, control and elimination of Caulerpa	Kaeden Leonard	Pending	Business case has been completed, and media have highlighted the costs in recent articles https://www.nzherald.co.nz/northern-advocate/news/invasive-caulerpa-threatens-94b-hit-spreads-to-bay-of-islands/ZA735UA6RREY3JDB7SYCNIXYOU/ https://www.teaonews.co.nz/2025/05/08/nz-faces-94b-hit-from-invasive-caulerpa-analysis-shows/
Wetland mapping	From the previous action table	An update on data progress with MTAG	Justin Murfitt	Pending	MTAG has been asked for feedback on indicative wetland / mapping tool from a tangata whenua perspective. To date advice from MTAG has not identified any significant concerns but this will be confirmed at the next opportunity. MTAG advice will inform communications and ongoing QA process for indicative maps.

14 August 2024	Sea spurge	A further update to a future working party be provided	Jo Barr	Pending	<p>Funding of \$80k has been allocated by MPI and a programme of works underway.</p> <p>An update on the current findings will be given at the meeting and previous records are described below.</p> <p>New sites</p> <p>A new sea spurge site found on the 5th of February by a member of the public. This was 0.5km south of an existing site (the Gap). Six juvenile plants were found and removed.</p> <p>Plant specimens were sent to Cawthorn Institute for research. T</p> <p>Sea spurge site summaries</p> <p>Te Oneroa-a-Tohe sites:</p> <p>Hukatere - ‘The Gap’ (11km North up the coast from Hukatere beach access.)</p> <p><i>Te Aupōuri is taking the lead on surveillance and control at this control site.</i></p> <p>A follow up search at the large sea spurge infestation site was undertaken on the 5th of February 2025. It was found that all plants controlled with herbicide in early December of 2024 had completely died. Five small seedlings were found. The next follow up visit will be in 4 weeks’ time and will include a detailed survey of a 50metre radius from the control site.</p>
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					<p>Waipapakauri sites (numerous plants along 8km of coastline) <i>NgaiTakoto will take the lead on surveillance and control at these sites. A small number of seedlings continue to be found at Karaka stream. An extensive search and survey 15km north and south is still required</i></p> <p>Ahipara <i>Te Rarawa and the Ahipara Kaitiaki rangers are taking the lead on surveillance and control at these sites.</i> Single plant found. With no plants found since.</p> <p>The Ahipara Kaitiaki rangers have done extensive searching along this coastline and have spent many hours distributing flyers and educating Te Oneroa a Tohe beach users about Sea spurge over the summer period.</p> <p>Other sites:</p> <p>Mitimiti An extensive 30km beach survey led by Te Akau Roa Kaitiaki was undertaken on the 22nd of January. No further infestations were found. The occasional seedling is still emerging from the infestation site at Moetangi Bay.</p> <p>Waipoua A single seedling plant was found at the Waipoua River mouth early this year by a local Te Roroa resident. DOC will be over seeing this site and are currently engaged with Te Roroa Environs who they are hoping will lead ongoing inspections and surveillance at this site.</p> <p>Pouto DOC are managing this site and have been undertaking quarterly inspections; they have been finding the odd seedling at each inspection round. Te Uri O Hau are aware of the site.</p>
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12 March 2025	Madagascar Ragwort Update	Staff to report back to the working party with a future paper detailing the progress and effectiveness of collaborations with industry stakeholders	Jo Barr		<p>A meeting with Dairy NZ reps and Beef and Lamb representatives is expected in May to ascertain if these key industries are prepared to share in the costs of control. A report back to a future working party in August will update on progress.</p> <p>Staff have also proposed to council that a minor administrative change to the RPMP be undertaken to correctly reference Madagascar ragwort in councils current Plan.</p>
12 March 2025	Dune Lakes Update	Staff to report back to the working party with a future paper detailing the progress and effectiveness of communication initiatives.	Lisa Forester/Jacki Byrd	Pending	A date for this presentation will be confirmed for a future working party meeting.

Please note: All items completed will be removed from the current Schedule of Actions.

TITLE: **Caulerpa Update**

From: Kaeden Leonard, Biosecurity Manager - Marine

Authorised by Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 13 May 2025
Group Manager/s:

Whakarāpopototanga / Executive summary

The Exotic Caulerpa Elimination Project aims to develop an effective tool for removing the invasive seaweed Exotic Caulerpa. Currently in Phase III, the project focuses on the design, construction, and testing of the Submersible Dredge Planer (SDP), an advanced underwater vehicle to be deployed in Omākiwi Cove, Bay of Islands. Johnson Bros Ltd (JBL) leads the technical development, with oversight from a governance group including MPI, NRC, Cawthron, and JBL.

The SDP, based on the Aleron Centurion ROV platform, features a dual-brush dredge head for dislodging and capturing Exotic Caulerpa. The first brush cuts through dense mats, while the second collects fragments for removal. The system uses venturi and centrifugal technologies for efficient sediment and biomass transport over a 150-metre hose. Real-time control is supported by sonar and high-definition cameras, with GPS-guided tracking for precise operation. Dredged material is dewatered and stored in one-tonne bags for disposal at a consented landfill site.

Since February 2025, JBL has completed key milestones, including the initial project plan, detailed design, and due diligence checks. Field testing in Omakiwi Cove is scheduled from mid-August to late September, with a month reserved for weather-related delays.

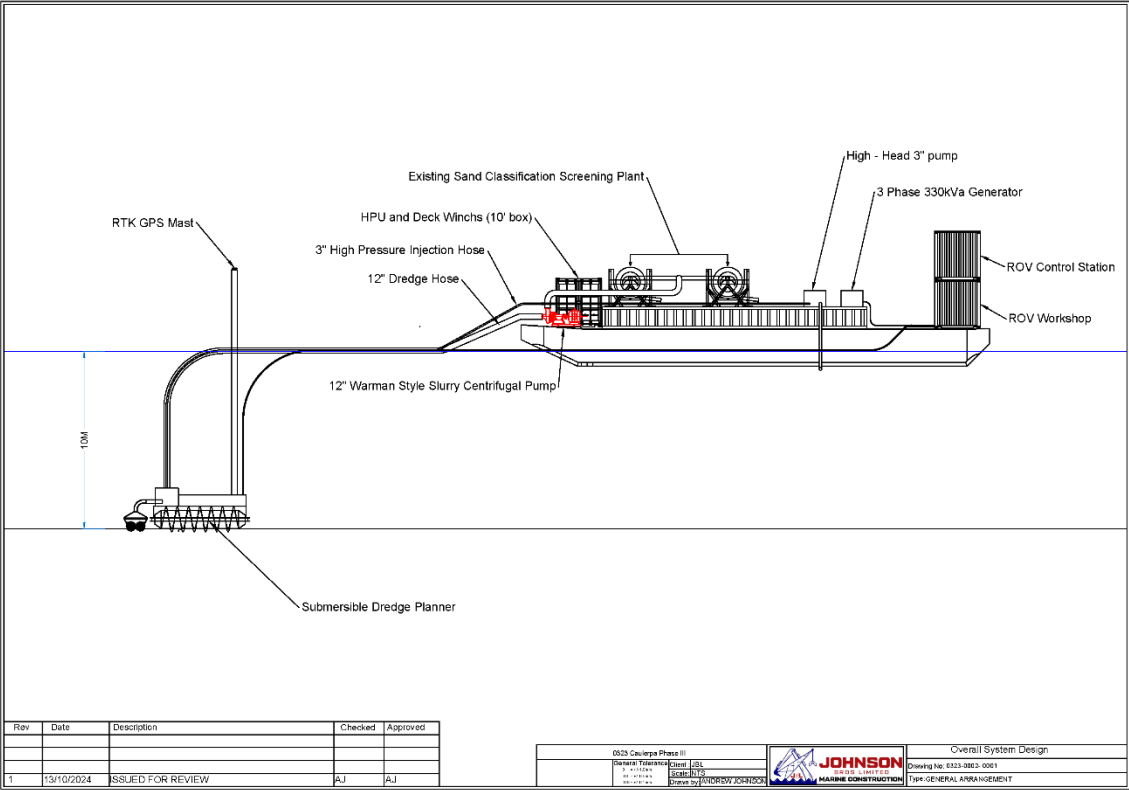
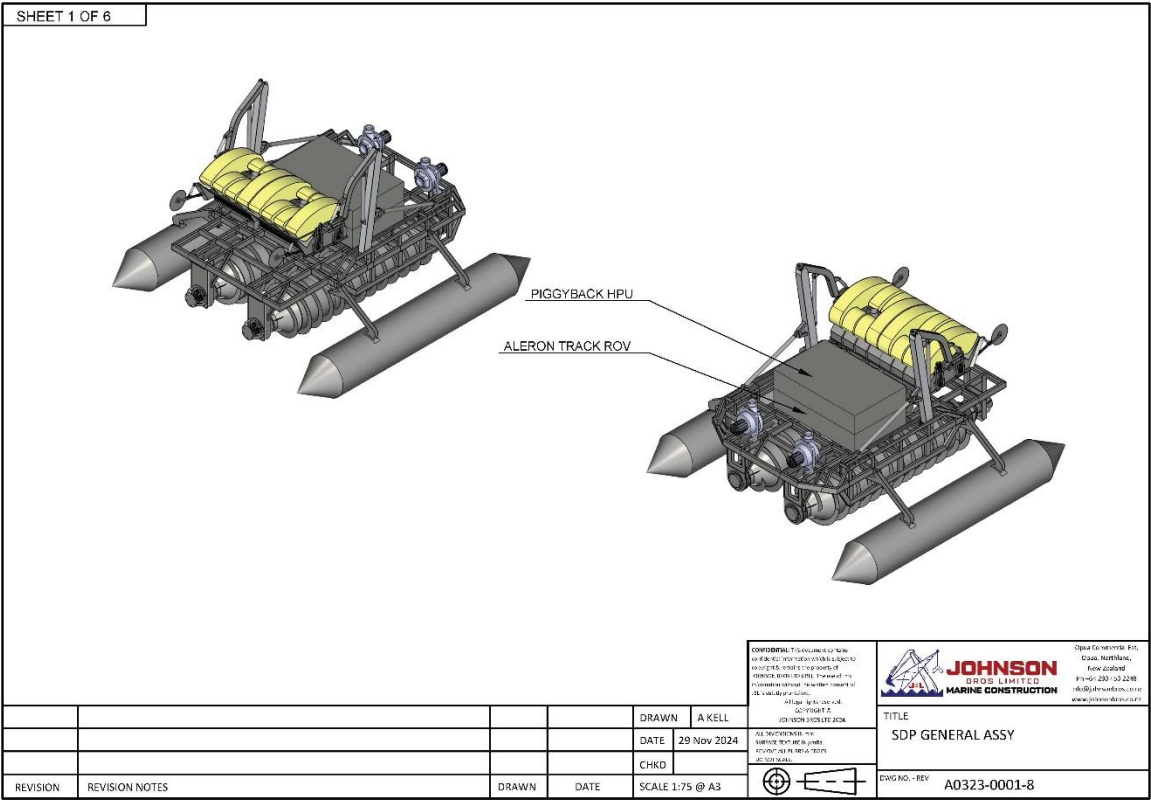
Ngā mahi tūtohutia / Recommended actions

1. That the working party note the information contained in this report and its attachments.
2. That the working party support staff in their requests to Biosecurity New Zealand to stand up a project to have an eradication plan and surveillance in place for Northland

Background/Tuhinga

Overview

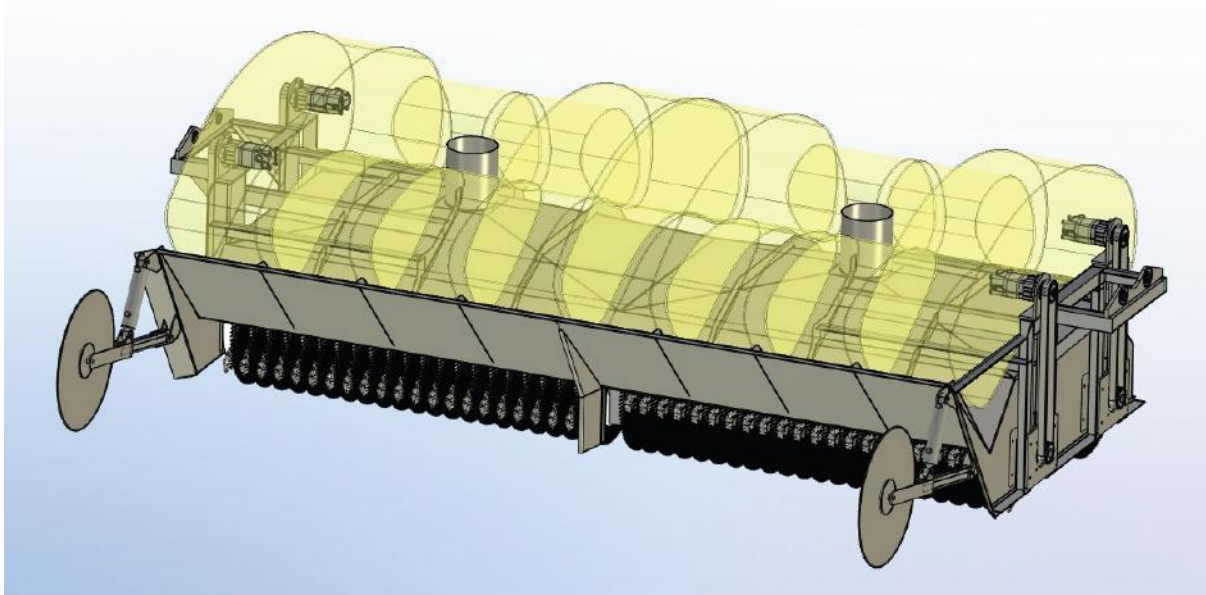
The Exotic Caulerpa Elimination Project is a collaborative initiative between the Ministry for Primary Industries (MPI) and the Northland Regional Council (NRC), aimed at developing a high-efficacy tool for the mechanical removal of the invasive seaweed Exotic Caulerpa. Now in Phase III, the project centres on the design, construction, and testing of a new underwater vehicle—the Submersible Dredge Planer (SDP)—which will be deployed in Omakiwi Cove in the Bay of Islands. Johnson Bros Ltd (JBL) is leading the technical development of the SDP, with oversight provided by a governance group comprising representatives from MPI, NRC, Cawthron, and JBL.



System and Operational Summary

The Submersible Dredge Planer represents a significant advancement in marine pest control technology. Built around the Aleron Centurion ROV platform, the SDP features a dual-brush dredge head designed to both dislodge and capture exotic Caulerpa in a single pass. The first brush,

equipped with chain flails, cuts through dense mats of *Caulerpa*, while the second, softer brush collects fragments and directs them into the chamber for removal. The pumping system combines venturi and centrifugal technologies to enable efficient sediment and biomass transport over a 150-metre vertical hose length.

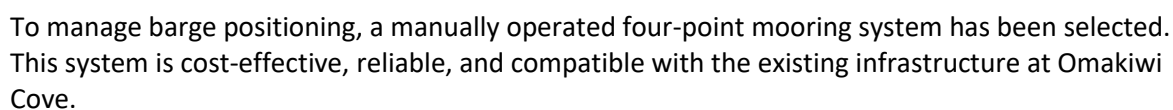


.Dredge Head Assembly



Sweeper ring/flailing chain spindle assembly

Sonar and high-definition cameras support real-time control and monitoring, enabling precise operation by an ROV pilot. A GPS-guided interface allows accurate tracking of treated areas. Once collected, the dredged material is pumped to the surface, passed through a dual trommel screening plant for dewatering, and placed in one-tonne bags. These bags are then stored on a secondary barge before being transported ashore to a consented landfill site for disposal.



Progress to Date

The project commenced in February 2025 following contract signing. Since then, JBL has achieved several key milestones. The initial project plan was submitted to MPI at the end of February, followed by detailed design and due diligence work. These checks, particularly regarding the suitability of the SMD Aleron Centurion ROV platform, have now been completed.

Design and drafting have been finalised, including comprehensive schematics covering the dredge head, hydraulic power system, and control integration. In parallel, JBL has collaborated closely with Centurion in the UK to address power supply and integration challenges, especially those related to the high-voltage requirements of the system. These discussions have confirmed that all necessary components—transformers, valve packs, control pods, and quick-connect systems—are available and can be assembled and tested in the UK before shipping.

An updated inventory has been reviewed and reconciled against contract specifications. A procurement contract is now in its final draft and awaiting MPI approval, which will enable JBL to begin modifying components for shipment to New Zealand.

Timeline and Delivery

Once the procurement contract is approved, the SDP components will be assembled and wet-tested in the UK throughout June and July. Shipment to New Zealand is expected by late July, followed by on-site assembly and integration Ōpua. Dry testing of the SDP, including the diesel-powered hydraulic unit and ballasting system, will take place in July. The system will then be mobilised to Omakiwi Cove in mid-August for field testing, which is scheduled to run from 18 August to 28 September. The project schedule includes one month reserved for weather-related delays.

The upcoming phase involves contract execution, overseas assembly, shipping, and local integration. All efforts are currently focused on ensuring that the August–September field testing window is fully utilised. A successful demonstration at Omakiwi Cove will confirm the SDP's operational readiness and validate its potential for broader application across New Zealand's coastal regions affected by Exotic Caulerpa.

Ngā tapirihanga / Attachments

Attachment 1: Ministry for Primary Industries Newsletter [↗](#) 



6 May 2025

Kia ora koutou

In this update – progress in caulerpa removal tools development; latest detections of exotic caulerpa; and working with regions to spread the word.

Two caulerpa removal projects now in the water

Two of the three significant projects to fast-track caulerpa removal tools are currently under trial in Omakiwi Cove in the Bay of Islands and will shortly move to the Hauraki Gulf.

'Rehabitat' chlorine treatment enclosure

This tool is a way of applying a mix of chlorine and freshwater to areas of exotic caulerpa in a controlled way that confines the chlorine to the specific area being treated.

An early prototype of the technology, which the developers are calling the 'Rehabitat', uses a metal frame with

'curtains' to contain the chlorine mix. This has been tested in recent weeks in Omakiwi Cove and is working very well.



Commercial Dive Specialists' early prototype of an enclosure to contain chlorine treatment to a target area. Green is the caulerpa and brown area is treated.



The equipment on board the accompanying vessel to deliver chlorine to treatment area. Photo: Commercial Dive Specialists.

The team is now refining the method with a move to an enclosure with inflatable sides. This can be filled with seawater to drop the Rehabitat over the treatment area, and then inflated with air to raise and move it.

The developers, Commercial Dive Specialists, say this method will be scalable and be able to be used over large areas and a variety of seabed surfaces. Next stages in the tool development will include trialling a continuous 24 hour per day operation.

Early results from the trials have shown the chlorine treatment to be very successful and able to kill caulerpa in a very short time minimising damage to other marine life in the area. The team has been able to determine the optimal dose and exposure time, and the method has been effective even against dense caulerpa.

UV-C light treatment

The UV-C light treatment trial is progressing well with the team completing three rounds of irradiating patches of exotic caulerpa in Omakiwi Cove, Northland.

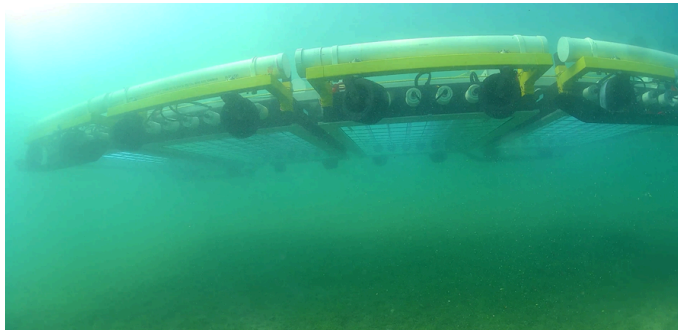
The focus of this project is translating success in a laboratory to a field-scale model and the work has involved tuning the lighting frame to the environmental conditions at Omakiwi. This has meant adjusting the height of the lights over the plants and shifting from a continuously moving light frame to holding a position during treatment before moving on to the next patch.

The Advanced Aquarium Technologies team is testing use of the light technology on three different types of exotic caulerpa infestation – intertidal, thicker dense beds, and areas that have already been treated by suction dredge.

After assessing the treated areas, removal results are looking promising.



Advanced Aquarium Technologies Ltd test the UV-C treatment panels in the waters of Omakiwi Cove, Bay of Islands.



UV-C lights on. Photo: Advanced Aquarium Technologies Ltd.



*Screenshot exotic caulerpa before UV-C treatment. Photo
Advanced Aquarium Technologies Ltd.*



Screenshot same area after UV-C treatment. Photo: Advanced Aquarium Technologies Ltd.

Northland submersible dredge planer

The third project is the development of a large-scale suction dredging tool to operate remotely on the seabed and remove large areas of caulerpa.

The Northland-based developers are building a submersible dredge head and working closely with engineers in Scotland who are creating a remote-operated vehicle that the equipment will be docked with. Trials in the water are scheduled for later in the year.

Beach cast clean-up after Cyclone Tam

Cyclone Tam that recently hit the upper North Island washed up many tonnes of exotic caulerpa on the beaches of Omakiwi Cove in Northland.



Exotic caulerpa on the seashore after Cyclone Tam. Photo: Nyze Manuel.

A volunteer army from iwi and the community gathered in the aftermath of the storm to move the beach-cast caulerpa above the high-tide mark to prevent it washing back into the water.

More than 200 people were involved in the mahi over the Easter weekend, and subsequently.



Community volunteers work to move caulerpa above the high-tide mark. Photo: Nyze Manuel.

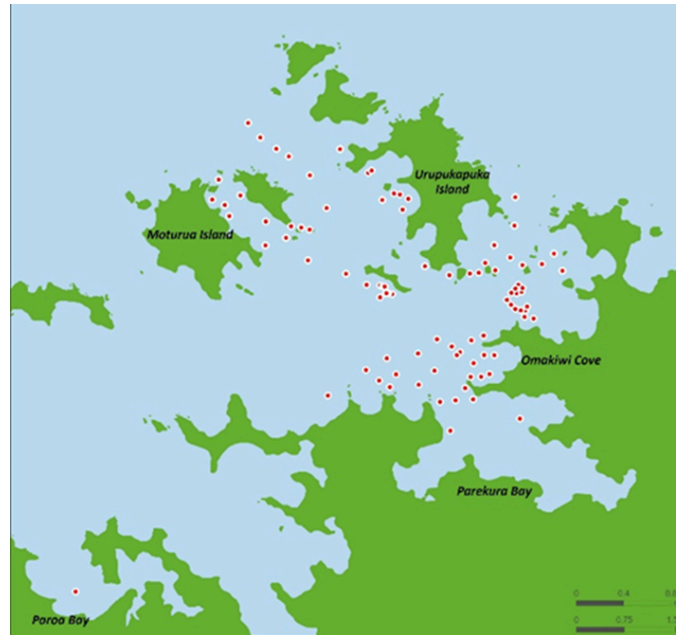
Biosecurity New Zealand has acknowledged the community effort and contributed to the costs of the clean-up with a \$20,000 grant afterwards to Whangaroa Taiao Ltd who were key co-ordinators of the project, in collaboration with hau kainga. The grant will also help the community prepare for biosecure caulerpa removal in future weather events, funding the purchase of nets, collection bins, rakes and bleach stations to scrub down equipment.

Latest exotic caulerpa detections

Since we last updated on caulerpa locations, there have been a number of new detections in the Bay of Islands outside of the current controlled area in Omakiwi Cove. The new locations (see map below) are:

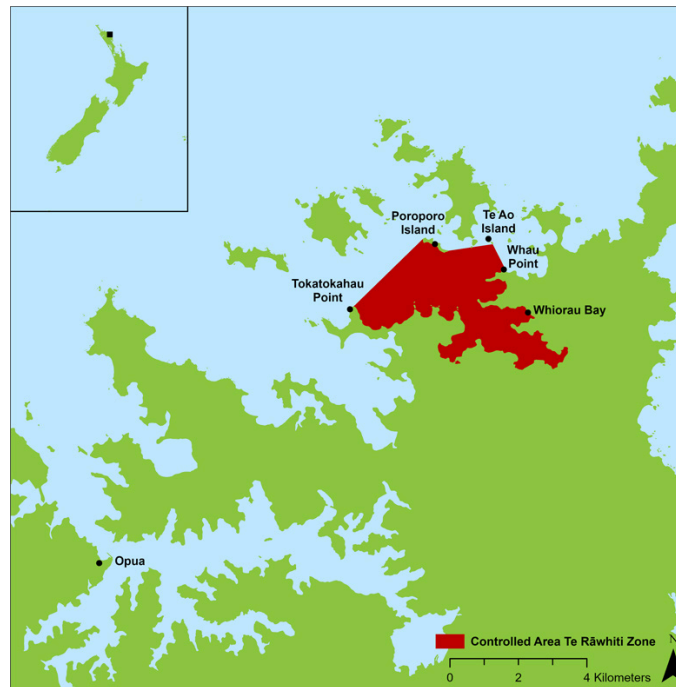
- The channels between Motukiekie Island and Waewaetorea and Moturua Islands
- Poroporo Island
- Mohenoititi Islands (including Hauai)
- Paradise Bay
- Otaio Bay
- Cable Bay
- Waewaetorea Channel

- Sunset Bay
- Paroa Bay
- Tapeka Point



This is a reminder that it is very important boaties, fishers and divers take care to avoid accidentally spreading exotic caulerpa.

First, follow the rules of the Controlled Area at Omakiwi Bay (see map below). These legal requirements make it illegal to anchor in this area unless it's an emergency or you have a permit from Biosecurity New Zealand. All forms of fishing are prohibited in the Controlled Area, and you cannot dive there.



Map showing controlled area at Omakiwi Cove, Te Rāwhiti Inlet.

Outside of the CAN, in all other Northland waters, before you move to a new location, check your vessel's anchor and anchor chain, as well as any other gear that has been in the water such as a fishing line or dive equipment.

If you find any seaweed attached – remove it, bag or contain it securely and take it ashore for disposal.

On shore, dispose of the seaweed in rubbish bins away from the ocean or in the household rubbish.

Communicating boatie best practice

Ensuring boaties and fishers understand how they can help is important because caulerpa can spread over long distances as small pieces, snagged on anchors, anchor chains and fishing/dive equipment.

Indeed, most of the locations where the pest has been found are popular anchorages.

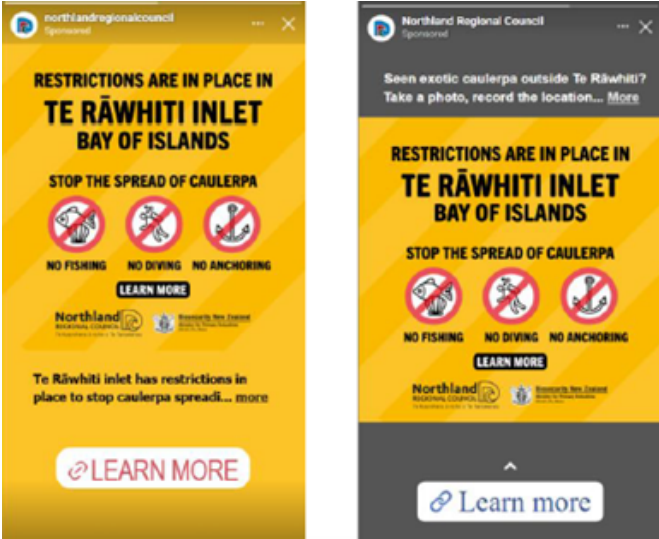
Over the late-summer period we have adopted a communications and engagement approach which is led by the regions and supported by Biosecurity New Zealand.

Auckland Council, Waikato Regional Council, Northland Regional Council and the Bay of Plenty Regional Council have been contracted to produce locally focused communications and marketing to reach marine users in their regions.

Their initiatives have included editorials, videos, social media posts, a range of paid advertising in publications and web locations that boaties use, and local ambassadors spreading the word at boat ramps, beaches and events.



Auckland Council video about stopping exotic caulerpa, featuring Senior Marine Biosecurity Advisor Dimitri Colella.



Northland Regional Council advertising that geotargeted people in the region with an interest in fishing, boating and

diving.

Nāku noa, nā

The exotic caulerpa response team

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Biosecurity New Zealand

Ministry for Primary Industries
Manatū Ahu Matua

For more information about exotic caulerpa seaweeds in
New Zealand [visit the Ministry for Primary Industries](#)
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TITLE: Invasive *Asparagopsis taxiformis* status

From: Kaeden Leonard, Biosecurity Manager - Marine

Authorised by Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 13 May 2025
Group Manager/s:

Whakarāpopototanga / Executive summary

Asparagopsis taxiformis, a non-native red seaweed, has been recently detected at multiple sites in Northland, including Whangārei Harbour and Iris Shoal near Kawau Island. The lineage found (L2) is considered invasive and is distinct from the native seaweed species present in New Zealand. It poses a potential threat to local marine biodiversity due to its ability to spread rapidly via natural currents and marine equipment, as well as its capacity to reproduce both sexually and through fragmentation.

This paper presents two strategic options for Council consideration. The first is to advocate for the Ministry for Primary Industries (MPI) to list *A. taxiformis* as an unwanted organism under the Biosecurity Act 1993, enabling immediate national coordination and regulatory control. The second option is to include the species in the next Regional Pest Management Plan (RPMP), allowing for locally tailored management, including provisions for cultural removal by hāpu.

Ngā mahi tūtohutia / Recommended actions

1. That the report 'Invasive *Asparagopsis taxiformis* status' by Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity be received.
2. That staff prepare a council agenda item seeking a decision from MPI to list *A. taxiformis* as an Unwanted Organism under the Biosecurity Act.

Background/Tuhinga

Asparagopsis taxiformis has been observed at several sites in Whangārei Harbour, including Tamaterau, Onerahi, and Little Munroe Bay. It is visually similar to the native *Asparagopsis armata* but lacks that species' distinctive harpoon-like structures. The likely introduction pathway is via fouling on marine vessels, a common vector for marine pest species.

In December 2024, a rapid risk assessment confirmed the presence of *A. taxiformis* at Iris Shoal (Kawau Island) and Whangārei Harbour. Given the 75 km distance between these sites, the species may have been present for some time. The lineage detected, known as Lineage 2 (L2), is considered invasive and distinct from the lineage native to New Zealand. It has been shown overseas to impact biodiversity, outcompete native seaweeds, and spread rapidly via both natural fragmentation and sexual reproduction. Domestic spread is likely to occur through water movement and by becoming entangled in boating equipment.

To date, no actions have been taken by MPI to manage the spread of this species.

Option 1: Advocate for MPI to List *A. taxiformis* as an Unwanted Organism

Listing the species as an unwanted organism under the Biosecurity Act 1993 would enable immediate regulatory measures to help limit its spread. This would include movement controls and allow for a coordinated national response, drawing on the Ministry for Primary Industries' (MPI)

resources and biosecurity framework. To pursue this approach, NRC would need to advocate to MPI, potentially alongside other regional councils, and engage with relevant ministers and local MPs. This option would also involve public awareness campaigns and expanding surveillance efforts in collaboration with MPI and local communities.

Option 2: Manage the spread and harvest of *A. taxiformis* through the Northland Regional Pest and Marine Pathway Management Plan (RPMPMP)

An alternative approach is to manage *A. taxiformis* regionally through the RPMPMP. This process would allow for the development of tailored management objectives and methods suitable to Northland. Importantly, this approach provides an opportunity to formally recognise the role of hāpu and iwi in managing marine environments. Specific exemptions could be created to allow for cultural removal by hāpu. Collaborative planning with tangata whenua would be required to balance ecological protection

Staff prefer Option 1 due to the widespread nature of this seaweed and likelihood it will be transported to other regions via bio fouling on vessel anchors and other marine equipment. Listing the species as an “Unwanted Organism” would provide for national regulatory measures and greater national awareness. In addition, a revised RPMP won’t be adopted until 2026 and could be subject to appeals which may further delay completion. A decision by MPI now to assign a UO status would impose immediate regulatory measures and would not prevent inclusion in the RPMPMP at a later stage.

Ngā tapirihanga / Attachments

Nil

TITLE: **Regional Pest Management Plan Update**

From: April Nordstrom, Kaitātari Kaupapa Wai Māori and Leon Keefer, Policy Specialist - Freshwater

Authorised by Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 13 May 2025
Group Manager/s:

Whakarāpopototanga / Executive summary

The Regional Pest Management and Marine Pathways plan has currently concluded its 'Have Your Say' consultation phase (ended on the 1st March) and the summary feedback has been included in the consultation report. Our analysis is largely complete, though at the writing of this agenda paper we still have some key meetings scheduled that will be held prior to the working party itself.

Each of the sections is being undertaken concurrently with the aim of satisfying the requirements of the Biosecurity Act 1993 for plan preparation; notably:

- sections 70, 71, and 72 with respect to the Regional Pest Management Plan process; and
- sections 81, 82, and 83 with respect to the Marine Pathway Management Plan process.

A presentation will be given at the meeting and will prompt discussion.

Ngā mahi tūtohutia / Recommended actions

1. That the Biosecurity and Biodiversity Working Party receive this report.
 2. That the working party provide feedback and guidance to staff on candidate pest species as highlighted from the consultation phase.
-

Background/Tuhinga

Further to our Working Party update from 12 March 2025, which was held at the end of general consultation, we have continued to analyse iwi/hapū feedback, public feedback, and pursued engagements with particular stakeholders where feedback was either lacking or further detail was requested. Our analysis is largely complete, though at the writing of this agenda paper we still have some key meetings scheduled that will be held prior to the working party itself.

The information to be presented by staff summarised the analysis of this consultation. Of particular note to the Working Party, the following will be discussed:

- Summary of consultation results, including who provided feedback;
 - A high-level overview of the key themes discussed in feedback;
 - Consideration of changes to existing programmes;
 - Consideration of new species to possibly be added to the plan;
 - Consideration of species that require management but may not be included in this plan;
 - Consideration of site-led management of new and existing pests.
-

Incorporation of Consultation into RPMP

All information obtained through this consultation process forms part of our qualitative cost-benefit analysis, particularly as any proposed pest management relates to social and cultural values. Economic values can be inferred from some data obtained, but the level of detail and information received is insufficient to undertake a quantitative analysis.

Much of the feedback, perhaps most of the feedback, related to non-statutory methods for pests already in the plan. Feedback included recommendations and suggestions on how Council can either sponsor or even lead pest management programmes that exist outside of our RPMP. These need to be discussed and analysed amongst staff and stakeholders to more fully develop before they are presented to this Working Group; however, in our presentation we have provided some examples of non-statutory methods that featured in this consultation.

Staff are progressing the development of both RPMP rules and non-statutory strategies/methods concurrently to enable a holistic approach to our plan development process. This is important to genuinely reflect the aspirations and values of our communities as Te Taitokerau changes over the next 10 years.

Ngā tapirihanga / Attachments

Attachment 1: Draft Regional Pest Management & Marine Pathway Plans [↓](#) 

Mahere whakaaere karearea ā-rohe

Let's kōrero about pests!



Consultation Report

Regional Pest Management and Marine Pathways Plans

1 List of Abbreviations

The Act	Biosecurity Act 1993
NPD	National Policy Direction for Biosecurity 2015
NRC	Northland Regional Council
RPMP	Regional Pest Management (and Marine Pathways) Plan
WDC	Whangarei District Council
WMP	Weed Management Plan

2 Executive summary

Northland Regional Council (NRC) is the management agency responsible for developing and implementing Te Taitokerau's Regional Pest Management and Marine Pathways Plan (RPMP) in accordance with the Biosecurity Act 1993 (the Act). The current RPMP was adopted in 2017 until 2027, NRC staff have started the review of this plan with the aim of replacing this with a new RPMP 2026-2036.

Staff have undertaken consultation on the review of the plan with a range of stakeholders. This has been undertaken to:

- inform the development of the RPMP's cost/benefit analysis pursuant to sections 70 and 90 of the Act and the NPD 2015; and
- commence consultation requirements under sections 72 and 92 of the Act, which require NRC to undertake consultation with Tangata whenua, agencies, stakeholders, and all other people that are likely to be affected by the RPMP¹.

The results of our consultation to date have elicited feedback from a wide array of communities and stakeholders, some of whom have stated opinions on the candidate species and rules that have been put forward, with some others going further and highlighting ongoing impacts from still further species, and even some offering ideas and suggestions on how to tackle pest management in certain areas.

¹ <https://www.legislation.govt.nz/act/public/1993/0095/latest/DLM315723.html>

3 Purpose and Background

Biosecurity and protection of indigenous biodiversity is a critical issue for Te Taitokerau and a major part of the work undertaken by Northland Regional Council. As such, drafting a Regional Pest Management Plan is more than just a statutory requirement, but an opportunity to drive actions that support community aspirations and other key Council strategies. Further to the opportunity, RPMPs are generally reviewed only once every 10 years, meaning that a significant amount of work is necessary at the front-end of plan development to create a robust document that will stand up over this timeframe.

To this end, we chose to seek public feedback on our biosecurity priorities before putting pen to paper. Calls for general public feedback and targeted communications to Te Tiriti Partners and stakeholders were undertaken from October 2024 until March 2025.

Our goals in undertaking this first round of consultation were to:

- Promote engagement with our consultation in the first place and increase awareness of biosecurity issues in Te Taitokerau;
- Get preliminary feedback on our intentions and previous biosecurity objectives from a wide range of Te Tiriti partners, stakeholders, communities, and agencies;
- Reach out to those voices that don't typically stand out; and
- Start our planning process with the knowledge of our communities' priorities.

This report summarises the key themes and messages that were discussed in our many hui and correspondences, with the aim of informing the public, elected Council members, and staff on the biosecurity priorities across the region.

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A proposed candidate species list was included in the consultation and engagement process. The proposed list was developed through workshops with NRC staff that are Biosecurity Specialists and consultation with Te Kaunihera o Tāmaki Makaurau (Auckland Council), and a desktop literature review of various other regional councils comparing the rules, species and classifications in their RPMP. The proposed candidate species was workshopped with the NRC Biosecurity and Biodiversity Working Party (sub-group, which included members from Te Ruarangi (Te Taitokerau Māori and Council working party) and the proposed list was approved by NRC councillors on the 22nd of October 2024 before the consultation period began in early November 2025.

The proposed candidate species list developed alongside the discussion document is provided at this [link here](#).

4 Consultation Methods

Consultation was undertaken through numerous channels, including:

- Public events, such as festivals and A&P shows;
- In-person/online meetings with NRC staff and interested parties;
- Social media invitations to review information and provide feedback online;
- Written/email correspondence;
- Monitored and reviewed social media posts and newspaper articles.

Invitations for consultation and feedback on the draft list of candidate species for inclusion and other matters of interest were open to the general public, though targeted consultation was sought from organisations and individuals with vested interests in the development and implementation of a RPMP. Staff are still continuing to reach out to agencies, tangata whenua and respond to inquiries from the general public and businesses.

5 Feedback received

Feedback was received through multiple channels:

- The online feedback (form on the website, Facebook and other social media)
- Written feedback (emails or other)
- Hui with iwi/hapū
- Meetings conducted in person or online
- Events attended and facilitated by staff

As part of this work, NRC staff developed the Discussion Document and associated proposed candidate species list to inform the public of the process and potential species for inclusion into the new RPMP.

Staff used a variety of methods to engage with tangata whenua, agencies and stakeholders, marinas, pet breeders, nurseries, community groups and other people affected, NRC received a large amount of feedback about what pests people are seeing around the region and what is causing concerns. NRC staff thank those that took the time to share their views, and this feedback will be used to shape the direction of the future Regional Pest Management and Marine Pathways Plan 2026-2036.

5.1 Who NRC received feedback from

We have heard from various communities across Te Taitokerau:

- Te Tiriti partners, Māori owned and managed pest control groups, kaitiaki and rangatira.
- Regional Councils in Auckland, Tauranga Moana and Waikato
- Landowners, farmers, industry organisations and agencies.
- Community organized pest control groups and Predator Free 2050.
- Nurseries and pet shops.

- General public at a range of events and organized hui.

5.2 Online statistical breakdown

<i>Web statistics</i>	
The Pest Plan webpage was set up for the public to be able to easily access the consultation materials but also find more information on pests through the NRC website.	
www.nrc.govt.nz/pestplan views during the feedback period	Page views: 1294
<i>Social media statistics</i>	
Posts were created and shared through a range of social media platforms including Facebook, Instagram and LinkedIn.	
Impressions (number of times that the content was displayed to users)	23,042
Engagements (user interactions with content)	1,153
Engagement rate	5%
Post link clicks	210

6 Key messages

Throughout the region there are a group of pests that are prominent in the media and in the feedback received from communities including:

- Exotic Caulerpa
- Freshwater Gold Clam
- 'Feral' dogs and cats
- Cattle
- Moth plant
- Madagascan Ragwort
- Wasps

These pests received a large amount of interest from the public and featured largely in social media as well as groups that are attempting to manage these pest species. Overall, there was support for the inclusion of these pest species listed above or for more stringent rules, and an increase in support for community groups/tangata whenua to be able to better manage these species through resourcing and education.

There was also feedback that suggested or supported the undertaking of more site-lead work on specific pests and either extending the areas for existing projects or the creation of new areas. For example, including the Predator Free 2050 projects around the region with a different species

classification (specific to that project area) and more stringent rules for their target species (possums, rats, mustelids).

The changing landscape in Te Taitokerau was mentioned highly throughout the feedback and the need for NRC to develop a plan that has provisions and rules that will still be reflective of how the environment will change over the 10 year plan life. Highlighted in the feedback is the growth of the forestry sector in the region and locations where farmland is being converted into forestry. There is concern about the movement of pest plants and mammals being enabled from joining of native blocks to newer forestry blocks.

7 Overall themes

The discussion document and other engagement material invited feedback on biosecurity issues important to the reader. Feedback therefore reflected what people saw in their back yards, in their industries, or provided commentary and concerns with respect to impacts that a new RPMP could have on their day-to-day. We found that the feedback was represented by some overarching themes, even across different stakeholder groups.

As we had invited all stakeholders to tell us what was important to them, what they were seeing in their back yard or in their work, and how NRC could help shape the next RPMP to address these issues, many of the responses were focused on:

- pests that are ubiquitous (found everywhere);
- criticisms of a perceived lack of action on particular pests;
- criticisms on candidate species inclusion where stakeholders have interests in those organisms and/or where we have not shown evidence of organisms being current or future pests.

This also meant that this feedback generally did not include opinions or views on some of our current pest management focuses, such as our deer eradication program, exclusion/eradication of sea spurge, or the massive efforts undertaken regarding exotic *Caulerpa*.

These themes are elaborated on in the following paragraphs and categorised by topic.

7.1 Pet breeders

Northland has 6 known physical pet stores that sell fish and reptiles, as well as numerous breeders and sellers of fish, reptiles, and exotic parrots. Out of region online sales of pets are also common, including an existing international export market for exotic parrots.

Our discussion document highlights that there are several existing and new animal species that have been identified as 'pest pets', and that NRC will be looking to restrict the breeding and sale of these animals. This is expected to have direct impacts on those breeders who raise and sell these animals as their trade.

Exotic Parrots

Staff received written emails providing initial feedback on the RPMP discussion document, which subsequently led to phone conversations and in-person meetings with individual breeders and breeders associated with the Northland Parrot Society. These discussions are ongoing, but included:

- Recognition that Indian ring-necked parakeet, Rainbow lorikeet, and scaly-breasted lorikeet are potential pests due to their ability to breed in the wild and existing pet populations;
- Scepticism that the other parrot species included in the candidate species list pose a pest threat, due to best practice standards that are used by export-focused breeders and observed viability of the different parrot species held in captivity;
- A desire to work with NRC to develop a better framework to manage the risks associated with escapee populations. Some ideas put forward are included in the discussions at the end of this report;
- Confirmation that there would certainly be economic impacts on commercial breeders, including secondary impacts down the supply chain (salaried employees, food producers, stockists, etc.).

Reptiles and fish

The candidate species list included 'all exotic turtles and lizards'. No written feedback or targeted meetings were held to discuss this inclusion. Verbal feedback from members of the public was supportive, particularly with regard to red-eared slider turtles, which are becoming more conspicuous in the wild.

Similarly, no specific written feedback was received regarding pet fish species (goldfish or koi), only verbal support for rules and management at in-person events.

7.2 Pigs, Goats, and Kauri Dieback

Pigs, goats, and Kauri Dieback are all listed within our existing RPMP, and feedback regarding these species from hapu, conservation groups, and individuals had the common theme of interconnectedness. Pigs and goats are known vectors of Kauri Dieback, and calls have been made to link the outcomes of control for each of these species with the intent of protecting particular forests.

Forest and Bird provided in-depth feedback, particularly around the need for NRC to lead or enable methods to better coordinate groups that are controlling these pests. This is discussed further in Section 9 of this report.

Feedback included an acknowledgement that the management of pigs, in particular, will require significant education for communities where pig hunting forms part of the social fabric.

7.3 Waterfowl

Waterfowl comprise different species including ducks, geese, and swans. These are flocking birds adapted to spending significant amounts of time on or near water bodies. Due to the size of the

flocks, the size of the birds, and the amount of time spent on or near water bodies, they can pose significant environmental and economic challenges, with their fecal matter leading to nitrogen and *E. coli* contamination, and their feeding habits destroying nearby agricultural lands.

From the feedback received, common concerns were raised about Black Swan and Canada Geese.

Black Swan (*Cygnus atratus*) is native to Western Australia, but has a large natural migratory range and is found throughout that continent. In the 1800s, it was distributed around the world as an ornamental species, including to New Zealand in the 1860s. However, research indicates that the species was naturally colonising New Zealand at around the same time. It is possible that this time period was coincidental due to the ecologically recent arrival of humans to New Zealand, and an ecological niche being available due to the extinction of the New Zealand Swan (*Cygnus sumnerensis*) in the 1400s. As a result of this natural colonisation by the bird itself, the species is considered to be 'native' and therefore cannot be managed through the Regional Pest Management Plan. Private control can still be undertaken with the appropriate permits from Fish and Game during the corresponding hunting season.

Canada Goose (*Branta canadensis*) was introduced as a game bird but is no longer managed under those provisions. Concerns about their environmental and economic damage have been discussed with many members of the general public at A&P shows, and has features prominently in hui held with different hapu that are managing land at the catchment scale.

7.4 Weeds on roadsides, public land, and unmanaged land

The majority of feedback received regarding pest plants centred around Northland's vast tracts of land that provides habitat for both regenerating native plants and a raft of introduced weeds, and the ongoing struggle with responsibility for management of those weeds. Due to the broad nature of this topic, numerous meetings were held with key stakeholders to bolster the good feedback received from the general public.

7.4.1 Roadside weeds

Pest plants within road corridors is currently managed under Rule XXXX of our RPMP. This rule requires road controlling authorities (District Councils, NZTA, and KiwiRail) to develop and implement a Weed Management Plan (WMP), with oversight from NRC. The purpose of a WMP would be to identify target species and target road corridors where weed management would be undertaken. It is recognised that eradication of all weeds in a road corridor is not possible, so the WMP would be a tool to prioritise improved outcomes in key areas.

Whangarei District Council

Only Whangarei District Council (WDC) had an existing WMP, though it is noted that it was out of date and NRC staff were not aware of particular outcomes from its implementation. WDC staff met with NRC staff and confirmed that this approach suited their operations, though it was recognised that more attention would be needed to better implement the plan and perhaps update the WMP in

accordance with the rule. WDC noted that identifying specific target species in the rule would help direct the creation of a WMP.

New Zealand Transport Agency

Staff met with NZTA to discuss the same rule, where it was made apparent that agency budgets were largely focused on health, safety, and network efficiency. As weed management operations were funded through the same budget as all other operational activities (including road maintenance, sightline maintenance, grass mowing, etc.), the primary focus of the Agency inevitably demoted weed management to being a non-priority. NZTA staff noted that a rule requiring a WMP would not necessarily improve accountability, but specific rules for specific weeds in the road corridor may.

General Public

The general public raised concerns:

- about a perceived lack of weed management, with many emails and discussions raising concerns about the ongoing spread of weeds such as pampas, Taiwan cherry, agapanthus, privet, moth plant, and woolly nightshade, amongst others;
- where landowners were trying to undertake weed management on their own property while the adjoining road corridor has little or no management;
- about the methods of roadside weed management, with some noting that ongoing use of herbicides resulted in unwanted spray drift and runoff into their own property, and others noting that the timing of spraying/mowing did not take into account bee foraging;

In some instances, there was confusion over which Council (Regional or District) are responsible for undertaking weed management.

Weed Action Whangarei Heads Trust

NRC staff met with Weed Action Whangarei Heads Trust, which is an organisation that undertakes voluntary weed management across public and private land within Whangarei Heads and some of the surrounding areas. This group has been focused on:

- removing target weed species from high-value areas, such as Mount Manaia and Bream head;
- reducing weed density along major road corridors, focusing on Whangarei Heads Road and Ocean Beach Road;
- Educating members of the public with roadside advertisements, online engagement, and working bees; and
- Working with other agencies, community groups, and hapu to reduce weeds in the area.

The Trust indicated a desire for more stringent rules with respect to management of roadside weeds, and suggested potential framework to collaborate with Whangarei District Council in achieving this. This suggestion is discussed further in Section 9 of this report. Additionally,

members expressed an interest in how Good Neighbour Rules could be utilised to compel private landowners into being more responsive to weed management.

7.4.2 *Unmanaged Land*

In more remote areas of the region, concerns on weed management focused on large tracts of land where owners were absent or unable to control weed proliferation. This included:

- Forestry land, particularly where new 'carbon forests' were being planted in place of pasture, and on production plantations which were not subject to sufficient weed management. This was notably more prevalent speaking with people in western Kaipara District and the Far North;
- Pastureland that has been subject to poor management or where the landowner is unable to manage emerging weeds, particularly Madagascar ragwort. This was more prevalent speaking with people in the Far North.
- Public land, whether Crown-owned/managed or Council owned/managed, where herbicide use and/or mowing was not undertaken for different reasons. There are some notable locations where public land surrounds water supply and treatment infrastructure with minimal or no weed management.

7.5 Commercial and Food Production Weeds

Plants that serve an economic or social function are generally grown by commercial nurseries, the horticulture industry, and communities seeking self-sufficiency. These plants can be grown for their ecological functions, physical characteristics, nutritional values, or purely for aesthetics. Feedback has been received regarding some of these plants and potential inclusion in our RPMP in both support and opposition, as summarised below.

7.5.1 *Palms and Ornamentals*

Responses from Northland's nurseries were limited, but highlighted that commercial growers are generally knowledgeable and understanding of the intent behind banning the sale and propagation of particular plants. Through the feedback provided, there were some notable challenges to some of the ornamental candidate species for inclusion into the 'banned from sale and propagation' list:

- *Ficus pumila*, creeping fig. An ornamental creeper, often used in urban settings and along fences/walls.
- *Ensete ventricosum*, Abyssinian banana. An ornamental subtropical that does produce viable seed but not edible fruit. These are also identified as a valuable permaculture crop.
- *Dietes bicolour*, African iris. Clumping, rhizomatous perennial. Drought-tolerant and used for ornamental purposes in urban settings and formal gardens.

It was noted in multiple feedback letters that there exist cultivars and hybrids of many ornamental plants that do not exhibit the same level of 'weediness' as natural genotypes. This has been demonstrated in Auckland with a variety of "Ecopanthus", low-fertility Agapanthus cultivars.

There were also submissions highlighting the ongoing battles with some garden escapees that are already on our RPMP, such as jasmine and Taiwan cherry. In particular, there are multiple volunteer groups that spend significant amounts of time in controlling these garden escapees in high-value ecological areas and public land.

We did not receive any negative responses regarding the potential inclusion of Chinese fan palm and bangalow palm on the 'banned from sale and propagation' list. We are aware of some palm-specific nurseries and will attempt to reach out to them again to better understand potential impacts on their businesses.

On the other hand, there was written support from the general public, conservation groups, DoC, Forest and Bird, and Whangarei District Council for the inclusion of these two species, with some stating that further rules and/or public education will be necessary to reduce the existing number of palms. Additional species were recommended by those

7.5.2 Horticulture Crops

Horticulture NZ provided a written submission identifying a range of potential horticultural pests and highlighting the ongoing changes to Northland's climate, both of which add significant pressures to food production and biosecurity.

The species identified include a range of insects and fungi that are not currently in our RPMP. Some of these species have not yet established in New Zealand and would still fall under the remit of Biosecurity NZ at the border, for example:

- Brown marmorated stink bug
- Oriental fruit fly
- Queensland fruit fly

Pseudomonas syringae PV *actinidae* (PSA) and *Isotenes miserana* (Orange fruit borer) are present in New Zealand. The former is subject to a national Pest Management Plan, while the Orange fruit borer may not be subject to any management plan.

We only received a single submission (from Department of Conservation) suggesting the inclusion of Fall Army Worm.

7.5.3 Permaculture Plants

Feedback was received from some commercial nurseries and other growers focusing on, for a lack of a better term, 'permaculture' plants. For the purposes of this report, this term refers to the range of sub-tropical fruits and crops that are used for sustained food sources, mulching and/or soil improvement, and alternative sources of structural material. Such species may not be widely cultivated or well known, but they have been identified as being potentially weedy, but also potentially more important economically and socially as Northland's climate and agricultural landscape changes.

These plants include, but are not limited to:

- Loquat varieties; a small, orange fruit grown mainly for food. Seeds are dispersed by keruru and exotic parrots;
- Abyssinian banana; large, leafy plant that does not produce edible fruit, but its roots can be harvested. Its leaves can be used in place of palm leaves in certain cuisines, and the plant itself is also used as livestock fodder and/or a chop and drop species.
- Guava (*Psidium guajava*, *Psidium cattleianum*); small fruit-bearing bush or tree that can produce large amounts of fruit. These also grow easily from seed, producing fruit within just a few years.
- Timber bamboo (*Phyllostachys edulis*); bamboo is widely cultivated for fast-growing privacy hedges, but timber bamboo is not common in New Zealand at this time. Nevertheless, there are some that use bamboo for structural purposes and may have aspirations for processing this into timber.

7.6 Freshwater Pests

Reed sweet grass (*Glyceria maxima*) is a perennial aquatic grass that grows up to 2m in height and can form exclusionary mats in drains, streams, and wetlands. Some people raised this as an issue at A&P shows, in written feedback, and at hui, calling for this weed to be included in the next RPMP to protect and aquatic habitats.

At the time of writing this report, freshwater gold clam species (*Corbicula fluminea* and *Corbicula australis*) are not known to be present in Northland. Feedback on this species was limited to feedback from tangata whenua (see Section 8 of this report).

7.7 Wild and Roaming Animals

Sustained control animals that are often targets of conservation efforts in Northland include possums, stoats, and rats. In areas where such control has been successful and sustained, there has been noticeable increases in wild kiwi populations and growing observations of other native birds, such as bitterns and kaka, and coastal birds such as fairy terns and dotterels. These areas may be held in either public or private land and are often fenced off or set aside primarily for their conservation value. However, these areas are also often adjacent to working farms and homes, where people keep pets and working animals. In some instances, domestic dogs and cats can kill birds in conservation areas.

There are also areas in Te Taitokerau where roaming dogs and potentially wild packs of dogs have caused significant mortality to flocks of sheep and even injuries to people.

There are further places in Northland with roaming and/or wild herds of cattle. While these are not widespread throughout the region, these herds have caused significant localised impacts on native bush, private property, and even human injuries on and off the road.

As a result of personal experiences and media attention, the impacts of these animals to conservation attempts and animal husbandry have resulted in numerous responses from people and groups to manage these animals under the RPMP. Feedback provided

7.8 Marine Pests

We received one email regarding Pacific oysters, requesting that these are placed into the plan due to their ability to compete with native oysters. Pacific oysters are a major aquaculture crop in New Zealand with potentially more oyster farms on the horizon in Northland's coastal waters.

The invasive *Caulerpa* species that is being found along Northland and Auckland's east coast is headlined across many forms of media, and consultation has resulted in strong feedback from coastal hapu and iwi on the need to include this pest into the RPMP and list it as an eradication species.

The long spined sea urchin was placed on our candidate list as a 'research species'. More information about its provenance is required to determine eligibility for management under the BSA. Feedback on this included observations of its presence at Poor Knights and in the waters around the Hen and Chickens.

Feedback on *Asparagopsis taxiformis* supported its inclusion into the plan, noting the potential for seaweed blooms and subsequent decay to result in rapid deoxygenation of coastal waters and the subsequent impacts on intertidal flora and fauna.

Much of the feedback on marine pests arose from consultation and communications with tangata whenua / moana. Our coastal iwi and hapu have requested that ongoing management, including monitoring and operations, consider their roles in kaitiakitanga, as well as their ability to sustainably harvest kaimoana. Specific details are described in the following section.

8 Tangata whenua engagement

8.1 Overview

Engaging with tangata whenua on the RPMP was an important part of the process and provided valuable perspective of how indigenous biodiversity sustainability and pest management aligns within Te Ao Māori.

Flora and fauna that have been introduced into Aotearoa may not have whakapapa that is linked to the landmarks within iwi/hapū whakapapa, meaning that it did not originate in Aotearoa, so these species are not usually found in kōrero toku iho. This highlights that the removal and management of pest species using mātauranga Māori can be challenging to tangata whenua but these methodologies for management are also not the focus of pest management.

The feedback received from tangata whenua emphasised the importance of a thriving taiao for future generations, and that a healthy environment is crucial for mokopuna to engage with nature. A balanced ecosystem, characterized by healthy ngahere, clean waterways, and thriving native flora and fauna, is essential for maintaining this balance.

A large portion of the feedback received reflected on the non-regulatory section of the RPMP and gives NRC staff valuable insight into different methodologies that could be used for pest

management strategies that are centred around Te Ao Māori and working in partnership with mana whenua.

- **Sustainable practices** are highlighted as a key feedback theme, with a strong emphasis on mātauranga Māori passed down through generations. Advocacy for natural pest management methods, such as planting native species and using natural materials, over chemical solutions. This approach aligns with a preference from some Māori groups for non-chemical methods to manage pests.
- **Impact of environmental changes** is another significant theme. Changes in weather patterns are affecting plant growth, and pollution is impacting rivers and traditional food sources. There is an urgent need to restore the mauri the taiao using effective pest management practices to ensure the health of these ecosystems and taonga species. This can be challenging where there are already severe incursions of pest species that need to be managed and researched in the marine environment such as Exotic Caulerpa and Asagopsis Taxiformis (red sea plume).
- **Community involvement and responsibility** are crucial for effective pest management. This highlights the importance of empowering whānau and hapū to actively care for the environment. Recognising the role of kaitiaki is essential in maintaining the health of the taiao. Māori groups gave feedback that they are often left out of participating and leading programs that are conducted by NRC and community. This doesn't allow them to have input into mahi that is being conducted in areas that they have shared interest in, limiting their kaitaki role to after the fact.
- **There are challenges and solutions** in pest management. Identifying and managing pest species that is conducted alongside iwi/hapū/marae trusts using traps, monitoring, and traditional methods are crucial steps. Additionally, addressing the impact of human activities, such as the movement of construction machinery in and out of Kauri Dieback areas, cleaning marine/freshwater vessels, or moving contaminated mulch from one area to another is essential for protecting the environment and not spreading pest species.
- **Cultural and environmental values** play a significant role in pest management plans. Feedback that we received was that our current RPMP was not reflective of Te Ao Māori, and that our Māori tangata did not feel like the current plan aligned with them. The integration of mātauranga Māori and respect for cultural values are emphasized in the next RPMP. The new RPMP and pest management practices should align with the principles of kaitiakitanga to ensure the well-being of both the whenua and tangata and this should be clear in the reviewed RPMP.

8.2 Tangata whenua candidate species feedback

Exotic Caulerpa

Strong feedback from tangata whenua that exotic Caulerpa should be classified as an eradication pest species and stringent rules in known locations where Caulerpa is being managed which would also include a buffer zone. Acknowledging that achieving eradication in the moana comes with its challenges, partnering with tangata whenua to start surveillance and monitoring for early

intervention of incursions. There is a large media presence for exotic *Caulerpa*, in particular after Cyclone Tam and the efforts of mana whenua and the community to remove tons of exotic *Caulerpa* from the seashores so that it was not left to float back out to sea.

Freshwater Gold Clam

Raised by iwi and hapū on the west coast of Te Taitokerau where there are Wai Māori (freshwater) bodies of significance including Kai Iwi lakes and Poutō Lakes. The Kai Iwi lakes are high traffic areas from visitors that travel from out of region, including Waikato where the Freshwater Gold Clam incursion is currently. There is a high concern from tangata whenua that a Freshwater Gold Clam incursion has a high probability, and tangata whenua are actively trying to protect freshwater sites supporting the check, clean and dry program and advocacy through summer periods and beyond.

9 Stakeholder Proposals

Many of the stakeholders who engaged in this process are frontline conservation groups that have been working on specific biosecurity and biodiversity programmes for many years. In their provided feedback, some groups have developed ideas to address some of the shortcomings that our current plan and operations have had. A few of these suggested are detailed below.

9.1 Forest and Bird

A discussion with Forest and Bird representatives covered a range of topics, including the management of pigs / ungulates with the aim of reducing the spread of Kauri dieback. A suggestion was made to implement a targeted programme that would achieve multiple objectives:

- Identification of high-value land with healthy stands of kauri;
- Selection of three 1,000ha areas to implement a site-led management plan focusing on reducing ungulates in those areas;
- Develop a 3-year programme with set key performance indicators to monitor and assess the effectiveness of management; and
- Expand the areas where KPIs have been achieved, and/or refocus management efforts where they have not.

This programme should also include education and advocacy to enable those local communities to understand the cause and effect of ungulates in these forests, consequences of sustaining wild pig populations, and encouraging participation of local hunters in the physical management of these wild animals.

Parallel to this programme, the mapping of these areas and subsequent success/failures would better inform other conservation groups within the region.

9.2 Weed Action Network Whangarei Heads Trust

This conservation group arose out of some volunteers in the Whangarei Heads area who have been managing weeds on roadsides and in high-value areas, such as Manaia, Mt Aubrey, and along the coastlines and public parks. They have existing relationships and buy-in from private landowners and some departments within Whangarei District Council (WDC), but the weed corridor along the road is troublesome due to the health and safety of operating on this high-speed road on steep banks.

The Trust have put forward a suggestion that they become more involved in weed control along the roadsides on behalf of WDC, in some form or another, to improve the Council's ability to comply with the RPMP rules requiring the implementation of a Weed Management Plan. This could entail:

- running training sessions for roading contractors to improve weed management (selection, timing, methods);
- undertaking weed management themselves, either on the back of already programmed road works or independently, with WDC roading contractors arranging traffic management; and/or
- assisting in the development of a Whangarei Heads site-specific Weed Management Plan.

The suggestions above are largely outside the remit of a RPMP, but a site-led approach could be written into the rules, with NRC taking a non-statutory role in assisting third parties in collaboration.

9.3 Northland Parrot Society

A meeting was held with three representatives from the Northland Parrot Society, and a separate meeting with a parrot breeder, where the existing ban on parrot breeding and sales in Auckland's Regional Pest Management Plan were discussed. Their desire is that we take a more flexible approach, with management focused on actual wild flocks rather than the blanket ban of exotic parrots.

The discussion led to exploring potential measures to reduce risks of accidental bird releases, which included:

- Development of a best practice guide for bird keepers, outlining aviary requirements and confirming what is allowed or not (e.g. free flying outside);
- Support for bird clubs to educate members on the rules and outcomes sought in the RPMP;
- Development of parrot register – likely focused on breeders rather than back yard hobbyists – along with an associated tracking system using numbered leg rings and/or microchips.