

AGENDA

SUPPLEMENTARY

Council
Tuesday 18 September 2018 at 10.30am

Northland Regional Council Supplementary Agenda

Meeting to be held in the Council Chamber
36 Water Street, Whangārei
on Tuesday 18 September 2018, commencing at 10.30am

Recommendations contained in the council agenda are NOT council decisions. Please refer to council minutes for resolutions.

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TITLE: **Receipt of Supplementary Items**

ID:

From: Chris Taylor, Governance Support Manager

Executive summary

This report presents two supplementary reports for council's consideration.

Recommendation

That as permitted under section 46A(7) of the Local Government Official Information and Meetings Act 1987 the following supplementary items be received:

- ITEM 6.5: Mediterranean fanworm response – Opuia
 - CONFIDENTIAL ITEM 9.4: Proposal for Property Development
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Authorised by Group Manager

Name: Chris Taylor

Title: Governance Support Manager

Date: 14 September 2018

TITLE: Mediterranean fanworm response - Opuā
ID: A1105641
From: Sophia Clark, Biosecurity Manager - Marine and Strategy

Executive summary

The purpose of this item to decide the management approach and funding for the incursion of Mediterranean fanworm at Opuā.

Following discussions with stakeholders and the Ministry for Primary Industries staff – staff believe the most appropriate action to take is a step-wise ‘local eradication’ approach using divers to detect and remove individuals using information acquired during the delimitation survey. Staff propose a step-wise approach of spending \$100k rounds of response up to \$300k with an assessment of findings after each round. It is proposed that the unbudgeted expenditure be funded from general reserves pending further consideration by council. Co-funding has been agreed to by MPI for the delimitation survey (50/50 share) and verbally for the first round of ‘local eradication’.

Recommendations

1. That the report ‘Mediterranean fanworm response - Opuā’ by Sophia Clark, Biosecurity Manager - Marine and Strategy and dated 5 September 2018, be received.
 2. That council approve and fund a ‘step-wise local eradication’ approach by using divers to detect and remove fanworm from the Opuā area with an assessment after each round of \$100k spending. Council approve a step-wise approach of spending \$100k rounds of response up to \$300k (\$150k from council/\$150k from MPI) with an assessment of findings after each round.
 3. Council approve the unbudgeted spending to date of \$42,500. The remaining \$42,500 of the total spending has been funded by MPI.
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Background

Situation to date:

- Significant range extension of *Sabella spallanzanii* detected at Opuā, previously only established in Whangarei Harbour, currently under surveillance in Tutukaka but no further detections since an initial incursion and eradication in 2015.
- Diver delimitation has found and removed 88 individuals from the Opuā area.
- NIWA’s marine invasive taxonomic service have confirmed the reproductive ability.
- \$85,000 excluding GST has been spent on diver effort to delimit area surveilling mooring blocks, sea floor transects, vessels, marina and other high risk structures (see GIS maps). This spending has not been budgeted for in the existing programme.

Since the delimitation survey – staff have been progressing the best options for management and have been engaged in conversations with stakeholders. Staff have discussions with MPI on their contribution to the response.

Considerations

Options

No.	Option	Advantages	Disadvantages
1	<p>Step-wise local elimination</p> <p>‘Search and destroy operation.’</p> <p>(Attempt removal of population to ‘zero density’ in a step-wise manner, evaluating after each round of diver effort.)</p>	<p>Bay of Islands is a high value marine area.</p> <p>Economic (aquaculture, tourism, fisheries) environmental, social values (cultural and aesthetics) are safeguarded.</p> <p>Currently low chance of transfer – mainly found on the substrate not on vessels or structures. Search and destroy gives a better chance of success.</p> <p>Limit/eliminate dispersal of larvae to surrounding area.</p>	<p>Extent of population is still unknown and a limited zone of potentially infected area will be assessed in this step wise approach.</p> <p>The programme design could be impacted by the step-wise design being limited by funding constraints and delays from reviewing the results after each round of surveillance.</p>
2	<p>Progressive containment.</p> <p>(Systematic removal and suppression of populations numbers to minimise risk of transfer and impact.)</p>	<p>Long term sustained approach.</p> <p>Success of other regions such as Nelson and Lyttleton.</p> <p>Higher chance of achieving suppression of population via removals rather than local elimination.</p>	<p>Risk of public backlash.</p> <p>Commitment of a larger lump sum for surveillance without a step-wise review as proposed in Option 1 – this could lead to a more robust survey design but would lose the flexibility of reviewing results.</p>
3	<p>Continue with existing programmes.</p> <p>(Continue to work with existing management tools such as rules preventing transfer of fanworm and biofouling but no further active search and destroy measures in this area.)</p>	<p>No extra financial cost.</p>	<p>Risk of public backlash.</p> <p>Spread of fanworm to other areas likely.</p> <p>Potential economic impact of tourism, aquaculture.</p> <p>Impact on biodiversity and social values.</p>

The staff’s recommended **option is option 1: Step-wise local elimination.**

2. Significance and engagement

In relation to section 79 of the Local Government Act 2002, this decision is considered to be of low significance when assessed against council's significance and engagement policy because it has previously been consulted on and provided for in council's Long-Term Plan and/or is part of council's day to day activities. This does not mean that this matter is not of significance to tangata whenua and/or individual communities, but that council is able to make decisions relating to this matter without undertaking further consultation or engagement.

3. Policy, risk management and legislative compliance

Mediterranean fanworm is a named pest in the Northland Regional Pest and Marine Pathway Management Plan 2017-2027. As such, specific rules apply for the transport and distribution of this pest. Mediterranean fanworm is under a 'sustained control' programme.

This incursion and the management decision of how to respond falls outside of the 'sustained control programme'. As such specific funding will need to be allocated to the response.

The risks of a local elimination approach are;

- Costs of the programme may be underestimated. Based on the current available information, up to \$900,000 could be spent on undertaking diver transects of risk areas. Whilst committing to spending in \$100K increments enables council and MPI to assess the costs vs. success at each point, this could result in one partner deciding to discontinue funding, impacting on the long-term commitments to managing this response.
- Any response needs to have long-term commitments – the costs of the programme will need to continue for the next 3-5 years, even if the work is scaled by from local elimination to another management option (i.e. progressive containment). An assessment of costs would likely be determined following the next stage of surveillance but could range from 60-150k depending on findings. This would be a potential matter to be added to the Annual Plan.

Further considerations

4. Community views

There is likely to be positive community support from a local elimination attempt. Continuing with the existing programme without additional effort in this area, there is a risk of losing wider stakeholder and community support.

5. Māori impact statement

The potential establishment of Mediterranean fanworm in the Bay of Islands is likely to have significant impacts on Maori values. As such, there is likely to be positive support from a local elimination attempt, continuing with the existing programme without additional effort in this area would be deemed inappropriate.

6. Financial implications

There are currently no allocated funds for 'incursion responses'. Funding of this response will have financial implications on the current marine biosecurity programme if additional funding is not allocated. This will mean that annual plan objectives for the marine biosecurity programme will not be met if additional funding is not secured.

It is proposed that the unbudgeted expenditure be funded from general reserves pending further consideration by council. This would ensure the delivery of the existing marine biosecurity programme and an adequate response to the Opuia incursion to be carried out. This

response will be reviewed after each round of diver surveillance. The review will be carried out by council and MPI staff and presented to council after divers have completed local elimination of known infestations. The assessment will be based on the number, densities and total area. If after each round of spending the local elimination effort is successful, the management options and long-term approach should be reviewed by both council and MPI.

7. Implementation issues

Implementation of a response will need to be in conjunction with MPI and local stakeholders. Additional staff resourcing and use of a marine consultant will be required.

Attachments

Attachment 1: Options for Management of Sabella [↓](#)

Authorised by Group Manager

Name: Bruce Howse
Title: Group Manager - Environmental Services
Date: 14 September 2018

Date: 5 September 2018

Subject: Mediterranean fanworm (*Sabella*) incursion management options - Opuia

Situation to date:

- A single Mediterranean fanworm (*Sabella*) was detected on a mooring block opposite the Opuia Marina on 3 July 2018. Subsequent delimiting surveys by divers found *Sabella* at a site to the east of the marina (one individual) and at a number of sites around the Opuia Marina, including near the boatyard.
- Diver delimitation has found and removed a total of 88 individuals.
- NIWA's marine invasive taxonomic service have confirmed the reproductive ability of some of the fanworms detected.
- Around \$87,000 excl. GST has been spent on diver effort to delimit area looking at mooring blocks, sea floor transects, vessels, marina and other high risk structures (see GIS maps).
- Significant range extension of *Sabella spallanzanii* detected at Opuia, previously only established in Whangarei Harbour and eliminated from Tutukaka Marina (currently under surveillance) with no further detections since incursion and removal in 2015. Note: Elimination = achieved when no further detections made on the substrate. Eradication = declared after a reasonable time period comprising regular surveillance, for at least 5 years following last detection.

Response (or incursion) Management Options

1.	Step-wise local elimination	Attempt removal of population to 'zero density' in a step-wise manner, evaluating after each round of diver effort. Search and destroy operation.
2.	Progressive containment	Systematic removal over time with the aim of population suppression to minimise risk of transfer and impact.
3.	Continue with existing programmes	Continue to work with existing management tools such as rules preventing transfer of fanworm and biofouling but no further active measures in this area.

1. Local Elimination

Programme objectives –

1. eliminate *Sabella spallanzanii* to 'zero density', prevent further spread of the species from Opuia to the wider Bay of Islands. There are a number of inlets and bays that would provide ideal habitat for *Sabella* to thrive and this will not only impact on the values of the Bay of Islands but greatly increase the risk of spread from the Bay of Islands to other parts of Northland and New Zealand as the first port of call.
2. Protect environmental, economic (aquaculture & tourism) values of the area. Protect biodiversity and other values of the Bay of Islands, *Sabella* not only have the potential to compete with native species for habitat occupation and planktonic food, they also have the potential to change local water quality conditions, they remove significant amounts of small particles from the water column through filter feeding.

Requirements

- Comprehensive management programme using divers to survey and remove fanworm.
- Effective project management and quality assurance procedures, clear lines of authority and rapid decision-making.
- Commitment of sufficient resources to meet project goals.
- Proven removal methods and adequate baseline knowledge (from delimitation).
- Buy-in from stakeholders, wider community and incentives for exacerbators to prevent spread.
- Consideration of managing vessels and potential spread. This may include extra searches of vessels in the area to be incorporated into the programme to ensure these vessels aren't transporting marine pests.

Considerations

- This option would involve a 'search and destroy' approach using diver effort. Work would be carried out in \$100k allocations with an assessment after each round of diver effort.
- Visibility is often low in the area which increases diver search time and decreases success rate. However, by using divers familiar with the area and conditions; efficacy can be expected.
- Strong currents affect precision of diver transect searches increasing the possibility of individuals being undetected.
- Weather events such as high rainfall will reduce visibility and lead to searches being postponed.
- The complexity of substrate and structure type will increase diver search time.
- The wide distribution of the individual fanworm can result in a low chance of detection.

Programme design

- Effort would be centred around the highest densities and largest individuals found in the initial delimitation survey. **Consideration of specimen maturity and rate of recruitment** needs to be examined so that we can obtain information on population dynamics to better focus diver effort.
- Manual removal of individuals will be conducted. Roughly 6km of transects can be afforded with a spend of \$100k. The area of concern is roughly 63 hectares. This is based on each detection of Sabella from the delimitation being given a 100m² grid. If a Sabella was detected, the surrounding 8 quadrats are identified as needing to be searched.
- Searches of surrounding 'high risk' areas by NRC staff including outer areas of the Bay of Islands. Most marine pest eradication programmes have failed because while focussing on the immediate search area another population thrived compromising the entire eradication programme.
- eDNA water sampling.

Hull surveillance will continue with strict requirements to have Sabella safely removed quickly from infested vessels to prevent further spread.

Marine farmers will have to thoroughly check and inspect their farms.

Public awareness and training for identification and prevention will promote public participation.

Eradication examples:

Location	Species	Outcome	Time span
Fiordland	<i>Undaria pinnatifida</i>	Failed	7 years
Marsden Cove	<i>Sabella spallanzanii</i>	Failed	3 years
Tutukaka Marina	<i>Sabella spallanzanii</i>	Under surveillance (One more clear round of inspections before eradication can be announced as successful)	5 years

Nelson Marina	<i>Sabella spallanzanii</i>	Elimination achieved 2018, surveillance required for 5 years before local eradication announced	5 years
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Determining success / tipping point for change in management

- A significant increase in population size or area would need to be considered as a tipping point for elimination to no longer being a viable option. For example – a large population being discovered in another area of the Bay of Islands.
- Consideration of costs – management approach to be assessed after each round of diver effort.

2. Progressive Containment

Programme objectives - Suppress the current population to low numbers, reduce the rate of spread to other areas and number of reproductive individuals. Contain the population to the known area.

Requirements

- Baseline knowledge and an effective surveillance regime.
- Clear lines of authority and rapid decision-making.
- Commitment of sufficient resources to meet project goals.
- Buy-in from stakeholders, and incentives for exacerbators to prevent spread.
- Effective quarantine to prevent spread.
- Effective project management and quality assurance procedures.

Programme design

Divers re-enter the area already delimited and work outwards from Sabella detection sites to systematically search and remove Sabella found. Diver effort would be targeted and carried out twice in the next financial year with an approximate spend of \$150,000 per round, \$300,000 a year. This effort could be scaled up or down depending on findings.

Hull surveillance will continue with strict requirements to have Sabella safely removed quickly from infested vessels to prevent further spread.

Marine farmers will have to thoroughly check and inspect their farms.

Public awareness and training for identification and prevention will promote public participation.

Progressive containment examples:

Lyttleton

- Population suppression was carried out following an intensive eradication attempt by MPI in 2008/09. Appears to be successful but densities are low & there are climatic differences to the Bay of Islands – cooler water temps may suppress ability for population to spread.
- **Determining success / tipping point for change in management**
- Population not being suppressed. Increase in population is more than 25% in year 2.

Possible funding mechanisms

Council will need to consider what mechanisms are available for funding these include;

- Rates and/or investment dividends.
 - Increasing the marine biosecurity charge for the Opuia area.
- 1.

2. Other Funding partners

- MPI - council staff are trying to secure funding from MPI for management of this range extension for the initial delimitation cost and on-going work.
- Far North Holding Limited have indicated that they will not contribute to funding of either option 1 or 2 at this stage but do support council trying to achieve eradication.

3. Continue with existing programmes

Continue with existing programmes such as managing biofouling through the marine pathway management plan to reduce the risk of transfer and enforcing the movement rule for transporting marine pests around Northland. Rely on the possible suppression in the area to continue and with continued hull inspections and heightened public awareness manage the vector for further spread.

Programme design

Hull surveillance will continue with strict requirements to have Sabella safely removed quickly from infested vessels to prevent further spread.

Public awareness and training for identification and prevention will promote public participation.

- **Determining success / tipping point for change in management**
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- Public opinion
 - Contribution from additional funding partners (e.g. marina operator and other stakeholders).

Other

- Increased spread rate to the rest of the Bay of Islands, Northland and wider New Zealand.

3.

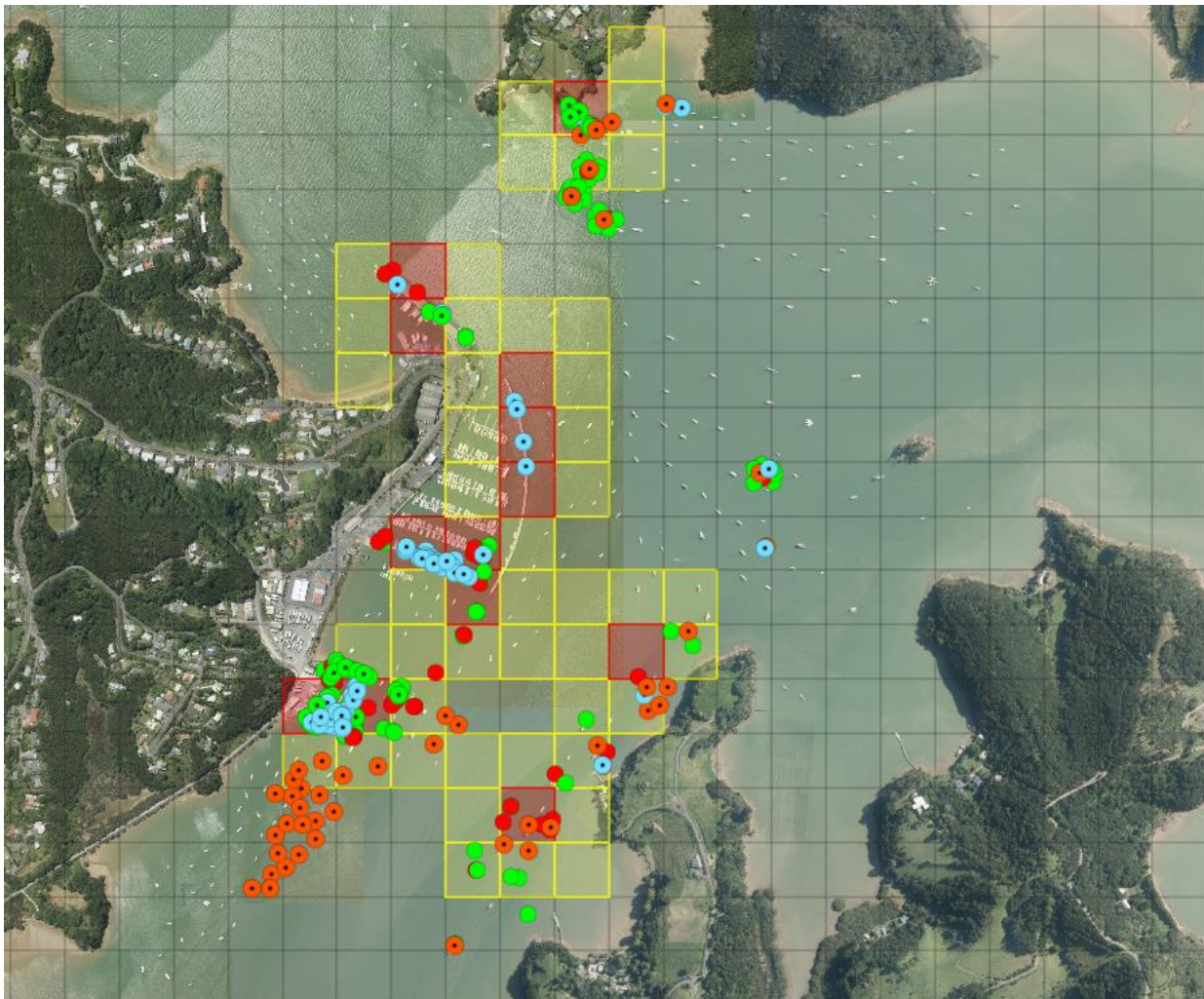







Figure 1. Map of diver delimitation including transects, sea bed and mooring inspections – red squares indicate presence of *Sabella Spallanzanii*.

Legend

Substrate and Structure Sampling

-  Artificial structure
-  Mooring
-  Reef
-  Seafloor
-  Shellfish bed

Transect Points

-  Start
-  End

Mediterranean Fanworm Presence

-  Yes
-  Maybe

