



# Northland Regional Pest and Marine Pathway Management Plan 2017-2027

**Operational Plan 2019-2020**

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# 1. INTRODUCTION

## Background

The Northland Regional Council (council) is the management agency responsible for developing and implementing the Northland Regional Pest and Marine Pathway Management Plan 2017-2027 (the *Pest Plan*) in accordance with the Biosecurity Act 1993.

The Pest plan is a combination of the eradication or effective management of specified pests or groups of pests, and a marine pathway plan which is designed to prevent and manage the spread of harmful marine organisms via boat hull fouling within Northland coastal waters.

The Pest plan describes the biosecurity activities that will be undertaken throughout Northland and outlines the management or eradication of specific organisms and/or marine pest pathways. Doing so will:

- minimise the actual or potential adverse or unintended effects associated with these organisms and/or pathways, and,
- maximise the effectiveness of individual actions in managing pests or pathways through a regionally coordinated approach

**Linkage to the Regional Pest and Marine Pathway Management Plan 2017-2027** (hereafter referred to as the “Pest Plan”)

This operational plan has been prepared as a requirement of the Biosecurity Act 1993 section 100B and should be read in conjunction with the Pest Plan. It includes all species listed in the Pest Plan.

## Linkage to Long Term Plan 2015-2025

This operational plan is integrated with councils Annual and Long Term plans which prescribes the funding and resources allocated to the programmes within this operational plan.

Council's Long Term Plan (2015-2025) maintains a focus on pest management activities in Northland. The plan states that the council will provide the services of:

- Reducing the impact of introduced pests on the environment, economic and social values;
- Protecting the health of forests and lakes through effective regional pest control; and
- Promoting community involvement in pest management, including tangata whenua, communities, district councils and other stakeholders.

## Purpose of the Operational Plan

This operational plan describes the nature and scope of activities the Council intends to undertake in the implementation of the Pest Plan for the period 1 July 2019 – 30 June 2020. For full details of pest management objectives, aims, principle measures to manage pests, and pest management rules, please refer to the Pest Plan.

## 2. IMPLEMENTATION PROGRAMMES

### Exclusion Pests

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 of infestations of the exclusion plants will be attempted by the council in conjunction with other agencies such as MPI and DOC and Auckland council.

### Eradication Pests

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

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.

- Existing populations will be monitored and, where appropriate, systems set in place to prevent further spread.
- New technologies and methods will be investigated and introduced where possible.

### Sustained Control Pests

*Note: Excludes marine sustained control pests - these are described under a separate section.*

The intermediate outcome is to provide for the sustained control of the pest to a level where external impacts are manageable. The focus is on ensuring densities do not reach a level where they are causing significant impacts.

Biodiversity restoration projects controlling sustained control pests are generally managed outside the plan through Biosecurity Partnership Programmes.

### Marine Pathway Management Plan

In 2012 an amendment to the Biosecurity Act 1993 added Pathway Management Plans as a legislative option to control the spread of pests in New Zealand. This operational plan includes both the Marine Pathway Management Plan AND the Marine Sustained Control species listed in the Regional Pest and Marine Pathway Management Plan 2017-2017. Both these programmes of work make up the Marine Biosecurity Programme for Northland undertaken by the Northland Regional Council. This plan has been prepared as a requirement of the Biosecurity Act 1993 section 100B.

### 3. NUMBER OF PESTS IN THE PLAN

Type of Pest	Number of Species (or groups of species) in the Pest Plan				
	Exclusion	Eradication	Progressive Control	Sustained Control	Banned from sale or distribution
Plants	13	21	5	15	37
Animals	8	3		9	
Diseases				1	
Fresh water	3	8	3	2	
Marine				7	

A breakdown of the pests included in the Pest Plan is detailed in Section 4 (overleaf).

## 4. PEST SPECIES INCLUDED IN THE PLAN

Pest Type	Exclusion Species	Eradication Species	Progressive Containment
<b>Plants</b>	Asiatic knotweed Chinese knotweed Climbing spindle berry Giant hogweed Giant knotweed Holly-leaved senecio Houttuynia Noogoora bur Old man's beard Phragmites Purple loosestrife Sea Spurge Velvet leaf	Akebia Balloon vine Bat-wing passionflower Cape tulip Cathedral bells Chilean rhubarb Evergreen buckthorn Field horsetail Firethorn Gypsywort Lesser knotweed Mexican feather grass Mickey mouse plant Monkey musk Nassella tussock Nutgrass Royal fern <i>Spartina alterniflora</i> <i>Spartina anglica</i> <i>Spartina townsendii</i> Wilding kiwifruit Yellow flag iris	African feather Grass Lantana Manchurian wild rice Mile a minute Pultenaea
<b>Animals</b>	Bearded dragon Big headed ant Blue tongued skink Indian ring-necked parakeet Rainbow lorikeet Rook Sulphur crested cockatoo Wallaby	Feral deer including all species <i>and hybrids of:</i> <i>Cervus</i> <i>Dama</i> <i>Odocoileus</i>	
<b>Disease</b>			
<b>Fresh water</b>	Entire marshwort Orfe Water poppy	Eastern water dragon Eel grass Nardoo Red-eared slider turtle Salvinia Senegal Tea Snake-necked turtle Water hyacinth	Koi carp Perch Tench
<b>Marine</b>			

Pest Type	Sustained Control	Banned from Sale and Distribution	
<b>Plants</b>	Bathurst bur Queen of the night Brazillian Pepper tree Rhus tree Gorse Gravel Groundsel Phoenix palm Privet Wild ginger incl: Yellow ginger Kahili ginger Wilding conifers incl: <i>Pinus contorta</i> Douglas fir Maritime pine Radiata pine Woolly nightshade	Agapanthus Black-eyed Susan Broom Brush wattle Buddleia Camphor laurel Cape honey flower Cape ivy Century plant Coastal banksia Cotoneaster incl: <i>C. glaucophyllus</i> <i>C. franchetii</i> Eleagnus Elephant's ear English ivy Furcraea German ivy Greater bindweed	Hakea Himalayan fairy grass Himalayan honeysuckle Jasmine Kangaroo acacia Lily of the valley vine Oxylobium Paperbark poplar Periwinkle Prickly mooses incl: <i>Acacia verticillata</i> subsp. <i>cephalantha</i> <i>A. v. subsp. ruscifolia</i> Sharp rush Sexton's bride Sycamore Sydney golden wattle Taiwan cherry Velvet groundsel
<b>Animals</b>	Argentine ant Darwin's ant Feral and stray cats Feral goat Feral pig Mustelids incl: Ferret Stoat Weasel Possum Rabbit Rodents incl: Norway rat Ship rat		
<b>Disease</b>	Kauri dieback		
<b>Fresh water</b>	Brown bullhead catfish Rudd		
<b>Marine</b>	Asian paddle crab Australian droplet tunicate Japanese Mantis Shrimp Mediterranean fan worm Pyura sea squirt Styela sea squirt Undaria seaweed		

## 5. FINANCIAL SUMMARY

Council's Long Term Plan 2015 - 2025 provides the necessary funding, via rates and user charges, for the operational and planning activities associated with pest management.

The 2019-2020 Long Term Plan and Revised budgets are summarised in the table below:

Biosecurity 2019-2020 Annual Budget		2019-2020
Biosecurity Overheads *	\$2,565,239	\$2,601,192
Partnerships	\$2,847,486	\$2,631,168
Pest Plants and Freshwater	\$488,908	\$965,583
Diseases and Incursions	\$583,345	\$567,032
Marine	\$594,432	\$591,604
<b>Total</b>	<b>\$7,079,410</b>	<b>\$7,356,579</b>

\* Includes staff training, vehicle running costs, regional and national working groups, administration staff, and council support services.



# 6. PEST PLANTS

## 6.1 Exclusion Plants

### Regulatory Programmes Include:

- Enforcement of rules relating to exclusion plants.
- Eradication of exclusion plants found in Northland.
- Inspection / enforcement of rules relating to Plant nurseries and retail outlets (National pest plant accord).

### Non-Regulatory Services Include (Not Limited To):

- Supporting eradications undertaken by other Crown agencies and stakeholders.
- Provide advice about how to manage exclusion plants.
- Support, attend and provide public weed control workshops to raise awareness and provide training to relevant stakeholders.
- Manage contractors relating to control of exclusion plants.

Key Performance Measures	How Will This Be Measured?
Identify new sites through passive and active surveillance by NRC staff, the public, or through regional surveillance.	Evidence of the records of new sites reported and recorded.
Initial investigations for all reported sightings and/or discoveries during the course of other work undertaken within 5 working days.	Council database.
A response plan developed and implemented for any incursion of an exclusion plant within 20 working days of confirmation of species.	Evidence of plans developed.
Collaborate with Regional Councils, Ministry for Primary Industries, other Crown agencies and stakeholders to prevent spread into Northland.	Report back on agency collaborations.
All known plant outlets in Northland are aware of obligations and inspected annually for exclusion species.	Record of plant outlets visited by staff and exclusion species encountered.
Increase in awareness of the exclusion plants.	Events attended and social media interactions.

## 6.2 Eradication Plants

Control work will be undertaken annually by council staff / contractors / partners and/or stakeholders and detailed work plans will be developed for specific pests.

### Regulatory Programmes Include:

- Enforcement of rules relating to eradication plants.
- Eradication of species listed within the eradication programme.
- Inspection / enforcement of rules relating to Plant nurseries and retail outlets (National pest plant accord).

### Non-Regulatory Services Include (not limited to):

- Support eradications undertaken by other Crown agencies and stakeholders.
- Provide advice about how to manage eradication plants.
- Support, attend and provide public pest control workshops to raise awareness.
- Manage contractors relating to control of eradication plants.

### Key Performance Measures

Key Performance Measures	How Will This Be Measured?
Identify new sites through passive and active surveillance by NRC staff, the public, or through regional surveillance.	Reported from Council database.
Response to reports from the public on eradication plants will be initially responded to within 5 working days and actions completed within 20 days.	Council database.
Increase in awareness of eradication plants.	Events attended and social media interactions.
All management sites visited on scheduled best practice rotation.	Evidence from council database.
Decrease in number of adult plants in existing sites	Officer field reports.
All known plant outlets in Northland are aware of obligations and inspected annually for eradication species.	Record of plant outlets visited by staff and eradication species encountered.

## 6.3 Progressive Containment Plants

Council staff will aim to eradicate populations outside the containment zone and also reduce the size of the containment zone through a variety of control methods, including but not limited to spraying.

Council staff will also support communities to reduce the impact of progressive containment pests through several regulatory and non-regulatory biosecurity programmes.

### Regulatory Programmes Include:

- Enforcement of rules relating to progressive containment plant species.
- Eradication and reduction of infestations of progressive containment plants will/may be attempted by the council in conjunction with relevant Crown agencies and stakeholders.

### Non-Regulatory Services Include (not limited to):

- Develop and support community pest control programmes.
- Develop and support biosecurity environment fund projects.
- Support community and land care groups.
- Provide advice about how to manage progressive containment species.
- Support, attend and provide public weed control workshops.
- Provide public weed workshops.
- Support biocontrol for progressive containment species.

### Key Performance Measures

Key Performance Measures	How Will This Be Measured?
Reports from the public on progressive containment pests will be responded to within 5 working days.	Council database.
Annual reporting on the status of all progressive containment pests.	Evidence of annual report.
All Management sites visited on scheduled best practice rotation.	Evidence of schedule and visits made reported back.
Decrease in number of adult plants in existing sites	Report back from field observations
Increase awareness about progressive containment pests.	Events attended and social media interactions.
Maintain or increase in number of land owners undertaking work within progressive containment zone.	Evidence of the change in numbers of landowners involved.

## 6.4 Sustained Control Plants

Council will provide advice to relevant road and rail authority staff regarding development and implementation of management plans for sustained control plants.

Sustained control plants are managed through both regulatory and non-regulatory biosecurity programmes.

### Regulatory Programmes Include:

- Enforcement of rules relating to sustained control plant species.
- Enforcement of Good neighbour rules.
- Inspection / enforcement of rules relating to Plant nurseries and retail outlets (National pest plant accord).
- Inspection / enforcement of rules relating to Quarries.
- Enforcement of rules relating to Road and rail, and development and implementation of management plans).

### Non-Regulatory Services Include (Not Limited To):

- Develop and support community pest control programmes and high value areas.
- Develop and support biosecurity environment fund projects.
- Support community and land care groups.
- Provide advice about how to manage sustained control species.
- Support, attend and provide public weed control workshops.
- Provide public weed workshops.
- Support biocontrol for sustained control plants.

### Key Performance Measures

Key Performance Measures	How Will This Be Measured?
Response to reports from the public on sustained controlled pests will be responded to within 20 working days.	Reported via council database.
The number of requests received shall be tracked.	Council database.
Increase in hectares of land under CPCAs per annum (increase by 5000 ha).	Evidence of management plans which show hectares of CPCA's.
Encourage the release of biocontrol agents in Northland.	Evidence of biocontrol programme support and new initiatives.
All known plant outlets in Northland are aware of obligations and inspected annually for species identified in the National Pest Plant Accord and RPMP.	Record of plant outlets visited by staff and any non-compliances found.

Key Performance Measures	How Will This Be Measured?
All exemptions to any rule are reported.	Council database.
Increase awareness about sustained control pests.	Events attended and social media interactions.
All road and rail authorities have 5 year weed management plans or prioritised annual plans approved and implemented.	Evidence of management plans in place.

# 7. PEST ANIMALS

## 7.1 Exclusion Animals

### Regulatory Programmes Include:

- Enforcement of rules relating to exclusion animals.
- Eradication of exclusion animals found in Northland.

### Non-Regulatory Services Include (Not Limited To):

- Support eradications undertaken by other Crown agencies and stakeholders.
- Provide advice about how to manage exclusion animals.
- Support, attend and provide public pest control workshops to provide training and raise awareness to assist in early detection.
- Manage contractors relating to control of exclusion animals.
- Council will provide advice, attend events and undertake publicity campaigns to increase public awareness of exclusion animals.

### Key Performance Measures

Key Performance Measures	How Will This Be Measured?
New sites are identified.	Evidence of records held on Council database.
Initial investigations for all reported sightings and/or discoveries in the course of other work undertaken within 5 working days.	Evidence held on council databases.
A response plan developed and implemented for any incursion of an exclusion pest within 20 working days of confirmation of species.	Evidence of response plans reported.
Collaborate with Regional Councils, Ministry for Primary Industries, other Crown agencies and stakeholders to prevent spread into Northland.	Evidence of the number of agencies and ministries working in collaboration with biosecurity staff.
Increase in awareness of the exclusion pests.	Events attended and social media interactions.

## 7.2 Eradication Animals

### Regulatory Programmes Include:

- Enforcement of rules relating to eradication animals.
- Eradication of species listed within the eradication programme.

### Non-Regulatory Services Include (not limited to):

- Support eradications undertaken by other Crown agencies and stakeholders.
- Provide advice about how to manage eradication animals.
- Support, attend and provide public pest control workshops to raise awareness.
- Manage contractors relating to control of eradication animals.

### Key Performance Measures

Key Performance Measures	How Will This Be Measured?
Incursions are responded to through passive and active surveillance by council staff, the public, or through regional surveillance.	Records held on council database.
Increase in awareness of eradication animals such as Feral Deer.	Number of public requests via 0800 Hotline.
Response to incidents from the public will be responded to within 5 working days.	Council database.
A response plan developed and implemented for any incursion of an exclusion pest within 20 working days of confirmation of species.	Evidence of a response plans drafted.
All deer farm fences are inspected bi-annually in partnership with the Department of Conservation.	Council database.

## 7.3 Sustained Control Animals

### Regulatory Programmes Include:

- Enforcement of rules relating to sustained control animal species.

### Non-Regulatory Services Include (Not Limited To):

- Develop and support community pest control programmes and high value areas.
- Develop and support biosecurity environment fund projects.
- Develop and support significant biosecurity partnerships (eg. NRC-Kiwi Coast Partnership).
- Support community and land care groups.
- Provide advice about how to manage sustained control animals.
- Support, attend and provide public pest control workshops.
- Provide selected pest control materials.
- Manage contractors relating to sustained control animal control.
- Staff will assist landowners and agencies to develop management plans to manage sustained control animals in Northland.

### Key Performance Measures

Key Performance Measures	How Will This Be Measured?
Response to reports from the public on sustained controlled pests will be responded to within 20 working days.	Council database.
Increase in hectares of land under CPCA's per annum (increase by 5000 ha).	Evidence of management plans which show hectares of CPCA's.
Increase in kiwi populations within NRC supported programmes – increase by 2% per annum.	Records from kiwi listening databases.
All exemptions to any rule are reported.	Council database reports.
Increase in awareness of sustained control animals. Measure annual outputs of council supported programmes – may include: <ul style="list-style-type: none"> <li>• Number of traps issued</li> <li>• Number of kills recorded</li> <li>• Number of Biofunds approved.</li> </ul>	Events attended and social media interactions.  Council database records.



# 8. DISEASES AND PATHOGENS

## How Will The Programmes Be Implemented?

The kauri dieback programme is a multi-agency programme involving the Ministry for Primary Industries, Department of Conservation, Northland Regional Council, Auckland Council, Waikato Regional Council, Bay of Plenty Regional Council, and tangata whenua.

The programme will utilise scientific and technological advancements to help reduce the spread of kauri dieback including Matauranga Māori.

### 8.1.1 How Will the Programme Be Implemented?

#### Regulatory Programmes Include:

- Enforcement of rules relating to sustained control disease.
- Development of high-risk kauri dieback management plans.
- Council staff and/or their contractors will visit all places on private land suspected of containing kauri dieback to undertake further assessment or testing.

#### Non-Regulatory Services Include (Not Limited To):

- Develop and support community pest control programmes (CPCA).
- Develop and support biosecurity environment fund projects.
- Develop and support significant biosecurity partnerships (NRC-Kiwi Coast Partnership and Māori).
- Support community and land care groups.
- Provide advice about how to manage sustained control disease.
- Support, attend and provide public kauri dieback workshops.
- Provide selected pest control materials.
- Manage contractors relating to sustained control species.

#### Key Performance Measures

Key Performance Measures	How Will This Be Measured?
All high-risk sites have management plans.	Number of KDB management plans completed.
Engagement activities are conducted to facilitate an increase in awareness of kauri dieback disease.	Number of educational events and their approximate reach will be recorded.
Soil sampling.	Completion of 120 aerial survey sites and follow up sampling of positive sites.
Maintain a record of distribution of kauri dieback disease across Northland.	Recorded on national and council data systems.

Key Performance Measures	How Will This Be Measured?
All incidents are recorded, and a response plan is developed and implemented within 20 working days.	Evidence held on council database.
Requests from the public shall be responded to within 5 working days.	Council database.
All exemptions to any rule are reported.	Council database reports.
Improved hygiene of tracks through installation of hygiene station.	Number of hygiene stations installed across Northland.

# 9. FRESHWATER PESTS

## 9.1 Exclusion Freshwater Pests

### Regulatory Programmes Include:

- Enforcement of rules relating to exclusion freshwater pests.
- Eradication of exclusion freshwater pests found in Northland.
- Inspection / enforcement of rules relating to Plant nurseries and retail outlets (National pest plant accord).

### Non-Regulatory Services Include (Not Limited To):

- Support eradications undertaken by other Crown agencies and stakeholders.
- Provide advice about how to manage exclusion freshwater species.
- Support, attend and provide public pest control workshops to raise awareness.
- Manage contractors relating to control of exclusion species.
- Provide training to relevant council staff and stakeholders about the identification of the exclusion pests to assist in early detection.
- Provide advice, attend events and undertake publicity campaigns to increase public awareness of exclusion pests.

### Key Performance Measures

Key Performance Measures	How Will This Be Measured?
Identify new sites through passive and active surveillance by council staff, the public, or through regional surveillance.	Evidence of new sites recorded and stored council database.
Initial investigations for all reported sightings and/or discoveries in the course of other work undertaken within 5 working days.	Council database reports.
A response plan developed and implemented for any incursion of an exclusion freshwater pest within 20 working days of confirmation of species.	Evidence of plans.
Collaborate with Regional Councils, Ministry for Primary Industries, other Crown agencies and stakeholders to prevent spread into Northland.	Evidence of the number of agencies and ministries working in collaboration with biosecurity staff.
All known plant outlets in Northland are aware of obligations and inspected annually for exclusion species	Record of plant outlets visited by staff and exclusion species encountered.

Key Performance Measures	How Will This Be Measured?
Increase in awareness of the exclusion freshwater pests.	Events attended and social media interactions.

## 9.2 Eradication Freshwater Pests

### Regulatory Programmes Include:

- Enforcement of rules relating to eradication freshwater species.
- Eradication of species listed within the eradication programme.
- Inspection / enforcement of rules relating to Plant nurseries and retail outlets (National pest plant accord).

### Non-Regulatory Services Include (not limited to):

- Support eradications undertaken by other Crown agencies and stakeholders.
- Provide advice about how to manage eradication freshwater species.
- Support, attend and provide public pest control workshops to raise awareness.
- Manage contractors relating to control of eradication freshwater species.

### Key Performance Measures

Key Performance Measures	How Will This Be Measured?
Identify new sites through passive and active surveillance by NRC staff, the public, or through regional surveillance.	Council database..
Response to reports from the public on eradication plants will be responded to within 5 working days.	Council database
Increase in awareness of eradication plants.	Events attended and social media interactions.
All Management sites visited on scheduled best practice rotation.	Evidence of schedule and visits made reported back.
Decrease in number of adult plants in existing sites	Report back from field observations.
All known plant outlets in Northland are aware of obligations and inspected annually for eradication species.	Record of plant outlets visited by staff and eradication species encountered.

## 9.3 Progressive Containment Freshwater Pests

### Regulatory Programmes Include:

- Enforcement of rules relating to sustained control freshwater species.
- Eradication and/or reduction of infestations of the progressive containment freshwater pests may be attempted by the council in conjunction with relevant Crown agencies and stakeholders where practicable.

### Non-Regulatory Services Include (not limited to):

- Council staff will assist land owners to develop management plans.
- Council will provide training to relevant council staff and stakeholders in the identification of pests to assist in early detection.
- Council staff will provide advice, attend events and undertake publicity campaigns to increase public awareness of pests.
- New technologies and methods will be investigated and introduced where possible.

### Key Performance Measures

Key Performance Measures	How Will This Be Measured?
Reports from the public on progressive containment pests will be responded to within 5 working days.	Council database
Annual reporting on the status of all progressive containment pests.	Evidence of report produced
All Management sites visited on scheduled best practice rotation.	Evidence of schedule and visits made reported back
Decrease in number of adult plants in existing sites	Report back from field observations
Increase awareness about progressive containment pests.	Events attended and social media interactions.
Maintain an updated distribution record of progressive containment freshwater species.	Evidence retrieved from council database

## 9.4 Sustained Control Freshwater Pests

### Regulatory Programmes Include:

- Enforcement of rules relating to sustained control freshwater species

### Non-Regulatory Services Include (not limited to):

- Develop and support community pest control programmes and high value areas.
- Develop and support biosecurity environment fund projects.
- Support community and land care groups.
- Provide advice about how to manage sustained control species.
- Support, attend and provide public pest control workshops.
- Provide selected pest control materials.
- Manage contractors relating to sustained control species.

### Key Performance Measures

- Respond to requests / incidents within 5 working days.
- All exemptions to any rule are reported.
- Increase in awareness of sustained control species.

Key Performance Measures	How Will This Be Measured?
Response to reports from the public on sustained controlled freshwater pests will be responded to within 20 working days.	Evidence held on council database.
The number of requests received shall be tracked.	Council database.
All exemptions to any rule are reported.	Council database.
Increase awareness about sustained control freshwater pests.	Events attended and social media interactions.

# 10. MARINE PATHWAYS MANAGEMENT PLAN (MPMP)

## 10.1 Background of the Marine Pathway Plan

Over the life of the RPMP (including MPMP), council has the following aims:

- To increase the number of vessel owners and/or persons in charge of vessels complying with the pathways plan rules.
- To increase the awareness of the risk hull fouling poses to marine pest spread.
- To see a reduction in the new marine pest introductions to Northland.
- To see a reduction in the rate of spread of established marine pests within Northland.
- 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 sustained control pests.

Since 2010 council has had a species-led approach to managing marine pests. However, identifying marine pests and potential risk organisms for Northland is difficult so rather than relying solely on the species-led approach, NRC is addressing a universal vector of spread. Mediterranean fanworm is one of many species that has entered the region via hull biofouling, with over 100 vessels carrying fanworm found in Northland since 2012. Taking a proactive approach and encouraging cleaner hulls through a MPMP will result in fewer vessels carrying marine pests and other biofouling to the region and reduce the risk of new marine pest incursions.

The programme includes the following species and pathways:

Marine Pests and Pathway			
Marine Pathway plan	Hull fouling: Level of Fouling 2		
Sustained control marine pests	Asian paddle crab Australian droplet tunicate Japanese Mantis Shrimp	Mediterranean fan worm Pyura sea squirt Styela sea squirt	Undaria seaweed

## 10.2 How Will the Programme Be Implemented?

### Year 2: 2019-2020

- Continue with existing communication and advice programmes to assist vessel owners & stakeholders with ensuring compliance with rules.
- The diver hull surveillance programme will continue as per year one with any vessel carrying a named marine pest placed under a Notice of Direction and directed to make a plan to have the vessel cleaned. In addition, owners of vessels that exceed the MPMP fouling threshold will be advised what that will mean for them once the rules are enforced.
- If a vessel is over the fouling threshold it will be cross referenced against existing data to assess if any management has been undertaken or whether the vessel has moved. Although Notices of Direction (NOD's) will not be issued in year 2 while the program is still in an

education phase, this information will assist our understanding of non-compliant vessel numbers and movements.

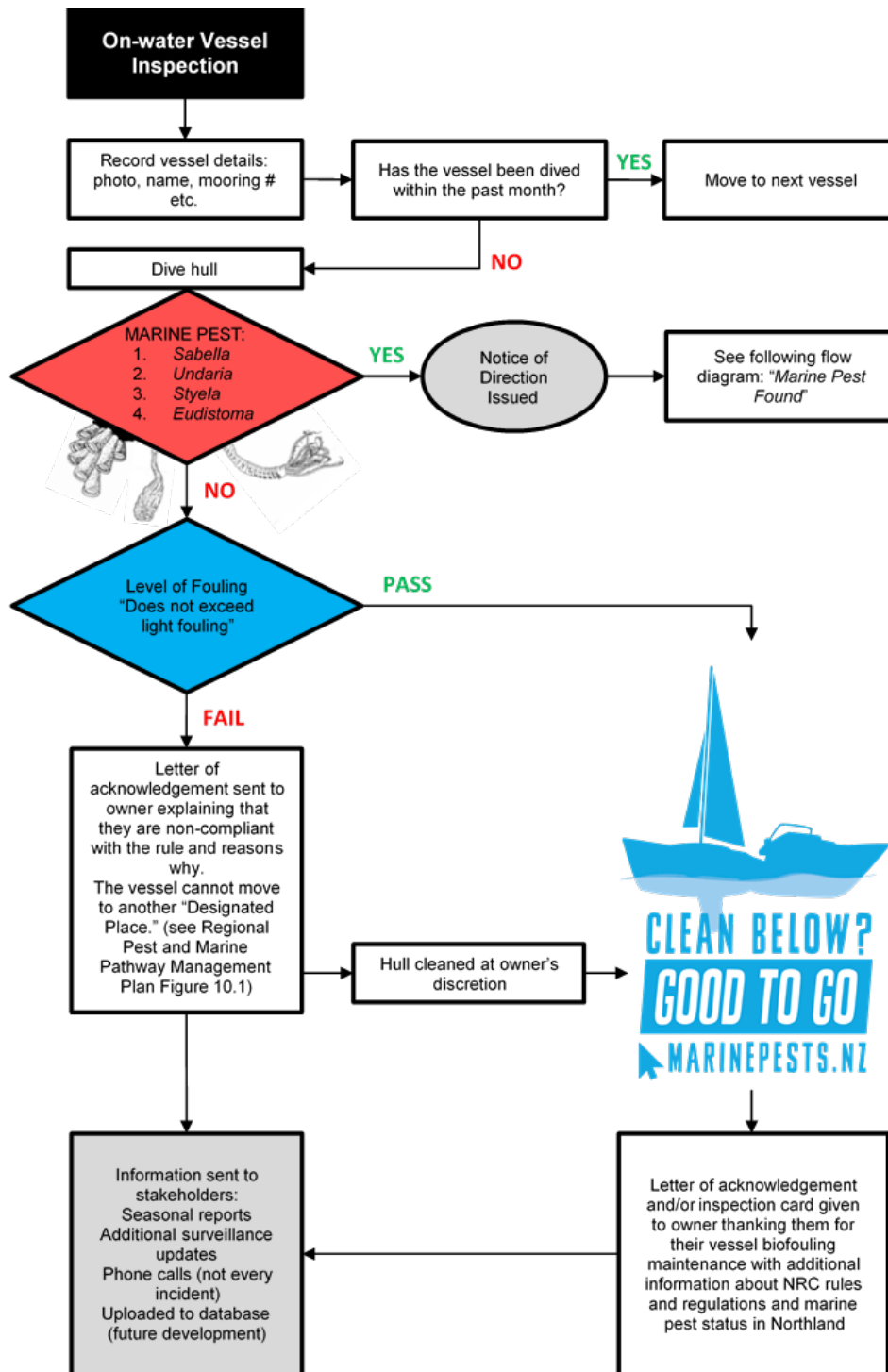
- NOD's on vessels found with listed marine pests will be tracked in IRIS (councils online incident logging database) and regular contact will be made with vessel owners to ensure they have not moved their vessels.

. *Figures 1 and 2* outline the process of

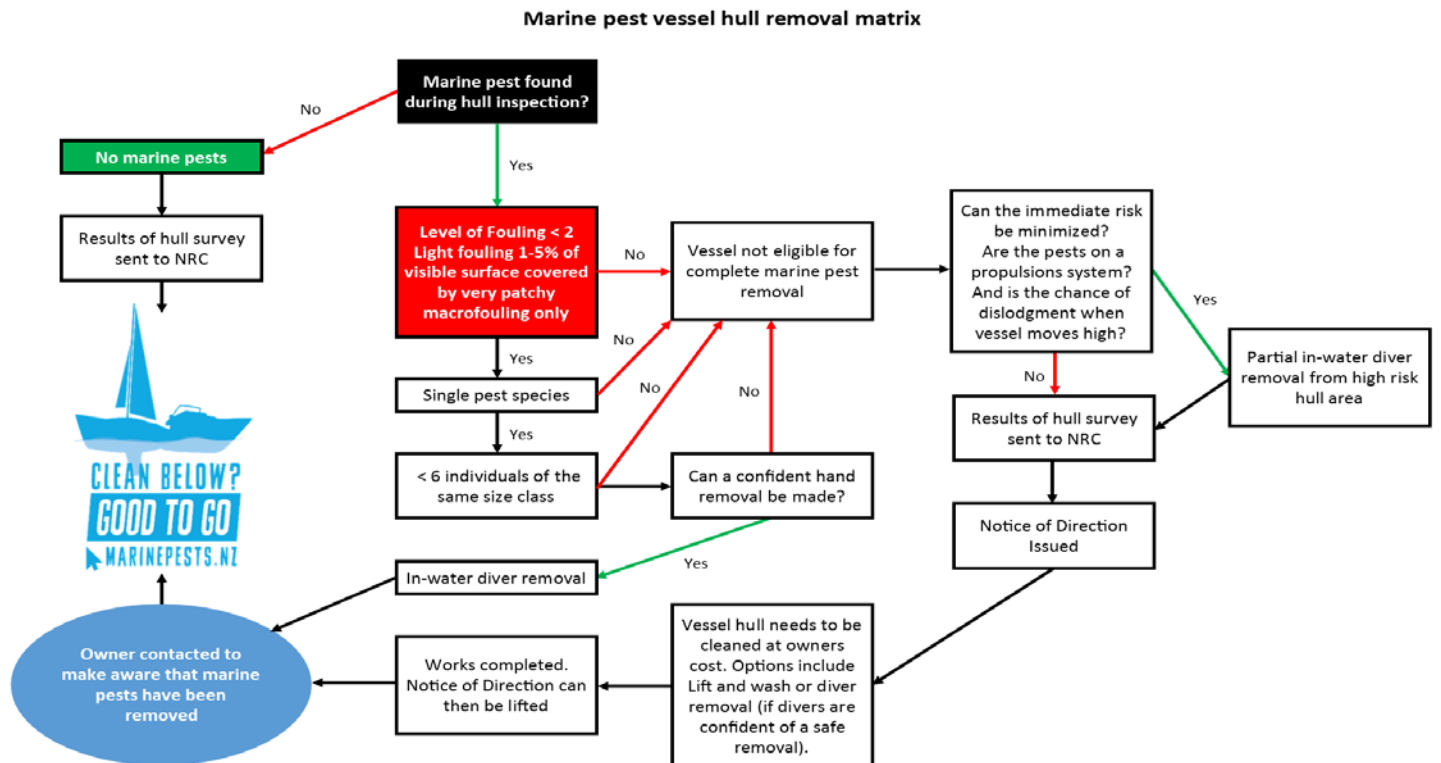
- Vessel inspection (*Figure 1*)
- The protocol followed if a marine pest is found (*Figure 2*).

Not all cases are the same and may therefore not follow these protocols step by step.





**Figure 1:** Flow diagram outlining the hull inspection process from vessel identification, diving the hull, identifying marine pests present, the process for informing vessel owners once hull inspections have been carried out, and feedback to stakeholders.



**Figure 2:** Flow diagram outlining the process for removing marine pests once identified on the hull of a vessel.

## 10.3 Programme Costs

The 2019-2020 diver hull surveillance contract was tendered out at **\$222,000** for inspection of 2,000 vessels and is currently the largest operational cost. An increase in compliance and a reliance on proxy measures of clean hulls like the voluntary antifoul declaration, a log book system, visual inspections and evidence of haul outs and antifoul applications could see a decrease in the need for inspection.

## 10.4 Performance Targets and Measures

Key Performance Measures	How Will This Be Measured?
Compliance with the marine pest and pathway plan is recorded and trends over the duration of the plan are analysed.	<p>The vessel hull surveillance programme will inspect 2000 vessel hulls annually.</p> <p>Compliance with the pathway plan and all incidents will be recorded and reported monthly.</p>
Engagement activities are conducted to facilitate an increase in awareness of the risk hull fouling poses to the spread of marine pests.	<p>Education surveys will be undertaken, and results recorded.</p> <p>Educational events and their approximate reach will be recorded.</p>
Introductions of new marine pests to Northland and spread of established pests to new designated areas within Northland are recorded and trends over the duration of the plan are analysed.	<p>Number of incidents and reports of marine pests will be recorded and reported monthly.</p> <p>Surveillance activities will be recorded to contribute to an assessment of surveillance effort over the duration of the plan.</p>
All incidents are recorded, and a response plan is developed and implemented within 5 working days.	IRIS data reports.
All exemptions to the rules are recorded and reported on. Exemptions include a description, reasons and time period and are made available to the public.	IRIS data reports.

# 11. OPERATIONAL PLAN REPORTING

Council will produce a report on the operational plan and its implementation not later than 5 months after the end of each financial year.

A copy of this report will be provided to council.

# 12. OPERATIONAL PLAN REVIEW

This operational plan will be reviewed annually and be subject to regular revision and improvement during each year.

**Northland Regional Council**

**P** 0800 002 004

**E** [info@nrc.govt.nz](mailto:info@nrc.govt.nz)

**W** [www.nrc.govt.nz](http://www.nrc.govt.nz)