

**Kaihū River Working Group**  
**Monday 9 July 2018 at 10.30am**

# **AGENDA**

## Kaihū River Working Group Agenda

Meeting to be held in the Committee Room, Dargaville Town Hall, 37 Hokianga Road, Dargaville  
on Monday 9 July 2018, commencing at 10.30am

**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 KAIHŪ RIVER WORKING GROUP

Chairman, Councillor John Bain

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# KAIHU RIVER WORKING GROUP

## Terms of Reference

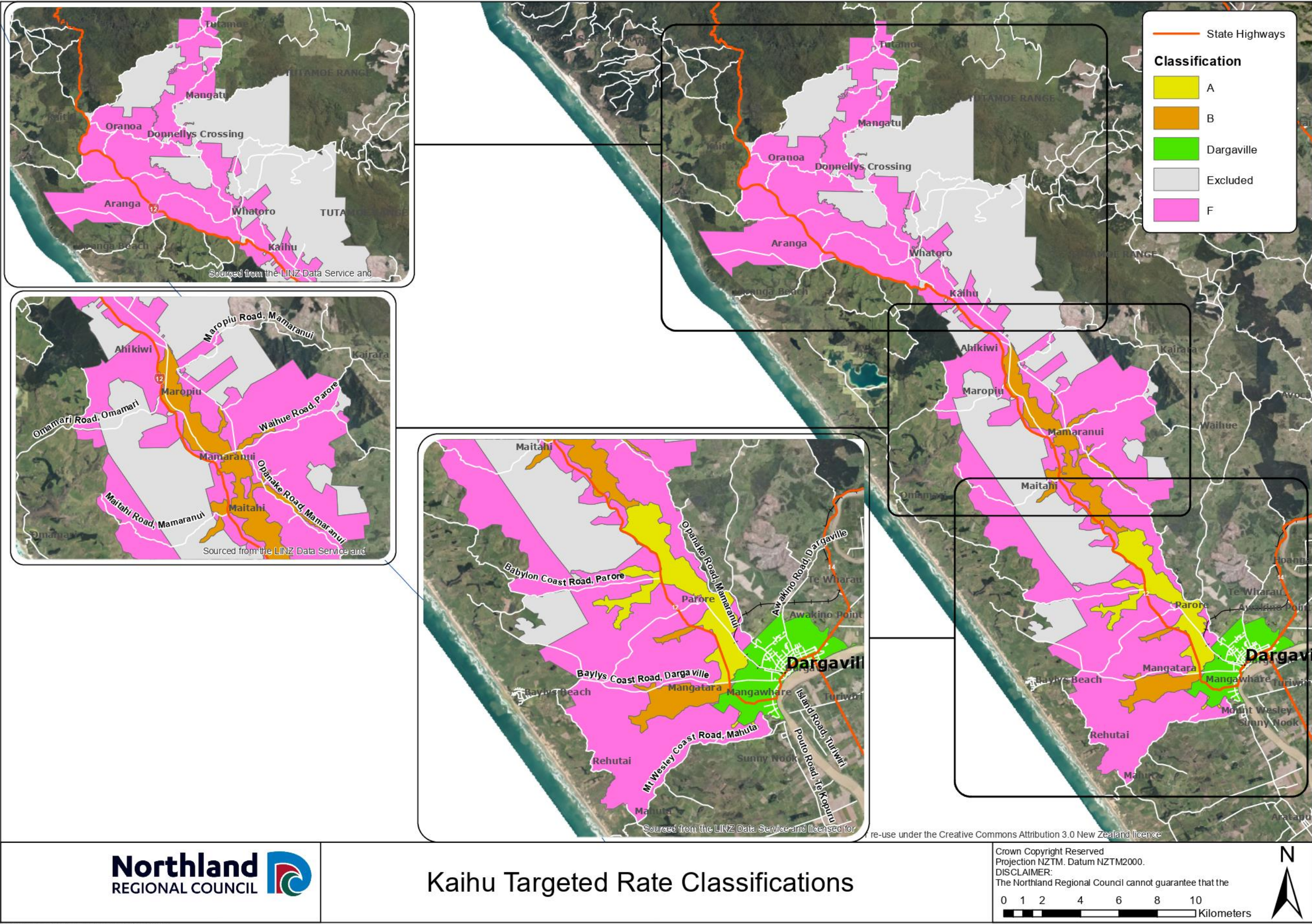
- Reporting to:** The Northland Regional Council
- Composition:** The Working Group is appointed by the Northland Regional Council and shall comprise:
- One member appointed by the Northland Regional Council
  - One Kaipara District Councillor (who also represents the residents of Dargaville)
  - One member nominated by Te Roroa, or in his/her absence, a nominee who shall have voting rights (*Sharon Murray*).
  - One member nominated to represent Te Houhanga Marae (*Des Subritzky*)
  - Three representatives of the ratepayers of the river catchment, one from each area:
    - Area 1 Class A rated land on the floodplain
    - Area 2 Class B rated land on the floodplain (*vacant*)
    - Area 3 Class F rated land being the catchment area beyond the floodplain
- And that the Northland Regional Council may from time to time appoint to the Working Group because of their particular skills or knowledge.
- Length of Term:** Appointments will be made for a term of three years, in sequence with the local government elections, or until earlier disqualification, death or resignation. Should any of the latter three events arise, replacement appointees may be made by the Northland Regional Council.
- Meeting Frequency:** As required.
- Objective:** To advise and make recommendations to the Northland Regional Council, on all matters pertaining to the development and implementation of the Kaihu River Management Plan.
- Functions:** The Kaihu River Working Group is an advisory committee of the Northland Regional Council and has no delegated authority or specific powers. Its functions are to:

1. Provide a stakeholder forum for the development of policies and plans for the management of flooding within the Kaihu River catchment.
2. Enable stakeholders to participate in the ongoing management of flood control with the Kaihu River catchment.
3. Facilitate communications between the Northland Regional Council, which is ultimately responsible for the management of the scheme, and the residents and landholders within the catchment.
4. Advise the Northland Regional Council on all matters relating to the management of the Kaihu River Flood Control Scheme.

**Specific tasks will include:**

1. Assisting the Northland Regional Council to develop and adopt a Management Plan for the management of flooding and erosion within the catchment of the Kaihu River.
2. Annually reviewing the priority and order of works within the management plan, ensuring that works are being undertaken in the order set out in the Plan and to the standards specified in the Plan or, when necessary, recommending changes to the Plan.
3. Each year, reporting on performance against the past year's work plan and recommending to the Northland Regional Council an annual works plan and budget for the forthcoming financial year.









## **RECORD OF ACTIONS**

### **KAIHU RIVER WORKING GROUP**

**Discussion held at Northland Regional Council Office, Dargaville  
On Wednesday 6 September 2017, at 10.00am**

**Present:**

Cr John Bain	Committee Chair
Des Subritzky	Te Houhanga Marae representative
Ian Lupton	Ratepayer Representative Area 2 (Floodplain – Rotu Bottleneck to Dargaville)
Boyd Parker	Ratepayer Representative Area 3 (Catchment area above floodplain)
Taoho Patuawa	Te Roroa Representative
Cr Penny Smart	Kaipara Representative

**Also in Attendance:**

Joseph Camuso	NRC Rivers Programme Manager
Gary Treadgold	NRC Area Manager – Dargaville
Jonathan Santos	NRC River Management Engineer

#### **1. APOLOGIES**

Bruce Howse	NRC Group Manager, Environmental Services
Snow Tane	Te Roroa Representative

<b><u>MOVED:</u></b>	Apologies be accepted
Moved:	Cr Bain
Second:	Mr Subritzky

#### **2. WORKSHOP NOTES OF PREVIOUS MEETING**

<b><u>MOVED:</u></b>	Workshop notes be confirmed
Moved:	Cr Bain
Second:	Mr Camuso

#### **3. MATTERS ARISING FROM NOTES**

- Helicopter spraying: MPI has supplied the chemical to interested farmers and the farmers paid the helicopter spraying service with a rate of \$240/ha.
- Bull Rush Spraying – scoping and test spraying by boat was successful.

#### **4. 2017/2018 BUDGET & PROPOSED WORKS PROGRAM**

**Presented By:**

Gary Treadgold

- Spray in December and late April twice per year. Cr Bain suggested we ask for a variation to the consent to allow spraying earlier: Using a boat for Bull Rush spraying approximately \$200 per hour about 40 to 50 hours work.
- Maybe add some additional spraying at the inland lakes for Rice-grass check with Taoho and SOE team.
- Tree Removal – Des Subritzky demonstrated that Poplar can be used if milled correctly.
- Gravel Extraction

#### **Agreed Action Points**

- Jonathan Santos to contact NRC Biosecurity and Consents team and ask for a variation to allow spraying outside the consent dates to take advantage of warm spring weather
- Gary Treadgold to investigate using NRC boat with TAG also obtaining certification for their boat.
- Gary Treadgold to investigate feasibility of Rice-grass checks of inland lakes
- Gary Treadgold to contact Doug Carter and other Poplar tree users to see if there is a market for problematic Poplar trees.
- Schedule Barney Brotherhood to survey gravel islands on the Kaihu River that were extracted last time and calculate a volume of new gravel.
- Gary Treadgold and Jonathan Santos to meet with Taoho Patuawa to discuss the location and details of the gravel extraction.

### **5. NORTHLAND IRRIGATION STUDY UPDATE**

#### **Presented By:**

Cr Bain

- Cr Bain laid out the implicated cost of the irrigation scheme in Kaipara which is very costly
- Joseph Camuso pointed out the priority areas are the Mid-North and Kaipara. Mid-North scheme is approximately 50% cheaper per ha.
- The next step is to develop a pre-feasibility study.
- Council has not committed to funding the pre-feasibility study.

### **6. OTHER BUSINESS**

- Des Subritzky requested a visit to view the Bull Rush on Tapia banks. Gary Treadgold responded that it has been sprayed once with the helicopter and will look at spraying via boat next time.

**MEETING CLOSED:** 11.10am



12 April 2018

Hi Des;

**RE: Island at Aratapu**

Please see attached aerial photo of the island near Aratapu.

I would suspect this has grown in the past and as you have observed over the years.

**Background:**

You have witnessed the island is building in a wide part of the River where we would expect slower velocities. The Island splits the channel and the outside channel True Right (closest to Aratapu) we would expect to have higher velocities as you have observed. The wider inside channel we would expect to have lower velocities and would expect natural deposition and the Island getting bigger.

I have done some rough measurements using google maps so it is not so accurate but probably within 5%, just to get a general idea of the flow dynamics.

The river is narrow upstream and downstream and fat in the middle, where the island is building.

**Width of N. Wairoa River**

Upstream ~ 425 meters

@ Island ~ 850 meters The Island is approximate 150-meter-wide and 700 meters long

Downstream ~ 450 meter

I don't believe that spraying the island will have long term benefits given this appears to be a natural deposition area.

Happy to discuss at your convenience.

Regards;



Joe



Joseph Camuso

Rivers and Natural Hazards Manager – Environmental Services

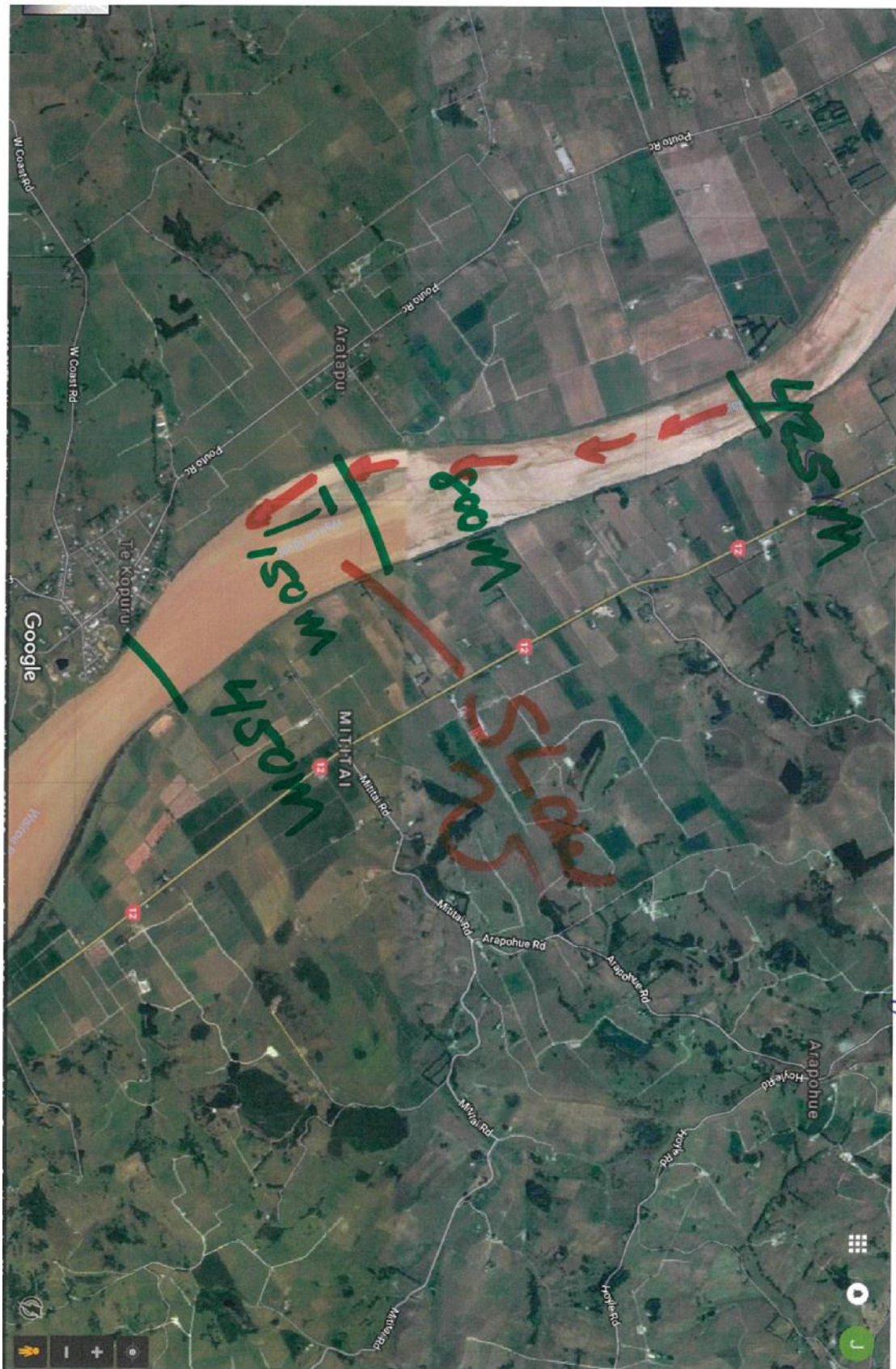
Northland Regional Council | Te Kaunihera ā rohe o Te Taitokerau

DDI 09 470 1264 M 027 4384 639

A 36 Water Street, Whangārei 0110

P 0800 002 004 24 HR ENVIRONMENTAL HOTLINE 0800 504 639





Des  
Bull Rush -  
Need to wash before  
Need to use clean water  
then spray -

## ITEM5 & 6: 2017/2018 BUDGET AND WORK UPDATE

<b>Kaihu River Management Scheme</b>							
Cost Centre 5003	2016/17			2017/18			2018/19
	Revised Annual Budget	Actual	Variance to Revised Budget	Revised Annual Budget	Actual to May 2018	Variance to Revised Budget	Revised Annual Budget
<b>Costs</b>							
Salaries / Labour Costs	11,094	4,190	6,904	10,835	3,387	7,448	11,160
Stop banks/river sch maintenance			0			0	
River Clearance works	79,515	67,553	11,962	59,857	77,907	(18,050)	59,857
Advertising and Statutory notices	327		327	327		327	327
National meeting/working party							
TLA collection commission	3,471	3,475	(4)	3,471	3,007	464	3,471
TLA special RID DB costs added* QV	-		0	-		0	
Consultants	4,810	3,942	868	4,810	4,300	510	4,810
Harbour/Field Inspections							
Sundry Supplies	-		0	-		0	
Printing and Stationery							
Vehicle running @ 0.62cents per km			0		305	(305)	
Capital Works							
<b>Total Costs</b>	<b>99,217</b>	<b>79,160</b>	<b>20,058</b>	<b>79,300</b>	<b>88,906</b>	<b>(9,606)</b>	<b>79,625</b>
<b>Revenue</b>							
Kaihu River Management Rates	78,843	75,357	(3,486)	69,451	68,683	(768)	69,451
Kaihu River Management Rates b/fwd							
Funding provided from Land Mgmt Reserve							
Other Income		7,377	7,377		6,180	6,180	
<b>Total Revenue</b>	<b>78,843</b>	<b>82,734</b>	<b>3,891</b>	<b>69,451</b>	<b>74,863</b>	<b>5,412</b>	<b>69,451</b>
<b>Net surplus/(deficit)</b>	<b>(20,373)</b>	<b>3,574</b>	<b>23,949</b>	<b>10,000</b>	<b>(14,044)</b>	<b>(4,195)</b>	<b>(10,174)</b>
Surplus(deficit) carried forward	41,123	75,878	(34,755)	55,502	79,453	(23,951)	69,450
<b>Life to date surplus/(deficit)</b>	<b>20,750</b>	<b>79,453</b>	<b>(10,807)</b>	<b>65,502</b>	<b>65,409</b>	<b>(28,145)</b>	<b>59,276</b>



## Boat Spraying Manchurian Rice Grass and Californian Rush along the banks of the Kaihu River (Twice in a year)

### Scope and Nature of the Service

#### Manchurian Rice Grass:

In general, the Contractor sprayed Manchurian Rice Grass on both banks of Kaihu River from Duck Creek to the mouth of the and on both banks of the section adjacent to the Marae about 1.4 km upstream of Beach Rd. See the Location Map. Total length of spraying = 2,695 m.



#### Californian Rush:

The Contractor sprayed only parts of the Californian Rush that are exposed and obstructing the flow of water. The location of the Californian Rush vary in which Contractor shall spray on both banks from Kaihu River Opening to Parore Road Bridge. See the Location Map.

For spraying the Contractor used the Haloxypop and crop oil that can be used over water only between 1st of December and the 31st of July in accordance with conditions in the Resource Consent AUT.010950.03.03.

1st Actual Spray – late February

2nd Actual Spray – late April

It is preferable that the spraying is done during low tide.

The boat to be used while spraying shall have obtained the New Zealand Maritime Approval. The contractor has submitted to NRC a copy of the current certificate.







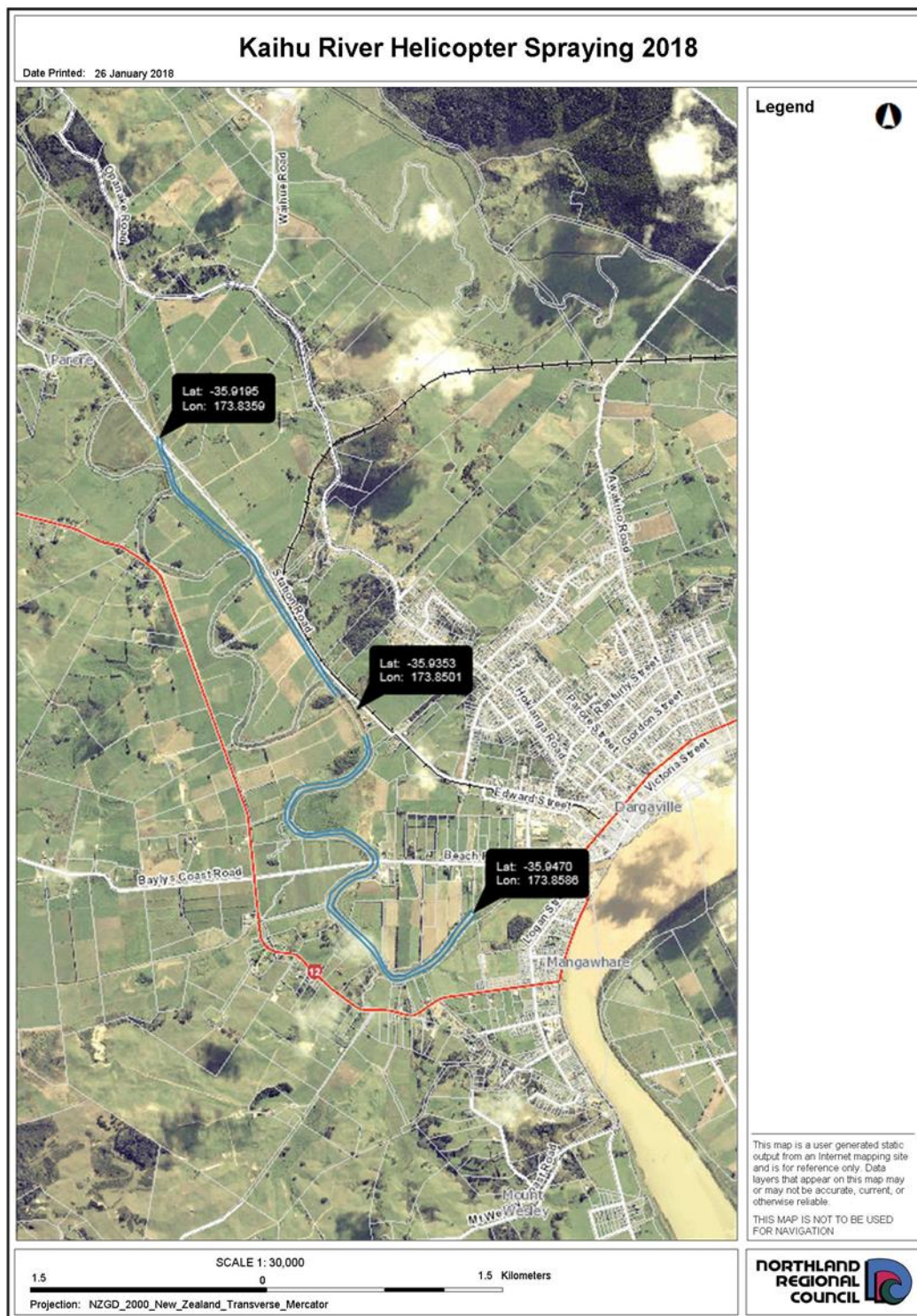
## Helicopter Spraying Manchurian Rice Grass along the banks of the Kaihu River (Twice in a year)

### Scope and Nature of the Service

This scope of these river works is to Spray Manchurian Rice Grass in both banks of Kaihu River from section about 680 meters downstream of Duck Creek ( NZTM: 1677434.402, 6021585.587) to the section about 800 meters downstream of Parore Bridge (NZTM: 1675412.516, 6024652.760). See location map below.







## Fallen Tree Removal in Kaihu River 2018

### Scope and Nature of the Service

Fallen trees, branches that block and undermine the free flow of water in the river and trees on the bank edges exposing risk of falling within about 1800 meter stretch as shown in the location map below shall be put into tree removal programme. See Figure 1.













## Review of the Kaihu River Maintenance work for the past three years

SECTIONS	2015-2016	2016-2017	2017-2018
From Opening to Auto Yard Boundary - Left Bank	Spraying Rice Grass	Spraying Rice Grass & Boat Spraying Bull Rush	Boat Spraying Rice Grass and Bull Rush
From Opening to Bridge - Right Bank	Spraying Rice Grass	Spraying Rice Grass & Boat Spraying Bull Rush	Boat Spraying Rice Grass and Bull Rush
From Auto Yard Boundary to Duck Creek - Left Bank	Machine Cleaning & Helicopter Spraying Rice Grass	Machine Cleaning & Helicopter Spraying Rice Grass	Boat Spraying Bull Rush
From Bridge to Duck Creek - Right Bank	Machine Cleaning & Helicopter Spraying Rice Grass	Machine Cleaning & Helicopter Spraying Rice Grass	Boat Spraying Bull Rush
From Duck Creek to Parore - Left Bank	Machine Cleaning, Helicopter Spraying & Direct Spraying Rice Grass at the Marae	Machine Cleaning, Helicopter Spraying & Direct Spraying Rice Grass at the Marae	Helicopter Spraying & Boat Spraying at Marae
From Duck Creek to Parore - Right Bank	Machine Cleaning, Helicopter Spraying & Direct Spraying Rice Grass at the Marae	Machine Cleaning, Helicopter Spraying & Direct Spraying Rice Grass at the Marae	Helicopter Spraying & Boat Spraying at Marae
From Parore to Bottle Neck - Left Bank		Machine Cleaning	
From Parore to Bottle Neck - Right Bank		Machine Cleaning	
From Bottle Neck to Waihue Road - inside bend	Provisional	Provisional	
From Waihue to Maropiu	Tree Removal		Tree Removal
From Maropiu to Waima			Bank Armouring at Kaihu Wood Road Bridge

## Kaihu River Flood Mitigation Working Group Meeting

### Agenda item 7 Northland Water Storage and Use Update (note change in title)

#### Executive Summary

Northland Regional Council (council) has submitted an Expression of Interest (EOI) to the Provincial Growth Fund (PGF) for funding to undertake a prefeasibility analysis of all four water storage options identified in the *Scoping of Irrigation Scheme Options in Northland* report, including one using water from the Kaihu River. Council is working closely with Kaipara District Council (KDC), Far North District Council (FNDC) and central government officials on a formal application for funding to the PGF. It is intended that this will be submitted within the next 4-6 weeks.


#### Report


In 2014, council began a process of considering the potential development of new water storage options in Northland, in large part prompted by drought events in the Kaipara district in the early years of this decade. The work done to date includes:

- *Northland Strategic Irrigation Infrastructure Study* (Phase 1) completed in early 2016. This provided a high level regional scale overview of the potential for irrigation development in Northland (i.e. what could it be).
- *Scoping of Irrigation Scheme Options* (Phase 2) completed in mid-2017. This considered in greater detail and depth the potential for irrigation demand and supply opportunities in the most promising areas from the first study (i.e. what should it be). It identified four potential water storage schemes options in Northland: three in the Mid-North and one in Kaipara (see figure below).

### Scheme option 1: Kaipara

Water storage will encourage diversification of existing land-use as well as provide a reliable water supply within Dargaville and the wider community.

 **19,000** ha of land that could benefit from irrigation (command area) shown in green

 **6,300** ha irrigable area within the command area (assumed 30% uptake)

 **4,000** m<sup>3</sup>/ha peak irrigation demand

 **3,400** m<sup>3</sup>/ha/year average irrigation demand

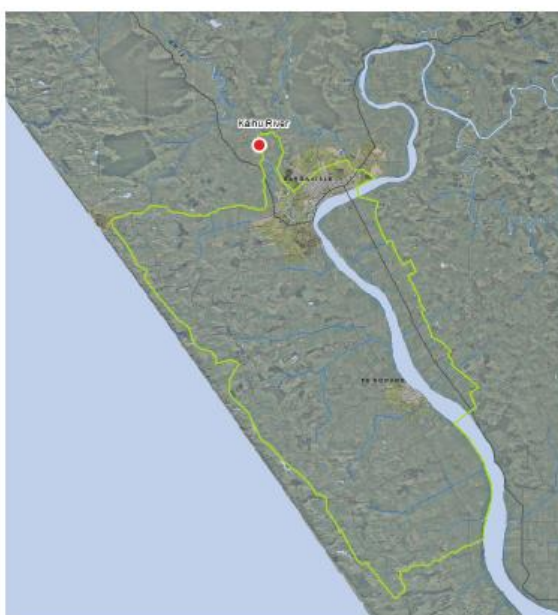
 **\$115** million total capital cost

 **\$17,000** /ha capital cost

 **\$390** /ha/year operational costs

 **950** additional people predicted to be employed

 **\$85** million /year regional GDP increase



These studies are available on the NRC website <https://www.nrc.govt.nz/Your-Council/Economic-development/investment-and-growth-reserve/>. While both studies were led by council, they were jointly funded by council and central government.

Following the completion of the scoping study council began working with Crown Irrigation Investments Limited (CIIL) in the second half of 2017 to scope up and obtain co-funding for next stage of work involving more detailed investigations (Phase 3 Prefeasibility). However, the criteria used by CIIL did not apply well to the proposed Kaipara scheme. This was largely because CIIL's criteria was focussed on return on investment by the private sector and failed to consider wider community benefits and potential investment by the public sector. Consequently, the Kaipara option identified in the scoping report was initially excluded from further investigations.

However, the new coalition government formed in 2017, determined in March 2018 that funding for this work would no longer be possible through CIIL, and therefore the work programme originally developed for Phase 3 was halted. Instead, an opportunity was provided through the establishment of the Provincial Growth Fund (PGF) to seek funding for further investigations into water storage and use through this facility. Consequently, council submitted an EOI to the PGF to undertake prefeasibility work on all four water storage options.

The purpose of the prefeasibility work is to undertake a series of studies that assess the four options from the scoping stage to select the preferred scheme 'base case'. Since receiving council's EOI, officers from central government have been meeting with staff from council, KDC and FNDC to discuss how to best prepare an application to the PGF and how to best align the project with the government's priorities.

If funding is successfully secured, suitably qualified consultants will be engaged to undertake the prefeasibility work programme. This work will include opportunities for active participation by stakeholders. It should be noted that no preferred design for the water management infrastructure, including storage locations, has yet been identified. The exact design and location of the scheme(s) will depend on the findings of the proposed work programme.