Biosecurity and Biodiversity Working Party

Wednesday 27 May 2026 at 1:00 pm

AGENDA

Northland REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau

Biosecurity and Biodiversity Working Party Agenda

Meeting to be held in the Council Chamber
36 Water Street, Whangārei
on Wednesday 27 May 2026, 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 Craw
Te Rūnanga Nui o Te Aupōuri, Niki Conrad
Councillor Geoff Crawford Councillor
John Hunt
Councillor, Amy Macdonald
Te Rūnanga o Ngāti Rehia, Kipa Munro
Te Parawhau Hapū Authority Charitable Trust, Mira Norris
Ngāti Hine, Jaycee Tipene-Thomas
NRC Chair, Pita Tipene (Ex-Officio)

KARAKIA

Karakia

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

TITLE:	**Record of Actions – 25 February 2026**
From:	Sandra Harris, Personal Assistant - Pou Tiakai Taiao
Authorised by Group Manager/s:	Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 20 May 2026

Whakarāpopototanga / Executive summary

The purpose of this report is to present the Record of Actions of the last meeting (attached) held on 25 February 2026 for review by the meeting.

Attachments/Ngā tapirihanga

Attachment 1: Record of Actions 25 February 2026 ⇩

Biosecurity and Biodiversity Working Party
25 February 2026

Biosecurity and Biodiversity Working Party Record of Actions

Meeting held in the Council Chamber
36 Water Street, Whangārei
on Wednesday 25 February 2026, commencing at 1:00 pm

Tuhinga/Present:

Chairperson, Councillor Jack Craw
Councillor Geoff Crawford
Councillor, John Hunt
Councillor, Amy Macdonald
NRC Chair, Pita Tipene (Ex-Officio)
Ngāti Hine, Jaycee Tipene-Thomas
Te Rūnanga o Ngāti Rēhia, Kipa Munro
Te Parawhau Hapū Authority Charitable Trust, Mira Norris

I Tae Mai/In Attendance:

Pou Tiaki Pūtaiao – GM Biosecurity, Don McKenzie
Pou Tiaki Taiao | GM Environmental Services, Ruben Wylie
Biosecurity Manager Marine, Kaeden Leonard
Biosecurity Manager Pest Plants, Joanna Barr
Policy Specialist – Freshwater Planning and Policy, Leon Keefer
Coastal Biodiversity Manager, Laura Shaft
Biosecurity Officer Incursions and Response, Alicia King
Biosecurity Project Lead – Feral Deer, Grant MacPherson
Biosecurity Communications and Engagement Advisor – Wild Deer Eradication, Murray Soljak
Principal Scientist, Plant and Food Research, Dr Beccy Ganley
Kaiāwhina Tari, Te Tiriti Partnerships and Engagement, Meloney Tupou
Kaiāwhina Matawhaiaro Biosecurity, Janice Kirk
TTMAC Representative, Nyze Manuel
Councillor John Blackwell
Te Raki Māori, Arama Morunga

The meeting commenced at 1:00 pm, karakia by Cr Macdonald.

Ngā Mahi Whakapai/Housekeeping (Item 1.0)

Ngā Whakapahā/Apologies (Item 2.0)

There were no apologies. Te Rūnanga Nui o Te Aupōuri, Niki Conrad was not present.

Biosecurity and Biodiversity Working Party
25 February 2026

Record of Actions – 6 August 2025 (Item 4.1)

Presented by: Chairperson, Councillor Jack Craw

Agreed action points:

- Amend the minutes of 6 August 2025 to correct the spelling of the member's name Nyze Manuel
- Amend the minutes of 6 August to include the correct date for the report '2025 -2026 Biosecurity Operational Plan (Item 4.6).' the resolution under "Direction to continue as per report" should read:
    - That the report '2025-2026 Biosecurity Operational Plan' by Don McKenzie, Pou Tiaki Pūtaiao – GM Biosecurity and dated 18 August 2025, be received."

Receipt of Action Sheet (Item 4.2)

Presented by: Chairperson, Councillor Jack Craw

Agreed action points:

- Kauri protection:
    - Staff to report back on Kauri Protection at the next meeting that covered what the current programme has achieved to date, and for the report to contain information on disease spread. In addition to the report, what has been achieved in the Waikato region.
    - Biosecurity staff to work with Jaycee Tipene-Thomas and Nyze Manuel to organise a hui on developing a collective approach to Kauri Protection in Te Taitokerau and the predicted (financial) needs of the collective – date to be confirmed but as soon as possible.
- Spartina:
    - As part of the Action table (further) discussion, the Chair requested that staff prepare a report on Spartina for the next Working Party Meeting.

Myrtle Rust (Item 4.3)

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

Discussion and agreed action points:

- Dr Beccy Ganley attended the meeting in person and delivered a presentation on Myrtle Rust.
- The Biodiversity and Biosecurity Working Party noted the information provided.
- Report was taken as read.
- Action: Myrtle Rust presentation to be made available to Working Party members. Staff to report back to the next Working Party meeting on a plan to engage summer students and undertake survey for the disease and raise awareness.

Direction to continue as per report and agreed actions:

- Working Party to note the contents of this briefing.

Secretarial note: request for item order change 4.6 Wild Deer to precede 4.4 Regional Pest Management Strategy. Working Party in favour.

Wild Deer (Item 4.6)

Presented by: Murray Soljak, Communications and Engagement Advisor – Wild Deer Eradication; Grant MacPherson, Biosecurity Project Lead – Feral Deer

Discussion and agreed action points:

- Report taken as read.
- Action: Staff to bring a further update on the wild deer eradication programme to a future working party meeting.

Direction to continue as per report and agreed actions:

1. Note the contents of this briefing.
2. Staff to bring a further update on the wild deer eradication programme to a future working party meeting.

Secretarial note: request for item change 4.8 Caulerpa to precede 4.4 Regional Pest Management Strategy. Working Party in favour.

Caulerpa (Item 4.8)

Presented by: Don McKenzie, Pou Tiaki Pūtaiao – GM Biosecurity and Kaeden Leonard, Biosecurity Manager – Marine

Discussion and agreed action points:

- Report taken as read.

Direction to continue as per report and agreed actions:

1. That the Working Party note the information contained in this report on the exotic *Caulerpa* response – in particular, the progress and upcoming field testing of the Phase III Submersible Dredge Planer (SDP).
2. That staff bring back a further update to the Working Party at a future date.

Secretarial note: request for item change 4.5 Biodiversity Update to precede 4.4 Regional Pest Management Strategy. Working Party in favour.

Biodiversity Update (Item 4.5)

Presented by: Ruben Wylie, Pou Tiaki Taiao, Jacki Byrd, Biodiversity Specialist – Freshwater, and Laura Shaft, Coastal Biodiversity Manager

Discussion and agreed action points:

- Report taken as read.

- Ruben provided an overview.

Direction to continue as per report and agreed actions:

1. That Biodiversity staff present the final report on the project "Conservation Status of Indigenous Vascular Plants in Te Taitokerau / Northland" to the Working Party meeting on 27 May 2026.

Secretarial note: It was observed that Item 4.4 did not utilise the correct legal definition of Regional Pest Management Plan. The correct legal definition is to be applied in all references from this point forward.

Regional Pest Management Strategy (Item 4.4)

Presented by: Leon Keefer, Policy Specialist – Freshwater

Discussion and agreed action points:

- Received the report on the development of the RPMP and Marine Pathways Management Plan.
- Noted the progress made on drafting rules, pest programme classifications, cost-benefit analysis and pre-consultation.
- Note that staff will bring back a further update to the Working Party at a future date.
- Action: staff to present a draft RPMP to a future Working Party and before it goes to Council meeting at the end of June 2026.

Direction to continue as per report and agreed actions:

1. Receive the report on the development of the Regional Pest Management Plan and Marine Pathways Management Plan.
2. Note the progress made on drafting rules, pest programme classifications, cost-benefit analysis and pre-consultation.
3. That staff bring back a further update to the Working Party at a future date.

Gold Clam (Item 4.7)

Presented by: Alicia King, Biosecurity Officer – Incursions and Response

Discussion and agreed action points:

- Report taken as read.
- The Working Party supported the Biosecurity New Zealand (BNZ) proposal to prohibit ballasted watercraft from Taharoa unless they have a specific permit and require all other craft to be treated at an approved wash-down facility.
- The Working Party indicated their support for the BNZ rule that all other equipment used in the water at Lake Taharoa meeting Check, Clean, Dry protocols.
- The Working Party indicated their support for multiple wash stations to be progressed as part of a CAN rule.
- The Working Party agreed to option 2 as the preferred option – Designated Wash-Down Stations.

Direction to continue as per report and agreed actions:

1. That the Biodiversity and Biosecurity Working Party note the information provided.
2. That the Working Party indicate support or otherwise for the BNZ proposal to prohibit ballasted watercraft from Taharoa unless they have a specific permit and require all other craft to be treated at an approved wash-down facility.
3. The Working Party indicate their support or otherwise for the BNZ rule that all other equipment used in the water at lake Taharoa meet Check, Clean, Dry protocols.
4. That the Working Party indicate their support or otherwise for multiple wash stations to be progressed as part of a CAN rule.

Whakamutunga (Conclusion)

The meeting concluded at 4.05pm.

TITLE:	**Receipt of Action Sheet**
From:	Sandra Harris, Personal Assistant - Pou Tiakai Taiao
Authorised by Group Manager/s:	Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 20 May 2026

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: Schedule of Actions

Biosecurity and Biodiversity Working Party – Schedule of Actions

Meeting date	Item	BABWP action	Responsible staff	Status	Notes
25 February 2026	Myrtle Rust	Staff to report back to the next Working Party meeting on a plan to engage summer students and undertake survey for the disease and raise awareness.	Kaeden Leonard	Ongoing	Staff will provide a verbal update at the workshop on 27 May.
Wetland mapping	From the previous action table	An update on data progress with MTAG	Justin Murfitt	Ongoing	A GIS viewer developed for NRC staff (internal only) has been available since mid 2025. Public release of the updated wetland maps on the NRC website's GIS platform awaits completion of guidance on use of the data. While the maps are very useful, they require interpretation and wetland knowledge because of the maps being indicative only and usually need field confirmation i.e. they are not ground validated and clear quality assurance reporting is yet to occur.
14 August 2024	Sea spurge	A further update to a future working party be provided	Jo Barr	Ongoing	Confirm if action still required (previous verbal updates provided against this action in previous meetings).

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	Ongoing	Staff will provide a verbal update at the workshop on 27 May. Following the completion of the jointly funded position paper and economic impact assessment, staff have been pursuing a cost share model with industry partners and MPI. Industry partners and MPI have been presented with multiple scaled options for a cost share model for an initial 12-month period, based on a the jointly commissioned position paper. To date the proposals have received only very limited support from industry, and MPIs potential support likely to be conditional on industry commitment. Staff have requested a formal response from the industry partners by 20th May.
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 summary of activities is given below. **1. Lakes Ecological Surveys** Nine lake ecological surveys were done in 2026. The lake report cards will be up on the Northland Regional Council website by the end of July. Highlights included: an improvement in vegetation cover in Mokeno and Kanono and no hornwort in Lake Egg. **3. Hornwort control** NRC successfully applied to the EPA to carry out whole lake treatments to control hornwort in 2027 to eradicate the last 1% of hornwort that keeps persisting in Lakes Tutaki and Mt Camel North. Quarter lake treatments were carried out at Roto Tutaki, Mt Camel North and Waikanae in March and April. **4. Lagarosiphon control** This weed was controlled in Lake Ngatu in September 2020 and we have surveyed for lagarosiphon every year since and found none. The final survey was undertaken in September. No lagarosiphon was found so we have declared the weed eradicated from the lake. A celebration day was held with the local school in late March. **5. Pine removal** Pines around the outstanding dune lake Rotokawau on the Poutō Peninsula will start in May 2026, followed by native replanting in

					winter. Pines have had a detrimental affect on freshwater mussels / kākahi in the lake.
21 May 2025	Regional Pest Management Plan Update (4.5)	Staff will refine the species list and associated rules based on the feedback received Staff will create a draft rule to the Road and Rail section, to provide for NRC to enforce provisions of the Biosecurity Act on road and rail controlling authorities where management plan has not been complied with, and where the required work has not been done, to do the work and recover costs as is provided in the Act. Staff to present a draft RPMP to a future Working Party and before it goes to Council meeting at the end of June 2026	Leon Keefer	In development	Report and paper to be presented by staff at May 27th workshop, outlining components nearing completion, areas requiring further refinement, and the proposed process and indicative timeline through to consultation, submissions, and hearings
21 May 2025	Invasive Asparagopsis taxiformis status	Advocate to the Ministry for Primary Industries (MPI) for the formal listing of *Asparagopsis taxiformis* as an Unwanted Organism under the Biosecurity Act, in response to its identification in Whangaroa Harbour and the associated ecological concerns. Engage with Auckland and Waikato councils to seek their	Kaeden Leonard	Confirm if action still required	A reply from the CTO at MPI has been received declining the request made due to a native variant of the species already being in New Zealand and the difficulty for MPI to correctly identify. No further action on this is recommended given MPI's reluctance however the species will be named in the proposed RPMS when it is advertised for public submissions. If the species is included in the RPMS then it will be an offence under our rules to move it around and facilitate its spread.

		support for the initiative to list as an Unwanted Organism under the Biosecurity Act, aiming to strengthen the case and ensure a coordinated response.			
25 February 2026	Kauri Protection Report	Staff to report on Kauri Protection at the next meeting to cover what the current programme has achieved to date, and for the report to contain information on disease spread. In addition to the report, what has been achieved in the Waikato region. Biosecurity staff to work with Jaycee Tipene-Thomas and Nyze Manuel to organise a hui on developing a collective approach to Kauri Protection in Te Taitokerau and the predicted (financial) needs of the collective – date to be confirmed but as soon as possible.	Dai Morgan	Pending	Report and paper to be presented by staff at May 27 Workshop. Report to summarises Northland Regional Council's delivery of the Kauri Protection Programme from 2021/22 to the present, during a period of significant investment in kauri dieback management. It outlines integrated efforts including surveillance, mitigation, vector control, infrastructure, advocacy, and partnerships to reduce the spread and impact of *Phytophthora agathidicida* across Te Tai Tokerau.
25 February 2026	Spartina	Staff prepare a report on Spartina for the next Working Party Meeting	Jo Barr	Rescheduled	Report rescheduled to workshop on the 26th August
February 2026		Madagascar ragwort	Jo Barr	Ongoing	Staff will provide a verbal update at the workshop on 27 May.

25 February 2026	Wild Deer	Staff to bring a further update on the wild deer eradication programme to a future working party meeting	Nicky Fitzgibbon	Ongoing	Staff will provide a verbal update at the workshop on 27 May.
25 February 2026	Caulerpa	Staff bring back a further update to the Working Party at a future date	Kaeden Leonard	Ongoing	Staff will provide a verbal update at the workshop on 27 May.
25 February 2026	Biodiversity Update (4.5)	Biodiversity staff present the final report on the project "Conservation Status of Indigenous Vascular Plants in Te Taitokerau / Northland" to the Working Party meeting on 27 May 2026	Lisa Forester	Postponed	Postponed and proposed to be bought back the Biodiversity and Biosecurity Working Group on the 26th August

Please note: All items with a completed status will be removed for the following meeting.

TITLE:	**Verbal update on Gold Clam and new to New Zealand Sea Grass**
From:	Kaeden Leonard, Biosecurity Manager - Marine and Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity
Authorised by Group Manager/s:	Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 20 May 2026

Whakarāpopototanga / Executive summary

This report entitled 'Verbal Update on Gold Clam and new to New Zealand Sea Grass' by Don McKenzie Pou, Tiaki Pūtaiao – GM Biosecurity 27 May 2026 is tabled for information purposes. Staff will be available at the meeting to provide a verbal update.

Ngā mahi tūtohutia / Recommended actions

1. Staff to provide further information to future working party meetings

Background/Tuhinga

Not relevant

Ngā tapirihanga / Attachments

Nil

TITLE:	**Invasive Long-Spined Sea Urchin (Centrostephanus rodgersii)**
From:	Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity and Kaeden Leonard, Biosecurity Manager - Marine
Authorised by Group Manager/s:	Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 20 May 2026

Whakarāpopototanga / Executive summary

Dr Monique Ladds (DOC) will brief the Biosecurity and Biodiversity Working Party on the rapid increase of long-spined sea urchin (*Centrostephanus rodgersii*) at Tawhiti Rahi/Poor Knights Islands Marine Reserve and a current management trial.

Rising urchin numbers linked to warming seas and low predator abundance are degrading reef habitats and biodiversity by creating urchin barrens. A joint DOC-led operation removed over 130,000 urchins across trial sites in 2025 to test whether targeted removals can support reef recovery.

This item provides an overview of the issue, the trial, and implications for Northland's marine ecosystems.

Ngā mahi tūtohutia / Recommended actions

1. That the Biosecurity and Biodiversity Working Party note the information provided by Dr Monique Ladds on long-spined sea urchins and the Poor Knights management trial.
2. That staff continue to stay engaged with DOC, Te Whānau o Rangiwhakaahu, the University of Auckland and other partners as monitoring results become available.

Background/Tuhinga

The long-spined black urchin, *Centrostephanus rodgersii*, is an increasing ecological concern at the Poor Knights Islands Marine Reserve. While the species has been present in northern New Zealand waters for many years, recent population growth has resulted in extensive grazing pressure on reef ecosystems. Dense aggregations of long-spined black urchins can remove kelp and other macroalgae, creating "urchin barrens" where complex reef habitat is replaced by bare rock. This has significant implications for biodiversity, ecosystem resilience, and the ecological values for which the Poor Knights Islands Marine Reserve is recognised.

The issue is being driven by a combination of factors, including warming sea temperatures, favourable environmental conditions, and reduced natural predation pressure. Similar ecological impacts have been observed in south-eastern Australia and Tasmania, where expansion of *Centrostephanus rodgersii* has caused large-scale loss of kelp forest habitat. The Poor Knights Islands Marine Reserve is therefore considered a high-priority location for active intervention, monitoring, and learning. In response, the Department of Conservation, Te Whānau o Rangiwhakaahu, and the University of Auckland are working in partnership to test whether targeted removals can slow the spread of urchin barrens and support reef recovery.

A collaborative removal operation has recently been completed by dive teams from across the Department of Conservation, Northland Regional Council, and the University of Auckland. The operation involved 441 dives, totalling 288.5 dive hours, with divers working to depths of 30 metres. Approximately 130,000 long-spined black urchins were removed from around six hectares of reef habitat. This equates to approximately five percent of the barren area currently affected.

The scale of the removal highlights both the seriousness of the issue and the operational challenge associated with managing established urchin barrens. Current population increase estimates indicate that, without intervention, the Poor Knights Islands Marine Reserve could lose its reef habitat by 2030. This would represent a major ecological shift in one of New Zealand's most significant marine protected areas.

The recent removal work provides an important opportunity to assess whether targeted intervention can slow or reverse barren formation, protect remaining reef habitat, and support kelp forest recovery. Ongoing monitoring will be important to understand recovery rates, reinvasion pressure, cost-effectiveness, and whether similar methods could be applied at other priority sites in Northland.

The guest presentation from Dr Monique Ladds, Department of Conservation, will provide the Working Party with an overview of the issue, the recent removal operation, the current state of the Poor Knights reefs, and the next steps being considered by DOC and partner agencies.

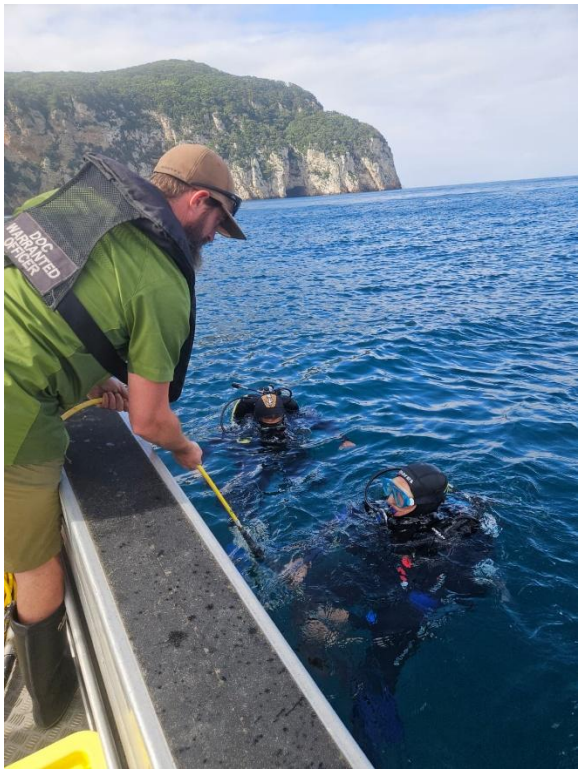


Image: DOC officer assists NRC scientific divers

Ngā tapirihanga / Attachments

Nil

TITLE:	**Biosecurity and Biodiversity Working Party Terms of Reference**
From:	Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity and Kaeden Leonard, Biosecurity Manager - Marine
Authorised by Group Manager/s:	Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 08 May 2026

Whakarāpopototanga / Executive summary

Terms of Reference were approved by council on 25 November 2026 with the resolution stating: "*That the TOR be reviewed by the respective governance bodies at their first meeting and any agreed amendments be brought back to respective councils for ratification*." This paper is to allow the terms of reference to be reviewed and confirmed for the 2025 – 2028 triennium.

The terms of reference are attached.

Ngā mahi tūtohutia / Recommended actions

1. That the Biosecurity and Biodiversity Working Party receive the terms of reference for the Biosecurity and Biodiversity Working Party.
2. That the Biosecurity and Biodiversity Working Party review and propose any amendments or confirm the status quo to the terms of reference.

Ngā tapirihanga / Attachments

Attachment 1: Terms of Reference - Biosecurity and Biodiversity Working Party

Document Management

Date	Detail	Authorised by
4 Dec 2023	Updated membership	Council resolution 28 Nov 2023
11 Jul 2024	Updated membership	Council resolution 25 Jun 2024
14 Jan 2026	Updated membership	Council resolution 25 Nov 2025
14 Jan 2026	Updated membership	Council resolution 17 Dec 2025

Terms of Reference

Biosecurity and Biodiversity Working Party

Membership

The Biosecurity and Biodiversity Working Party shall be comprised of four (4) councillors and four (4) Te Ruarangi Hapu and Iwi Working Party members as follows:

Chair:	Cr J Craw
Members:	Crs G Crawford, J Hunt, A Macdonald
Māori Representation:	Jaycee Tipene-Thomas (Ngāti Hine), Kipa Munro (Te Rūnanga o Ngāti Rēhia), Mira Norris (Te Parawhau Hapū Authority Charitable Trust), Niki Conrad (Te Rūnanga Nui o Te Aupōuri)
Ex officio:	Chairperson P Tipene

Standing orders do not apply.

Quorum

The quorum for meetings of the working party shall be four members. Ex-officio and non-elected members count towards a quorum.

Vision, mission and areas of focus (Long Term Plan 2021-2031)

Our Northland – together we thrive. Working together to create a healthy environment, strong economy and resilient communities.

This working party will contribute directly to the following areas of focus:

- Protected and flourishing native life
- Meaningful partnerships with tangata whenua

Objectives

The objectives of the working party are to:

- Provide oversight and assistance to the Chief Executive on council's biosecurity and biodiversity strategic activities ensuring accountabilities and responsibilities are fulfilled; and
- Make recommendations to council on biosecurity and biodiversity matters.

Responsibilities

The working party is directly responsible and accountable to the council for the exercise of its responsibilities.

In carrying out its responsibilities, the working party must at all times recognise that primary responsibility for management of the council rests with the Chief Executive.

For reasons of efficiency and/or expediency, should the working party not be able to perform their functions, the council will assume their role and responsibilities.

ROLE AND FUNCTIONS

The council authorises the working party, within the scope of its Terms of Reference, role and responsibilities, to:

1. General

a) Subject to operating within approved budget allocation - obtain information it needs from the CEO and/or external party (subject to their legal obligation to protect information);

b) Discuss any matters with the external auditor, or other external parties (subject) to confidentiality considerations;

c) Request the attendance of any employee, subject to the Chief Executive's approval, at meetings of the working party or its working groups;

d) In discussion with the CEO and subject to operating within approved budget allocation - obtain external legal or other professional advice, as considered necessary to meet its responsibilities, at the council's expense;

e) Co-opt a person as a (non-voting) member of the working party to assist with special projects.

f) Recommend to council that additional members be appointed to the working party should it consider wider representation would be of assistance in performing its functions;

g) To regularly report progress on its functions to the council; and

h) Undertake such other functions as may be delegated by council from time to time.

2. Biosecurity and Biodiversity

a) For council's biosecurity and biodiversity activities:
   i) Advise council on any significant legislative changes, programmes, plans or reports affecting these activities.
   ii) Advise and make recommendations to council (and relevant working parties or working groups) on matters of policy and strategic nature.
   iii) Monitor and review progress towards council's objectives, the achievement of the performance targets and the delivery of work programmes in the relevant Northland Long Term Plan, Annual Plan and operational strategies, such as the Regional Pest Management Plan (RPMP) and Marine Pathway Plan (MPP).

b) To monitor and review implementation of Nga Taumata o te Moana – our climate change strategy, as the actions relate to council's biosecurity and biodiversity functions.

c) To coordinate with other agencies on strategic matters concerning biosecurity and biodiversity in Northland.

d) To identify and workshop important and/or contentious matters with full council, as appropriate, to ensure buy-in prior to formal council consideration of plans.

e) To review and recommend to council on such other functions as may be delegated from time to time.

3. **Reporting**

The Chairperson, supported by staff, will report on working party activities and associated recommendations to Council on a quarterly basis.

4. **Meeting Frequency**

The Biosecurity and Biodiversity Working Party is to meet quarterly.

5. No Delegated Authority – Power to Act

The working party has no delegated authority or power to act.

TITLE:	**Biodiversity - Dune Lakes Update**
From:	Jacki Byrd, Biodiversity Specialist - Freshwater; Kaeden Leonard, Biosecurity Manager - Marine; Lisa Forester, Biodiversity Manager and Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity
Authorised by Group Manager/s:	Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity and Ruben Wylie, Pou Tiaki Taiao, on 20 May 2026

Whakarāpopototanga / Executive summary

This report provides a summary of the 2026 Dune Lakes Ecological Survey and the Dune Lakes Kaitiaki Partnerships Programme.

Ngā mahi tūtohutia / Recommended actions

1. That this report 'Biodiversity – Dune Lakes Update' dated 27 May 2026, be received.
2. That staff bring a further update on the Dune Lakes programme to a future working party meeting.

Background/Tuhinga

The Dune Lakes Ecological Surveys and the Dune Lakes Kaitiaki Partnerships Programme contribute to the delivery of the Northland Regional Council Long Term Plan 2024-2034 Community Outcome: *Protected and flourishing native life*. They also support the Level of Service: The indigenous biodiversity and ecosystems of Northland's forests, wetlands, lakes and coastal margins are maintained and enhanced, in line with *Te Mana o te Taiao – Aotearoa NZ Biodiversity Strategy*. Key Performance Indicators are currently on track to be met for the 2026 financial year.

1. Dune Lakes Ecological Survey

Highlights

Nine lakes were assessed in February: Waitahora Lake and Lagoon, Lakes Waiporohita and Rotoroa in Te Hiku and Lakes Karaka, Mokeno, Kahuparere, Kanono and Egg (Poutō Peninsula).

Lake Mokeno was the only one of nine lakes surveyed to achieve an *Outstanding* ecological value rating with a score of 12 out of 20, reflecting the recovery of extensive charophyte meadows following earlier vegetation loss driven by algal blooms. The Waitahora Lake and Lagoon complex was assessed as a unique hydrologically dynamic lake–lagoon–wetland system separated from the sea by a sand barrier that breaches intermittently. It is recommended for future consideration as an *Outstanding Water Body* due to its largely native catchment, extensive wetlands, and high values for threatened species. It is also the only lake in the region influenced by marine conditions, periodically shifting between freshwater and brackish states.

Five of the assessed lakes – Waiporohita, Rotoroa (Sweetwater), Karaka, Kahuparere and Kanono – were rated as having *High* ecological value with scores of either 10 or 11. In addition, a significant population of the Threatened – National Critical moss *Archidium elatum* was discovered on ancient kauri stumps at Lake Rotoroa.

Challenges

The survey identified several ongoing pressures that affect lake health. The most significant of these is eutrophication associated with agricultural land use and production forestry within lake catchments. Additional pressures include invasive species, high populations of waterfowl (mainly

Canada geese) contributing to nutrient inputs, degraded riparian margins, and biosecurity risks associated with public access and recreational activities such as hunting. Eutrophication was observed consistently across the surveyed lakes with indicators including algal blooms, persistent benthic algal mats, high epiphyton loads, organic floc accumulation, sulphide development, and receding depth limits for submerged vegetation.

The tiny native waterlily *Trithuria inconspicua*, which is Threatened - Nationally Critical and only occurs in five Northland lakes, was not detected in Lake Rotoroa (previously a stronghold population) despite extensive searching. This absence may be due to the high-water levels at the time of sampling, and a repeat survey is recommended next year.

Progress to date

Draft lake ecological reports have been received from the contractor and are currently being finalised. These reports will be loaded onto the council website by the end of June 2026.

Recommendations

The recommendations from the lake ecological reports will be reviewed, and the highest priority actions, within available budget, will be incorporated into the Dune Lakes Kaitiaki Partnership Programme for the 2026/27 financial year.

2. Dune Lakes Kaitiaki Partnerships Programme

Highlights

Significant progress has been made through the Dune Lakes Kaitiaki Partnerships Programme over the past year. At Lake Rototuna, over-mature marginal pine trees were felled and replaced with 2,750 native plants. This work was undertaken with involvement from local schools and Te Uri o Hau, with planting funded by Kaipara Moana Remediation.

Lake Ngātu has been declared free of lagarosiphon following five years with no detections after a single lake-wide treatment using Endothall (Aquathol K) in September 2019. This milestone was celebrated with a council-run community event involving Paparore School, where 150 students participated in learning about their lake and how to look after it.

Challenges

Despite successes, challenges remain. Hornwort continues to be an issue across several lakes, because quarter-lake treatments do not reach all parts of the lake, so we have not achieved eradication. While these treatments significantly reduce biomass, regrowth of the few remaining fragments between applications means we have not eradicated the weed. Lake Egg is currently the only lake where hornwort has been eradicated successfully using this method.

Progress to date

Recent management actions include quarter-lake hornwort treatments using Aquathol K at Lakes Mt Camel North, Waikanae, and Tūtaki, applied by drone. These treatments achieved good suppression but did not result in eradication, likely due to rapid plant growth in Northland's warm climate and limitations on applying herbicide near emergent vegetation, such as reed beds. It is important that eradication is achieved for the health of the lakes and to reduce the risk of weed spread through human activity to nearby lakes.

Approval has now been obtained from the Environmental Protection Authority for whole-lake treatments at two lakes, allowing herbicide to be applied at rates sufficient to eradicate hornwort in a single operation. In addition, Aquathol Super K, a granular formulation that can be safely applied

among emergent vegetation, is being imported and is expected to improve treatment effectiveness, particularly along lake margins amongst emergent vegetation where hornwort persists.

At Lake Rotokawau, a pine removal contract is in place with work scheduled to begin mid-May. Replanting with native species will be staged over five years in partnership with Kaipara Moana Remediation, Te Uri o Hau, and the Department of Conservation. Aquatic weed management is also underway at this lake to control egeria, which has been present since before 1993. While currently limited in extent, egeria has the potential to significantly impact the lake, especially if in-lake nutrient levels increase. Control efforts include the use of wool matting applied underwater by contract divers to smother weed beds. Approximately 500 m2 have been treated to date, with additional areas planned. This method is both cost-effective and environmentally beneficial, as the biodegradable material supports recolonisation by native species. Targeted hand weeding by divers has also been undertaken to remove smaller infestations. The council's Maritime team and Biosecurity Marine team have supported the project, saving costs.

Biodiversity freshwater staff and Ngāi Takoto hosted a hui with the Waiharara school and adjacent landowners at Lake Waiparera on 20 February. The hui was held to discuss the poor water quality, and specifically, an unexpected drop in pH and the loss of submerged vegetation in the lake. Staff gathered information from the community about the lake and catchment, as well as their aspirations for improving lake health. Investigations are currently being undertaken by the Science team to determine the cause of this change.

Next Steps:

The following actions are planned:

1. Undertake whole-lake treatments with a mix of Aquathol K (liquid) and Aquathol Super K (granules) at Lake Mt Camel North and Tūtaki in late summer 2027 with the aim of eradicating hornwort.
2. Apply to the EPA for whole-lake hornwort treatments at Waikanae and Karaka.
3. Continue benthic locking (weed mat) and hand-weeding egeria in Rotokawau until eradication is achieved.
4. Ongoing work with lake owners to implement the highest priority recommendations from the lake ecological reports.

Ngā tapirihanga / Attachments

Nil

TITLE:	**Kauri Protection Programme Report**
From:	Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity; Kaeden Leonard, Biosecurity Manager - Marine and Dai Morgan, Biosecurity Manager - Partnerships
Authorised by Group Manager/s:	Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 20 May 2026

Whakarāpopototanga / Executive summary

This report provides an overview of Northland Regional Council's delivery of the Kauri Protection Programme over the period from 2021/22 to the current financial year, reflecting a time of significant investment in kauri dieback management. The programme combines surveillance, mitigation, vector control, infrastructure upgrades, advocacy, and partnerships to prevent the spread and reduce the impacts of *Phytophthora agathidicida* across Te Tai Tokerau.

Ngā mahi tūtohutia / Recommended actions

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

Background/Tuhinga

This report outlines kauri protection mahi done by Northland Regional Council Biosecurity predominantly between 2021/22 financial year and the current financial year. This time period reflects the significant investment from central government of $32M in kauri protection over this time, of which the NRC has received $2.25M and contributed a total of $4.6M via rates over the same time period.

Northland Regional Council delivers kauri protection through a set of integrated workstreams that collectively aim to prevent the spread and reduce the impacts of kauri dieback across Taitokerau. Core activities include surveillance and detection, using a combination of aerial imagery, AI-assisted analysis, ground-based tree health surveys, and targeted soil sampling to identify the presence and distribution of *Phytophthora agathidicida* (PA). These surveillance outputs inform risk assessment and management planning, with NRC developing site-specific mitigation advice and formal Kauri Dieback Management Plans for PA-positive or high-risk sites, in collaboration with landowners, mana whenua, and partner agencies.

Supporting these technical activities, NRC undertakes a suite of on-the-ground mitigation and enabling workstreams, including infrastructure upgrades such as hygiene stations and walking track improvements to reduce soil movement, vector control programmes targeting pest animals, and fencing to exclude stock and protect kauri stands. Alongside this, NRC places strong emphasis on engagement, education, and partnerships, working closely with iwi and hapū, community groups, schools, and sector stakeholders to build awareness, capability, and shared responsibility for kauri protection.

NRC Kauri Protection Operational Plan

Northland Regional Council's kauri protection activities are guided by the council's annual Biosecurity Operational Plans, which give effect to the Northland Regional Pest and Marine Pathway Management Plan 2017–2027. Through these operational plans, kauri dieback is managed as part of council's wider regional biosecurity responsibilities that minimise the adverse effects of pest organisms and pathways across Northland. The operational plans translate strategic direction into

annual priorities and measurable outcomes, providing a structured framework for council's kauri protection work. Progress is monitored through performance measures set out in the Biosecurity Operational Plans, enabling council to track delivery, adapt practice over time, and demonstrate continuous improvement.

Table 1 summarises council's performance in achieving these kauri-related performance measures over the reporting period. Further detail on the delivery, effectiveness, and outcomes of key kauri protection activities is provided in subsequent sections of this report.

Table 1. Northland Regional Council Kauri Protection key performance indicators, 2021/22 – 2025/26.

KPI	Description	How will this be measured?	21/22	22/23	23/24	24/25	25/26
Soil sampling	100% of remaining aerial survey sites on private land sampled; 50% of high-risk sites with plans	Evidence of the number of sites sampled and PA management plans completed will be recorded on Council databases	Achieved in Part[1]	Not Achieved[4]	Achieved[5]	Achieved[5]	Achieved[5]
	Management plans	50% PA management plans completed	Achieved in Part[2]	Not Achieved[4]	Achieved	Achieved	*On track*
Follow-up soil sampling	Sample five previously sampled sites to reconfirm PA status	Evidence of the number of sites sampled recorded on Council databases	N/A[3]	Achieved in Part[4]	Achieved	Achieved	Not Achieved[6]
Hygiene stations	Minimum of five hygiene stations installed	Evidence of stations recorded on Council database	Achieved	Achieved	Achieved	Achieved	Achieved
PA Distribution Records	Maintain a record of PA distribution across Northland	Recorded on national and Council data systems	Achieved	Achieved	Achieved	Achieved	*On Track*
Incident response times	All incidents recorded and responded to within 20 working days	Evidence held on Council database	Not Achieved	Achieved in Part[4]	Achieved in Part[4]	Achieved in Part[4]	*TBC*
Community engagement	Deliver a minimum of 10 public engagement events annually	Evidence held on Council database	Achieved	Achieved	Achieved	Achieved	Achieved

[1] Some of the identified sites (n=42) from the 2017-2018 aerial survey were landowners who have either denied access, or who were unable to be contacted during the year despite repeated attempts.
[2] Some sites were on Māori land with multiple landowners and further work is required to engage with the multiple landowners to develop a plan.
[3] Data not available.
[4] During the initial year following the setup of these KPIs, the programme was being established and processes around sampling were still being developed and tested.
[5] 100% of sites where the landowner has been granted access have been sampled.
[6] Due to competing priorities (four PA-positive sites were resampled).

Summary of Reporting Information Requested by Council

Several performance measures were requested by council to be included in this report that cover the delivery of kauri protection activities across Northland. At the outset, it was intended that these measures would reflect contributions from all key organisations and groups involved in kauri protection within the region. However, this was not possible due in part to data sovereignty considerations for iwi and hapū, and in part to feedback from some organisations that, as they are not contracted or governed through Northland Regional Council, formal reporting obligations more appropriately sit with the national coordinating agency – Tiakina Kauri.

Accordingly, the performance data presented in this report relates only to Northland Regional Council's kauri protection activities over the reporting period. Table 2 presents a summary of council's achievement against these performance measures. A more detailed discussion of activities and outcomes included later in this report. In addition to performance measure data, a map showing the current distribution of sites that have been sampled (including PA-positive sites) was requested. The map provided (Figure 1) shows results from testing supported by NRC only; although other groups are also conducting sampling within their rohe. Due to data sovereignty issues, this additional data is not available to council at the time of writing.

Table 2. Requested Northland Regional Council performance measures, 2021/22 – 2025/26.

Performance measure	21/22	22/23	23/24	24/25	25/26[1]	Total
OPEX expenditure (excl. GST)[2]	$385,984	$987,643	$1,534,478	$950,795	$783,554[3]	$4,642,456
Track upgrades and boardwalks (no. of projects)	8,020m (4x)	4,070m (2x)	2,012m (3x)	928m (1x)	2,000m (2x)	17,030m
Fences installed or repaired (no. of projects)	2,850m (3x)	3,410m (8x)	3,354m (13x)	3,235m (11x)	720m (4x)	13,569m
Soil samples taken (no. of sites) PA positive samples (no. of sites)	153 (17x) 5 (2x)	7 (2x) 0	212 (8x) 39 (7x)	43 (4x) 0	88 (15x) 5 (2x)	476 49
Hygiene stations installed	11	17	12	15	7	62
Tree health surveys conducted	0	0	1,342	392	167	1,901
Kauri ora plans developed	2	0	7	6	1	16
Engagement events	33	16	68	10	11	139

[1] Data valid to March 2026
[2] Does not include staff salaries, which are currently four FTEs (one is vacant)
[3] Forecast expenditure.

Discussion

Supporting safe forest access

Significant investment has been made in infrastructure upgrades to reduce the risk of kauri dieback spread and improve public compliance across Northland's kauri forests. Over the reporting period, NRC facilitated the upgrade of over 17km of walking tracks, including the installation of raised timber boardwalks, elevated gravel surfaces, and associated safety features. These upgrades are designed to minimise contact with soil around kauri root zones, which reduces the likelihood of pathogen transfer. Track works were often delivered in partnership with agencies such as DOC and WDC and supported by funding from Tiakina Kauri (MPI).

Hygiene infrastructure has continued to expand across the region, with the installation of 62 new hygiene stations at priority kauri sites. These stations enable for footwear and equipment to be cleaned and disinfected, while promoting behaviour change and public compliance with biosecurity requirements. In addition, NRC supported the installation of a vehicle washdown hygiene station at Te Au Warawara, extending hygiene measures beyond pedestrians to vehicle movements in sensitive kauri areas. Collectively, these infrastructure investments represent a practical, on-the-ground contribution to kauri protection.

Figure 1. Sites across Northland where the Northland Regional Council has supported *Phytophthora agathidicida* sampling. Red and green dots indicate sites where PA has or has not been detected, respectively. This image was extracted from the NRC GIS Kauri Protection gallery: date accessed, 7 May 2026.

Soil sampling and PA trends

Soil sampling remains the primary method for detecting the presence of PA and the results directly inform management decisions, including the development of site-specific management plans for PA-positive areas and the identification of high-risk sites requiring preventative measures. Sampling is undertaken on both public and private land, ensuring that surveillance and response efforts reflect the full range of kauri habitats across the region.

Through this testing, a PA-positive site was detected at AH Reed Kauri Reserve, which is owned by WDC. While we acknowledge that a breakdown in communication regarding the reporting of this result led to a delayed response, we are now working alongside WDC and iwi/hapū to mount a coordinated response to manage this event and mitigate further spread of the disease.

Historically, NRC has relied on external contractors to undertake soil sampling. However, capability within the kauri protection team has recently increased, with one approved sampler now in place and a second nearing approval. Advances in science are also shaping future monitoring, with new soil testing methods under development. The introduction of these methods requires time for calibration and comparison with existing protocols, as well as laboratory accreditation, which can delay their operational use. Over the reporting period, NRC supported the collection of 469 soil samples, of which 49 returned positive results for PA.

Interpretation of spatial trends from NRC soil-sampling data alone remains challenging. While the results suggest a higher concentration of PA detections in the southern part of the region, with additional infestations identified along the west coast and isolated pockets on the east, it is difficult to determine whether this pattern represents a true region-wide trend. This uncertainty reflects the fact that the available dataset is limited to NRC-supported sampling only, and the overall distribution of PA may differ if results from all stakeholders were considered.

Robust assessment of regional trends relies on a coordinated, region-wide approach to sampling and data sharing that includes all agencies and iwi/hapū groups. The importance of such collaboration has been echoed by Dr Ian Horner, a recognised PA expert, who has also noted that a more integrated approach to region-wide sampling would be required to comprehensively investigate the spread and dynamics of PA across the region.

Advocacy and education

Advocacy and education have been a central pillar of NRC's kauri protection programme. Over the reporting period, NRC hosted or were present at dozens of public events, workshops, school visits, or public talks that were aimed at raising awareness of kauri dieback, biosecurity responsibilities, and practical actions people can take to reduce disease spread. These activities have targeted a wide range of audiences, ensuring kauri protection messages are accessible, culturally grounded, and locally relevant to all. NRC has also worked closely with partners such as the Department of Conservation, Tiakina Kauri, iwi and hapū, schools, and community organisations to co-design and deliver these activities.

A flagship education tool has been the Kauri Pou Kaitiaki virtual reality (VR) experience (Figure 2), which NRC has delivered across the region since 2023. Using VR headsets, the immersive programme

Figure 2. L-R: Students using VR headsets to explore kauri forests; representatives from NRC, Kauri Ora Iwi Colab, and DOC in front of the kauri protection engagement trailer at the Waitangi celebrations, 2026.

enables participants to experience a kauri forest, understand the impacts of kauri dieback, and learn correct hygiene practices through interactive elements. The VR experience has proven popular, helping people connect emotionally with kauri while reinforcing simple messages, such as cleaning footwear, that directly reduce the risk of spreading PA.

To support ongoing outreach, NRC, the Kauri Ora Iwi Colab and DOC have co-invested in a purpose-built kauri protection engagement trailer (Figure 2), designed as a mobile education and advocacy hub. The trailer will house VR equipment, displays, and training resources that will enable the delivery of kauri protection messaging at schools, community events, field days, and remote locations across Northland. Together, these advocacy and education initiatives play a critical role in protecting kauri by improving awareness, increasing compliance with hygiene requirements, and fostering shared responsibility for forest health.

Vector control

Vector control has been a key component of NRC's kauri protection programme, recognising that animal disturbance is a significant pathway for the spread of kauri dieback through soil movement and root damage. Accordingly, NRC undertook substantial fencing works to protect kauri forest from stock and pest animal disturbance, completing 39 projects during the reporting period that resulted in the construction or repair of approximately 13.5km of fencing. This included remedial fencing following damage caused by Cyclone Gabrielle in 2023, particularly in high-value kauri areas such as Kauri Mountain.

The Kauri Protection team has also worked in collaboration with NRC's Deer Eradication programme, ensuring that biosecurity objectives are integrated into wider ungulate control activities. Where hunters have been operating or surveying areas for deer, kauri protection funding has been used strategically to also target feral goats and pigs, recognising the role particularly of wild pigs as significant vectors in the spread of kauri dieback.

To date, encouraging results have been delivered. For example, during the 2023/24 financial year, over 400 goats were culled from Russell State Forest while, in collaboration with DOC and private landowners, 278 pigs were culled in targeted operations. In the current financial year, this partnership has continued, with more than 300 goats and 18 pigs culled across five coordinated operations (Table 3). These outcomes demonstrate the value of aligning kauri protection priorities with broader pest management programmes enabling effective, targeted vector control across kauri forests.

Table 3. Summary of Northland Regional Council kauri protection vector control operations 2025/26.

Project	Project description	Animals removed	Key outcomes
Kai Iwi Lakes surveillance and follow-up control	Deer proof-of-absence surveillance followed by a wānanga and targeted goat and pig removal in partnership with Te Roroa	25 goats, 7 pigs	• Reduced pest pressure in a high-value lake environment • Confirmed absence of deer • Built capability and capacity with Te Roroa to support ongoing pest management • Strengthened enduring relationships with mana whenua
Pouto surveillance	Thermal surveillance for deer/goats and pig presence	0 goats, 0 pigs	• Informs control priorities and supports robust determination of species presence or absence • No deer or goats identified • Confirmed pig pressure
Pouto proof of absence and opportunistic pig control	Deer surveillance with opportunistic pig control in partnership with Te Uri o Hau	Ongoing[1]	• Progressing proof-of-absence for deer and goats; pig reduction underway • Built capability and capacity with Te Uri o Hau to support ongoing pest management • Strengthened enduring relationships with mana whenua
Puketi Forest targeted control	Targeted control in northern Puketi Kauri Forest	33 goats, 11 pigs	• Protection of high-value kauri ecosystem • Targeted response in priority area
2025/26 NRC goat control contracts	Targeted goat control across multiple sites • Mountain Road, Kaiwaka • Pakotai • Paparoa • Gammons Road, Mangakahia	251 goats[1]	• Landscape-scale goat suppression in high-value kauri area
	Total	**309 goats, 18 pigs**	

[1] Numbers are likely to increase as projects are active until the end of the current financial year.

Implementation of AI-assisted kauri surveillance

Northland Regional Council initiated the use of AI-assisted aerial surveillance to strengthen early detection and landscape-scale monitoring of kauri dieback across the region. The approach was adopted to complement ground-based surveys and improve coverage across remote and difficult-to-access forest areas. This work represents a proactive investment by NRC in innovative technology to support evidence-based decision making and long-term kauri protection.

This work is being delivered by Biospatial Ltd, a Northland-based company specialising in high-resolution, spatially referenced photoblique imagery. Using fixed-wing aircraft and advanced imaging, Biospatial captures detailed canopy-level data that is analysed through machine-learning models trained to identify kauri trees (Figure 3) and detect indicators of kauri dieback such as canopy thinning, discolouration, and mortality.

This work is progressing well, with continued refinement of AI models and the integration of new technologies accelerating analysis and improving accuracy. While the work is still ongoing, advances in AI processing and imaging capability are expected to further enhance detection and reporting in the near future. Once fully operational, this approach will continue to support more targeted ground investigations, risk-based management, and efficient deployment of kauri protection resources across Northland.

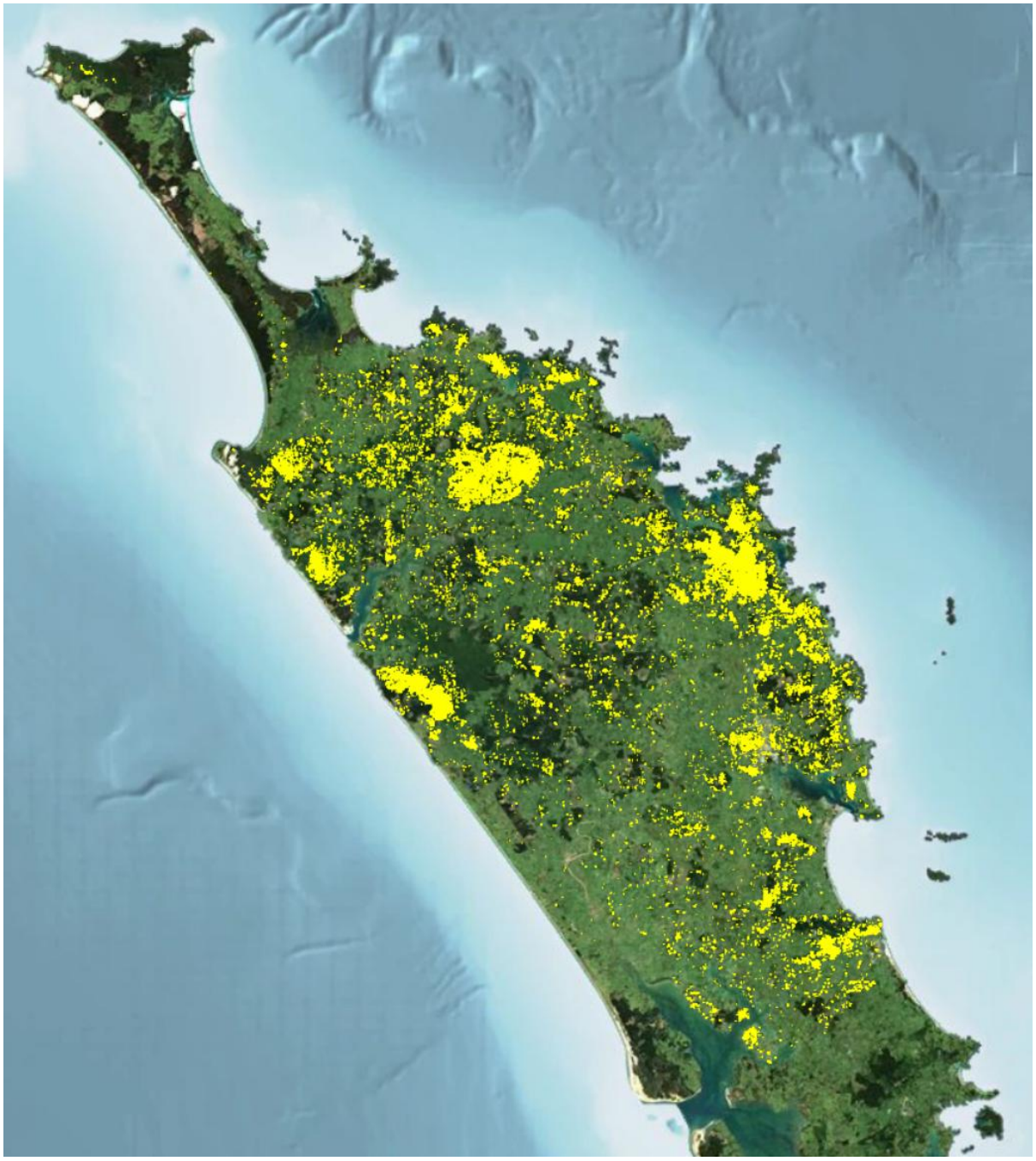


Figure 3. A map of kauri trees across Northland using Biospatial AI-assisted models. Yellow dots represent kauri trees that have been matched at least three times using Photoblique imagery.

Ngā tapirihanga / Attachments

Nil

TITLE:	**Regional Pest Management Plan (RPMP) - Draft Plan Update**
From:	Leon Keefer, Policy Specialist - Freshwater; Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity and Kaeden Leonard, Biosecurity Manager - Marine
Authorised by Group Manager/s:	Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 20 May 2026

Whakarāpopototanga / Executive summary

The purpose of this report is to update the Biosecurity and Biodiversity Working Party on progress with the Regional Pest Management Plan (RPMP) review. The report outlines which components of the draft plan are largely complete, which areas require further development and refinement, and the indicative process and timing to progress the plan through proposal, public submissions, and hearings.

The report highlights ongoing targeted stakeholder engagement and the key changes between our current RPMP and the draft RPMP. A high-level comparison of the existing RPMP and the draft RPMP is provided to illustrate the key differences. This will be expanded on during the Working Party Meeting.

Ngā mahi tūtohutia / Recommended actions

1. That the Biosecurity and Biodiversity Working Party receive the contents of this report.
2. That the Working Party note the staff resourcing constraints in developing the RPMP and potential impacts on the delivery timeline for the draft RPMP.
3. That staff report back to the Working Party with further updates as the draft RPMP progresses toward notification.

Background/Tuhinga

The Northland Regional Council is undertaking a review of the Regional Pest Management Plan in accordance with statutory requirements under the Biosecurity Act 1993. The review provides an opportunity to ensure the RPMP remains fit for purpose, aligned with current pest risks, and is reflective of stakeholder aspirations in Taitokerau.

To reiterate our process, the review to date has involved:

- Developing a candidate species list, building on the existing RPMP, reviewing neighbouring regions' RPMPs, considering National programmes, and incorporating staff observations;
- Developing a discussion document and associated consultation campaign, targeting key stakeholders and interested parties most likely to be impacted by rules in the RPMP;
- Frequent communication with members of the Biosecurity and Biodiversity Working Group to confirm development directions;
- Developing a quantitative cost-benefit analysis (CBA) for each species, including findings from research literature, staff observations, other RPMPs, and community feedback. The CBA sets out our reasons for inclusion of each pest and for our preferred management programme;

- Reviewing the effectiveness of current rules, our ability to monitor and enforce these, and their appropriateness for our new RPMP; and
- Developing our proposed rules based on the review of existing rules, rules in other RPMPs, and discussions held with key stakeholders.

Consultation has continued with stakeholders who have raised issues with proposed regulations on the Exotic Pet Trade. There is a nation-wide programme of consultation being led by Te Uru Kahika, with input from NRC staff, and additional conversations have been had with those Northland stakeholders to maintain clarity around the two separate engagement campaigns.

Status of the Draft RPMP

Work to complete the RPMP has continued along the programmed timeline for a mid-2026 notification. However, it is important to note that there have been changes to staff resources and priorities that are being managed:

- Since February, staff drafting the RPMP and managing inputs fell from 2 FTE to 1 FTE;
- Mapping is anticipated to be a bottleneck, as inputs are still being developed for handover to our GIS teams, which are committed to many council projects.
- June 2026 will see numerous Resource Management Bills published, and NRC policy staff are anticipating an 'all-hands-on-deck' resource requirement. Staff continuity is expected to be maintained. However, this will be a very challenging time for the policy team as a whole.

Refinement of the organisms declared as pests, their respective pest management programmes, and novel approaches are also still being considered. This needs careful consideration, given the increase to the scope of the RPMP and the need to implement the plan within LTP and Annual Plan budget allocations.

A summary of the current status is provided below:

Sections complete

The following components of the draft RPMP are now complete, subject to final integration, internal review, and any unforeseen pressures:

- **Pest Animals programme,** primarily aspects delivered by the Community Partnerships team.
- **Strategic framework and objectives**, including alignment with the National Policy Direction for Biosecurity.
- **Marine Pathway Management Plan** sections.
- **Plant pathogens programme**, which is limited to Kauri Dieback.
- **Pest species status tables**, including proposed exclusions, eradication, containment, and sustained control categories.
- **Monitoring and reporting approach**, including performance measures.

These sections provide a strong foundation for the overall plan structure and policy intent, and a draft of these sections is attached as appendices.

Sections requiring further development and refinement

Further work is required across the plan, but particularly on the following areas before the draft plan can be finalised for proposal.

Confirmation of management programmes, particularly for:

- Exotic parrots.
- Invasive freshwater clam and pathway management.
- Site-led management programmes for ungulates, kauri dieback, and mammalian predators.
- Site-led management of dune lake systems.
- Site-led approach scope for secondary predators (hedgehogs, mice, wasps).

Pest Plants Programme:

- Confirmation of council-managed species Exclusion, Eradication, and Progressive Containment
- Confirmation of road/rail corridor rules.
- Confirmation of Good Neighbour Rules.

Comparison between the current and proposed RPMP

As noted above, the size and scale of the draft RPMP have increased, with existing programmes continuing and new pest incursions to manage. This is reflected in the number of pests included in the draft plan (see Table of Contents comparison below) compared with our existing RPMP.

While we are expecting the quantity of pests included in the plan to increase from 143 species to 349, this direct comparison does not account for some structural changes that paint a different picture:

- Our current plan did not list every plant listed under the National Pest Plant Accord, whereas the reviewed plan will list these as banned from sale and propagation to avoid ambiguity.
- Our current plan is structured according to NRC's biosecurity operations, so freshwater plants and animals are not accounted for in the current number of pest plants and animals in these respective chapters. The reviewed plan changes this to remove the freshwater chapter.
- The reviewed plan will include new chapters that incorporate the outcomes from our strategy development and consultation, including a broader vision and more deference to the use of mātauranga Māori that is prevalent across hapū and community groups active in biosecurity programmes, as well as a section describing our proposed site-led management framework.

A comparison of the table of contents is provided overleaf.

Existing RPMP	**Reviewed RPMP**
Introduction	Introduction
Planning and statutory background Responsibilities and obligations Programmes and attributes Organisms declared as pests Plants - 12 Exclusion plants - 20 Eradication plants - 5 Progressive containment plants - 11 Sustained control plants - 33 Banned from S&P plants - Road and rail rules Animals - 8 Exclusion animals - 1 Eradication animal - 8 Sustained control animals Diseases and pathogens - 1 Sustained control phytophthora Freshwater - 3 Exclusion freshwater pests - 8 Eradication freshwater pests - 3 Progressive Containment freshwater pests - 2 Sustained control freshwater pests Marine - 7 Sustained control marine pests - 18 Designated places Monitoring - Powers conferred Funding Glossary Appendix 1 – Non-regulatory methods	Vision and purpose Planning and statutory background - Including non-statutory strategies Responsibilities and obligations Pest management framework Programme and attributes Organisms declared as pests Plants - 15 Exclusion plants - 28 Eradication plants - 6 Progressive containment plants - 47 Sustained control plants - 165 Banned from S&P - Transport corridors Animals - 13 Exclusion animals - 4 Eradication animals - 4 Progressive containment animals - 13 Sustained control animals Diseases and pathogens - 1 Sustained control phytophthora Site-led programmes - Canada goose - Dune lakes - Feral ungulates - Secondary predators (hedgehogs, mice, Vespa wasps) Marine - 11 Sustained control marine pests - 18 Designated places Monitoring - Powers conferred Funding Glossary
Appendix 2 – Marine Pathway Plan designated places coordinates Appendix 3 – Kauri Dieback Management Plan minimum criteria	

Noteworthy changes

The biggest changes to the delivery of the RPMP over the next 10 years are expected to occur across site-led programmes, road corridor rules for pest plants, and our general exclusion/eradication rules.

It is anticipated that the new approach will expand the opportunities for biosecurity staff to achieve operational objectives. However, it is recognised that additional resources for monitoring and/or enforcement will likely be necessary. It is expected that near-future changes to the Biosecurity Act will improve council's ability to carry out enforcement action, although staff have recently become aware that the Biosecurity Act review bill will not be heard prior to the upcoming election.

Site-led programmes

- These are not included in our existing RPMP.
- The intent is to provide a framework where operational activities can be justified based on the site-led programme content in the RPMP.
- Example: A Dune Lake programme will set out the objectives and aims of a site-led programme, and the criteria for site selection, but will not identify where, when, and how long any programme will be undertaken. That is left to operational plans.
- This approach enables NRC to be responsive to opportunities, where partner organisations and external funding can be utilised for shared outcomes.

Road corridor rules for pest plants

- The existing RPMP requires Weed Management Plans to be developed by road controlling authorities.
- This did not occur as required and the rules did not achieve the desired outcomes.
- More specific and deliberate rules are being drafted that will be more enforceable and thus RCAs will be more accountable.
- Staff are considering area-specific opportunities for sustained-control species that may be more manageable in certain areas.
- Example: Taiwan cherry is widespread and abundant around Whangārei but is still sparse and localised in the Far North. Road corridor rules in these areas may target Taiwan cherry to prevent exponential spread.

Overarching exclusion and eradication rules have also had an overhaul from our current RPMP

- Exclusion and eradication rules in our current RPMP require reporting any sighting, and make illegal the sale, breeding, or transport of any pest listed in these categories. This will be maintained in the revised RPMP.
- The draft rules also include rules that protect measures to manage these pests, increase freshwater pathway regulations for vessels and equipment, and reduce blanket exemptions for individual species.
- Where blanket exemptions did exist for exotic pest pets, staff are considering personal exemptions to undertake the breeding and selling of exotic parrots to certain commercial operators who sell outside of Northland.

Next Steps

As each section of the draft RPMP is complete, it will undergo the required reviews by Biosecurity managers and our internal legal advisers. As each chapter has completed this review, the final draft sections will be provided to the Working Party for further comment.

The Communications Team are also aligned to incorporate NRC's corporate design themes to the document. The marketing campaign (i.e. social media ads) of the proposed plan has not been confirmed but will be scheduled as we have more confidence on the completion date of the plan.

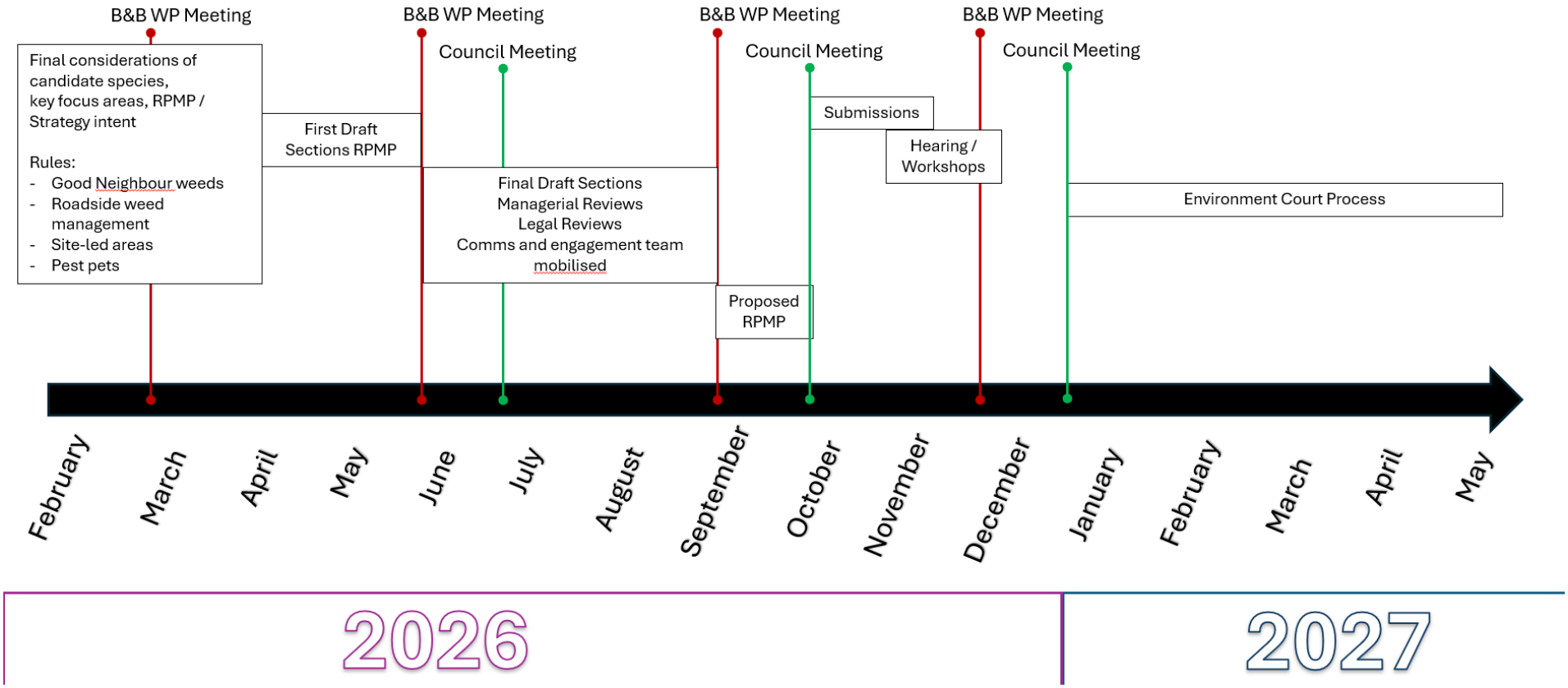
The notification process involves calling for submissions on the proposed plan. We anticipate robust submissions from a handful of organisations and people with significant interests in and/or impacts resulting from the implementation of the proposed RPMP. As discussed in our February working party meeting, it is understood there is a preference for no hearings to be held. This will require staff to address each submission point in a report detailing the respite, if any, for each submitter. Where changes are made to the RPMP, and where submission points are not addressed, justification will need to be provided.

In place of a traditional hearing, a hybrid approach could be taken, similar to the RLTP process, where a workshop is held with submitter groups that have points council may consider. It is recommended this is determined following receipt of submissions.

An updated timeline is provided overleaf. It shows the best-case scenario given our current staff resourcing pressures and upcoming priorities.

Timeframes

Updated following comms meeting



Ngā tapirihanga / Attachments

Attachment 1: Pest Animals Programme (DRAFT section)

Attachment 2: Strategic frameworks and objectives (DRAFT section)

Attachment 3: Marine pathways (DRAFT section)

Attachment 4: Plant Pathogens Programme (DRAFT section)

Attachment 5: Pest Species Tables (DRAFT section)

Attachment 6: Monitoring, reporting, funding (DRAFT section)

8 Animals

Animal pests threaten biodiversity and limit native forest regeneration. Animal pests which have invaded Northland have had devastating impacts on our forests, pastures, scrubland and, to a lesser extent, urban areas. Northland's warm climate favours the establishment for animal pests and mild winters enable their survival and persistence. Many animal pests have the ability to outcompete native birds, predate on native invertebrates and consume native vegetation. These pests can be difficult to manage and require persistent effort to control.

8.1 Principal Rules and Measures

The following rules and measures apply to all pests listed in Chapter 8. Additional rules specific to individual pests may also apply and will be set out in the description of each relevant species.

8.1.1 Banned from sale and distribution

Under Sections 52 and 53 of the Biosecurity Act 1993 no person can sell, propagate, breed, distribute or otherwise spread any pest in this plan, or any unwanted organism. Section 53 also includes organisms which may contain or harbour a pest or unwanted organism. Not complying with Section 52 or 53 is an offence under the Act and may result in the penalties noted in Section 157(1).

A breach of these rules will create an offence under Section 154N(19) of the Act.

8.1.2 General Rules

Rule 8.1.1 Every person who sees or suspects the presence of any exclusion or eradication animal, shall immediately report the sighting to Northland Regional Council.

Rule 8.1.2 For progressive containment fish species:

a. Every person who sees or suspects the presence of any progressive containment pest fish species outside of the identified locations shall immediately report the sighting to Northland Regional Council;

b. Any person who catches containment pest fish species intentionally or accidentally in Northland must destroy them immediately upon capture.

Rule 8.1.3 No person shall:

a. Move or interfere with any article or substance left in place by an authorized person for the purpose of monitoring, controlling, or eradicating a pest listed in this RPMP; or

b. Move, or allow to be moved, any live pest listed in this Plan, or any machinery, vessel, organism, or goods that are contaminated with any pest listed in this Plan, including any juveniles, eggs, and/or spawn; or

This is to protect production, environmental, cultural, and public amenity values that can be adversely affected by pests.

Rule 8.1.4 To avoid the spread of freshwater pests, the following provisions apply

a. No person shall leave boat trailers in any water body other than for the purposes of launching and/or retrieving boats;

b. No person shall transport ballast water from any water body to any other location;

c. All occupiers of vessels or craft entering any water body within Northland shall check, clean, and dry their vessels or craft (including trailers) to ensure they are free from freshwater pests including fragments;

d. All occupiers of vessels or craft using a boat ramp with a self-certification check point must complete a supplied certification form. Before launching, the self-certification form must either be submitted electronically or displayed in the vehicle used to launch the vessel or craft.

Rule 8.1.5 All persons must notify Council once they become aware they have received products contaminated by exclusion pests.

This is to protect production, environmental, cultural, and public values that can be adversely affected by marine pests.

Rule 8.1.6 No person may possess any listed pest animal unless:

a. Any listed animal was legally in a person's possession prior to the adoption of this RPMP (DATE); or

b. An exemption is obtained from Northland Regional Council.

Exemptions are only available under certain circumstances. Refer specific rules for each pest animal.

Rule 8.1.7 No person may release any listed pest animal.

Rules 8.1.8 No person may breed, sell, distribute, or transport any listed pest animal unless: an exemption is obtained from Northland Regional Council.

Exemptions are only available under certain circumstances. Refer specific rules for each pest animal.

A breach of these rules will create an offence under Section 154N(19) of the Act.

Species specific rules are set out in the sections below.

8.1.3 Other relevant legislation or programmes

The following pests in this plan are classified as unwanted organisms by Biosecurity New Zealand pursuant to the Biosecurity Act 1993:

- European carp / Koi carp – Cyprinus carpio
- Ferret – Mustela fero
- Freshwater gold clam – Corbicula fluminea
- Rainbow lorikeet – Trichoglossus haematodus
- Ring-neck parakeet – Psittacula krameri
- Rook – Corvus frugilegus
- Wallabies – Macropus eugenii, M. parma, Petrogale penicillata

An unwanted organism is any organism that a chief technical officer believes is capable or potentially capable of causing unwanted harm to any natural and physical resources or human health.

The Wild Animal Control Act 1977 includes requirements for keeping wild animals in captivity including identification and fencing and restricts the release of wild animals.

The Wildlife Act 1953 sets out in Schedule 5 which animals are classified as wildlife not protected under that Act.

The Wild Animal Control Act 1977 includes requirements for keeping wild animals in captivity including identification and fencing, and restricts the release of wild animals.

8.1.4 Principal measures

Requirement to act

People are required to:

- Report the presence or suspected presence of exclusion and eradication animals and may not possess those pests without an exemption permit;
- Report the presence of progressive containment animals where they are outside of the mapped progressive containment zones; and
- Undertake actions to help reduce the impacts and spread of the sustained control pests.

The purpose of these rules is to assist in preventing the establishment of exclusion and eradication animals in Northland, and to prevent the establishment of progressive containment animals beyond their current established populations.

Council inspection

Council staff and/or their contractors will:

- conduct monitoring in areas vulnerable to pest incursions, and inspections and searches for exclusion and eradication animals will be undertaken by staff where evidence of such an animal has been discovered;
- monitor and enforce conditions of exemption permits held by any person;
- visit places to determine whether rules and management programmes are complied with and effective; and
- will undertake compliance activities when required, such as rule enforcement, action on default, prosecution, and processing exemptions.

Service delivery

- Council will lead eradication attempts for any pest animal managed under the exclusion and eradication programmes. Pest animals managed under progressive containment and site-led programmes will be led by council staff within mapped areas.
- Council staff will provide education and advice to owners, occupiers and the public about sustained control pests and how to control them.

Advocacy and education

- Council staff will provide training, support, and resources to stakeholders and communities to increase knowledge around pest animal identification, ecology, and management techniques to help achieve the objectives and aims of the pest management programmes.
- Council staff will assist land occupiers in developing managements plans where these are required by a rule.
- Council will provide advice, attend events and undertake publicity campaigns to increase public awareness of pests.

8.2 Exclusion animals

Exclusion animals are potential pests which are not known to have established in Northland or have previously established and have been eradicated. These pests all have the potential to re-establish in the region and are capable of causing adverse effects to the environmental, economic, social, and/or cultural values of the region. The following objectives and provisions apply to the exclusion animals listed in this chapter.

Objectives

For the duration of the Pest Plan, avoid impacts to biodiversity, cultural, and economic values by preventing the establishment of exclusion animals in Northland.

Aims

- Exclusion animals will be detected before they become widely established in Northland.
- A prompt response with appropriate funding will be initiated to control or manage infestations in Northland.

Listed species

Alexandrine parakeet *(Psittacula eupatria)*

Alexandrine parakeets are a large parakeet native to the Indian subcontinent and southeast Asia. They measure 56 - 62cm from head to tail and weigh between 200 and 300g. Feathers are predominantly green with a light blue-grey sheen on the cheeks and nape, a yellow-green abdomen, red patch on the shoulders, and a large red beak with yellow tips. In captivity, selective breeding may result in colour variations. Their plumage is sexually dimorphic, with adult males having a black stripe across their lower cheeks and a pink band on their nape.

These birds appear similar to the Indian ring-neck parakeet and can be misidentified by those unfamiliar with the differences. These are social birds that usually live in smaller flocks. Where food sources are abundant, larger colonies may form. Overseas they can also be found living alongside the distantly related Indian ring-neck parakeets. Captive birds can live up to 40 years.

Exemption to Rules 8.1.6 and 8.1.8

An exemption to Rules 8.1.6 and 8.1.8 may be obtained from Northland Regional Council for the possession, breeding, and selling of Alexandrine parakeets where:

a. The person/organisation applying for the exemption is a commercial breeder and/or permitted animal refuge;

b. Facilities used for the commercial and/or refuge operation utilises best

management practices to avoid the release or escape of captive animals; and

c. No animals are sold or distributed within Northland, unless to exemption holders.

Bearded dragon *(Pogona barbata)*

Bearded dragons are grey-brown reptiles native to Australia, which can grow to 55 centimetres long. The throat is covered with distinctive spiny scales which can be raised to form a black "beard". The inside of the mouth is usually a bright yellow colour. Bearded dragons have long, spiny scales along the lower sides of the body. Bearded dragons are active during the day and can move with considerable speed. Juveniles are insectivorous and adults are omnivorous, eating mainly insects and some vegetation. The lifespan in the wild is unknown but they are known to live for more than 10 years in captivity. Potential for predation on native invertebrates as they are opportunistic omnivores, also competition for food and resource with native species.

Big-headed ant *(Pheidole megacephala)*

Big-headed ants are relatively small, grey-yellow to dark brown in colour and covered in many sparse, long hairs. They have two main growth forms. Major workers are usually about 3.5 millimetres long with large, heart-shaped heads while minor workers are about two millimetres long. Big-headed ants are omnivorous, feeding on seeds, invertebrates and small vertebrates. This can affect invertebrate communities, vegetation and ecosystem processes. They are aggressive to other ants and can reach high densities.

Blue tongued skink - common *(Tiliqua scincoides)* and blotched *(T. nigrolutea)*

Common blue-tongue skinks are native to Australia and can grow to 60 centimetres long. They have dark bands around the body and tail, a cream-coloured belly, and a large, triangular head with a distinctive bright blue tongue. Blotched blue-tongue skinks are mostly black with varying amounts of light brown or grey blotches or bands. They also have the distinctive blue tongue. Blue-tongue skinks are omnivorous, feeding during the day on berries, fruits, eggs, invertebrates and small vertebrates, as well as carrion. They can live for more than 30 years in captivity. Potential for predation on native invertebrates, smaller lizards and birds and their eggs as they are opportunistic omnivores. Also competition for food and resource with native species. Potential for disease transmission to other reptiles (for example, mites, endoparasites, skin conditions, and they can transmit Salmonella).

Freshwater gold clam *(Corbicula fluminea)*

Corbicula, commonly referred to as Freshwater gold clam, is an extremely invasive freshwater bivalve native to eastern Asia. It has successfully established itself as an invasive species throughout the world. They are fast and prolific breeders, able to produce 400 juveniles a day and up to 70,000 juveniles per year, resulting in significant changes to freshwater ecosystems and significant costs to freshwater infrastructure. These juveniles are small and easily transported via water flows and by human activities, such as irrigation pumps and water sports. It is suspected they entered New Zealand via a ballast tank in a wake boat.

Galah *(Eolophus roseicapillus)*

Galahs have a white crown and rump, grey wings and the neck, abdomen and underwing coverts are pink. Male and female plumage is indistinguishable. They are approximately 325g in weight, and 36cm long. They are ground feeding grain eaters, but will also eat buds, flowers, berries and insect larvae. They are gregarious, forming variably sized semi-nomadic flocks. Courtship and mating occurs in August in New Zealand.

Exemption to Rules 8.1.6 and 8.1.8

An exemption to Rules 8.1.6 and 8.1.8 may be obtained from Northland Regional Council for the possession, breeding, and selling of Galah where:

a. The person/organisation applying for the exemption is a commercial breeder and/or permitted animal refuge;
b. Facilities used for the commercial and/or refuge operation utilises best management practices to avoid the release or escape of captive animals; and
c. No animals are sold or distributed within Northland, unless to exemption holders.

Indian ring-necked parakeet *(Psittacula krameri)*

Also known as: rose-ringed parakeet. Indian ring-necked parrots are 38-42 centimetres in length, typically with a green body. Colour variations are available due to selective breeding/mutation. The neck is encircled by a red band (males) or indistinct emerald band (females). The parrots are gregarious and feed and breed in groups. They are highly aggressive to other species, including birds and small mammals such as bats, and have the potential to competitively exclude other cavity-nesting species through eviction or early occupancy and successful defence of cavities.

Monk parakeet / Quaker parrot *(Leuciscus idus)*

Monk parakeets (also known as Quaker parrots) are a medium-sized parrot around 90 – 120g. They are greenish-grey above with a yellower underside, and blue secondary and flight feathers on the wings. The face and throat are grey. They have slight sexual dimorphism, with males being slightly heavier except during breeding. Colouring is similar between sexes. These birds are opportunistic omnivores and can be sustained on a wide variety of food sources, changing foraging behaviours to match their habitat. They would likely occupy similar habitats already occupied by other exotic birds, such as sparrows and mynas.

Exemption to Rules 8.1.6 and 8.1.8

An exemption to Rules 8.1.6 and 8.1.8 may be obtained from Northland Regional Council for the possession, breeding, and selling of Monk parakeets / Quaker parrots where:

a. The person/organisation applying for the exemption is a commercial breeder and/or permitted animal refuge;
b. Facilities used for the commercial and/or refuge operation utilises best management practices to avoid the release or escape of captive animals; and
c. No animals are sold or distributed within Northland, unless to exemption holders.

Orfe *(Leuciscus idus)*

Orfe are a native freshwater fish from Northern Europe and were illegally introduced to New Zealand in the 1980s. They are thought to have been eradicated from New Zealand but it is possible that they persist in some areas in the lower reaches of Northland. Orfe are similar to rudd in appearance with smaller scales and they lack the projection at the base of pelvic and pectoral fins that rudd have. Adult orfe have a varied diet, feeding on prey on the surface, mid-water and benthic areas. T hey will also switch to a vegetative diet when other food sources are scarce and as they grow larger. Orfe can grow to 80 centimetres long. Orfe are carnivores and compete with other native fish, they can tolerate brackish water and are likley to impact on taonga species.

Rainbow lorikeet *(Trichoglossus haematodus)*

Rainbow lorikeets are long-tailed, brightly-coloured parrots, about 30 centimetres long. They have a bright-red beak and eyes, a blue head and belly, green wings, tail and back, and an orange/yellow breast. They make distinctive screeching and chattering calls and are almost always seen in pairs or in flocks. Rainbow lorikeets look very similar to the more common eastern rosella, but rosellas have a red head and the lorikeet's head is blue. Rainbow lorikeets are prolific breeders and can compete with native birds for food and nesting sites. They can also carry diseases that can threaten the health of native bird species.

Rook *(Corvus frugilegus)*

Rooks are black birds about the same size as magpies. Adults are black except for their face, which has light-grey skin bare of feathers. Juvenile birds have a black-feathered face. Rooks have long, pointed black beaks and dark-brown eyes. They can cause serious damage to farms and market gardens as they feed on most types of crops, either eating the seed heads or pulling out young plants. They occasionally pierce fruit such as apples and pears with their bills, and can also tear up large areas of pasture looking for invertebrates

Scaly-breasted lorikeet *(Trichoglossus chlorolepidotus)*

Scaly-breasted lorikeets are a medium-sized green lorikeet around 22cm to 25cm in length with yellow 'scales' on its breast, and orange-red underwings. They have a green head and a red beak. Their tail is much shorter than a Rainbow lorikeet. Their natural range occurs across the coast of eastern Australia, within lowland forests as well as heathlands and urban areas with many trees. They feed mainly on nectar and pollen, but also eat blossoms, berries, other fruit, and insects. They can cause damage in orchards and on grain crops.

Exemption to Rules 8.1.6 and 8.1.8

An exemption to Rules 8.1.6 and 8.1.8 may be obtained from Northland Regional Council for the possession, breeding, and selling of scaly-breasted lorikeets where:

a. The person/organisation applying for the exemption is a commercial breeder and/or permitted animal refuge;
b. Facilities used for the commercial and/or refuge operation utilises best management practices to avoid the release or escape of captive animals; and
c. No animals are sold or distributed within Northland, unless to exemption holders.

Sulphur crested cockatoo *(Cacatua galerita)*

Sulphur-crested cockatoos are large, white birds that have prominent yellow crests on the tops of their heads. There is also pale yellow on the underside of the tail and wing. Their beaks are black and their eyes are a dark red-brown. Females are slightly larger than males and juveniles have a paler eye, and may have some grey in their plumage. Sulphur-crested cockatoos usually occur as pairs or small groups in spring and summer and may form large flocks in autumn and winter. Sulphur-crested cockatoos may effect threatened species either directly (by defoliating plants) or indirectly (through competition for nest sites or by changing vegetation composition or structure).

Exemption to Rules 8.1.6 and 8.1.8

An exemption to Rules 8.1.6 and 8.1.8 may be obtained from Northland Regional Council for the possession, breeding, and selling of sulphur-crested cockatoos

where:

a. The person/organisation applying for the exemption is a commercial breeder and/or permitted animal refuge;

b. Facilities used for the commercial and/or refuge operation utilises best management practices to avoid the release or escape of captive animals; and

c. No animals are sold or distributed within Northland, unless to exemption holders.

Wallaby (Macropus, Petrogale and Wallabia species)

Wallabies are small marsupial animals that look like small kangaroos. They are silver-grey to dark brown in colour. Wallabies live in scrub, native forest and production forests, preferring the edges of these habitats. They are nocturnal and start feeding during early to late evening when they eat grasses, native shrubs and trees. Their browsing of native plants changes vegetation composition with subsequent negative impacts on the indigenous flora and fauna.

8.3 Eradication animals

Eradication animals are pests which are present in Northland, but still at levels low enough where targeted programmes could reduce infestation levels of the pests to zero levels in the near to medium term.

Objectives

For the duration of this Pest Plan:

- Continue the eradication efforts undertaken during the previous Pest Plan and eradicate feral deer from Northland and continue to prevent the successful establishment of new wild deer populations.
- Eradicate feral populations of exotic parrots, particularly sustained flocks, and reduce the number of escaped pets through the management of the exotic animal pet trade through rules and exemptions that significantly restrict breeding, selling, and trading these animals as pets.
- Eradicate any freshwater turtle found in the wild prevent the breeding, selling, and keeping of these animals as pets through the rules in this RPMP.

Aims

- Council will work co-operatively with the Department of Conservation and other stakeholders to achieve the programme objectives of the Wild Deer Free Taitokerau/Northland;
- Landowners, occupiers, and the public understand the risks and environmental consequences of feral deer establishing in Northland and are supportive of the programme;
- Landowners, occupiers, and the public understand the risks and environmental consequences of feral parrots, turtles, and lizards establishing in Northland and are supportive of the programme;
- The exotic pet trade is managed to enable sustainable economic activity for existing commercial breeders while managing the extant risk of escapee pets establishing feral flocks.

Listed species

Feral deer (All *Cervus*, *Dama* and *Odocoileus* species and hybrids)

There are currently three species of deer known to be present in Northland: red deer (*Cervus elaphus scoticus*), fallow deer (*Dama dama*) and sika deer (*Cervus nippon*). Red deer and fallow deer are farmed but sika deer is present only as a result of illegal releases.

- Red deer are the largest of the three species and tend to be reddish-brown, occasionally with white spots around the spine.

- Sika deer are one of the few deer species that does not lose its spots upon reaching maturity.
- Fallow deer are the most variable of any deer species in New Zealand with four quite distinctive colour phases. The most common colour is a brown-black back with paler grey-brown underside and neck, and no spots.

Deer are selective browsers and target particular forest species over others. This can result in significant changes to forest composition and has effects on the fauna that rely on those plants. Deer can destroy the under-storey of native forest by browsing, grazing, bark-stripping and trampling, which in turn may increase soil erosion. Feral deer can reduce production by damaging crops and exotic forests. They have also been implicated in the transmission of bovine tuberculosis.

Red-eared slider turtle *(Trachemys scripta elegans)*

Red-eared sliders are commonly sold as hatchlings, and as adults grow up to 30cm long. Their shell is olive to brown with yellow spots/stripes, and they have a distinctive red stripe behind each eye. The diet is omnivorous, including vegetation, zooplankton, molluscs, frogs, crustaceans, insects, gastropods, birds and small reptiles. Red-eared sliders can inhabit a wide variety of still and slow-moving water bodies. They are capable of rapid range expansion via overland dispersal. They are classified as one of the "World's Worst Invasive Alien Species" by the World Conservation Union's (IUCN) Invasive Species Specialist Group.

Snake-necked turtle *(Chelodina longicollis)*

Snake-necked turtles are medium-sized turtles, with an average length of 25 centimetres. They have long, narrow necks, and a shell that is black to light brown. They are endemic to Australia. They are semi-aquatic, preferring slow moving water, and are capable of long distance overland migration. If conditions are dry, they will seek out new habitat. Snake-necked turtles are opportunistic carnivores and feed on a broad range of plankton, bottom-dwelling macro-invertebrates, carrion and terrestrial insects. There are no known populations established in the wild in Northland or elsewhere in New Zealand. Climatic suitability modelling suggests that this species could find suitable nesting sites in some parts of New Zealand, including Auckland and Northland.

8.4 Progressive containment animals

Progressive containment animals are those that are present in the region in numbers that mean eradication is not possible in the short term, but populations can be contained or reduced over time. Due to the mobility of animals and Council resources, the ability to contain infestations is limited to aquatic species in freshwater bodies. These freshwater pests can have a severe impact on waterways and are capable of causing adverse effects to the environmental, economic, social or cultural values in Northland.

Objectives

For the duration of the Pest Plan, reduce impacts on biodiversity, cultural and economic values by containing and, where practicable, reducing or eradicating populations of pest fish and the geographic distribution of populations of pest fish species in Northland.

Aims

- Existing populations will be monitored and, where appropriate, systems set in place to prevent further spread;
- New incursions will be monitored and efforts made to trace their source;
- A prompt response with appropriate funding will be initiated to control or manage infestations in Northland; and
- New technologies and methods will be investigated and introduced where possible.

Listed Species

Koi carp *(Cyprinus carpio, C. rubrofuscus)*

Koi carp are an ornamental strain of common carp. Body colouration is variable, often in a blotchy pattern, which can include black, red, orange, gold and white. They have two pairs of barbels around the mouth. Koi carp grow up to around 70 centimetres long. They are bottom-feeding omnivores and eat plankton as juveniles. Adults mainly eat macro-invertebrates, but also some plant material and fish eggs/larvae.

Koi carp grow rapidly, and have wide environmental and habitat tolerances, including poor water quality. When feeding, koi carp suck up and expel material from the bottom, filtering out edible material. They can greatly increase the turbidity of the water because they are constantly stirring up and dislodging the substrate. Koi prefer still or slow moving freshwater bodies, especially shallow, warm water. They may spend a lot of time in one area, but some individuals undertake long distance movements (greater than 20 kilometres in some cases), particularly during the spawning season. Koi carp reach sexual maturity early in

New Zealand; males mature by two years old, females by three years old. The time to maturation is influenced by water temperature. Multiple spawning events (batches) can occur within one season, and koi carp are highly fertile. Eggs stick to submerged vegetation and reproduction may be limited in habitats devoid of vegetation. Where available they will seek off-stream wetland habitats for spawning.

Progressive containment zones for Koi carp are shown in Figure 9.1 'Koi carp progressive containment zones (1)', Figure 9.2 'Koi carp progressive containment zones (2)' and Figure 9.3 'Koi carp progressive containment zones (3)'.

Perch *(Perca fluviatilis)*

Perch are olive green-grey, with six or more dark vertical bands across their sides. The pelvic and anal fins and lower half of the tail are bright red-orange. Adults are reported at around 40-45 centimetres long and 1-2 kilograms overseas. The fish are predominantly active during the day and are known to live to 20 plus years overseas. Perch shoal as young and are more solitary as adults. The larvae eat free swimming zooplankton and larger juveniles eat bottom-dwelling macro-invertebrates. Adults mainly eat other fish (including cannibalising juvenile perch).

Perch are a warm-water species and becomes less active during winter but tolerate a wide temperature range. The spread of perch in Northland beyond known locations should be avoided as far as possible as this species has the potential to create major problems in lakes through its effects on water quality and endemic biodiversity. Perch have the potential to significantly alter native freshwater communities through predation and competition with native fish species. They show habitat and behavioural flexibility and fill a niche not represented within native freshwater fauna. Perch can dominate fish fauna of freshwater bodies and are invasive overseas.

Progressive containment zones for perch are shown in Figure 9.4 'Perch progressive containment zones (1)' and Figure 9.5 'Perch progressive containment zones (2)'.

Tench *(Tinca tinca)*

Tench were first introduced to New Zealand in 1867 as a sport fish. They grow to a large size in New Zealand and fish weighing more than two kilograms are not uncommon. Tench are usually olive green-bronze in colour, with red eyes, two barbels, large soft-rayed fins and copious mucous. Adults are about 30-40 centimetres long (sometimes up to 70 centimetres) and the lifespan is around five-plus years. Juveniles predominantly feed on zooplankton. Adults are primarily bottom feeders, preferring small molluscs when available, but can survive solely on zooplankton when alternative food sources are absent. Tench are predominantly nocturnal foragers and are a warm water species, becoming less active during winter.

Tench are found in shallow regions of warm, still or slow-moving freshwater bodies with soft substrates (mud/silt/sand) and preferably some submerged vegetation. They tolerate very low oxygen levels, high turbidity, brackish water and a wide pH range. Tench spawn in shallow water, broadcasting eggs over substrate. They can spawn more than once within one season. Warmer temperatures favour earlier sexual maturation and higher fertility. Tench have the potential to significantly alter native freshwater communities. They have few predators in New Zealand. The progressive containment zone for tench is shown in Figure 9.6 'Tench progressive containment zone'.

[[Progressive containment maps are being updated]]

8.5 Sustained control animals

Sustained control animals are pests that are widespread in suitable habitats throughout Northland. These pests all cause adverse effects to the environmental, economic, social or cultural values of the region. Biodiversity projects involving the sustained control pests are managed through the Rules in this RPMP and through non-statutory programmes, for example where biosecurity partners collaborate on Community Pest Control Areas. The following information applies to all of the sustained control animals.

Objectives

For the duration of the Pest Plan, reduce the impacts of sustained control animal pests on the biodiversity, cultural and economic values in Northland.

Aims

- To help landowners, occupiers, and the public to gain knowledge and skills to help reduce the impacts and spread of the sustained control pests.

Listed Species

Argentine ant *(Linepithema humile)* and Darwin's ant *(Doleromyrma darwiniana)*

Argentine ants are only 2–3 millimetres long and are a uniform honey-brown colour. Foraging ants move steadily in defined continuous trails that can often be seen going up trees or shrubs, especially if these are flowering. The ants cannot sting but some people react to their bite. They have a slight greasy odour when crushed, as opposed to the strong formic acid smell of some ant species. Darwin's ants are about two millimetres long. They have a dark-brown head but the rest of the body and the legs are light brown. They look similar to Argentine ants but they give off a strong odour when crushed.

Brown bullhead catfish *(Ameiurus nebulosus)*

Brown bullhead catfish are a dark brown to olive green colour with paler sides and bellies. They have eight distinctive barbels around the mouth, small eyes and smooth, scaleless skin. The leading edge on their dorsal and pectoral fins has a sharp toxic spine.

Catfish are found in lakes and slow-moving water bodies, and favour areas with submerged vegetation. Tolerance of poor water quality enables them to cope with habitats that many other species are unable to tolerate. Tolerance of low oxygen levels could also increase their chance of survival if people move them between water bodies.

Catfish are now well established in the Wairoa River catchment, but they appear to be relatively scarce elsewhere in Northland (only 10 known sites). Catfish could be readily spread from the Wairoa River catchment to a range of other waters, including lakes, in Northland. Rated highly for impact and management priority in New Zealand and some overseas jurisdictions. Opportunistic, generalist feeders, therefore wide range of taxa potentially impacted by predation. Documented eating common bullies as well as a wide range of invertebrates including koura (native crayfish - preferred food source where available), caddis fly, snails and midges. May affect establishment and persistence of submerged vegetation.

Cats - feral and stray *(Felis catus)*

Feral and stray cats are widely distributed throughout New Zealand and live in most terrestrial habitats. Feral cats have none of their needs provided by humans. They do not usually live around centres of human habitation and their population is self-sustaining. Stray cats are companion/domestic cats that have been lost or abandoned. They may have many of their needs indirectly supplied by humans and live around centres of human habitation. Companion cats, which are excluded from this plan, live with humans as a companion and are dependent on them for their welfare. Cats are generalist predators and can have large home ranges. It is estimated that feral, stray and companion cats kill up to 100 million birds in New Zealand each year. They are a major predator of kiwi chicks and also eat eggs, lizards, invertebrates and frogs. Cats that are not given regular preventative treatments can spread diseases, such as toxoplasmosis.

Feral goat *(Capra hircus)*

Feral goats vary in size and colour and are social, preferring to travel in small groups. Goats destroy the under-storey of vegetation and, when combined with possum damage to the upper canopy, severe deterioration of native forest occurs. Browsing reduces vegetation cover and density and causes the loss of plant species' richness and altered community composition in favour of unpalatable species. Goats also damage vegetation planted on land retired for soil conservation purposes and newly planted or young trees in exotic forests.

Feral pig *(Sus scrofa)*

Feral pigs occur in both native forest and exotic plantations and are well established throughout New Zealand. They are smaller and more muscular than domestic pigs.

Feral pigs eat grasses and crops and cause damage through uprooting. They can destroy forests and wetlands by uprooting trees, saplings, and grasses, eating native plants, and causing streambank and wetland erosion. Feral pigs eat native animals and are particularly damaging to native insect numbers. They are known to be carriers of bovine tuberculosis and leptospirosis. They are a key vector

spreading kauri dieback disease.

Mustelids - ferret *(Mustela furo)*, stoat *(Mustela erminea)* and weasel *(Mustela nivalis vulgaris)*

Ferrets, stoats and weasels belong to a group of animals known as mustelids.

- Ferrets are the largest of the three species at about 48-56 centimetres long, including the tail, and are usually dark brown or blackish with a creamy under fur.
- Stoats, the most common of the three mustelids, grow to 34-40 centimetres long, are very thin. Stoats have a chestnut-brown coat, which turns white in winter, a light-coloured belly, and a bushy, black-tipped tail.
- Weasels are the smallest and least common of the three mustelids, growing to 20-25 centimetres long with similar colouring to a stoat. Weasels will attack prey that is much larger than themselves.

Mustelids are widespread throughout Northland. They can be devastating to native bird life and other fauna. Native bird species, lizards, frogs and large native insects (like weta) are particularly susceptible to mustelid attack.

Possum *(Trichosurus vulpecula)*

Possums are furry marsupial animals of medium to stout build with thick, bushy tails. Their bodies are 38-45 centimtres long excluding the tail. They can be grey or black. Possums have large eyes and catlike whiskers, which are characteristic of nocturnal animals. Possums are found throughout the region, although their density varies from area to area. They are one of the most destructive animals in a forest environment. Their browsing damages and destroys forests, and affects pasture, vegetable and horticultural crops. Possums can be a vector in the spread of diseases affecting domestic animals and people, including bovine tuberculosis.

Rabbit *(Oryctolaqus cuniculus cuniculus)*

Rabbits are usually grey-brown in colour, with other colour varieties occasionally occurring in the wild. They may live in communal warrens (underground tunnels with multiple entrances) or above-ground where sufficient cover exists.

Rabbits are widespread throughout Northland at varying levels of infestation. Soil type and land management have a significant influence on population levels, with the greatest densities on hard-grazed lighter and drier sandy and volcanic soils. Rabbits breed rapidly and populations can recover quickly after being reduced by disease, control pressures or environmental changes. They eat a variety of plant matter including grasses (they compete directly with stock for grazing and can sour pasture by eating out the most palatable species of grass), seedlings of trees and crops.

Domestic rabbit varieties, when in proper confinement, are excluded from the Pest Plan.

Rats - including Norway rat (*Rattus norvegicus*) and ship rat (*Rattus rattus*)

Rats are widespread throughout Northland. Norway rats are the larger of the two European rats found in New Zealand. Their coats are grey-brown and shaggy with a pale underside. Ship rats are smaller than Norway rats but their tails are larger and thicker and longer than their bodies.

Rats are mainly nocturnal. They have a varied diet that includes native birds, eggs and chicks, invertebrates, frogs, and lizards. They eat large quantities of native seeds, either from the ground or straight from the tree (in the case of ship rats, which can climb high into the canopy). Norway rats are common in wet habitats and urban areas. Ship rats are found in most habitats and they are the most abundant and widespread rat on mainland New Zealand. Since their arrival in New Zealand, rats have had significant impacts on native flora and fauna, and have been implicated in the decline of many native species.

Domestic rat varieties, when in proper confinement, are excluded from the Pest Plan.

Rudd *(Scardinius erythrophthalmus)*

Rudd were illegally imported into New Zealand in 1967, and widely released into freshwater systems. Rudd are darker on their backs than on their bellies and have bronze highlights when the light catches their scales. Their fins are usually bright reddish-orange. They do not have spines on the front edge of the dorsal fin, but have projections at the bases of their pectoral and pelvis fins. Rudd are usually 20-25 centimetres long.

Rudd are restricted mainly to lakes and ponds in Northland. Current data indicates they are present in Lakes Rototuna, Ngatu, Parawanui, Kapoai and Kai Iwi, along with four unnamed lakes and ponds. Populations have been recorded in the Waitangi River and a small tributary of the Wairoa River.

Rudd are prolific breeders. Juvenile rudd are carnivorous, but as adults their diet consists mainly of aquatic plants. A high-density rudd population could impact on native fish and plant communities, particularly where plant communities are limited. Rudd are often caught for sport by coarse anglers.

8.6 Site-led management programmes

A 'site-led management programme' is utilised where the intermediate outcome for the programme is that the subject species, or an organism being spread by the subject species, that is capable of causing damage to a place is excluded or eradicated from that place, or is contained, reduced, or controlled within the place to an extent that protects the values of that place.

Northland has a wide variety of established pests that prey on our native taonga fauna and can devastate native flora; and in spite of these ongoing risks, Northland still has natural areas of ecological, social, and cultural importance that can significantly benefit from targeted protection.

In this RPMP, site-led programme frameworks have been developed to identify areas with significant values to protect and enable biosecurity measures to compliment ongoing biodiversity enhancement projects and aspirations.

[WORK IN PROGRESS]

[SPECIES SUBJECT TO Site-Led Efforts]

- All listed species in this Plan
- Focus depends on site where management will take place:
    - Dune Lakes Programme – pest fish, pest weeds
    - Ungulates programme – pigs, goats, deer, complimenting protection of Kauri from Kauri Dieback
    - Predator Free Areas – build on success of possum, mustelid, and rat control, look towards mice, hedgehogs, and wasps.
    - Water quality efforts – Canada goose. Identify areas where Canada goose and other exotic waterfowl (not protected) are contributing to water quality issues

5 Pest Management Framework

5.1 Objectives

Objectives have been set for each pest or class of pests. As required by the National Policy Direction, the objectives include:

- the particular adverse effect(s) (Section 54(a) of the Act) to be addressed;
- the intermediate outcomes of managing the pest;
- the geographic area to which the objective applies;
- the level of outcome, if applicable;
- the period for achieving the outcome; and
- the intended outcome in the first 10 years of the Plan (if the period is greater than 10 years).

In selecting the most appropriate objectives and programmes for each pest, we must understand the costs and benefits associated with different management regimes, and the risks and impacts of each pest in the absence of any management.

5.1.1 Pest Ecology – invasion curve

Classifying pests into categories makes it easier to understand the potential risks and impacts of those pests. The council has used an 'invasion curve model' to help classify pests and guide decision-making on pest management options.

The invasion curve is a simple descriptive model (derived from Williams, 1997) that demonstrates basic pest population dynamics and can be used to help guide strategy objectives and management programmes for individual pests. There is a strong relationship between where a pest sits on the invasion curve and the likelihood of controlling it.

[INVASION CURVE FIGURE]

The invasion curve has four stages which can be explained as follows:

Absent stage: These pests have not yet established in Northland, or all known sites have been eradicated. The most effective form of management is to continue to exclude them.

Lag stage: This is the initial slow establishment stage. Pest numbers are low, the rate of population increase is slow and distribution is limited. The most cost-effective option during this stage may be eradication, to prevent further establishment.

Explosion stage: The explosion stage occurs once a pest has adapted to its environment and has reached a population base that allows rapid growth in population size and range. At this stage it is not realistic or cost effective to eradicate the pest, but it may be possible to prevent further spread through containment.

Established stage: This stage occurs when the rapid growth in population size and range slows as the pest fills most of its available habitat. At this stage, pests can only be suppressed to mitigate their impacts.

5.1.2 Pest Management Programmes

Examples of programme objectives as they relate to invasion stages are shown in this table:

Category	Objectives
Exclusion pests (Absent stage)	For the duration of the Pest Plan, avoid impacts to biodiversity, cultural and economic values by preventing the establishment of exclusion pests in Northland. Council will search for and control new incursions of pests that are present in New Zealand but not yet established in Northland which have been identified as having the potential to be a serious pest in the future. Section 100V of the Act may be used to investigate emergency control of new incursions of pests that are not otherwise listed in the Pest Plan.
Eradication pests (Lag stage)	For the duration of the Pest Plan, reduce impacts to biodiversity, cultural and economic values by eradicating identified pests in Northland. The intermediate outcome is to eradicate the pest in an area. In the short to medium term, infestation levels will be reduced to the point where it becomes difficult to detect the pest.
Progressive containment pests (Explosion stage)	For the duration of the Pest Plan, reduce impacts to biodiversity, cultural and economic values by containing and, where practicable, reducing the geographic distribution of pests in Northland. The intermediate outcome is to contain and reduce the geographic distribution of the pest to an area over time. Progressive containment pests are those where a pest is at high densities in parts of Northland,

	but of low extent or limited range. Eradication is not feasible, but it is feasible to prevent the pest from spreading to other parts of Northland or to eradicate the pest from other parts of Northland.
Sustained control pests (Established stage)	For the duration of the Pest Plan, reduce impacts to biodiversity, cultural and economic values by controlling identified pests in Northland and preventing unreasonable impacts from these plants spreading across property boundaries and causing unwanted effects on adjacent or nearby neighbours' assets and values. The intermediate outcome is to provide for the sustained control of the pest to a level where externality impacts are manageable. The focus is on ensuring densities do not reach a level where they are causing significant externality impacts.
Pathway management plan	For the duration of the Marine Pathway Plan, reduce and avoid impacts to biodiversity, cultural and economic values by preventing the establishment of marine pests and where practicable, containing the geographic distribution of pests in Northland.

5.1.3 Additional Programmes

In addition to the management programmes that are applied to identified pests, objectives and rules can also be developed which are applied to geographic locations, directing or restricting activities in and between locations. In this RPMP, we have:

- Pathways Management; and
- Site-Led Management.

Pathways Management

Pathways management involves rules on activities that are likely to transport and spread pests from known established populations to locations without established populations. This RPMP includes a Marine Pathways Management Plan to protect out coastal waters from invasive species, and the RPMP also includes general hygiene rules to manage the spread of freshwater pests.

Site-Led Management

Site-led management programmes enable Council to have targeted management for a range of species within specified locations. Such areas may have outstanding natural values that are threatened by a range of invasive species, or have particularly vulnerable habitats that could be significantly impacted by an incursion. Site-led programmes allow for additional funding and resources to manage pests in a specified area for a specified period of time to achieve certain intermediate outcomes. This RPMP includes site-led programmes for freshwater and terrestrial environments.

5.2 Principal measures to manage pests

The principal measures used in the Pest Plan and Marine Pathway Plan to achieve the objectives are in four main categories. Each category contains a suite of tools to be applied in appropriate circumstances.

5.2.1 Requirement to act

Landowners and/or occupiers or other persons may be required to act where pest or pathway management rules dictate:

- pests are to be controlled;
- management plans are to be prepared and submitted;
- the presence of pests is to be reported;
- actions are to be reported (type, quantity, frequency, location, programme completion);
- pests are not to be spread (propagated, sold, distributed); or
- pathways are to be managed (for example, vessel hulls).

5.2.2 Council inspection

Inspection by council may include staff:

- visiting places or doing surveys to determine whether pests are present, or rules and management programmes are complied with, or to identify areas that control programmes will apply to (places of value, exclusion zones, movement control areas);
- managing compliance with regulations (rule enforcement, action on default, prosecution, exemptions);
- taking limited control actions, where doing so is effective and cost efficient; or
- monitoring effectiveness of control.

5.2.3 Service delivery

Council may deliver the service:

- where it is funded to do so within a rating district;
- on a user-pays basis;
- by providing control tools, including sourcing and distributing biological agents, or provisions (for example, traps, chemicals).
- Council will support the development of tools and best practice guidelines to manage pests.

5.2.4 Advocacy and education

Council may:

- provide education, advice, awareness and publicity activities to owners and/or occupiers and the public about pests and pathways (and control of them);
- encourage owners and/or occupiers to control pests;

- facilitate or fund community and landowners and/or occupier self-help groups and committees;
- work co-operatively with other agencies and stakeholders with control, advocacy, and the sharing or sourcing of funding;
- promote industry requirements and best practice to contractors and owners and/or occupiers;
- encourage owners and/or occupiers and other persons to report pests they find or to control them; or
- facilitate or commission research.

5.3 Rules

Rules play an integral role in securing many of the pest management outcomes sought in this Plan. They create a safety net to protect land owners, occupiers, and the environment at large from the effects of the actions or inactions of others where non-regulatory means are inappropriate or do not succeed. The Crown is bound by the rules identified in this plan as 'Good Neighbour Rules' pursuant to the Biosecurity Act 1993.

Section 73(5) of the Act prescribes the matters that may be addressed by rules, and the need to:

- specify if the rule is to be designated as a Good Neighbour Rule;
- specify if breaching the rule is an offence under the Act;
- specify if an exemption to the rule, or any part of it, is allowable or not; and
- explain the purpose of the rule.

Section 93(5) of the Act prescribes the matters that may be addressed by pathway plan rules.

Rules can apply to owners and/or occupiers, or to a person's actions in general.

The National Policy Direction and accompanying guidance notes set out additional requirements to include in the rules of a new Good Neighbour Rule; in particular:

- identify who the Good Neighbour Rule applies to (either all owners and/or occupiers, or a specified class of owner and/or occupier);
- identify the pests to be managed;
- state that the pest must already be present on the owner's and/or occupier's land;
- state that the owner and/or occupier of the adjacent or nearby property must, in the view of the management agency, be taking reasonable measures to manage the pest on their land; and
- (if relevant) state the particular values or uses of the neighbouring land that the pest's spread affects, and that the Good Neighbour Rule is intended to address.

5.4 Non-regulatory programmes

5.4.1 Predator Free 2050

Predator Free 2050 (PF2050) is a coordinated nationwide goal to eradicate mustelids, rats, possums, and feral cats from mainland New Zealand by 2050. It is operated by the Predator Free NZ Trust, but it has significant input from crown agencies including leadership from the Department of Conservation. The Trust provides funding to researchers and to large-scale pest management operations across the country.

Northland Regional Council leads two Predator Free projects within Northland:

Predator Free Pēwhairangi Whānui

Predator Free Pēwhairangi Whānui spans across three peninsulas in the Bay of Islands:

- Purerua-Mataroa,
- Russell/Kororāreka, and
- Cape Brett/Rakaumangamanga

The programme is led by Northland Regional Council and is supported by numerous Māori partners and collaborators including Ngāti Rēhia, Ngāti Torēhina, Ngāti Kuta, and Patukeha, Russel Landcare trust, Kiwi Coast, Manaaki Whenua, and the Department of Conservation. This project was launched in July 2021

Predator Free Whangarei

Predator Free Whangarei includes 60,000ha the Whangarei District with 3 different programmes:

- Possum-free Whangarei Heads, covering about 9,000ha from Parua Bay/Taraunui out to the sea;
- Tiakina Whangarei, a community partnership programme supporting predator control activities in Whangarei urban areas (including Onerahi and Te Kamo);
- General predator suppression across the district, with resources such as traps and baits provided to residents at cost.

The programme involves NRC staff working collaboratively with nearly 2,000 landowners across the project areas/

Poipoia te Kakano

A third Predator Free 2050 programme in Northland, Poipoia te Kakano, is being led by Environs Te Uri o Hau. Launched in August 2021, it seeks to eradicate possums, stoats, rats, and pigs from 105,000ha across 5 peninsulas in the Kaipara Harbour:

- Hukatere
- Puketotara
- Pouto
- Okahukura (Auckland)
- Te Korowai o Tonga (Auckland Region)

5.4.2 Tiakina Kerikeri

TBC

5.4.3 Community Pest Control Areas

TBC

11 Marine pathways plan

Northland's coastal marine area has significant economic, ecological, social, and cultural value, comprising:

- approximately 3000 kilometres of coastline;
- dozens of offshore islands and stacks;
- 17 harbours and major estuaries; and
- extensive stretches of rocky and sandy open coast.

The marine environment also includes a wide range of subtidal habitats, ranging from rocky reefs to sand or mud bottom areas. Largely due to this diversity of habitat and the region's warm subtropical climate, and prevailing oceanic currents, Northland has a greater biodiversity of marine fish and invertebrates than any other region in New Zealand. It also contains marine ecosystems of national and regional importance, including two marine reserves and numerous nursery areas for economically and culturally significant fish stocks.

Northland is also the home and destination of thousands of sea-going vessels every year, most of which are small boats (<10m long) used for recreation within harbours and bays. There are about a hundred yachts used as residences, primarily in the Bay of Islands and some other harbours on the east coast. In and around summer, yachts arrive in our ports and harbours from international harbours, potentially bringing tropical hitchhikers both above and below deck.

To manage marine pests in this RPMP, a Pathway Plan has been developed.

11.1.1Introduction

A pathway plan is designed to prevent pests from reaching new areas, rather than responding to a pest once it has arrived and had time to establish. Put simply, 'pathways' are human activities that may transport a (marine) pest from one place to another; for example, hull biofouling, ballast water, or movement of aquaculture equipment.

Experience has shown that the eradication and control of established marine pest populations is difficult and expensive, so reducing the spread of marine pests through management of pathways is a high priority. An effective pathways plan will not only prevent incursions of new marine pests into the region, but will also reduce the spread of harmful marine species that are already established in Northland's coastal marine area.

As well as addressing recognised harmful marine organisms, pathways plans have the benefit of including all the unknown or potential risk species that may be associated with a pathway, irrespective of their designated pest status. The pest management national plan of action clearly defines roles and responsibilities of agencies within the scope of marine biosecurity. The Ministry for Primary Industries

(MPI) manages border biosecurity, the national high-risk site surveillance and national incursion responses. MPI is also responsible for setting marine pest priority species at a national level and carrying out the risk assessments of new-to-New Zealand organisms. At the time of development of this plan, New Zealand has an existing list of 10 marine pests designated as Unwanted Organisms by the MPI. However, as these are set at a national level, some of the regionally-specific threats may be overlooked; for example, species that may not pose a threat in cooler southern waters could become problematic if introduced to Northland.

Marine pest pathways into Northland

Biofouling on the hulls of moored, anchored or berthed vessels is widely regarded as an important contributor to the spread and establishment of marine pests. Significant fouling can arise on vessels, particularly those that spend long periods of time idle. Some vessel types (for example, yachts) also travel at slow speeds, meaning that fouling pests are not dislodged and can easily be transported to new locations.

Both recreational and commercial vessels have the potential to transport marine pests as hull biofouling. Vessels will accumulate local biofouling organisms on their hull during periods of inactivity or when the antifouling coating is not working effectively. This accumulation of local hull fouling may look unsightly but does not pose a biosecurity risk until vessels move and take the local biofouling with them to new locations.

Northland is highly connected to other regions of New Zealand through the movement of both commercial and recreational vessels and it is likely that new species will continue to be introduced unless effective management systems are put in place.

Commercial and recreational vessels arrive into Northland from both domestic and overseas ports. Northland receives about 400 large (greater than 99 tonnes) commercial vessels annually with the vast majority of these being bulk and cargo vessels that travel to Northport in Whangārei Harbour. However, the majority of vessel movements in Northland are visiting recreational vessels (more than 2000 per year). Recreational vessels arrive in Northland from many parts of the country and the region's two customs clearance ports mean it also receives a large proportion of vessels from overseas. Ōpua is among New Zealand's busiest ports for recreational vessels, with more than 1300 long-distance arrivals and departures each year, while Whangārei receives about half that number. Vessel hull biofouling has been implicated in incursions of the marine pests *Sabella spallanzanii* (Mediterranean fanworm) and *Styela clava* (a sea squirt) in Northland.

11.1.2 Objectives

The objective of the Marine Pathway Plan is to prevent the introduction of new marine pests into Northland and slow the spread of established marine pests within the region.

11.1.3 Pathway to be managed

The pathway to be managed is vessel movement.

11.1.4 Aims

For the duration of the plan:

- There will be an increase in the number of vessel owners and/or persons in charge of vessels complying with the Marine Pathway Plan rules;
- There will be an increase in awareness of the risk hull fouling poses to marine pest spread;
- There will be a reduction in new marine pest introductions to Northland;
- There will be a reduction in the rate of spread of established marine pests within Northland; and
- Appropriate funding and resources will be allocated to the control and/or management of hull fouling in Northland.

11.1.5 Principal measures

Requirement to act

The person in charge of a vessel is required to:

- ensure there are no pest species or unwanted organisms present on the hull of the vessel
- the fouling on the hull of the vessel meets the requirements of the Marine Pathway Plan.

Voluntary Antifouling Declaration

Council will issue an Antifouling Declaration to people in charge of a vessel where a declaration is made:

- Providing the full name; contact address; email address and phone number of the person making the declaration;
- Detailing the craftname; any relevant ID number; craft type; and closest home port of the vessel in respect the declaration is made;
- That the vessel has had antifouling paint applied to its hull in accordance with the manufacturer's instructions within the preceding 12 months.
- Antifouling Declarations are valid for 12 months.

Rules 11.1.1 and 11.1.2 must still be compiled with where a vessel has a current Antifouling Declaration.

Council inspection

Council staff and/or their contractors will:

- conduct surveys to assess hull fouling on vessels in all areas within Northland.
- manage compliance activities such as rule enforcement, action on default, prosecution and rule exemption applications.

Service delivery

Council will:

- support voluntary compliance by vessel owners by funding surveillance and education activities.
- ensure tools and best practice guidelines are available to vessel owners and relevant industries.

Advocacy and education

Council will:

- encourage owners and/or persons in charge of vessels to control hull fouling.
- work co-operatively with other agencies and stakeholders to facilitate research to understand potential risks of hull fouling, and develop tools and best practice guidelines to manage hull fouling.
- provide training to relevant council staff and stakeholders in the assessment of vessel hull fouling and identification of marine pest species.
- provide advice, attend events and undertake publicity campaigns to increase public awareness of marine pests and hull fouling as a vector of spread.

11.1.6 Marine pests and unwanted organisms

Even when the requirements of the Marine Pathway Plan rules are met, the following legislation still applies.

Under Sections 52 and 53 of the Biosecurity Act 1993 no person can sell, propagate, breed, distribute or otherwise spread any pest in this plan, or any unwanted organism. Not complying with Section 52 or 53 is an offence under the Act, and may result in the penalties noted in Section 157(1).

Other relevant legislation or programmes

The Regional Plan has rules relating to in-water cleaning of vessel hulls and marine pests. These rules cover the following sections of the RMA: discharge of contaminants to water ((Sections 15(1)(a) and 15B(1)(a)); deposit any substance in, on and under any foreshore or seabed ((Section 12(1)(d)), and introduce or plant any marine pest in, on and under any foreshore or seabed ((Sections 12(1)(f) and 12(3)(a)). XXX TO BE UPDATED FOLLOWING RELEASE OF NEW NEP BILL/ACT.

The Marine Pathway Plan rules will not apply to international vessel arrivals because the Pest Management National Plan of Action allocated responsibility for border biosecurity to the Ministry for Primary Industries, which has developed the *Craft Risk Management Standard: Biofouling on vessels arriving to New Zealand 2014* to manage the risk of international vessels introducing marine pests to New Zealand. Information about this standard can be found via *"Craft Risk Management Standard, for bio fouling"* (XXX INSERT HYPERLINK).

11.1.7 Rules

The purpose of Marine Pathway rules is to prevent the spread and establishment of marine pests into and around Northland.

Rule 11.1.1 The owner or person in charge of a craft entering Northland must ensure that the fouling of the hull and niche areas of the craft does not exceed 'light fouling'.

Rule 11.1.2 The owner or person in charge of a craft moving from one 'designated place' and entering a separate 'designated place' in Northland must ensure that the fouling on the hull and niche areas of the craft does not exceed 'light fouling'.

Definition: 'Light fouling' is defined as: small patches (up to 100mm in diameter) of visible fouling, totalling less than 5% of the hull and niche areas. A slime layer and/or any species of barnacles are allowable fouling.

A breach of Rules 11.1.1 and 11.1.2 will create an offence under section 154N(19) of the Act.

However, if these Rules are breached and the following three criteria are each met, the Council will not prosecute and instead will issue a notice of direction pursuant to s122 of the Act:

1. There is a current Antifouling Declaration for the craft; and
2. The owner or person in charge of the craft provides documents to Council that confirm application of antifouling paint to the craft in accordance with manufacturer's instructions within the preceding 12 months of the date the declaration was made; and
3. Marcofouling or filamentous algae does not exceed 15% of the visible hull surface.

Exemptions to Rules 11.1.1 and 11.1.2

The above pathway plan rules will not apply to craft entering Northland, or moving between areas in Northland in an emergency situation. For the purposes of this pathway plan, an emergency arises when the craft enters Northland, or moves between areas in Northland, because of an emergency rlated to:

1. The safety of the craft; or
2. The health and safety of any person on board the craft; or
3. The New Zealand Defence Force acting in the event of a natural disaster, or emergency management response. This exemption does not apply to training purposes.

Exemption to Rule 11.1.2

Vessels can travel from one designated place to another for the purpose of a haul out. The vessel haul out must be undertaken within 24 hours of arriving in the new designated place. Proof via receipt from a haul out facility must be provided to a council authorised person.

- Council staff and/or their contractors will conduct surveys to assess hull fouling on vessels in all areas within Northland.
- Council staff and/or their contractors will manage compliance activities such as rule enforcement, action on default, prosecution and rule exemption applications.

11.1.8 Marine Pathway Plan designated 'places'

Council has designated harbours and popular anchorages as discrete 'places'. A vessel moving between these designated 'places' must ensure fouling on the hull does not exceed 'light fouling'.

The 'place' boundaries take into account the known marine pest risks of the 'place', common vessel movements and anchorages, and the proximity of haul out or cleaning facilities. Coordinates for these 'places' can be found in Appendix XXX – Marine Pathway Plan designated places coordinates'.

[MAPS EXCLUDED DUE TO FILE SIZE RESTRAINTS ON WORKING PARTY AGENDA]

11.2 Sustained control marine pests

Marine pests in the sustained control programme are pests that are already established in suitable habitats throughout Northland. These pests all cause adverse effects to the environmental, economic, social or cultural values of the region.

11.2.1 Objective

For the duration of the Pest Plan, reduce the impacts of sustained control marine pests on the biodiversity, cultural and economic values in the Northland coastal marine area.

11.2.2 Aim

To help marine stakeholders, coastal marine area occupiers, vessel owners and the public to gain knowledge and skills to help reduce the impacts and spread of the sustained control pests.

11.2.3 Rules

The purpose of Marine Pathway rules is to prevent the spread and establishment of marine pests into and around Northland.

Rule 11.2.1 No person shall knowingly transport, distribute, sell or offer for sale any material or equipment that may contain or harbour a marine sustained control pest. Suitable measures will be undertaken to ensure all marine sustained control pests are removed or rendered non-viable.

Advice note: Suitable measures include but are not limited to; ensuring all marine gear and equipment on a vessel or used in the marine environment is visibly clean and all on-board residual seawater has been treated or is visibly clean and free of marine pests.

Rule 11.2.2 Where an authorised person identifies a property or structure or activity as high risk in the coastal marine area, the owners must implement an approved management plan to reduce the risk of the identified marine pest from spreading.

Advice note: "*Activity*" includes, but is not limited to, dredging, marine farming (including transport of product or equipment), commercial fishing, tourism charters and marine construction.

A breach of these rules will create an offence under Section 154 N(19) of the Act.

Banned from sale and distribution

Under Sections 52 and 53 of the Biosecurity Act 1993 no person can sell, propagate, breed, distribute or otherwise spread any pest in this plan. Not complying with Section 52 or 53 is an offence under the Act, and may result in the penalties noted in Section 157(1).

11.2.4 Other relevant legislation or programmes

Biodiversity programmes and community-led projects involving the sustained control pests are managed outside the pest management plan through the 'Biosecurity Partnerships' programme.

In addition to the marine species listed within this plan, there are a number of marine species that are named as unwanted organisms by MPI that have not yet established in New Zealand. More information can be found on the MPI Website

11.2.5 Principal measures

Requirement to act

People are required to undertake actions to help reduce the impacts and spread of the sustained control pests.

The purpose of the rules is to assist both in reducing the impacts of sustained control pests in Northland on values, and the spread of sustained control pests to other places within and beyond the Northland coastal marine area.

Council inspection

- Council staff and/or their contractors will visit places and conduct surveys to determine whether rules and management programmes are complied with and effective.
- Council staff will undertake compliance activities when required, such as rule enforcement, action on default, prosecution and processing exemptions.

Service delivery

Council staff will provide education and advice to stakeholders, occupiers and the public about the sustained control pests and how to manage them.

Advocacy and education

Council will provide training to relevant council staff and stakeholders in the identification and control of the sustained control pests.

Council will provide advice, attend events and undertake publicity campaigns to increase public awareness of these marine pests.

11.2.6 List of Sustained Control Speciesl

Asian paddle crab (*Charybdis japonica*)

Asian paddle crabs are relatively large swimming crabs with paddle-like hind legs.The shell can reach 12 centimetres across. Adults have six distinct spines or spikes on each side of the shell below the eyes, and five prominent spines on the upper surface of each claw. The crabs range in colour from pale-green or olive-green to a deep chestnut-brown with purplish markings on the shell. They are are typically found in estuaries where there is firm sand, muddy fine sand, or muddy-shelly fine sand. These crabs are very aggressive and have the potential to compete with native crabs for space and food. They also prey on native species including shellfish, fish, other crustaceans and polychaete worms.

Australian droplet tunicate *(Eudistoma elongatum)*

The Australian droplet tunicate is a type of sea squirt. It forms large colonies that look like clusters of white or

cream-coloured cylindrical tubes. Each colony contains numerous small individuals and they can appear orange flecked due to the colour of the larvae within them. The Australian droplet tunicate is firm and gelatinous to the touch and the cylindrical colonies are generally 5-30 centimetres long, but can occasionally reach 1.5 metres long. Colonies over-winter as small cream buds, re-growing into larger colonies when the conditions are favourable.

The Australian droplet tunicate is able to occupy a wide range of lower inter-tidal and shallow sub-tidal habitats in both sheltered bays and semi-sheltered coastlines. It is generally found in soft-bottomed tidal habitats and on hard structures such as wharf piles, aquaculture equipment and mangrove roots. It competes with native species for both space and food, grows rapidly, can inhabit a wide range of habitats, and can reach high abundances. Its larvae can disperse naturally with water currents. Australian droplet tunicates are most commonly spread as fouling on marine farming equipment and potentially as fouling on boat hulls.

Exotic Caulerpa *(Caulerpa brachypus* and *Caulerpa parvifolia)*

Exotic Caulerpa (Caulerpa brachypus and Caulerpa parvifolia) are closely related and appear identical. They have green fronds up to 10 centimetres long in the shape of oar blades that rise from long runners or roots known as stolons. They can be found growing below the tideline at between 2 metres and 30 metres on both hard surfaces and in sandy areas.

Exotic caulerpa can spread rapidly, forming vast, dense underwater fields. In the right conditions, this pest can smother the ocean floor between the low-tide mark to approximately 40 metres deep. They crowd out native marine life, including sponges, cockles, mussels, scallops and even native caulerpa species. This presents

a risk to recreational, cultural, and commercial marine activities. Once established, exotic caulerpa is difficult to get rid of.

One of the main ways exotic Caulerpa spreads is by breaking into fragments, which can easily float to other areas and take root, or by attaching to marine equipment (e.g. boat anchors and chains, nets, dive and fishing gear, and crayfish pots) and relocating to a new location.

Exotic caulerpa can survive out of water for up to a week or more in moist conditions (like in an anchor locker or a bunched-up fishing net).

Japanese mantis shrimp (*Oratosquilla oratoria*)

The Japanese mantis shrimp is a large light grey mantis shrimp that can grow up to 185 millimetres long. As with other mantis shrimp, it has two long spiny claws to capture food. Japanese mantis shrimp has red-maroon ridges running down the mid-length of its body, and the outer surface of the tail fan is blue and yellow (it is grey and yellow in the native species). Japanese mantis shrimp live in burrows in soft sediments, sand and mud in sheltered bays and estuaries. It is native to the north-west Pacific where it is most common in the temperate waters of China and Japan.

In New Zealand, Japanese mantis shrimp has been reported in harbours along the west coast of the North Island. It was found in the Kaipara Harbour in 2009 and has subsequently been discovered in the Hokianga Harbour and reported in the Waikare Inlet. The Japanese mantis shrimp preys on shrimps, crabs and juvenile fish and can alter habitats through its burrowing activities.

Mediterranean fanworm *(Sabella spallanzanii)*

Mediterranean fanworm is a large tube-dwelling bristle worm that is typically found in estuaries and sheltered sites up to depths of around 30 metres. It has a tube up to 80 centimetres tall, which is always anchored to a hard surface, topped with a single, spiral fan (radiole). The tube is tough and flexible and often muddy in appearance. It can often have other organisms growing on the surface. Mediterranean fanworm can live in most artificial and natural habitats in the marine environment but it will not tolerate freshwater. It is generally found on hard sub-tidal structures, but can also be buried up to 10 centimtres deep in soft substrates. It is also a fouling species on moored vessels and this is the most common way it is spread.

Mediterranean fanworm can form dense beds that are likely to out-compete other species, clog fishing gear and dredges, and interfere with biological processes. It has the potential to compete with native filter-feeding organisms for food and space, and in high densities is likely to impact commercially on important species (for example, mussels, oysters, and scallops. Mediterranean fanworm is established in the Whangārei Harbour, Waitemata Harbour and elsewhere in the Auckland

region and in Lyttelton Harbour.

Pyura sea squirt *(Pyura praepetualis and Pyura doppelgangera*)

Formerly known as Pyura stolonifera praeputialis

The pyura sea-squirt has a sack-like body with a brown, or reddish-brown, leathery skin. There is sometimes sand and shell material incorporated into the outer skin and other sea life such as sea lettuce can grow on and around them. Each sea squirt has two siphons or holes for inhaling and exhaling sea water and adults grow up to 15 centimetres or more in height and around 3-5 centimetres in diameter. The only visible difference between the two species of pyura sea-squirt is thatPyura praepetualis generally grows to a larger size.

The pyura sea-squirts are native to Australia and South America, and have established at a number of sites in the Far North. They generally inhabit the low to mid-intertidal, zone as well as shallow subtidal areas less than 12m deep. In New Zealand, they mainly colonise rocky platforms and outcrops, rock pools and the underside of rock overhangs, but they are also found on artificial structures such as oyster farms and wharf piles.

Aggregations are often in very exposed areas with strong wave or tidal action. The pyura sea squirt is an aggressive competitor for space and has the potential to significantly alter the structure and composition of intertidal communities. Dense mats have already engulfed and displaced native green-lipped mussel beds in some areas of the Far North.

Red Sea Plume *(Asparagopsis taxifolis)*

Red sea plume is a species of red algae with a global range across tropical to warm-temperate marine waters. It appears very similar to a native red algae, *Asparagopsis armata*, which has harpoon-like structures on its side branches. The invasive *Asparagopsis taxifolis* does not have these harpoon structures.

The algae can spread through ocean currents as well as by hitchhiking on underwater equipment and vessels. Once established in a new location, it can aggressively grow to smother and displace native species.

Styela sea squirt *(Styela clava)*

Steyla sea-squirt is a large, solitary sea squirt that is native to the north-west Pacific. The styela sea-squirt has a long, club-shaped body and uses a short, tough stalk to attach to substrate. Its surface is leathery and usually brown in colour; however, underwater it can appear fuzzy with secondary growth coating it. Styela sea squirts grow attached to hard artificial and natural surfaces and are frequently transported as biofouling on vessels and other mobile marine structures.

The Sytela sea squirt poses a threat to biodiversity values through its smothering

behaviour. It can multiply rapidly and forms dense stands in suitable sites and competes with other filter feeders for space and food. As a result it can disrupt native ecosystems. The styela sea-squirt can also add significant maintenance costs to marine structures and vessels through its fouling behaviour. Styela is established in Northland and is prevalent in Marsden Cove Marina and Bay of Islands (Ōpua) Marina.

Undaria seaweed *(Undaria pinnatifida)*

Undaria is a large seaweed that grows to 1-2 metres long. Mature plants are golden brown or green-brown in colour, crinkly in appearance, slightly slimy to the touch, and have a distinct midrib. Juvenile plants have an undivided blade which looks like a single leaf with the midrib starting to become apparent once the plant grows more than five centimetres. Undaria plants have a holdfast, a stem and a sporophyll at the base of the stem (a frilly-shaped reproductive structure which produces spores).

Undaria is present in many harbours and ports around New Zealand and is established in Rangaunu and Houhora harbours. Undaria can produce millions of spores, tolerate a wide range of light levels and grow on a variety of surfaces. These characteristics allow it to spread rapidly in favourable conditions and form dense underwater forests. Through competition for light and space, stands of Undaria can displace native species and alter habitats.

11.2.7 Principal measures

Requirement to act

People are required to undertake actions to help reduce the impacts and spread of the sustained control pests.

The purpose of the rules is to assist both in reducing the impacts of sustained control pests in Northland on values, and the spread of sustained control pests to other places within and beyond the Northland coastal marine area.

Council inspection

- Council staff and/or their contractors will visit places and conduct surveys to determine whether rules and management programmes are complied with and effective.
- Council staff will undertake compliance activities when required, such as rule enforcement, action on default, prosecution and processing exemptions.

Service delivery

- Council staff will provide education and advice to stakeholders, occupiers

and the public about the sustained control pests and how to manage them.

Advocacy and education

- Council will provide training to relevant council staff and stakeholders in the identification and control of the sustained control pests.
- Council will provide advice, attend events and undertake publicity campaigns to increase public awareness of these marine pests.

9 Diseases and pathogens

Diseases and pathogens are a serious threat to Northland's native biodiversity, industry, cultural and social values. Diseases and pathogens are often difficult to detect and, once they are detected, difficult to manage.

Diseases and pathogens require new and novel methods for control and furthermore, a high level of community awareness especially for identifying and minimising vectors of spread. The following section describes the management of diseases and pathogens of particular concern in Northland.

9.1 Sustained control diseases

Sustained controlled diseases are one in which they are widespread throughout Northland in suitable habitats. The following section relates to the management of kauri dieback disease in Northland.

Objectives

For the duration of the Pest Plan, prevent the spread of kauri dieback to reduce impacts on biodiversity, cultural and economic values in Northland.

Ensure coordination with other government agencies and the Department of Conservation to achieve the Pest Plan objectives.

Aims

- To maintain a complete record of the full distribution and severity of kauri dieback in Northland.
- To increase public knowledge and skills, and encourage people to take action to help reduce the spread of kauri dieback.
- To ensure that measures taken under the Pest Plan are complementary to inter-regional and national approaches to kauri dieback.
- To utilise scientific and technological advancements to help reduce the spread of kauri dieback.

Banned from sale and distribution

Under Sections 52 and 53 of the Biosecurity Act 1993 no person can sell, propagate, breed, distribute or otherwise spread any pest in this plan, or any unwanted organism. Section 53 also includes organisms which may contain or harbour a pest or unwanted organism. Not complying with Section 52 or 53 is an offence under the Act and may result in the penalties noted in Section 157(1).

Rules

Rule 9.1.1 a) Authorised persons will determine whether a property is "high risk" by having regard to:

- Site status – is it a confirmed or likely site?
- Site location – is it close to known kauri dieback sites?
- Vectors – is there a high likelihood of spread to or from the site?
- Any other relevant factors.

b) Where the property is identified as "high risk", an approved kauri dieback management plan shall be prepared by the authorised person in consultation with the occupier / owner / manager / user (as relevant).

c) The minimum criteria for an approved kauri dieback management plan are contained in Appendix XXX of the Northland Regional Pest and Marine Pathway Management Plan 2027-2037.

- d) Land owners / occupiers / managers / users (as relevant) within Northland must implement the approved kauri dieback management plan to reduce the risk of kauri dieback spreading.

Rule 9.2.1 Every person who sees or suspects the presence of kauri dieback shall immediately report the sighting to Northland Regional Council or an appropriate management agency.

A breach of these rules will create an offence under Section 154 N(19) of the Act.

9.2 Principal measures

Requirement to act

Members of the public are required by Rule 8.1.1 and Sections 52 and 53 of the Biosecurity Act 1993 to take action to help reduce the impact and spread of kauri dieback.

People are required to report the presence or suspected presence of kauri dieback.

The purpose of these rules are to help prevent the spread of kauri dieback and reduce the impact on values in Northland.

Council inspection

- Council staff and/or their contractors will visit all places on private land suspected of containing kauri dieback to undertake further assessment or testing.
- Council staff will undertake compliance activities when required, such as

rule enforcement, action on default, prosecution and processing exemptions.
- Council staff and/or their contractors will visit places to determine whether rules and management programmes are complied with and effective.

Service delivery

Council staff will provide education and advice to owners, occupiers and the public about kauri dieback and how to reduce the risks of spread.

Advocacy and education

Council staff will assist land occupiers to develop management plans for kauri dieback.

Council will provide training to relevant council staff and stakeholders about the identification of kauri dieback, and how to reduce the risks of spread.

Council will provide advice, attend events and undertake publicity campaigns to increase public awareness of kauri dieback.

6 Organisms declared as pests

The organisms listed in Tables 5.1 – 5.4 'Organisms classified as pests' are classified as pests. The table also indicates what management programme or programmes will apply to the pest and if a Good Neighbour Rule applies.

Attention is also drawn to the statutory obligations of any person under Sections 52 and 53 of the Biosecurity Act 1993 (the 'Act'). Those sections ban anyone from selling, propagating, breeding or distributing any pest, or part of a pest, covered by the Pest Plan. These sections also relate to unwanted organisms, whether or not they are in a plan. Non-compliance with Sections 52 and 53 is an offence under the Act and may result in the penalties noted in Section 157(1).

Table XX. Organisms classified as pest plants and their management programme.

Exclusion programme			
Common name	**Scientific name**	**Programme**	**Page**
Asiatic knotweed	*Fallopia japonica*	Exclusion	
Chinese knotweed	*Presicaria chinensis*	Exclusion	
Climbing spindle berry	*Celastrus orbiculatus*	Exclusion	
Giant hogweed	*Heracleum mantegazzianum*	Exclusion	
Giant knotweed	*Fallopia sachalinensis*	Exclusion	
Holly-leaved senecio	*Senecio glastifolius*	Exclusion	
Houttuynia	*Houttuynia cordata*	Exclusion	
Marshwort	*Nymphoides montana*	Exclusion	
Noogoora bur	*Xanthium strumarium*	Exclusion	
Old man's beard	*Clematis vitalba*	Exclusion	
Phragmites	*Phragmites australis*	Exclusion	
Purple loosestrife	*Lythrum salicaria*	Exclusion	
Sea spurge	*Euphorbial paralias*	Exclusion	
Velvetleaf	*Abutilon theophrasti*	Exclusion	
Water poppy	*Hydrocleys nymphoides*	Exclusion	

Eradication programme			
Common name	**Scientific name**	**Programme**	**Page**
Eel grass	*Vallisneria australis*	Eradication	

Akebia (Chocolate Vine)	*Akebia quinata*	Eradication	
Balloon vine	*Cardiospermum grandiflorum*	Eradication	
Bat-wing passion flower	*Passiflora apetala*	Eradication	
Cape tulip	*Moraea flaccida*	Eradication	
Cathedral bells	*Cobaea scandens*	Eradication	
Chilean rhubarb	*Gunnera tinctoria*	Eradication (mapped)	
Eel grass	*Vallisneria australis*	Eradication	
Evergreen buckthorn	*Rhamnus alaternus*	Eradication	
Field horsetail	*Equisetum arvense*	Eradication	
Firethorn	*Pyracantha angustifolia*	Eradication	
Gypsywort	*Lycopus europaeus*	Eradication	
Lesser knotweed	*Acongonon campanulatum*	Eradication	
Mexican feather grass	*Nassella tenuissima*	Eradication	
Mickey Mouse plant	*Ochna serrulata*	Eradication	
Monkey musk	*Erythranthe guttata*	Eradication	
Nardoo	*Marsilea mutica*	Eradication	
Nassella tussock	*Nassella trichotoma*	Eradication	
Nutgrass	*Cyperus rotundus*	Eradication	
Royal fern	*Osmunda regalis*	Eradication	
Salvinia	*Salvinia molesta*	Eradication	
Senegal tea	*Gymnocoronis spilanthoides*	Eradication	
Spartina (alterniflora)	*Spartina alterniflora*	Eradication	
Spartina (angelica)	*Spartina anglica*	Eradication	
Spartina (townsendii)	*Spartina townsendii*	Eradication	
Water hyacinth	*Eichhornia crassipes*	Eradication	
Wilding kiwifuit	*Actinidiaceae spp.*	Eradication	
Yellow flag iris	*Iris pseudacorus*	Eradication	

Progressive containment programme			
Common name	**Scientific name**	**Programme**	**Page**
African feather grass	*Cenchrus macrourus*	Progressive Containment	
African feather grass	*Cenchrus macrourus*	Progressive Containment	
Lantana	*Lantana camara*	Progressive Containment	
Manchurian wild rice	*Zizania latifolia*	Progressive Containment	
Mile-a-minute	*Dipogon lignosus*	Progressive Containment	
Pultenaea	*Pultenaea daphnoides*	Progressive Containment	

Sustained control programme			
Common name	**Scientific name**	**Programme**	**Page**
Agapanthus	*Agapanthus praecox*	Sustained Control	
Bathurst bur	*Xanthium spinosum*	Sustained Control	
Black-eyed susan	*Thumbergia alata*	Sustained Control	
Brazilian pepper tree	*Schinus terebinthifolius*	Sustained Control	
Broom	*Cytisus scorparius*	Sustained Control	
Brush wattle	*Paraserianthes lophantha*	Sustained Control	
Buddleia	*Buddleja davidii*	Sustained Control	
Camphor laurel	*Cinnamomum camphora*	Sustained Control	
Cape honey flower	*Melianthus major*	Sustained Control	
Cape ivy	*Senecio angulatus*	Sustained Control	
Century plant	*Agave americana*	Sustained Control	
Coastal banksia	*Banksia inegrifolia*	Sustained Control	
Cotoneaster (franchetii)	*Cotoneaster franchetii*	Sustained Control	
Cotoneaster (glaucophyllus)	*Contoneaster glaucophyllus*	Sustained Control	
Elaeagnus	*Elaeagnus x reflexa*	Sustained Control	
Elephant's ear	*Alocasia brisbanesis*	Sustained Control	
English ivy	*Hedera helix*	Sustained Control	
Furcraea	*Furcraea spp,*	Sustained Control	
German ivy	*Delairea odorata*	Sustained Control	
Gorse	*Ulex spp.*	Sustained Control	
Gravel goundsel	*Senecio skirrhodon*	Sustained Control	
Greater bindweed	*Calystegia silvatica*	Sustained Control	
Hakea	*Hakea spp.*	Sustained Control	
Himalayan fairy grass	*Miscanthus nepalensis*	Sustained Control	
Himalayan honeysuckle	*Leycesteria formosa*	Sustained Control	
Jasmine	*Jasminum polyanthum*	Sustained Control	
Kahili ginger	*Hedychium gardnerianum*	Sustained Control	
Kangaroo acacia	*Acacia paradoxa*	Sustained Control	
Lily of the valley vine	*Salpichroa origanifolia*	Sustained Control	
Lodgepole pine	*Pinus contorta*	Sustained Control	
Oxylobium	*Callistachys lanceolata*	Sustained Control	
Paperbark poplar	*Melaleuca quinquinervia*	Sustained Control	
Periwinkle	*Vinca major*	Sustained Control	
Phoenix palm	*Phoenix canariensis*	Sustained Control	
Prickly moses	*Acacia verticillata*	Sustained Control	
Privet	*Ligustrum spp.*	Sustained Control	
Queen of the night	*Cestrum nocturnum*	Sustained Control	
Rhus tree	*Toxicodendron succedaneum*	Sustained Control	

Sexton's bride	*Rhaphiolepis umbellata*	Sustained Control	
Sharp rush	*Juncus acutus*	Sustained Control	
Sycamore	*Acer pseudoplatanus*	Sustained Control	
Sydney golden wattle	*Acacia longifolia*	Sustained Control	
Taiwan cherry	*Prunus campulata*	Sustained Control	
Velvet groundsel	*Roldana petasitis*	Sustained Control	
Wilding conifer spp.	*Pinus contorta, P. radiata, P. pinaster, Pseudostuga menziesii*	Sustained Control	
Woolly nightshade	*Solanum mauritianum*	Sustained Control	
Yellow ginger	*Hedychium flavescens*	Sustained Control	

Ban on sale and propagation programme			
Common name	**Scientific name**	**Programme**	**Page**
Agapanthus	*Agapanthus praecox*	Ban on sale/propagation	
Abyssinian banana	*Ensete ventricosum*	Ban on sale/propagation	
African club moss	*Selaginella kraussiana*	Ban on sale/propagation	
African iris	*Dietes bicolour*	Ban on sale/propagation	
African pig's ear	*Cotyledon orbiculata*	Ban on sale/propagation	
Alder	*Alnus glutinosa*	Ban on sale/propagation	
Alligator weed	*Alternanthera philoxeroides*	Ban on sale/propagation	
Aristea	*Aristea ecklonii*	Ban on sale/propagation	
Artillery plant	*Lamium galeobdolon*	Ban on sale/propagation	
Arum lily	*Zantedeschia aethiopica*	Ban on sale/propagation	
Australian sedge	*Carex longebrachiata*	Ban on sale/propagation	
Baccaris	*Baccharis halimifolia*	Ban on sale/propagation	
Bamboo species	*Phyllostachys aurea, Phyllostachys nigra, Pleioblastus auricomus, Pleioblastus hindsii, Pseudosasa japonica, Chimonobambusa quadrangularis (Banned from Sale & propagation in Auckland), Phyllostachys edulis*	Ban on sale/propagation	
Banana passionfruit	*Passiflora tripartita*	Ban on sale/propagation	
Bangalow palm	*Archontophoenix cunninghamiana*	Ban on sale/propagation	
Bangalow palm	*Archontophoenix cunninghamiana*	Ban on sale/propagation	
Barberry	*Berberis glaucocarpa*	Ban on sale/propagation	

Bartlettina	*Bartlettina sordida*	Ban on sale/propagation	
Bears breeches	*Acanthus mollis*	Ban on sale/propagation	
Berry heath	*Erica baccans*	Ban on sale/propagation	
Black wattle	*Acacia mearnsli*	Ban on sale/propagation	
Blackberry (wild aggregates)	*Rubus fruiticosus agg.*	Ban on sale/propagation	
Bladderwort	*Utricularia spp.*	Ban on sale/propagation	
Blue morning glory	*Ipomoea indica*	Ban on sale/propagation	
Blue passion flower	*Passiflora caerulea*	Ban on sale/propagation	
Blue spur flower	*Plectranthus eckionii*	Ban on sale/propagation	
Bolivian fuchsia	*Fuchsia boliviana*	Ban on sale/propagation	
Bomarea (Climbing alstromeria)	*Bomarea caldasii*	Ban on sale/propagation	
Boneseed	*Chrsanthemoides monilifera*	Ban on sale/propagation	
Boxthorn	*Lycium ferocissimum*	Ban on sale/propagation	
Brazillian rattlebox	*Sesbania punicea*	Ban on sale/propagation	
Bur daisy	*Calotis lappulacea*	Ban on sale/propagation	
Burdock	*Arctium minus*	Ban on sale/propagation	
Bushy asparagus	*Asparagus aethiopicus*	Ban on sale/propagation	
buttercup tree, Brazillian buttercup, Arsenic bush	*Senna septemtrionalis*	Ban on sale/propagation	
Californian bulrush	*Schoenoplectus californicus*	Ban on sale/propagation	
Californian thistle	*Cirsium arvense*	Ban on sale/propagation	
Canary island ivy	*Hedera helix sub species canariensis*	Ban on sale/propagation	
Canary Island ivy	*Hedera helix canariensis*	Ban on sale/propagation	
Cape pondweed	*Aponogeton distachyus*	Ban on sale/propagation	
Cape sundew	*Drosera capensis*	Ban on sale/propagation	
Carex (divulsa)	*Carex divulsa*	Ban on sale/propagation	
Carex (scoparia)	*Carex scoparia*	Ban on sale/propagation	
Castor oil plant	*Ricinus communis*	Ban on sale/propagation	
Cat's claw creeper	*Macfadyena unguis-cati*	Ban on sale/propagation	
Cenchrus spp. (except kikuyu and pearl barley)	*Cenchrus spp., Pennisetum spp.*	Ban on sale/propagation	
Chilean flame creeper	*Tropaeolum speciosum*	Ban on sale/propagation	

Chilean glory creeper	*Eccremocarpus scaber*	Ban on sale/propagation	
Chinese fan palm	*Trachycarpus fortunei*	Ban on sale/propagation	
Chinese holly grape	*Mahonia lomarifolia*	Ban on sale/propagation	
Clematis (flammula)	*Clematis flammula*	Ban on sale/propagation	
Climbing asparagus	*Asparagus scandens*	Ban on sale/propagation	
Climbing dock	*Rumex sagittatus*	Ban on sale/propagation	
Climbing gloxinia	*Lophospermum erubescens*	Ban on sale/propagation	
Coastal yukka	*Yucca gloriosa*	Ban on sale/propagation	
Coltsfoot	*Tussilago farfara*	Ban on sale/propagation	
Coral berry	*Ardisia crenata*	Ban on sale/propagation	
Coral/flame tree	*Erythrina x sykesii*	Ban on sale/propagation	
Crack willow	*Salix fragilis*	Ban on sale/propagation	
Creeping fig	*Ficus pumila*	Ban on sale/propagation	
Dally pine	*Psoralea pinnata*	Ban on sale/propagation	
Darwin's barberry	*Berberis darwinii*	Ban on sale/propagation	
Devil's tail	*Persicaria perfoliata*	Ban on sale/propagation	
Divided sedge	*Carex divisa*	Ban on sale/propagation	
Drooping prickly pear	*Opuntia monacantha*	Ban on sale/propagation	
Dusky coral pea	*Kennedia rubicunda*	Ban on sale/propagation	
Egeria	*Egeria densa*	Ban on sale/propagation	
Elodea	*Elodea canadensis*	Ban on sale/propagation	
Equisetum spp (horsetails)	*Equisteum species*	Ban on sale/propagation	
False tamarisk	*Myricaria germanica*	Ban on sale/propagation	
Fatsia, false castor oil plant	*Fatsia japonica*	Ban on sale/propagation	
Ferny asparagus	*Asparagus plumosus*	Ban on sale/propagation	
Formosa lily	*Lilium formosanum*	Ban on sale/propagation	
Fucrea species	*Fucrea spp.*	Ban on sale/propagation	
Giant reed	*Arundo donax*	Ban on sale/propagation	
Giant rhubarb	*Gunnera manicata*	Ban on sale/propagation	
Goat's rue	*Galega officinalis*	Ban on sale/propagation	
Grey willow	*Salix cinerea*	Ban on sale/propagation	
Guava	*Psidium cattleianum*	Ban on sale/propagation	
Guava	*Psidium cattleianum*	Ban on sale/propagation	

Guinea grass	*Megathyrsus maximus*	Ban on sale/propagation	
Happy tree /tree of Life/cancer tree	Camptotheca acuminata	Ban on sale/propagation	
Hawkweed	*Pilosella spp.*	Ban on sale/propagation	
Hawthorn	*Crataegus monogyna*	Ban on sale/propagation	
Heather	*Calluna vulgaris*	Ban on sale/propagation	
Hemlock	*Conium maculatum*	Ban on sale/propagation	
Hornwort	*Ceratophyllum demersum*	Ban on sale/propagation	
Hydrocotle (umbellata)	*Hydrocotle umbellata*	Ban on sale/propagation	
Iceplant	*Carpobrotus edulis*	Ban on sale/propagation	
Italian arum	*Arum italicum*	Ban on sale/propagation	
Italian jasmine	*Jasminum humile*	Ban on sale/propagation	
Japanese cherry	*Prunus serrulata*	Ban on sale/propagation	
Japanese honeysuckle	*Lonicera japonica*	Ban on sale/propagation	
Japanese spindle tree	*Euonymus japonicas*	Ban on sale/propagation	
Japanese walnut	*Juglans ailantifolia*	Ban on sale/propagation	
Khasia berry	*Cotoneaster simonsii*	Ban on sale/propagation	
Kudzu vine	*Pueraira montana*	Ban on sale/propagation	
Lagarosiphon	*Lagarosiphon major*	Ban on sale/propagation	
Lizard's tail	*Saururus cernuus*	Ban on sale/propagation	
Loquat	*Eriobotrya japonica*	Ban on sale/propagation	
Madeira vine	*Anredera cordifolia*	Ban on sale/propagation	
Male fern	*Dryopteria filix-mas*	Ban on sale/propagation	
Marram grass	*Ammophila arenaria*	Ban on sale/propagation	
Mexican daisy	*Erigeron karvinskianus*	Ban on sale/propagation	
Mexican devil	*Ageratina adenophora*	Ban on sale/propagation	
Mexican water lily	*Nymphaea mexicana*	Ban on sale/propagation	
Mist flower	*Ageratina riparia*	Ban on sale/propagation	
Monkey apple	*Syzygium smithii*	Ban on sale/propagation	
Montbretia	*Crocosmia x crocosmiliflora*	Ban on sale/propagation	
Montpellier broom	*Genista monspessulana*	Ban on sale/propagation	
Morton Bay fig	*Ficus macrophylla*	Ban on sale/propagation	
Moth plant	*Araujia hortorum*	Ban on sale/propagation	
Mother of Millions	*Kalanchoe delagoensis*	Ban on sale/propagation	
Nodding thistle	*Carduus nutans*	Ban on sale/propagation	

Norfolk Island hibiscus	*Lagunaria patersonii*	Ban on sale/propagation	
Orange wild Rhea	*Debregeasia longifolia*	Ban on sale/propagation	
Palm grass	*Setaria pamifolia*	Ban on sale/propagation	
Pampas grass jubata	*Cortaderia jubata*	Ban on sale/propagation	
Pampas grass selloana	*Cortaderia selloana*	Ban on sale/propagation	
Parrot's feather	*Myriophyllum aquaticum*	Ban on sale/propagation	
Perennial nettle	*Urtica dioica*	Ban on sale/propagation	
Pitted crassula	*Crassula multicava*	Ban on sale/propagation	
Plectranthus	*Plectranthus ciliatus*	Ban on sale/propagation	
Plumeless thistle	*Carduus acanthoides*	Ban on sale/propagation	
Port Jackson fig	*Ficus rubiginosa*	Ban on sale/propagation	
Purple groundsel	*Senecio elegans*	Ban on sale/propagation	
Queensland poplar	*Homalanthus populifolius*	Ban on sale/propagation	
Queensland umbrella tree	*Schefflera actinophylla*	Ban on sale/propagation	
Ragwort	*Jacobaea vulgaris*	Ban on sale/propagation	
Red dragon	*Persicaria microcephala*	Ban on sale/propagation	
Red valerian	*Centranthus ruber*	Ban on sale/propagation	
Reed sweet grass	*Glyceria maxima*	Ban on sale/propagation	
Rough tree fern	*Cyathea cooperi*	Ban on sale/propagation	
Salt water paspalum	*Paspalum vaginatum*	Ban on sale/propagation	
Selaginella spp.	*Selaginella martensii, S. moellendorffii, S. uncinata*	Ban on sale/propagation	
Sheep's bur	*Acaena agnipila*	Ban on sale/propagation	
Skeleton weed	*Chondrilla juncea*	Ban on sale/propagation	
Smilax	*Asparagus asparagoides*	Ban on sale/propagation	
Snow poppy	*Eomecon chionantha*	Ban on sale/propagation	
Soap aloe	*Aloe maculata*	Ban on sale/propagation	
Spanish broom	*Spartium junceum*	Ban on sale/propagation	
Spanish heath	*Erica lusitanica*	Ban on sale/propagation	
Spiny broom	*Calicotome spinosa*	Ban on sale/propagation	
Stinking Iris	*Iris foetidissima*	Ban on sale/propagation	
Strangling fig	*Ficus microcarpa*	Ban on sale/propagation	
Sweet briar	*Rosa rubignosa*	Ban on sale/propagation	
Sweet pea shrub	*Polygala myrtifolia*	Ban on sale/propagation	

Sweet pittosporum	*Pittosporum undulatum*	Ban on sale/propagation	
Tasmanian ngaio	*Myoporum insulare*	Ban on sale/propagation	
Tradescantia	*Tradescantia fluminensis*	Ban on sale/propagation	
Tradescantia zebrina	*Tradescantia zebrina*	Ban on sale/propagation	
Tree lupin	*Lupinus arboreus*	Ban on sale/propagation	
Tree of heaven	*Ailanthus altissima*	Ban on sale/propagation	
Tropical guava	*Psidium guajava*	Ban on sale/propagation	
Tuber ladder fern	*Nephrolepis cordifolia*	Ban on sale/propagation	
Tutsan	*Hypericum androsaemum*	Ban on sale/propagation	
Variegated thistle	*Silybum marianum*	Ban on sale/propagation	
Water plantain	*Alisma plantago-aquatica*	Ban on sale/propagation	
Water primrose	*Ludwigia peploides*	Ban on sale/propagation	
Watsonia (Bugle lily)	*Watsonia spp.*	Ban on sale/propagation	
West Indian raspberry	*Rubus rosifolius*	Ban on sale/propagation	
Wonder tree	*Idesia polycarpa*	Ban on sale/propagation	
Yellow bristle grass	*Setaria pumila*	Ban on sale/propagation	
Yellow guava	*Psidium guajava*	Ban on sale/propagation	
Yellow passionfruit	*Passiflora ligularis*	Ban on sale/propagation	
Yellow water lily	*Nuphar lutea*	Ban on sale/propagation	

Table XX. Organisms classified as pest animals and their management programme.

Exclusion programme			
Common name	**Scientific name**	**Programme**	**Page**
Alexandrine parakeet	*Gymnorhina tibicen*	Exclusion	
Big-headed ant	*Pheidole megacephala*	Exclusion	
Blue tongued skink	*Tiliqua scincoides and Tiliqua nigrolutea*	Exclusion	
Eastern bearded dragon	*Pogona barbaba*	Exclusion	
Galah	*Eolophus roseicapillus*	Exclusion	
Gold Clam	*Corbicula fluminea* *Corbicula australis*	Exclusion	
Indian ring-necked parakeet	*Psittacula krameri*	Exclusion	
Monk parakeet	*Myiopsitta monachus*	Exclusion	

Orfe	*Leuciscus idus*	Exclusion	
Rainbow lorikeet	*Trichoglossus moluccanus*	Exclusion	
Rook	*Corvus frugilegus*	Exclusion	
Scaly-breasted lorikeet	*Trichoglossus chlorolepidotus*	Exclusion	
Sulphur-crested cockatoo	*Cacatua galerita*	Exclusion	
Wallaby	*Macropodidae, Petrogale, and Wallabia spp.*	Exclusion	

Eradication programme			
Common name	**Scientific name**	**Programme**	**Page**
Deer (feral)	*Cervus spp., Dama spp., Odocoileus spp. (and hybrids)*	Eradication	
Eastern water dragon	*Intellagama lesueurii (all sub-species and variants)*	Eradication	
Red-eared slider turtle	*Trachemys scripta elegans*	Eradication	
Snake-necked turtle	*Chelodina longicollis*	Eradication	

Progressive containment programme			
Common name	**Scientific name**	**Programme**	**Page**
Koi Carp	*Cyprinus carpio / rubrofuscus (all koi)*	Progressive containment	
Perch	*Perca fluviatilis*	Progressive containment	
Rudd	*Scardinius erythrophthalmus*	Progressive containment	
Tench	*Tinca tinca*	Progressive containment	

Sustained control programme			
Common name	**Scientific name**	**Programme**	**Page**
Argentine ant	*Linepithema humile*	Sustained control	
Brown bullhead catfish	*Ameiurus nebulosus*	Sustained control	
Cat (feral only)	*Felis catus*	Sustained control	
Darwin's ant	*Doleromyrma darwiniana*	Sustained control	
Goat (feral)	*Capra hircus*	Sustained control	
Mouse	*Mus musculus*	Sustained control	

Mustelids	*Mustela spp.*	Sustained control	
Pest Goldfish	*Carassius auratus*	Sustained control	
Pigs (feral)	*Sus scrofa*	Sustained control	
Possums	*Trichosurus vulpecula*	Sustained control	
Rabbits	*Oryctolagus cuniculus*	Sustained control	
Rats	*Rattus spp.*	Sustained control	
Other exotic turtles and lizards		Sustained control	

Site-led programme			
Common name	**Scientific name**	**Programme**	**Page**
Canada goose	*Branta canadensis*	Site-led pest programme	
European and German wasps	*Vespula vulgaris, Vespula germanica*	Site-led pest programme	
Feral ungulates (deer, goats, pigs)		Site-led pest programme	
Hedgehog	*Erinaceus europaeus*	Site-led pest programme	

Table XX. Organisms classified as pest plant pathogens and their management programme.

Sustained control programme			
Common name	**Scientific name**	**Programme**	**Page**
Kauri dieback disease	*Phytophthora agathidicida*	Sustained control	

Table XX. Marine organisms classified as pests and their management programme.

Sustained control programme			
Common name	**Scientific name**	**Programme**	**Page**
Asian paddle crab	*Charybdis japonica*	Sustained control	
Australian droplet tunicate	*Eudistoma elongatum*	Sustained control	
Exotic caulerpa	*Caulerpa brachypus*	Sustained control	
Exotic caulerpa	*Caulerpa parvifolia*	Sustained control	

Japanese mantis shrimp	*Oratosquilla oratoria*	Sustained control	
Mediterranean fanworm	*Sabella spallazanii*	Sustained control	
Pyura sea squirt	*Pyura praepetualis*	Sustained control	
Pyura sea squirt	*Pyura doppelgangera*	Sustained control	
Red sea plume	*Asparagopsis taxiformis*	Sustained control	
Styela sea squirt (Clubbed tunicate)	*Styela clava*	Sustained control	
Undaria seaweed	*Undaria pinnatifida*	Sustained control	

6.1 Unwanted organisms

In addition to the pests listed in the tables above, the release, sale, breeding, multiplying and propagation of any unwanted organism (UO) (as recognised and registered by a Chief Technical Officer employed under the State Sector Act 1988) is controlled under sections 52 and 53 of the Biosecurity Act 1993.

Part 9 of the Biosecurity Act allows for the national registration of UOs, being those capable or potentially capable of causing harm to any natural and physical resources or human health. Identification of a species as UO means regulatory programmes can be developed to address that organism without it needing to be included in a pest management plan. In such instances, the powers under the Biosecurity Act are held by central government (MPI), and the council has a general monitoring and surveillance role which sits outside of the RPMP.

While the council can still manage UOs outside of an RPMP, enforcement relies on delegation of powers from MPI to the council. UOs can also be included in RPMPs if that inclusion will enable more effective management responses, as is the case for wallabies.

The UO register maintained by MPI contains a list of plants and animals including insects and other invertebrates, as well as diseases – not all of which appear in this RPMP. Waikato Regional Council will support other agencies that have clear pest management leads.

13 Monitoring

13.1 Measuring what the objectives achieve

Programme	Indicator	Monitoring Method	Monitoring Frequency	Reporting frequency
Exclusion	Presence / absence	Field inspections, public reports	At least once annually or as reports received	Annually
Eradication	Presence / absence	Field inspections, public reports	At least once annually or as reports received	Annually
Progressive containment	Presence / absence beyond containment zones	Field survey and GIS mapping	On-going and in accordance with operational plans	Annually
Sustained control	Outcome and result based, pest trend monitoring	Species led, national protocols	On-going and in accordance with operational plans	Annually
Site-Led	Ecosystem health	Bird counts, kauri dieback absence/presence, scat absence/presence	On-going and in accordance with operational plans	Annually
Marine Pathways	Level of hull fouling	Diver surveys, passive and active reporting by the public	Continuous, active dive surveys concentrated around the summer months during peak vessel movements	Upon completion of diver surveys and as reports are received from the public

13.2 Monitoring the management agency's performance

As the management agency responsible for implementing the plans, Northland Regional Council will:

- prepare operational plans within three months of the Pest Plan and the Marine Pathway Plan being approved;
- review the operational plans, and amend them if needed;
- report on the operational plans each year, within five months after the end of each financial year;
- implement the Pest Plan and Marine Pathway Plan in line with the operational plans; and
- maintain up-to-date databases of complaints, pest levels and densities, and responses from the regional council and owners and/or occupiers.

13.3 Monitoring plan effectiveness

Monitoring the effects of the Pest Plan and Marine Pathway Plan will ensure that they continue to achieve their purpose. It will also check that relevant circumstances have not changed to such an extent that the plans require review. A review may be needed if:

- the Act is changed, and a review is needed to ensure that the plans are not inconsistent with the Act;
- other harmful organisms create, or have the potential to create, problems that can be resolved by including those organisms in the Pest Plan;
- monitoring shows the problems from pests, other organisms to be controlled, or pathways (as covered by the plans) have changed significantly; or
- circumstances change so significantly that the Northland Regional Council believes a review is appropriate.

If the plans do not need to be reviewed under such circumstances, they will be reviewed in line with Section 100D of the Act. Such a review may extend, amend or revoke the plans, or leave them unchanged.

The procedures to review the plans will include officers of Northland Regional Council:

- assessing the efficiency and effectiveness of the principal measures (specified for each pest and other organism (or pest group or organisms) or pathway to be controlled to achieve the objectives of the plans;
- assessing the impact the pest or organism (covered by the plan), or pathway has on the region and any other harmful organisms that should

be considered for inclusion in the plans; and
- liaising with other agencies and key interest groups on the effectiveness of the plan.

14 Powers conferred

14.1 Powers under Part 6 of the Act

The Principal Officer (Chief Executive) of the Northland Regional Council may appoint authorised persons to exercise the functions, powers and duties under the Act in relation to a regional pest management plan or pathway plan. Northland Regional Council will use those statutory powers of Part 6 of the Act as shown in Table 12.1 'Powers to be used, from Part 6 of the Act', where necessary, to help implement these plans. Any or all of the powers described in this table may be granted to Authorised Persons as per the Biosecurity Act 1993.

Administrative provisions	Biosecurity Act 1993 reference
Power to request information from land occupiers	Section 43
Grant exemption from the plan rules	Section 78
The appointment of authorised and accredited persons	Sections 103(3) and (7)
Authorised persons to comply with instructions	Section 104
Delegation to authorised persons	Section 105
Power to require assistance	Section 106
Power of inspections, entry, and duties	Sections 106, 110, 111, and 112
Power to record information	Section 113
General powers	Sections 114 and 114A
Use of dogs and devices	Section 115
Power to seize evidence	Section 118
Power to seize abandoned goods	Section 119

Power to intercept risk goods	Section 120
Power to examine organisms and apply substances	Sections 121 and 121A
Power to give directions	Section 122
Power to act on default	Section 128
Liens	Section 129
Declaration of restricted areas	Section 130
Declaration of controlled areas	Section 131
Duration of place and area declarations	Section 133
Options for cost recovery	Section 135
Failure to pay	Section 136
Offences	Sections 154M, 154N, and 154O

The Biosecurity Act 1993 sets out the procedures Northland Regional Council will follow when landowners and/or occupiers or other persons do not comply with the rules or other general duties.

14.2 Powers under other sections of the Act

An owner and/or occupier or any person in breach of a plan rule creates an offence under Section 154N(19) of the Act, where the rule provides for this. Northland Regional Council can seek prosecution under Section 157(5) of the Act for those offences.

A Chief Technical Officer (employed under the State Sector Act 1988) may appoint authorised people to implement other biosecurity law considered necessary. Examples include:

4. where restrictions on selling, propagating and distributing pests (under Sections 52 and 53 of the Act) must be enforced; and
5. where owners and/or occupiers are asked for information (under Section 43 of the Act).

14.3 Power to issue exemptions to plan rules

Any owner and/or occupier or other person may write to Northland Regional Council to seek an exemption from any provision of a plan rule set out in this Plan. However, a rule may state that no exemptions will be considered, or it may limit the circumstances to which exemptions apply (for example, scientific purposes).

The requirements in Section 98 of the Act must be met for a person to be granted an exemption. The council will keep and maintain a register that records the number and nature of exemptions granted. The public will be able to inspect this register during business hours.

15 Funding

The Act requires that funding is thoroughly examined. This includes the reason for, and source of, all funding.

15.1 Funding sources and reasons for funding

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

- those people who have an interest in the plan;
- those who benefit from the plan (beneficiaries);
- and those who contribute to the pest problem (exacerbators);

in a way that reflects economic efficiency, equity and the ability to target those funding the plan and the costs of collecting the funding.

These factors were considered when the council developed this Plan, and will continue to be considered during development of the council's Annual Plan and Long Term Plans as required by Section 100T of the Biosecurity Act. The plan will be funded by rates, user charges, and other council income (for example, dividends).

All management directed by this plan is directed towards pests which have the potential to significantly impact the economic, biodiversity, recreation, amenity and cultural values of the region as a whole, and the regional community has an interest in protecting these values. There are some instances where it is appropriate for exacerbators of pests to contribute by way of user charges, and these are set out in council's charging policy.

15.2 Anticipated implementation costs

The anticipated costs of implementing this Plan reflect a best estimate of expenditure levels. Funding levels will be further examined and set during subsequent Long-Term Plan and Annual Plan processes, including the revision of rates and user charges. While community funding is mainly sourced from rates, alternative funding sources will be sought by the council. Such funds will offset rates or be used as a value-added component in appropriate circumstances.

The funding of the implementation of the plans is from predominantly a region-wide targeted rate, set and assessed under the Local Government (Rating) Act 2002, and in determining this, the council has had regard to those matters outlined in Section 100T of the Biosecurity Act. Where the implementation of these plans are to be funded by a targeted rate, or a user-pays charge the matters outlined in Section 100T of the Biosecurity Act will be given specific regard to as part of the Annual Plan or Long Term Plan process

TITLE:	**2026-2027 Biosecurity Operational Plan**
From:	Kaeden Leonard, Biosecurity Manager - Marine and Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity
Authorised by Group Manager/s:	Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 20 May 2026

Whakarāpopototanga / Executive summary

Under the Biosecurity Act 1993, a Biosecurity Operational Plan must be prepared annually, outlining actions and performance measures for the coming year. This plan is required within three months of the close of the current financial year.

The 2026–2027 Operational Plan is expected to coincide with the council's adoption of a revised Regional Pest Management Plan (RPMP) in 2027. As a result, staff recommend that no significant changes be made to the current Operational Plan at this time, with only minor amendments proposed to key performance measures.

Following the adoption of the revised RPMP, the Operational Plan will need to be updated to align with any new rules, objectives, and expected outcomes introduced under the RPMP.

Ngā mahi tūtohutia / Recommended actions

1. That the Working Party note the contents of the agenda item and support the carry forward of the current Biosecurity Operational Plan performance measures for the 2026–2027 year.
2. That the Working Party note the minor amendments to the performance measures prior to council adopting the Operational Plan 2026-2027.

Background/Tuhinga

A Biosecurity Operational Plan (the Plan) is prepared annually for the forthcoming 12-month period in accordance with section 100B of the Biosecurity Act 1993. The Plan establishes performance measures and sets out how the Regional Pest and Marine Pathways Management Plan 2017–2027 (RPMPMP) will be implemented over that period. A link to the current Operational Plan for 2025–2026 is available here: https://www.nrc.govt.nz/media/qpqof5nw/2025-2026-biosecurity-operational-plan.pdf

The current Plan includes key performance indicators (KPIs) that relate to programmes of work expected to continue over several years, including wild deer eradication, Predator Free 2050 (PF2050), kauri protection, partnerships, and multi-year pest plant projects. These KPIs have been carefully developed over several years by the Biodiversity and Biosecurity Working Party, and it is not anticipated that they will require substantive change at this stage, particularly given the forthcoming review of the RPMPMP.

Rather than making significant changes, it is proposed that the current Plan be carried forward into the 2026–2027 year. However, staff have undertaken a review of the existing performance measures to ensure they remain relevant, clear, and fit for purpose. As a result, a small number of minor refinements to KPIs and their associated measures are proposed. These changes are primarily intended to improve clarity, ensure consistency of reporting, and reflect completed or evolving work programmes.

The proposed minor amendments are outlined below. No substantive changes to the overall structure or intent of the Plan are recommended at this time.

A revised RPMP is expected to be adopted by council in 2027, at which point a new Operational Plan will be required to align with any updated rules, priorities, and outcomes.

Page	Key performance measure	How will this be measured?	Proposed refined key performance measure	Proposed refined How will this be measured?	Rationale for change
16	Deer location records. Known deer populations are surveyed and mapped across Northland.	Data recorded on council mapping software	All information from public reports, surveillance and all escapes from permitted deer farms are recorded in the joint NRC–DOC Deer Database.	All records will be updated with 5 days of notification. All records contain all mandatory fields (location, source, date, species, category).	This action is complete. Revised KPI established in accordance with the Deer Operational Plan 2026–2027.
16	"Wild Deer Free Taitokerau" NRC and DOC to design a joint communications and engagement plan, involving other stakeholders as necessary (e.g. hapu/iwi, other government agencies and community), to promote the Strategy vision of "Wild Deer Free Taitokerau"	Joint communications/engagement plan developed	NRC and DOC deliver a coordinated communications campaign, involving other stakeholders as appropriate (e.g. iwi, hapū, Game Animal Council), to promote the Strategy Vision of "No wild populations of deer in Northland" and the "Wild Deer Free Northland" message.	At least three planned campaign activities are delivered.	This action is complete. Revised KPI established in accordance with the Deer Operational Plan 2026–2027.
16	Best practice management. NRC maintains at least annual contact with Northland deer farmers to support the industry in best practice. Reducing the farm deer escapes annually.	Meetings noted in monthly reporting and council database	NRC completes a presence/absence survey of suitable habitat within a 2km buffer of farms with a history of escapes that aren't part of an active project.	Presence/absence surveys completed for a minimum of four farms across the region and results recorded in the joint database.	This change shifts the KPI from general engagement with deer farmers to a clearly defined, measurable activity, improving clarity, consistency, and the ability to report on outcomes.

Ngā tapirihanga / Attachments

Nil