# Pest Management Working Party Thursday 18 April 2019 at 1.00pm

AGENDA



## Pest Management Working Party Agenda

Meeting to be held in the Kaipara Room Northland Regional Council, 36 Water Street, Whangārei on Thursday 18 April 2019, commencing at 1.00pm

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 PEST MANAGEMENT WORKING PARTY

	Chairman, Councillor Mike Finlays	on
Councillor Justin Blaikie	Councillor Paul Dimery	Councillor Bill Shepherd (Ex- Officio)
Councillor Rick Stolwerk	Non Elected Member from TTMAC	

#### Item

Page

#### 1.0 APOLOGIES

#### 2.0 DECLARATIONS OF CONFLICTS OF INTEREST

#### 3.0 REPORTS

- 3.1 Record of Actions from previous meeting & Matters Arising
- **3.2** Presentation by Commercial Fisherman re new Marine Pests established in Hokianga Harbour (Cr Justin Blaikie)
- **3.3** Community Engagement on Marine Biosecurity (Amelie Auge & Cr Mike Finlayson)
- **3.4** Predator Free Northland PF2050 Expression of Interest (Kane McElrea) Attachment 1 Predator Free Northland PF2050 - Application
- **3.5** Overview/Breakdown of Funding Allocation by area of LTP new Pest Management Fund (Kane McElrea)
- 3.6 Pig Control on Private Land surrounding Northland's Kauri Forests (Kane McElrea)

## TITLE: Record of Actions from previous meeting & Matters Arising

**ID:** A1184259

From: Nola Sooner, Land and Rivers Team Administrator/PA

#### Executive summary

The purpose of this report is to present the Record of Actions of the last meeting (attached) held on 12 December 2018 for review by the meeting.

#### Attachments/Ngā tapirihanga

Attachment 1: Record of Actions <a>J</a>

Attachment 2: Matters Arising J

Attachment 3: Pest Management Infographic <a>J</a>

#### Authorised by Group Manager

Name: Bruce Howse

Title: Group Manager - Environmental Services

Date:

## Pest Management Working Party Record of Actions

Meeting held in the Council Chamber 36 Water Street, Whangārei on Wednesday 12 December 2018, commencing at 9.00am

## Present:

Chairman, Councillor Mike Finlayson Councillor Justin Blaikie Councillor Paul Dimery Councillor Bill Shepherd (Ex-Officio) Councillor Rick Stolwerk Barb (Michelle) Elboz (TTMAC non-elected member)

## In Attendance:

#### **Full Meeting**

Bruce Howse, Group Manager - Environmental Services & Deputy CEO Don McKenzie, Biosecurity Manager Kane McElrea, Biosecurity Manager – Partnerships & Strategy Louise Orford, Biosecurity Officer – Team Support (Record of Actions Taker)

#### **Part Meeting**

Natasha Stubbing, Marketing and Engagement Manager

The meeting commenced at 9.00 am.

#### Apologies (Item 1.0)

Councillor Blaikie

## Record of Actions from Previous Meeting & Matters Arising (Item 3.1)

Presented by: Cr Mike Finlayson

## Deer Control Program (Item 3.2)

Presented by: Don McKenzie, Biosecurity Manager

#### Pest Fish Plan (Item 3.3)

Presented by: Don McKenzie, Biosecurity Manager

#### Agreed action points:

• Staff to include a repeat survey of the pest fish and plants survey in the Pest Fish Plan. Action: Don McKenzie

## Biosecurity 2025 'Ko ta tou - This is Us" Launch (Item 3.4)

Presented by: Don McKenzie, Biosecurity Manager

Agreed action points:

• School Biosecurity educational kits (House of Science <u>https://houseofscience.nz/)</u> to be obtained for Enviroschools. Action: Don McKenzie

## Opua Fanworm Response Update (Item 3.5)

Presented by: Don McKenzie, Biosecurity Manager

## Communications and Engagement Strategy for Biosecurity (Item 3.6)

Presented by: Natasha Stubbing, Marketing and Engagement Manager

#### Agreed action points:

- Native riparian planting statistics to be included in infographics. Action: Natasha Stubbing
- Enviroschools native planting activities to be included in the NRC website. Action: Natasha Stubbing
- Upcoming Environmental Awards to be included in a council workshop, the TTMAC agenda, and advised to Sheryl (for councillor diaries). Action: Natasha Stubbing
- Councillors to be given a supply of pest control hub business cards. Action: Natasha Stubbing
- Councillors to be sent biosecurity and biodiversity infographics (both jpgs and website links) when updated. Action: Natasha Stubbing

## **Other Business**

#### **Operational Plan Report**

The Operational Plan report is on the Big Tin Can.

#### **Agreed Action Point:**

• Brief summary of operational plan to be reported in CEO's report. Action: Don McKenzie

#### **Next Meeting**

It was agreed the next meeting will be a field trip to meet with Landcare and Kiwi Coast groups.

## Conclusion

The meeting concluded at 10.44 am.

## PEST MANAGEMENT WORKING PARTY RECORD OF ACTIONS (12-12-18) Matters Arising

## Pest Fish Plan (Item 3.3)

#### Agreed Action Point:

• Staff to include a repeat of the farm survey for pest fish and plants in the Pest Fish Plan. Action: Don McKenzie

**Status:** The survey is intended to repeat in a 5 yearly cycle, but staff are considering the potential benefits of resending it to non-respondents in the interim.

## Biosecurity 2025 "Ko ta tou – This is Us" Launch (Item 3.4)

#### **Agreed Action Point:**

• School Biosecurity educational kits (House of Science <u>https://houseofscience.nz/</u>) to be obtained for Enviroschools. Action: Don McKenzie

**Status:** The kits are only available to schools in regions where there is a House of Science branch operating, therefore the kits cannot be sourced for Northland at present. A proposal has been put to the Provincial Growth team for funding of a Northland branch of House of Science, but it was unsuccessful. Susan Karels (Enviroschools Regional Coordinator) is going meeting with the National CEO of House of Science on 29<sup>th</sup> April to discuss other options.

## Communications and Engagement Strategy for Biosecurity (Item 3.6)

#### Presented by: Natasha Stubbing, Marketing and Engagement Manager

Agreed action points:

• Native riparian planting statistics to be included in infographics. Action: Natasha Stubbing

**Status:** This will be included in the next Land Management infographic which isn't updated until the new financial year.

• Enviroschools native planting activities to be included in the NRC website. Action: Natasha Stubbing

**Status:** Enviroschools activities are updated on website and Facebook page. The school information packs including predator control methods have been recently updated.

• Upcoming Environmental Awards to be included in a council workshop, the TTMAC agenda, and advised to Sheryl (for councillor diaries). Action: Natasha Stubbing

**Status:** Completed. Judging is underway and we are looking forward to the awards ceremony on Thursday 23 May.

• Councillors to be given a supply of pest control hub business cards. Action: Natasha Stubbing

Status: Completed. We have more available if councillors missed out or require more.

• Councillors to be sent biosecurity and biodiversity infographics (both jpgs and website links) when updated. Action: Natasha Stubbing

**Status:** The biosecurity section on the website is getting updated and the infographic will be included on this. The link will be available afterwards. Please find attached PDF of infographic.

## **Other Business**

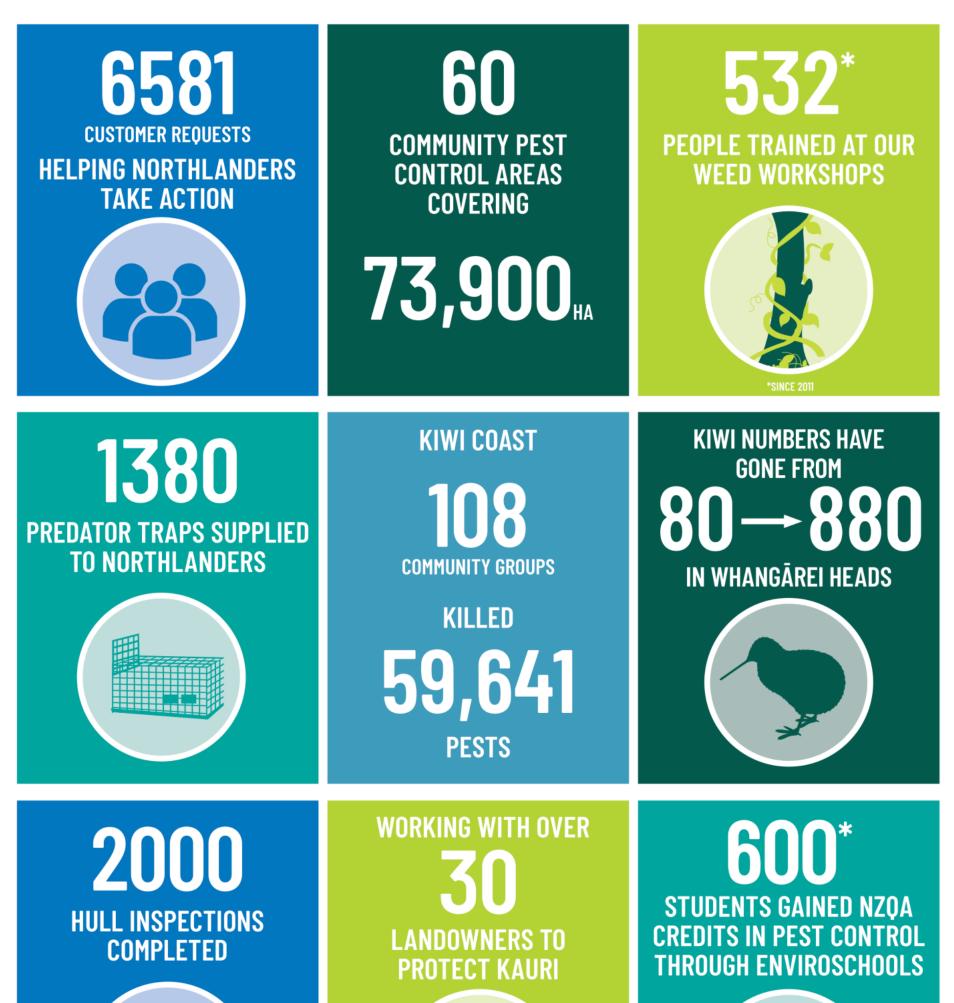
Operational plan report is on the big tin can.

#### Agreed Action Point:

• Brief summary of operational plan to be reported in the CEO's report. Action: Bruce Howse

Status: Summary was included in the March CEO's report to council.

# Pest control in action 2017-2018





# For more information P 0800 002 004 E info@nrc.govt.nz



## EXPRESSION OF INTEREST FORM SURGE REGION LARGE LANDSCAPE PROJECTS



Thank you for your interest in receiving support from Predator Free 2050 Limited's Provincial Growth Fund round. Please complete this Expression of Interest (EoI) form along with the supporting documentation outlined in the EoI information summary. Send documents to the address outlined at the end of this form. If you have any questions, please e-mail us via submissions@pf2050.co.nz.

# Any instructions in italics on this EoI may be removed. Please note EoI applications will be accepted from 18<sup>th</sup> February to 24<sup>th</sup> March 2019.

Organisation name	North	land Regional Council									
Postal address	36 Wa	36 Water Street, Private Bag 9021, Whangarei 0148									
Web address	www	/.nrc.govt.nz									
B. CONTACT FOR EOI											
Your name	Kane I	McElrea	Position	Biosecurity Manager							
Phone MB	02743	93774	Email	Kanem@nrc.govt.nz							
C. PROJECT DETAILS											
Project Title	ect Title Predator Free Northland (Project name to be finalised)										
Project collaborators		Northland Regional Council, Department of Conservation, Kiwi Coast Trust, Reconnecting Northland Trust, Northland Iwi and Hapu, District Councils, Northland Community Groups and Organisations,									
Surge region		Tai Tokerau/Northlar	nd,								
Location of project		Northland	Total number of years of funding requested								
		\$72m / \$154m		Have you requested funding from another							
Total Project Cost		4	— source for this pressure of the source for the								
Total Project Cost Total Funding reques	t	\$21.4m / \$38.1m									
	of	\$21.4m / \$38.1m									
Total Funding reques If yes indicate source funding and amount for and/or secured	of applied	\$21.4m / \$38.1m	FIDENTIAL?								

#### Project vision:

A healthy and connected Northland environment supporting a wealth of native wildlife and people in iconic ecosystems free from introduced predators.

#### Project Aim:

To support Northland community's ambitions to protect, restore and reconnect unique native forests and wildlife by controlling and eradicating introduced mammalian predators throughout Te Tai Tokerau (Northland), in high value landscapes by supporting community-led pest control, as the first step towards a Predator Free Northland (PFN).

#### Project Objectives:

- 1. **Eradicate** possums from at least **four** Northland peninsulas totalling more than 20,000ha by 2025. *Whangarei Heads (8,500ha), and Purerua (5,200), Russell (3023ha), Cape Brett (3074ha) in the Bay of Islands.*
- Suppress possums to less than 10% BMI in buffer zones adjacent to Eradication Zones totalling 30,000ha by 2025.
- 3. **Suppress** rodents to **zero density** at priority sites within possum eradication areas where communities are organised and ready (e.g. Whangarei Heads, Bay of Islands) by 2025.
- 4. **Suppress** mustelid predators over **150,000ha** through existing projects and continue to build this network throughout Northland.
- 5. **Support** and **develop** urban pest control programmes supporting backyard trapping and engagement in Whangarei (*5000ha*) and BOI (*4000ha*).
- 6. **Plan, support, develop and implement** large scale predator suppression to eradication programmes in other key areas of Northland –Kaipara, Western Northland).
- 7. Encourage, facilitate, build momentum and capability, link and connect community-led pest control programmes to establish a continuous pest control network throughout Northland.
- 8. **Increase** public awareness and engagement of pest control to ensure long-term sustainability of a Predator Free Northland.
- 9. **Develop** and **pilot** an impact investment programme that will attract investment to contribute to operational costs, and a pipeline of investment opportunities to scale up investments over the timeline PFN.

#### Project Outcomes

- Northland iwi, community landcare groups, organisations and agencies (currently over 150) are supported to work collaboratively towards a Predator Free Northland.
- Thousands of Northlanders are supported and enabled to actively control predators in Northland.
- Thousands of hectares of Northland forest and coastal habitats are protected and restored.
- Endangered species such as Australasian Bittern, NI Brown Kiwi, Ni Kaka, NI Kokako, NI Saddleback, NZ Fairy Tern, Long-tailed Bat, Short-Tailed Bat, NI Weka, Kauri Snail, flax snail, and numerous Northland-endemic invertebrates and plants are protected and restored.
- 2. Please outline the background to your project, briefly describing the research or best/promising practices that inform your project.

Northland has a reputable history in conservation management with over 30 years of community-led pest control, endangered species recovery and reintroductions, which has been significantly supported by Iwi, Northland Regional Council, Department of Conservation, and more recently Kiwi Coast, Reconnecting Northland, as well as other key regional and national supporting partners.

PFN brings an opportunity to link and connect several community-led landscape predator control programmes where there is a growing groundswell of community engagement, environmental awareness and enhancement programmes already in motion. A PFN collaboration will have significant cultural, social, environmental, and economic benefits for all Northlanders and New Zealand. PFN is scalable, adjustable and adaptable. PFN will ensure Northlands off shore predator free islands remain in this state and provide safe pathways for native species immigrating to the mainland.

Northland Regional Council has mana throughout Northland and can offer excellent relationship management through existing trust, collaborations and partnerships. NRC holds significant social capital in Northland to help support Northland communities to expand and achieve the next significant milestones in community-led conservation.

Naturally, peninsulas are strategic starting points for any mainland eradication or suppression programme. Northland is New Zealand's largest peninsula covering approx. 1.3m ha, with at least a dozen smaller peninsulas ranging from 1500ha - 90000ha. This project will accelerate possum control and eradication in Northland with the long-term goal of connecting and linking these programmes, while continuing to support the development of new large-scale community-led pest control programmes throughout Northland to achieve a Predator Free Northland.

PFN will support and develop new and novel control and monitoring techniques and equipment through partnerships and collaboration with leading research and development organisations regionally and nationally.

PFN will require an increased awareness and implementation of biosecurity hygiene practices, and development of new novel control techniques to reduce the spread of forest diseases such as Kauri Dieback (KDB).

NRC, DOC, and Reconnecting Northland are actively developing a collective impact model which will initially be trialled in Western Northland through He Ripo Kau, a holistic, community-led, connectivity conservation initiative in the Hokianga. Learnings from this model could then be applied to other areas of PFN.

#### 3. Briefly outline your work programme.

PFN will achieve its objectives through developing and supporting community led pest control programmes throughout the key focus areas while working towards a common goal of eradicating possums.

#### 2019-2020 (Year One) (July-June)

- > Develop Pest Free Northland strategic plan which aligns with a National PF2050 strategy.
- Confirm PFN working groups for Whangarei and Bay of Islands Predator Free Zones
- Appoint / employ operational staff
- Develop implementation plans for Whangarei and Bay of Islands Predator Free Zones (developed at the same time as the Pest Free Northland strategic plan).
- Develop associated PFN plans: (Utilising the skills and expertise of appropriate people, agencies and organisations)
  - o Communication and engagement plan
  - o Monitoring plan
  - Research plan
  - Education / training plan
- > Maintain existing pest control activities in all Predator Free Zones
- Undertake initial baseline monitoring
- Continue to expand predator control network and link largescale landscape project.

#### 2020-2021 (Year Two)

- Begin implementation of Whangarei and Bay of Islands PF project zones (possible to bring forward into Yr1 if ready)
- > Begin implementation of associated Predator Free Northland plans.
- Confirm Predator Free working groups for Kaipara and Western Northland project zones
- Develop Predator Free implementation plans for Kaipara and Western Northland Predator Free Zones
- Initiate impact investment pilot
- Maintain existing pest control activities in all Predator Free Zones
- Continue monitoring programme
- > Continue to expand predator control network and link largescale landscape projects.

#### 2021-2022 (Year Three)

- Begin Implementation of Kaipara and Western Northland PF project zones (possible to bring forward into Yr2 if ready)
- > Continue implementation of Predator Free Northland plans

- Scale up impact investment programme
- Maintain existing pest control activities in all Predator Free Zones
- Continue monitoring programme
- > Continue to expand predator control network and link largescale landscape projects.
- Undertake review of Predator Free Northland Programme.

#### 2022-2024 (Year Four / Five)

- Implement improvements identified from review of Predator Free Northland.
- > Continue implementation of all plans.
- Maintain impact investment programme growth
- Continue monitoring programme
- Maintain and expand existing pest control activities
- Continue to expand predator control network and link largescale landscape project.

#### 2025-2026

- Undertake review of Predator Free Northland Programme.
- Continue monitoring programme
- Maintain impact investment programme growth
- Maintain and expand existing pest control activities
- Achieve 0% Density Possum over 20,000ha
- Achieve <10% Possum throughout suppression zones (30,000ha)</p>
- Continue to expand predator control network and link largescale landscape project.

#### 2026-2029

- Continue monitoring programme
- Maintain impact investment programme growth
- > Maintain and expand existing pest control activities
- Continue to expand predator control network and link largescale landscape project.

Northland Regional Council understands its responsibilities under the Health and Safety at Work Act 2015 and will ensure all staff and other personnel working on a PFN project are appropriately trained in health and safety practices.

4. Briefly indicate how your proposal will contribute to regional development.

PFN will **create an estimated 100 new jobs** and provide a mechanism for Northland agencies, organisations, communities and enterprises to employ a range of people needed to achieve the project objectives and outcomes.

PFN will include a strong education and training component to upskill and provide **more employment opportunities** for Maori and Northland youth. This will be achieved by working with local schools, tertiary institutions, marae, and training organisations and providing regular training workshops, courses, mentoring programmes, apprenticeships and internships. PFN will connect strongly with councils Enviroschools programme and will support all Northland Enviroshools and other interested schools.

PFN will support and enable Māori to exercise kaitiakitanga over their whenua.

PFN will be as **environmentally sustainable** as practical, by supporting and contracting local companies, businesses and organisations for goods and services. PFN will endeavour to source locally made and manufactured control tools and equipment.

PFN will work with innovators, researchers and agencies to trial new control technology and techniques. This includes collaborating with Manaaki Whenua Landcare Research, Boffa Miskell Ltd to field trial the Possum Spitfire and Norbormide, Ecoland – Enviromate Automated Bait Station on buffer zones, Encounter Solutions Ltd - Celium Wireless Network, Groundtruth Ltd, SA2 Possum Traps, Bream Head Conservation Trust - defendable boundary and a range of other new technologies and NZAutoTraps Ltd.

PFN will **increase social connectedness** through alignment of a common vision. This project will encourage and support social inclusion and participation in all aspect of the project which will increase social, environmental, cultural connectedness and will work towards promoting higher living standards and greater intergenerational wellbeing as described in the Treasury's Living Standards Framework. The Kiwi Coast, Reconnecting Northland and Integrated Kaipara Harbour Management Group will continue to support communities through local and regional coordination.

Reducing predators will increase **forest resilience** and better prepare our native species for the adverse effects of climate change and ensure our native biodiversity can flourish for future generations.

# 5. What are the proposed project management and governance structures for your project? Please attach a brief bio of the key management personnel.

PFN has a number of collaborators each with their own governance structures. As the lead agency Northland Regional Council has a strong elected Council as set out in the Local Government Act 2002. All the legally required systems, process and auditing requirements are in place.

PFN would be fundamentally supported by the Northland Regional Council by providing regional governance, logistical and operational support, financial administration, planning and strategic support.

NRC will oversee and coordinate, and project manage a PFN programme, which will include overseeing health and safety, finances, communications, data management, and reporting.

Key Management Personnel:

- Project Sponsor Northland Regional Council Deputy Chief Executive Officer Bruce Howse
- Project Manager Kane McElrea NRC Biosecurity Manager Partnerships & Strategy
- Policy and Planning Support Ben Lee NRC Strategy Policy and Planning Manager
- Communications and Engagement Support NRC Natasha Stubbing NRC Marketing and Engagement Manager
- Financial Administration Support Steve Goddard NRC Management Accountant

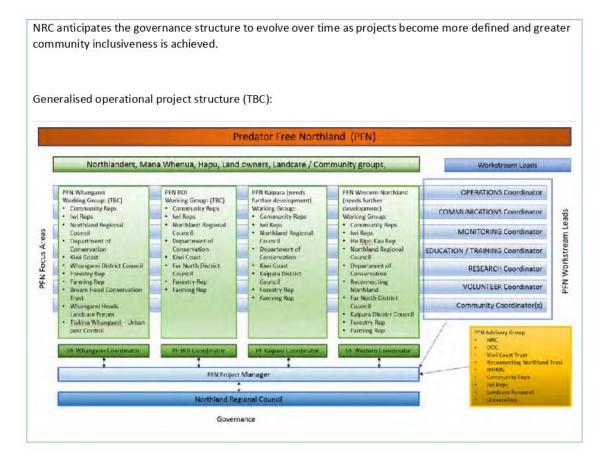
Additional management and specialised technical personnel will be added to PFN as the project develops.

#### NRC Organisational Management Personal

- Chief Executive Officer Malcolm Nicolson
- Customer Services/Community Resilience led by Tony Phipps
- Corporate Excellence led by Dave Tams
- Strategy and Governance led by Jonathan Gibbard
- Environmental Services led by Bruce Howse
- Regulatory Services led by Colin Dall

#### **Key Operational support**

- Department of Conservation
- Kiwi Coast Trust Ngaire Sullivan Kiwi Coast Project Manager
- Reconnecting Northland Eamon Nathan Pou Manatū Project manager
- Integrated Kaipara Harbour Management Group Willie Wright Chairman



#### **EOI Submission**

Please e-mail your application as a pdf file to submissions@pf2050.co.nz and post one paper copy to:

<u>ATT</u>: Submissions – Surge Region Projects Predator Free 2050 Limited PO Box 106040, Auckland 1143, New Zealand.

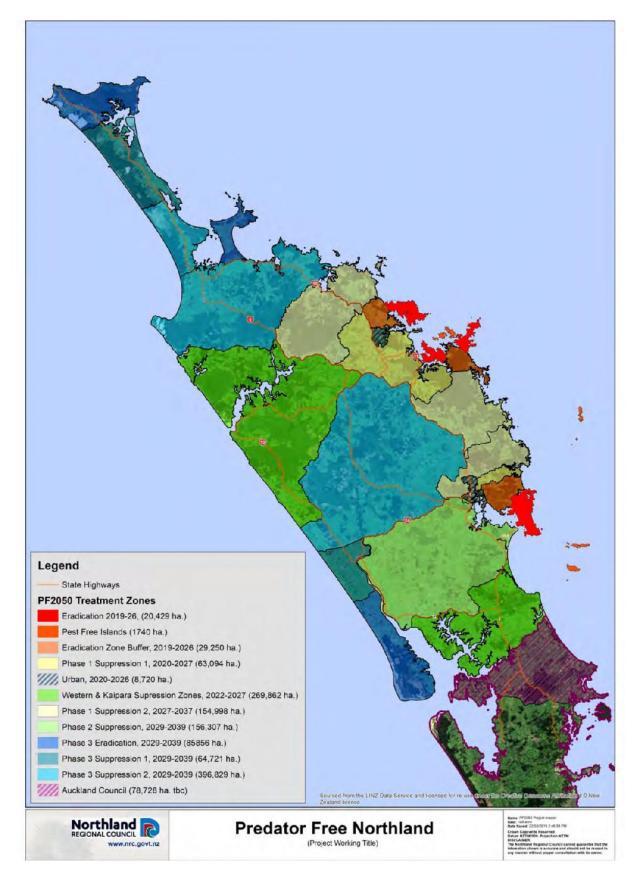
\*\*Only EOIs received in either electronic or paper format <u>prior to 5pm on 24 March, 2019</u> will be considered at Stage 1 of this application process\*\*

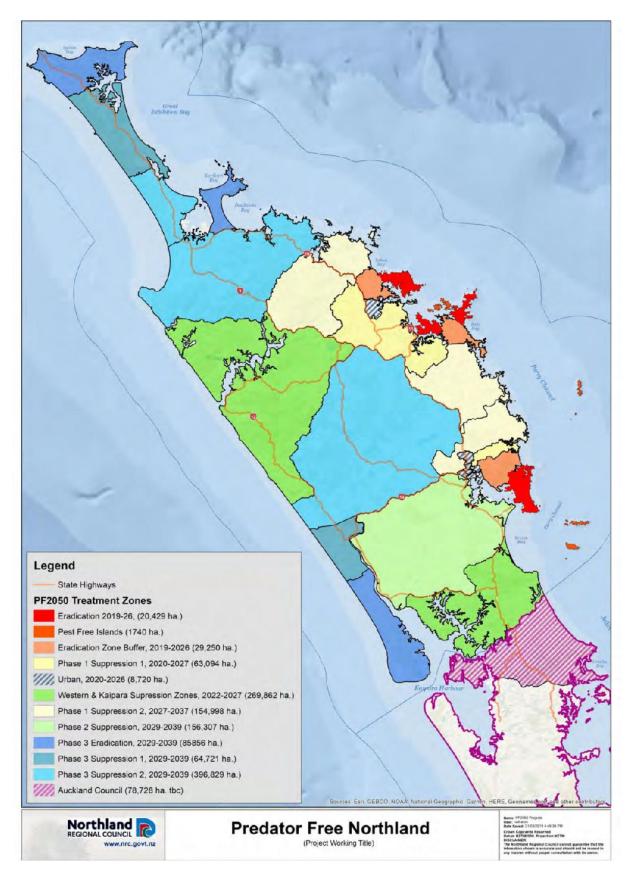
Please e-mail any questions to submissions@pf2050.co.nz

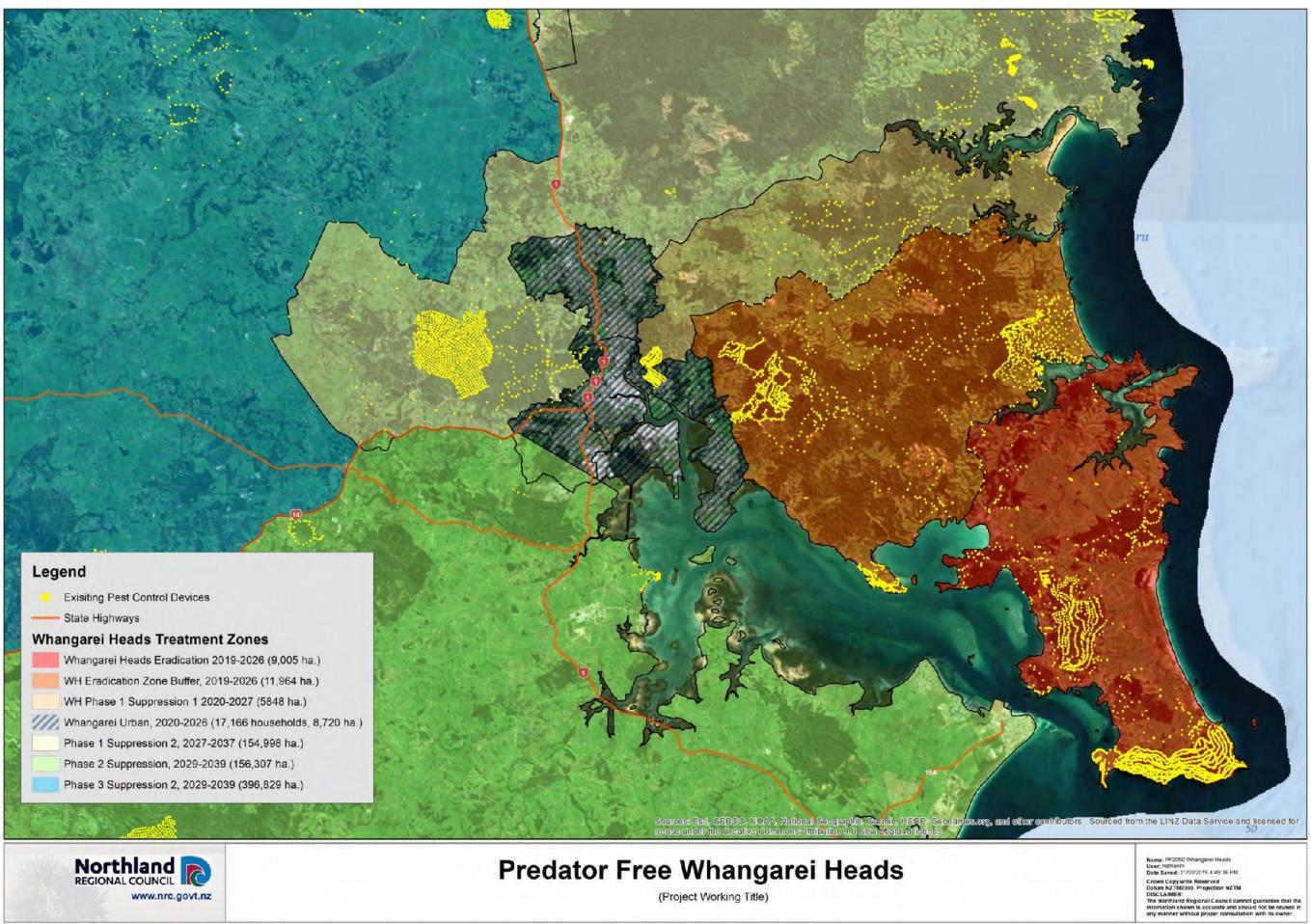
	<u>2019/20 Budget</u>	<u>2020/21 Budget</u>	<u>2021/22 Budget</u>	<u>2022/23 Budget</u>	<u>2023/24 Budget</u>	<u>2024/25 Budget</u>	<u>2025/26 Budget</u>	<u>2026/27 Budget</u>	<u>2027/28 Budget</u>	<u>2028/29 Budget</u>
Predator Free Programme Cost	10,846,091	13,142,003	15,008,230	16,261,586	16,861,496	5 17,099,531	16,211,619	16,542,772	16,495,362	1 16,495,361
FUNDING ALREADY COMMITED										
NRC Funded Activities	2,896,096	5 3,203,233	3,591,391	3,889,498	4,144,878	4,581,211	4,897,310	5,196,066	5 5,592,000	5 5,592,006
Community Contribution	1,773,868	3 1,901,255	2,041,381	2,195,519	2,365,071	L 2,551,578	2,756,736	5 2,982,409	3,230,650	3,230,650
Other Funding	1,256,490	) 1,261,072	1,279,616	1,137,716	5 1,142,578	912,240	917,299	922,459	943,30	7 943,307
TOTAL	5,926,454	6,365,560	6,912,387	7,222,732	7,652,527	8,045,029	8,571,344	9,100,934	9,765,963	9,765,963
Proposed Funding										
Community Contribution (New)	1,858,683	3 2,604,063	3,336,705	4,055,334	4,758,549	9 4,572,042	4,366,884	4,141,211	3,892,970	3,892,970
SUBTOTAL	7,785,137	8,969,623	10,249,092	11,278,066	12,411,077	12,617,071	12,938,229	13,242,145	5 13,658,932	13,658,932
FUNDING SHORTFALL/REQUIRED	3,060,954	4,172,380	4,759,138	4,983,519	4,450,419	9 4,482,459	3,273,390	3,300,627	2,836,428	3 2,836,428
Percentage Funding Requested	28%	<b>32%</b>	32%	31%	26%	<b>26%</b>	20%	5 <b>20</b> %	5 179	6 <b>17</b> %
	5 years	10 years								
Predator Free Programme Cost	72,119,405	5 154,964,047	,							
Northland Funding Contribution	50,692,995	5 116,808,304	Ļ							
FUNDING SHORTFALL/REQUIRED	21,426,410	38,155,742	!							
	30%	<b>25%</b>								

	per/ha ha	Labour / materials	Year 1 - 5	,	2020/21 Year 2	2021/22 Year 3	2022/23 Year 4	2023/24 Year 5	2024/25 Year 6	2025/26 Year 7	2026/27 Year 8	2027/28 Year 9	2028/29 Year 10
PF Project Management													
Project Management - Operations Manager	561000	\$90,000	\$450,000	\$90,000	\$90,000	\$90,000			\$90,000	\$90,000	\$90,000	\$90,000	\$90,000
Vehicles costs (lease) x 5			\$450,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000
Monitoring (Output, Outcome)	561000	\$100,000	\$500,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Communitcation (Media / Marketing)	0.25 561000	\$140,250	\$750,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Education / Advocacy / Training / Engagement	561000	\$250,000	\$250,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Science / Research / New Technology	561000	\$100,000	\$500,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
TOTAL:				\$580,000	\$580,000	\$580,000	\$580,000	\$580,000	\$580,000	\$580,000	\$580,000	\$580,000	\$580,000
PF Whangarei													
Project Management / Coordination	1.5 66285	\$99,428	\$497,138	\$99,428	\$99,428	\$99,428	\$99,428	\$99,428	\$99,428	\$99,428	\$99,428	\$99,428	\$99,428
Possum Eradication (Initial Control, Surveillance, Resposne)	150 9005	\$1,350,750	\$1,350,750	\$337,688	\$405,225	\$405,225	\$135,075	\$67,538	\$67,538	\$67,538	\$67,538	\$67,538	\$67,538
Possum suppression (BMI)	50 11964	\$598,200	\$598,200	\$179,460	\$119,640	\$119,640	\$119,640	\$59,820	\$59,820	\$59,820	\$59,820	\$59,820	\$59,820
Rodent Zero Density (within possum managed areas)	50 1200	\$60,000	\$300,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000
Mustelid Supression (Hardware, pro trap, community input)	10 66285	\$662,850	\$4,308,525	\$861,705	\$861,705	\$861,705	\$861,705	\$861,705	\$861,705	\$861,705	\$861,705	\$861,705	\$861,705
Possum suppression Zone 1	30 5848	\$175,440	\$0						\$43,860	\$52,632	\$52,632	\$17,544	\$8,772
Possum suppression Zone 2	30 33286	\$998,580	\$0						\$299,574	\$199,716	\$199,716	\$199,716	\$99,858
Labour - Community (in kind)	12 66285	\$795,420	\$3,977,100	\$795,420	\$795,420	\$795,420	\$795,420	\$795,420	\$795,420	\$795,420	\$795,420	\$795,420	\$795,420
TOTAL:				\$2,333,700	\$2,341,418	\$2,341,418	\$2,071,268	\$1,943,910	\$2,287,344	\$2,196,258	\$2,196,258	\$2,161,170	\$2,052,540
PFBOI													
Project Management / Coordination	1.5 163697	7 \$245,546	\$497,138	\$99,428	\$99,428	\$99,428	\$99,428	\$99,428	\$99,428	\$99,428	\$99,428	\$99,428	\$99,428
Possum Eradication (Initial Control, Surveillance, Resposne)	150 11424			\$428,400	\$514,080								
Possum suppression (BMI)	50 17285			\$259,275	\$119,640								
Rodent Zero Density (within possum managed areas (islands)	50 1,203			\$29,750	\$29,750	\$29,750							
Mustelid Supression (Hardware, pro trap, community input)	10 163697	. ,		\$1,636,970	\$1,636,970								
Possum suppression Zone 1	30 57246			\$1,030,570	\$1,030,570	\$1,030,570	\$1,050,570	\$1,030,570	\$429,345				
Possum suppression Zone 2	30 73463								\$661,167	\$440,778			
Labour - Community (in kind)	12 163697			\$1,964,364	\$1,964,364	\$1,964,364	\$1,964,364	\$1,964,364					
TOTAL:				\$4,418,187	\$4,364,232	\$4,364,232	\$4,021,512	\$3,876,012	\$4,966,524	\$4,832,004	\$4,832,004	\$4,488,528	\$4,182,270
Western Northland													
Project Management / Coordination	2 189705	5 \$379,410	\$1,897,050	\$379,410	\$379,410	\$379,410	\$379,410	\$379,410	\$379,410	\$379,410	\$379,410	\$379,410	\$379,410
Possum suppression Zone 1	30 189705		\$7,967,610	\$569,115					\$1,138,230				
Possum suppression Zone 2	30 189703	, 22,021,130	\$7,507,010 \$0	<i>\$</i> 503,115	ψ <u>1,1</u> 30,230	γ1,707,34J	<i>42,210,</i> 400	<i>72,210,</i> 400	<i>41,130,230</i>	<i>4505</i> ,115	,505,11J	4203,11J	<i>4505</i> ,115
Rodent Zero Density (within possum managed areas (islands)	50 1000	\$50,000											
Mustelid Supression (Hardware, pro trap, community input)	10 189705		\$2,655,870	\$379,410	\$569,115	\$569,115	\$569,115	\$560 115	¢1 129 220	¢1 227 025	\$1 517 640	\$1 707 245	\$1,897,050
Labour - Community (in kind)	12 189705		\$6,829,380	\$455,292	\$910,584								\$2,276,460
TOTAL:				\$1,783,227	\$2,997,339	\$4,021,746	\$5,046,153	\$5,501,445	\$4,932,330	\$4,552,920	\$4,742,625	\$4,932,330	\$5,122,035
Brynderwyn / Kaipara													
Project Management / Coordination	1.5 141448	2 \$212.172	\$1,060,860	\$212,172	\$212,172	\$212,172	\$212,172	\$212,172	\$212,172	\$212,172	\$212,172	\$212,172	\$212,172
Possum Eradication Zone 2	150 15000			<i>γ</i> ζιζ,1/ζ	7212,172	7212,17Z	γ <b>212,1</b> 72	7212,17Z	<i>₹</i> ∠1∠,17∠	7212,11Z	7212,17Z	γ <b>212,1</b> 72	<i>₹</i> ∠1∠,17∠
Possum Eradication Zone 3	150 15000	.,,,											
	30	\$5,855,450 \$0											
Possum suppression (BMI)				6434 344	¢040.000	¢1 172 022	¢1 607 376	¢1 607 376	6040 600	6424 244	6424 244	¢124.244	6424 244
Possum suppression Zone 1	30 141448			\$424,344	ə848,688	şı,273,032	\$1,697,376	¢τ'ρa\'3\ρ	\$848,688	\$424,344	\$424,344	\$424,344	\$424,344
Possum suppression Zone 2	30	\$0 \$0											
Rodent Zero Density (within possum managed areas (islands)	50 1000			4000	Arco 41-	Ar.co. 4	45 00 4 15	AF 60 41-	60.00.000	6000 400	64 404 555	64 272 223	
Mustelid Supression (Hardware, pro trap, community input)	10 141448	\$	\$2,559,356	\$282,896	\$569,115	\$569,115	\$569,115	\$569,115	\$848,688	\$990,136	\$1,131,584	\$1,2/3,032	\$1,414,480

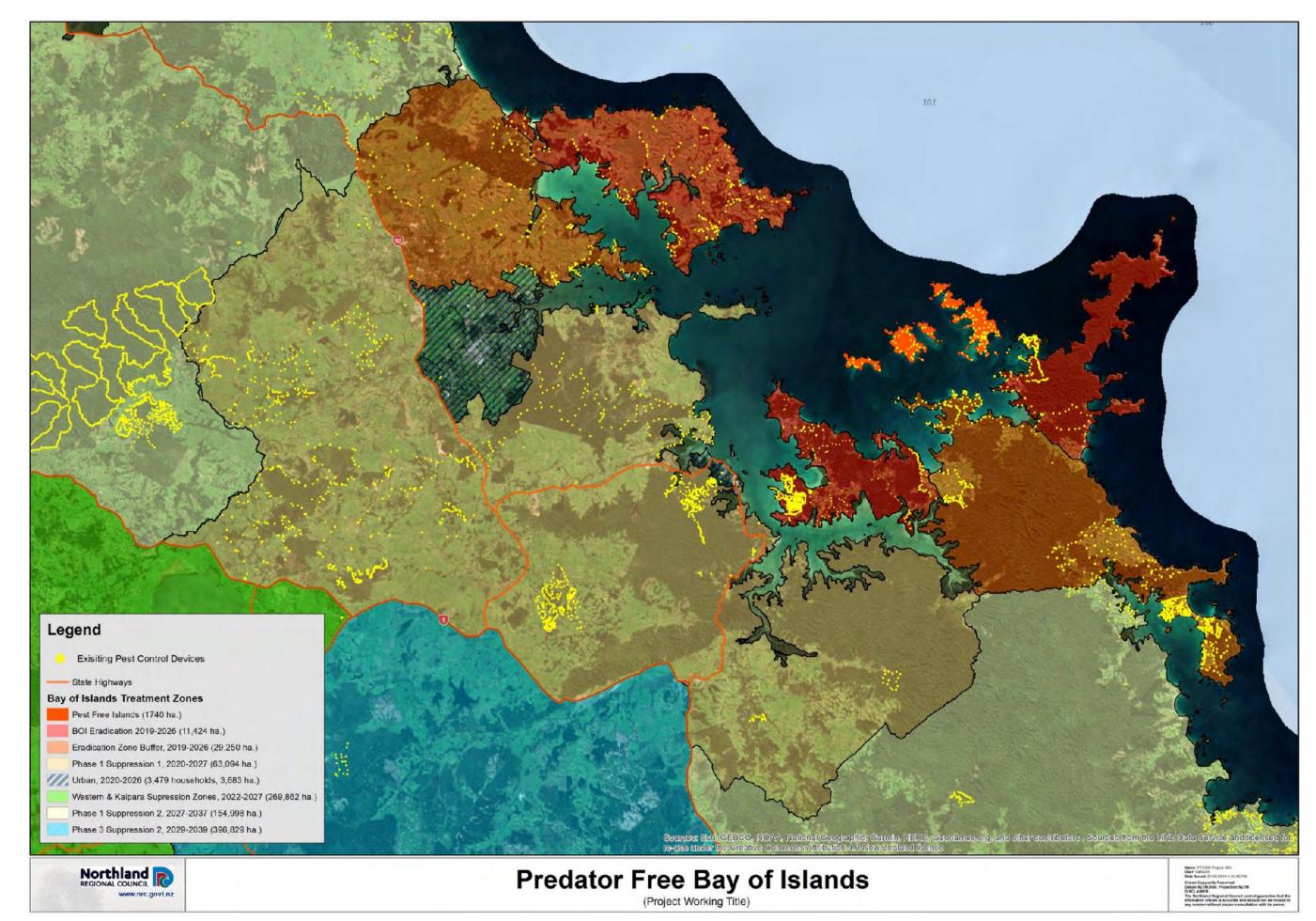
Labour - Community (in kind)	12 141448	\$1,697,376	\$5,092,128	\$339,475.20	\$678,950	\$1,018,426	\$1,357,901	\$1,697,376	\$1,697,376	\$1,697,376	\$1,697,376	\$1,697,376	\$1,697,376
TOTAL:				\$1,258,887	\$2,308,925	\$3,072,745	\$3,836,564	\$4,176,039	\$3,606,924	\$3,324,028	\$3,465,476	\$3,606,924	\$3,748,372
Urban Pest Control													
Project Management / Coordination		\$150,000	\$750,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Materials - Possum trap per 10 house (2136)		\$106,800	\$106,800	\$21,360	\$21,360	\$21,360	\$21,360	\$21,360	\$2,136	\$2,136	\$2,136	\$2,136	\$2,136
MATERIALS - Rodent Traps per 5 house (2473)		\$213,650	\$213,650	\$42,730	\$42,730	\$42,730	\$42,730	\$42,730	\$4,273	\$4,273	\$4,273	\$4,273	\$4,273
Labour - Contractors		\$80,000	\$400,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000
Monitoring		\$30,000	\$150,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Education / Advocacy		\$50,000	\$250,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Administration		\$20,000	\$100,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Labour - Community (in kind)		\$390,000	\$1,170,000	\$78,000	\$156,000	\$234,000	\$312,000	\$390,000	\$390,000	\$390,000	\$390,000	\$390,000	\$390,000
TOTAL:				\$472,090	\$550,090	\$628,090	\$706,090	\$784,090	\$726,409	\$726,409	\$726,409	\$726,409	\$726,409
TOTAL COST PER ANNUM				\$10,846,091	\$13,142,003	\$15,008,230	\$16,261,586	\$16,861,496	\$17,099,531	\$16,211,619	\$16,542,772	\$16,495,361	\$16,411,626
Labour - Community (in kind) Combined			\$26,890,428	\$3,632,551	\$4,505,318	\$5,378,086	\$6,250,853	\$7,123,620	\$7,123,620	\$7,123,620	\$7,123,620	\$7,123,620	\$7,123,620

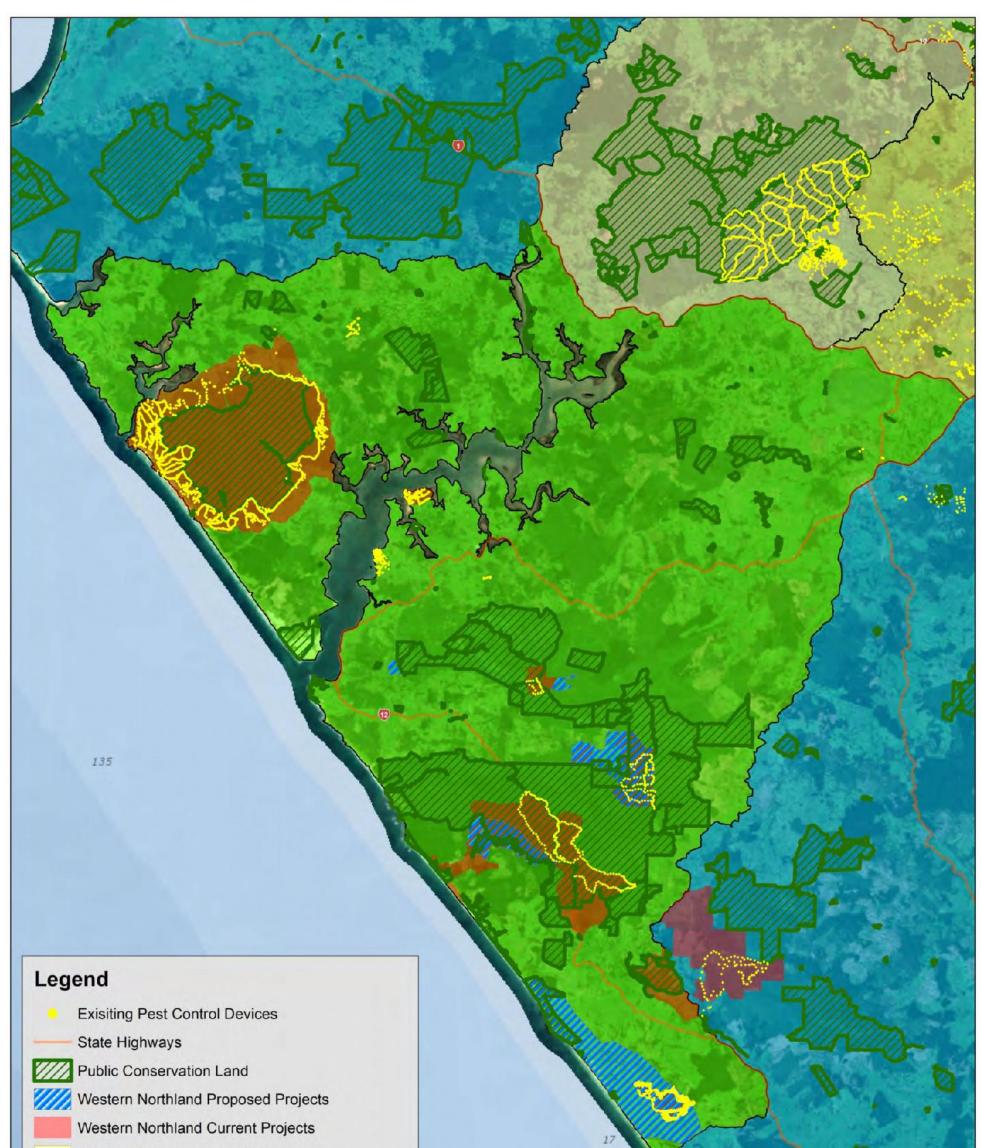












Phase 1 Suppression 1 (29,250 ha.)

Phase 1 Suppression 2 (154,998 ha.)

Phase 2, Western Northland (189,705 ha.)

Phase 3 Suppression 1, 2029-2039 (64,721 ha.)

Phase 3 Suppression 2, 2029-2039 (396,829 ha.)

Sources: Esri, GEBCO, NOAA, National Geographic, Gamma, HERE, Geonames.org, and other contributore, Sourced from the LINZ Data Service and licensed for re-use under the Greative Commons Attribution 4.0 New Zealand licence

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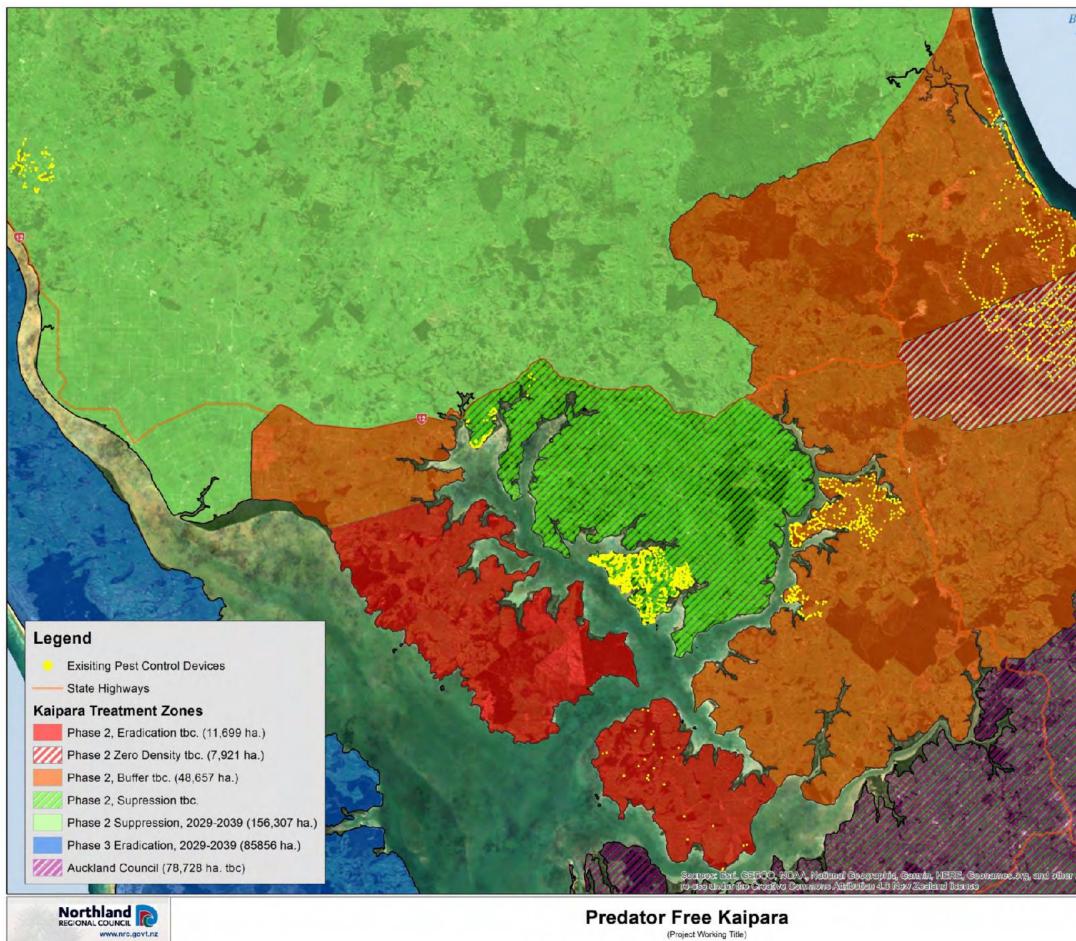


# **Predator Free Western Northland**

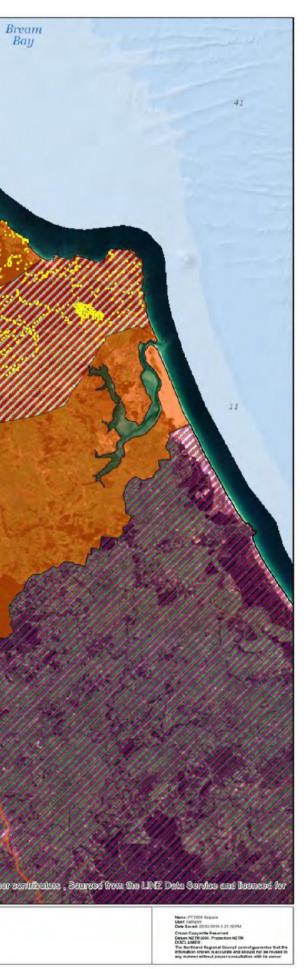
(Project Working Title, "Current & Proposed" Projects potential core PF2050 work areas)

Name: PF2050 Western Northland User: nathanm Date Saved: 22/03/2019 2:22:26 PM

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Predator Free Kaipara (Project Working Title)



#### Predator Free Northland Key Partner Organisations

Northland Regional Council, Department of Conservation, Northland Iwi and Hapu, Kiwi Coast Trust, Reconnecting Northland, Whangarei District Council, Kaipara District Council, Far North District Council, Intergrated Kaipara Harbour Management Group Auckland Council

Hancock Forest Management NZ ltd, Rayonier Matariki Forests Ltd, Kiwis for Kiwi, QEII Trust, Nga whenua Rahui, NorthTec, Manaaki Whenua Landcare Research, Encounter Solutions Ltd, NorthTec Boffa Miskell Ground Truth Ltd

#### Kiwi Coast Affiliated Group & Projects

Aroha Island Charitable Trust Backyard Kiwi **Bay Bush Action** Blue Orb Charitable Trust Blue Gum Lane Bream Head Conservation Trust Brynderwyns Kiwi Recovery **Bulls Gorge Trappers** Cames Rd Forest Group Candy's Farm Cemetary Rd Landcare Corymbosa Charitable Trust Department of Conservation - Whangarei Kiwi Sanctuary Doubtless Bay Landcare Eastern Bay of Islands Preservation Society Far North Sport Shooting Club Fish & Game - Flaxmill Wetland Fish & Game - Jack Bisset Wetlands Fish & Game - Te Hiku Summit Forests Friends of Matakohe / Limestone island Friends of Rangikapiti Pa Hancock Forest Managment -Brynderwyns Project Hancock Forest Management - Gammons Block Hancock Forest Management - Rakautao Hancock Forest Management - Whanui Hancock Forest Management - Whatoro CPCA Harris Rd Area Landcare Help For Houto Hupara Landcare Jude Rd Forest Care Kaiatea Landcare Kaimamaku Landcare Kaitiaki o Waikohatu Whenua Kauri Cliffs Kerikeri Peninsula Pest Control Kohinui Stream Landcare Langs Cove Trapping Group Living Waters Mahinepua-Radar Hill Landcare Group Inc. Manaia Landcare Mangatete Landcare Massey Rd Trappers Maungaparerua Stream Landcare Matapouri Kaitiaki Project Nga Kaitiaki o Huruiki Maunga Nga Kaitiaki o Ipipiri Ngunguru Ford Landcare Ngunguru Sandspit Protection Society Ngunguru School: Restoring Food Chains

NZ Kiwi Foundation Oakleigh Pest Control Group Ocean Beach Landcare Oi Kaitiaki Opara Kiwi Conservation Estate Otangaroa Landcare Owhiwa Landcare Papakarahi Landcare Papa Taiao Wainui Parihaka Community Landcare Parua Bay Cemetary Rd Landcare Pataua Nth Landcare Pest Free Pahi **Project Island Song** Puke Kopipi Restoration Project Pukenui/Western Hills Forest Trust Puketi Forest Trust Puketotara Landcare Pupurangi Nature Sanctuary Rayonier - Glenbervie Kiwi Project Reotahi Landcare **Riverlands Landcare** Ross Road Landcare Russell Landcare Russell - Orongo Bay Holiday Park Sandy Bay Kiwi South Kerikeri Inlet Landcare Taheke Landcare Taiharuru Catchment Care Group Tanekaha CPCA Tangiteroria Landcare Tapuhi Landcare Taurikura Ridge Landcare Taupo Bay Land and Coast Care Group Te Tangi o Te Ata The Farm The Shadehouse Volunteers Tutukaka Landcare Coalition Trust Vision Kerikeri Waimate North Landcare Waipu Kiwis Waitangi lwi Kiwi Project Weed Action Whangarei Heads Whakaangi Landcare Trust Whananaki Landcare Whangaruru Nth Residents & Ratepayers Assoc. Whareora Landcare Whiritoa Stream Trappers