

## **APPENDIX 21**

### EVIDENCE OF CONSULTATION WITH IWI [TE RARAWA, NGAI TAKATAU AND NGATI KAHU]

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## Awanui River Working Group Record of Actions

Meeting held in the Te Ahu Centre  
Kaitaia  
on Thursday 20 February 2020, commencing at 10:00

### Present:

Cr Colin Kitchen	(NRC Councillor – Chairman)
Bruce Howse	(NRC)
Russell Cantlay	(Awanui Ratepayers Assn)
John Stewart	(Te Hiku Community Board)
Fiona King	(Kaitaia Drainage Board)
Joe King	(Eastern Area)
Roz Popata	(Ngati Kahu)
Hone Popata	(Ngati Kahu)
Hone Walsh	(Te Rarawa)
Tui Bedggood	(Te Rarawa)

### In Attendance:

**Full Meeting**  
NRC Area Manager, Kaitaia  
NRC Rivers and Natural Hazards Manager  
NRC Customer Services Officer  
NRC Property Engagement Officer  
FNDC Community Development Advisor

The meeting commenced at 10:00.

### Apologies (Item 1.0)

Gary May, Michael Masters, Sarah Boniface

### Matters Arising (Item 2.0)

**Presented by:** Cr Kitchen

#### Agreed action points:

- Send a reminder to FNDC regarding NRC being an affected party for any works that may impact on the scheme. Action Joseph Camuso.
- Review practicality of new 50m3 rule with NRC staff. Action Bruce Howse.
- Arrange letter to Mike Finlayson. Action Bruce Howse.

### **Budget 2019-2020 and 2020-2021 (Item 3.0)**

**Presented by:** Bruce Howse

**Agreed action points:**

- No actions required

### **Works Programme 2019-2020 and 2020-2021 (Item 4.0)**

**Presented by:** Joseph Camuso

**Agreed action points:**

- No actions required

### **Awanui Scheme Upgrade Update (Item 5.0)**

**Presented by:** Joseph Camuso and Bruce Howse

**Agreed action points:**

- No actions required

### **Other Business (Item 6.0)**

**Presented by:** Cr Kitchen

**Agreed action points:**

- Contact DOC and FNDC to get the name and contact details of their new appointed representative. Action Michelle Shine.

### **Conclusion**

**The meeting concluded at 12:00.**

Correspondence with Ngai Takoto

Kia ora koutou,

Yep I can make this time as well. See you all Friday.

Kaio

**From:** Wallace Rivers <[wallace.rivers@ngaitakotoiwi.co.nz](mailto:wallace.rivers@ngaitakotoiwi.co.nz)>  
**Date:** Friday, 12 June 2020 at 5:47 PM  
**To:** Joseph Camuso <[josephc@nrc.govt.nz](mailto:josephc@nrc.govt.nz)>  
**Cc:** Kaio Hooper <[kaio@ngaitakotoiwi.co.nz](mailto:kaio@ngaitakotoiwi.co.nz)>, Kaio Hooper <[kaio.enviro.ngaitakoto@hotmail.co.nz](mailto:kaio.enviro.ngaitakoto@hotmail.co.nz)>, Peter Wiessing <[peterw@nrc.govt.nz](mailto:peterw@nrc.govt.nz)>  
**Subject:** RE: Awanui Flood Scheme Upgrade

Kia ora Joe,

That time frame will work, we can meet at your office.

Nga mihi

**Wallace Rivers**  
Acting CEO  
Te Runanga o NgaiTakoto



Phone: 09 408 0271 Mobile: 021 839 757  
PO Box 262, Kaitaia, 0410  
[www.ngaitakotoiwi.co.nz](http://www.ngaitakotoiwi.co.nz)

**From:** Joseph Camuso <[josephc@nrc.govt.nz](mailto:josephc@nrc.govt.nz)>  
**Sent:** Friday, 12 June 2020 2:51 pm  
**To:** Wallace Rivers <[wallace.rivers@ngaitakotoiwi.co.nz](mailto:wallace.rivers@ngaitakotoiwi.co.nz)>  
**Cc:** Kaio Hooper <[kaio@ngaitakotoiwi.co.nz](mailto:kaio@ngaitakotoiwi.co.nz)>; Kaio Hooper <[kaio.enviro.ngaitakoto@hotmail.co.nz](mailto:kaio.enviro.ngaitakoto@hotmail.co.nz)>; Peter Wiessing <[peterw@nrc.govt.nz](mailto:peterw@nrc.govt.nz)>  
**Subject:** RE: Awanui Flood Scheme Upgrade

Kia ora Wallace;

I have a meeting until 10:00 on Friday 19 June.

So I can leave Whangarei after that and arrive early afternoon in Kaitaia.

If we say 13:00 that should be enough travel time.

Would you prefer to meet at your offices or NRC?

Which ever is easiest for you.

**Ngā mihi**

**Joseph Camuso**

Correspondence with Ngai Takoto

Rivers and Natural Hazards Manager

DDI 09 470-1200

M 0274-384-639



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**From:** Wallace Rivers <[wallace.rivers@ngaitakotoiwi.co.nz](mailto:wallace.rivers@ngaitakotoiwi.co.nz)>

**Sent:** Friday, 12 June 2020 2:04 PM

**To:** Joseph Camuso <[josephc@nrc.govt.nz](mailto:josephc@nrc.govt.nz)>

**Cc:** Kaio Hooper <[kaio@ngaitakotoiwi.co.nz](mailto:kaio@ngaitakotoiwi.co.nz)>; Kaio Hooper <[kaio.enviro.ngaitakoto@hotmail.co.nz](mailto:kaio.enviro.ngaitakoto@hotmail.co.nz)>;

Peter Wiessing <[peterw@nrc.govt.nz](mailto:peterw@nrc.govt.nz)>

**Subject:** FW: Awanui Flood Scheme Upgrade

Kia ora Joe,

Further to our on line meeting earlier this week, confirming I will be in Kaitaia all next week.

Best time I have available later next week is Friday afternoon from midday onward.

If you are available that would be great.

Let me know if we can make that work.

Nga mihi

**Wallace Rivers**

Acting CEO

Te Runanga o NgaiTakoto



Phone: 09 408 0271 Mobile: 021 839 757

PO Box 262, Kaitaia, 0410

[www.ngaitakotoiwi.co.nz](http://www.ngaitakotoiwi.co.nz)

**From:** Joseph Camuso <[josephc@nrc.govt.nz](mailto:josephc@nrc.govt.nz)>

**Sent:** Monday, 8 June 2020 2:20 pm

**To:** [kaio.enviro.ngaitakoto@hotmail.co.nz](mailto:kaio.enviro.ngaitakoto@hotmail.co.nz)

**Cc:** Wallace Rivers <[wallace.rivers@ngaitakotoiwi.co.nz](mailto:wallace.rivers@ngaitakotoiwi.co.nz)>

**Subject:** FW: Awanui Flood Scheme Upgrade

Kia ora Kaio;

Correspondence with Ngai Takoto

Congratulations on your new baby, enjoy because they grow up too fast.

Sorry I was in a meeting and could not talk. I have been in touch with Wallace Rivers, we were planning on a Zoom or Teams meeting later in the week.

I have attached the link to the drawings – they are about 70 MB, so too big to e-mail.

[https://northlandregionalcouncil-my.sharepoint.com/:f:/g/personal/josephc\\_nrc\\_govt\\_nz/ErwiGYApe-pBncMmP\\_Ol61oBGAZA4icE4e3COPbl4olqeA?e=V4Y7dZ](https://northlandregionalcouncil-my.sharepoint.com/:f:/g/personal/josephc_nrc_govt_nz/ErwiGYApe-pBncMmP_Ol61oBGAZA4icE4e3COPbl4olqeA?e=V4Y7dZ)

**Ngā mihi**

**Joseph Camuso**

Rivers and Natural Hazards Manager

M: 0274-384-639



Te Kaunihera ā rohe o Te Taitokerau

P 0800 002 004 » W [www.nrc.govt.nz](http://www.nrc.govt.nz)



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**From:** Joseph Camuso

**Sent:** Wednesday, 3 June 2020 11:21 AM

**To:** [kaio.enviro.ngaitakoto@hotmail.co.nz](mailto:kaio.enviro.ngaitakoto@hotmail.co.nz)

**Cc:** Peter Wiessing <[peterw@nrc.govt.nz](mailto:peterw@nrc.govt.nz)>

**Subject:** FW: Awanui Flood Scheme Upgrade

Kia ora Kaio;

I just wanted to follow up on the Awanui Scheme Upgrade Outline attached.

Please feel free to contact me or Peter to discuss any issues at your convenience.

Correspondence with Ngai Takoto

**Ngā mihi**

**Joseph Camuso**

Rivers and Natural Hazards Manager

M: 0274-384-639



Te Kaunihera ā rohe o Te Taitokerau

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**From:** Joseph Camuso

**Sent:** Friday, 22 May 2020 3:15 PM

**To:** 'kaio.enviro.ngaitakoto@hotmail.co.nz' <[kaio.enviro.ngaitakoto@hotmail.co.nz](mailto:kaio.enviro.ngaitakoto@hotmail.co.nz)>

**Cc:** Peter Wiessing <[peterw@nrc.govt.nz](mailto:peterw@nrc.govt.nz)>

**Subject:** Awanui Flood Scheme Upgrade

Kia ora Kaio;

Hope all is well with you and your Whanau.

To follow on from my phone messages, I have attached the Awanui Flood Scheme Upgrade Outline and a link to the Awanui Scheme Design.

The scheme design is too large (approximately 76 MB) to email. I have placed it in a one drive that you can access at your convenience.

[https://northlandregionalcouncil-my.sharepoint.com/:f/g/personal/josephc\\_nrc\\_govt\\_nz/ErwjGYApe-pBncMmP\\_Ol61oBGZA4icE4e3COPbl4olqeA?e=0g3lbN](https://northlandregionalcouncil-my.sharepoint.com/:f/g/personal/josephc_nrc_govt_nz/ErwjGYApe-pBncMmP_Ol61oBGZA4icE4e3COPbl4olqeA?e=0g3lbN)

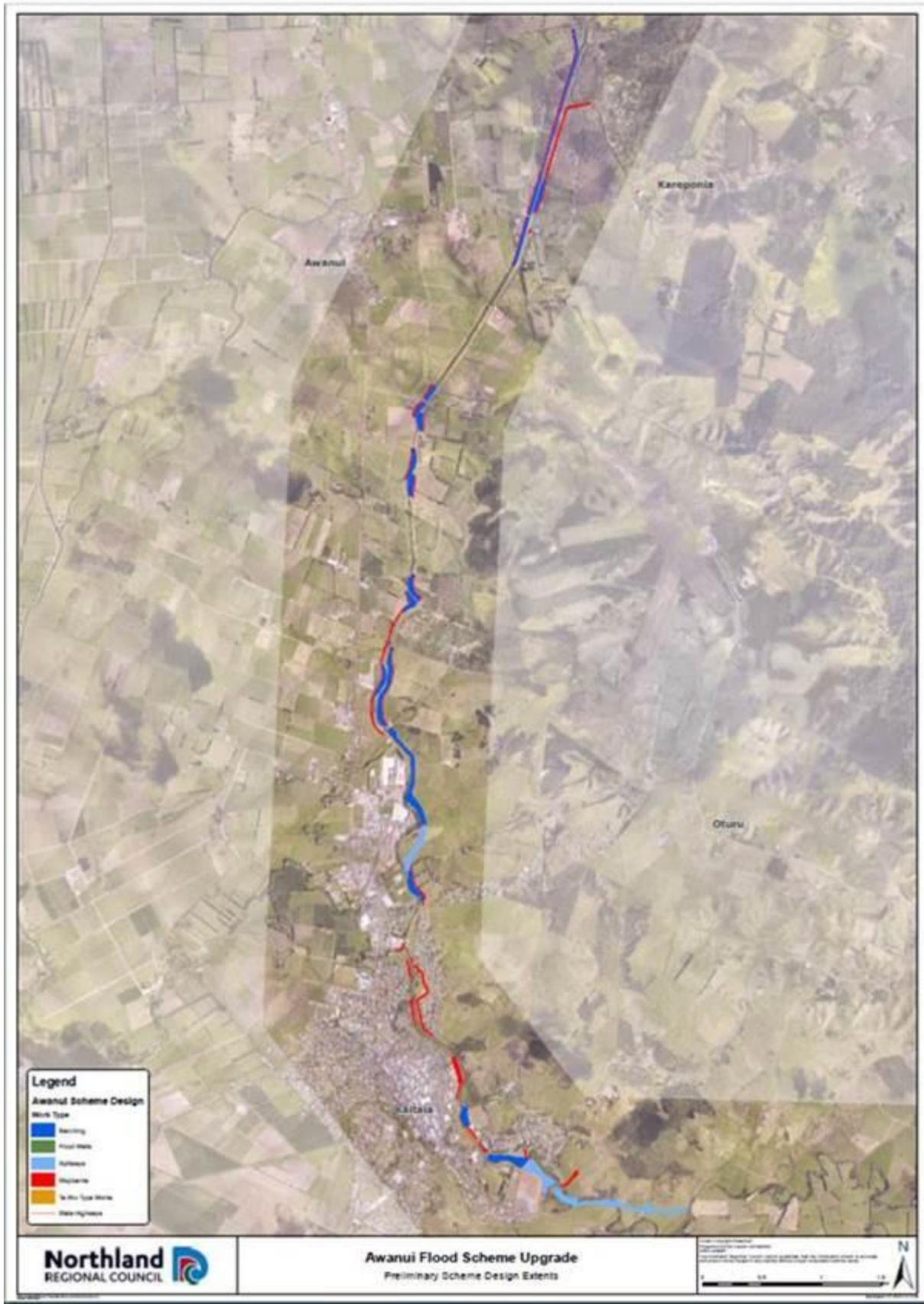
We would value your feedback and advice on the proposal. We are in the process of drafting the Resource Consent for works and will need your approval to proceed. Similar to Bells Hill and JNL work this summer.

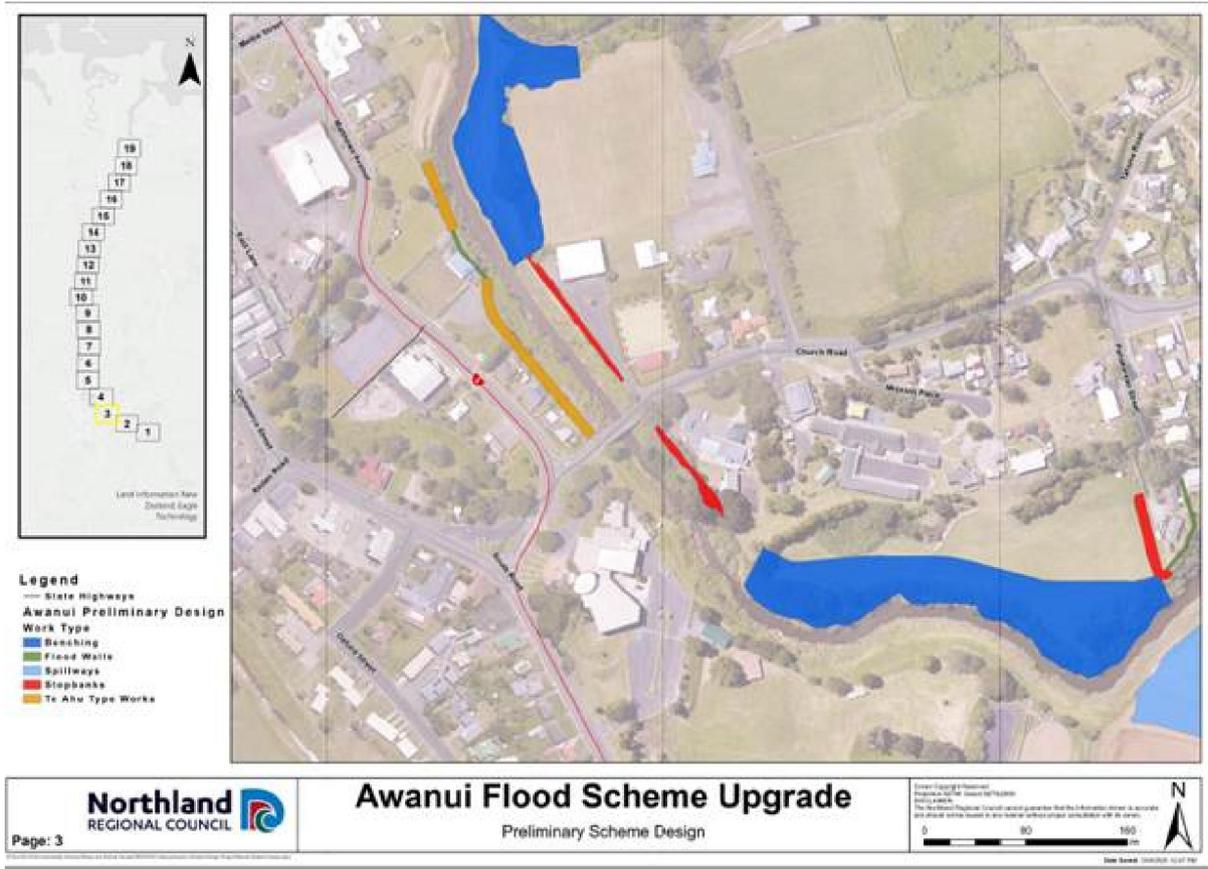
## Correspondence with Ngai Takoto

The colored segments below indicate the different work elements that are required for the upgrade. The upgrade will reduce flooding to Kaitaia and surroundings with an account for Climate Change.

The Outline document shows examples of what each work element will involve.

Please contact me if you have any questions, 0274 384 639. I am happy to meet to discuss in further detail at your convenience.





## Ngā mihi

**Joseph Camuso**

Rivers and Natural Hazards Manager

M: 0274-384-639



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## Correspondence with Ngai Takoto

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Iwi Engagement Ngati Kahu email correspondence

Kia ora Hone;

Yes the meeting is scheduled for 10 am NRC offices in Kaitaia.

I will plan on attending VIA TEAMS on-line from Whangarei office.

Looking forward to this meeting and progressing the Scheme Upgrade.

**Ngā mihi**

**Joseph Camuso**

Rivers and Natural Hazards Manager

**DDI 09 470-1200**

**M 0274-384-639**



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**From:** Oturu Marae <[oturumarae@gmail.com](mailto:oturumarae@gmail.com)>

**Sent:** Sunday, 26 July 2020 7:33 PM

**To:** Joseph Camuso <[josephc@nrc.govt.nz](mailto:josephc@nrc.govt.nz)>; Bruce Howse <[bruceh@nrc.govt.nz](mailto:bruceh@nrc.govt.nz)>; Peter Nowell <[peter@nrc.govt.nz](mailto:peter@nrc.govt.nz)>; Roz 35 <[jroz1251@gmail.com](mailto:jroz1251@gmail.com)>

**Subject:** Re: Awanui River Flood Scheme Upgrade

Kia ora Joesph

Can you confirm the zoom meeting on Wednesday 29th @ 10am? NRC Kaitaia office

Also, we will invoice for our time for this meeting

Nga mihi

Hone

On Tue, Jul 21, 2020 at 4:24 PM Joseph Camuso <[josephc@nrc.govt.nz](mailto:josephc@nrc.govt.nz)> wrote:

Kia ora Jaroz and Hona;

Iwi Engagement Ngati Kahu email correspondence

I have attached the PDF version of the power point it was too big as a PPT file.

**Ngā mihi**

**Joseph Camuso**

Rivers and Natural Hazards Manager

**DDI** 09 470-1200

**M** 0274-384-639



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-----Original Appointment-----

**From:** Joseph Camuso

**Sent:** Tuesday, 21 July 2020 4:13 PM

**To:** Joseph Camuso; Jaroz and Hona Popata ([oturumarae@gmail.com](mailto:oturumarae@gmail.com)); Peter Wiessing; Michelle Shine

**Subject:** Awanui River Flood Scheme Upgrade

**When:** Wednesday, 29 July 2020 10:00 AM-12:00 PM (UTC+12:00) Auckland, Wellington.

**Where:** Microsoft Teams Meeting - NRC Office

Kia ora Jaroz and Hona;

I have included the Awanui Scheme Upgrade Outline Document that shows each element of the proposed upgrade.

I will forward a power point that we can go thru on the day.

## [Join Microsoft Teams Meeting](#)

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If you do not have MS Teams installed, please copy the link to Chrome and open (it does not work in Internet Explorer). You can then either download the desktop app, or run the meeting from the Web.

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e-mail correspondence with Te Rarawa

*Tēnā koe Tui,*

*Sorry for the late response, we have been flat out with the flood response.*

*Thank you for the e-mail and I will try to address your concerns as below:*

*We have representatives of Te Hiku o te Ika iwi; Ngāi Takoto, Te Aupouri, Ngāti Kuri and their involvement within the Awanui River Working Group and are committed to seek iwi input and advice in regards to resource consents. During construction we encourage cultural monitoring visits and we have Marae Hui to induct our contractors prior to construction so that our contractors have a clear understanding of what iwi and/or mana whenua protocols. In this way our contractors know what is expected of them from mana whenua and are respectful of these expectations. We also encourage input into all aspects of the Awanui River Catchment Study including Mātauranga Māori models and frameworks. The idea is to collate all the information currently available on the Awanui Catchment to assist in catchment management by describing current conditions and identifying factors affecting catchment health. We look forward to planning together the planting of native planting plans within the scheme and have an open door policy for all matters.*

*With regards to Maintenance of the flood scheme areas and addressing silt build up in the river and stormwater drains. Much work goes into the maintenance of the scheme and this is discussed and guided by the Awanui River Working Group. We work with the Far North District Council and assist where possible in reducing sediment in the stormwater drains. In addition we look to the prevention and control of erosion through good design and construction.*

*If you have further questions please feel free to contact me.*

*Nga mihi;*

*Joe*

**Joseph Camuso**

Rivers and Natural Hazards Manager

**DDI** 09 470-1200

**M** 0274-384-639



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**From:** tui bedgood <[bedgoodtui6@gmail.com](mailto:bedgoodtui6@gmail.com)>

**Sent:** Friday, 17 July 2020 10:48 AM

**To:** Joseph Camuso <[josephc@nrc.govt.nz](mailto:josephc@nrc.govt.nz)>

**Cc:** Peter Wiessing <[peterw@nrc.govt.nz](mailto:peterw@nrc.govt.nz)>

**Subject:** Re: Awanui Flood Management

e-mail correspondence with Te Rarawa

Kia Ora Joseph and Peter

Thankyou for attending our hui. Of particular interest was the conversations around mana whenua input, does the NRC have plans for addressing these issues? Myself and Waikarere are representatives of the hapu and I wholeheartedly agree with the whakaaro she had regarding naming and beautifying the areas.

Another question was raised regarding maintenance of the flood scheme areas and addressing silt build up in the river and stormwater drains.

I will forward your response to Te Runanga o Te Rarawa. We are an iwi of 23 marae and for Te Rarawa to support any action the iwi as a collective must agree.

I look forward to a positive outcome.

Nga mihi  
Tui Bedggood

On Thu, Jul 16, 2020 at 11:00 AM Joseph Camuso <[josephc@nrc.govt.nz](mailto:josephc@nrc.govt.nz)> wrote:

Kia ora Tui;

Thank you for the opportunity to address Te Runanga O Te Rarawa regarding the Awanui Flood Scheme Upgrade.

Some very productive discussion and constructive input from the meeting that will benefit the overall catchment management.

We look forward to working together to not only providing better flood protection for the community but aiding in the restoration of the awa.

NRC Rivers Team will be applying for a resource consent for the Scheme Upgrade, hopefully within the next week or so.

It would be helpful if we could get a letter of support from Te Rarawa.

e-mail correspondence with Te Rarawa

I understand this may take some time, but the consent department will want to see that we have the support of local Iwi.

**Ngā mihi**

**Joseph Camuso**

Rivers and Natural Hazards Manager

**DDI** 09 470-1200

**M** 0274-384-639



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**From:** tui bedggood <[bedggoodtui6@gmail.com](mailto:bedggoodtui6@gmail.com)>

**Sent:** Friday, 26 June 2020 12:30 PM

**To:** Joseph Camuso <[josephc@nrc.govt.nz](mailto:josephc@nrc.govt.nz)>

**Subject:** Awanui Flood Management

Tena koe Joseph

I would like to invite you to meet with Te Runanga O Te Rarawa on the 15th of July at Toka Tumoana to answer any questions that may arise around the Flood Management Project and how it will impact our whenua.

Nga mihi

Tui Bedggood

---

Report of the meeting of the Awanui Flood Management Liaison Committee, held on Thursday 25 September 2008 at the REAP Centre, Puckey Ave, Kaitaia, commencing at 10.30a.m.

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Committee Members present:

Joe Carr	(NRC - Councillor)
Tony Phipps	(NRC)
Dennis Bowman	(FNDC)
Robert Srhoj	(FNDC)
Fiona King	(Kaitaia Drainage Board)
Johnathon Maxwell	(DOC)
Mangu Awarau	(Ngai Takoto)
Abraham Witana	(Te Runanga O Te Rarawa)
Tony Brljevich	(Northern Area)
Mike Masters	(Western Area)
Gary May	(Southern Area)
Joe King	(Eastern Area)

Also Present:

Joseph Camuso	(NRC)
Peter Wiessing	(NRC)
Vijesh Chandra	(GHD)
Craig Ambler	(GHD)
Ron Fenwick	(Contractor)

Apologies: Phil Cross, Marie Berghan, Patrick Whaley

### Introduction

Councillor Joe Carr opened the meeting and welcomed all those attending this inaugural meeting of the Awanui Flood Management Liaison Committee. The following format for the meeting was outlined:

- Review of Terms of Reference
- NRC update
- 2008 / 2009 works programme
- Progress with floodplain computer model
- Asset Management Plan
- Preliminary discussion on potential scheme improvement options

### Review of Terms of Reference

Cr Carr invited comments on or changes to the Terms of Reference for committee members. Tony Phipps advised that the NRC had agreed that FNDC should be invited to nominate an officer responsible for drainage and stormwater works in the scheme area to be on the liaison committee and that the terms of reference had been amended. Mr Robert Srhoj of FNDC would fill that position and was in attendance. It was also agreed that meetings of this committee shall be held during week days rather than evenings. Committee members supported the changes and no further changes were suggested.

### NRC Update

Joe Camuso gave an update on the works programme and outlined additional work not included in this year's budget. The on going works include building an asset register, river cleaning and tree removal. Building the asset register includes obtaining information on the scheme's assets and compiling a comprehensive asset register. NRC staff and contractors have been locating and identifying flood-gates, which can be difficult, due to the lack of

maintenance and overgrown vegetation in some areas. Once staff has located the asset a unique number is assigned to the asset, the GPS location is recorded, photographs taken and a condition assessment is recorded. The assessment is approximately 50% complete and has identified approximately \$150,000 dollars worth of repairs not included in this years budget.

In addition to the asset conditional survey, works included river channel cleaning and tree removal. Long-reach digger machine cleaning of the lower reaches of the spillway and along the Awanui River were completed prior to the rainy season, and this work appears to have had a good impact on reducing flood water and keeping the Waihou Flood Gate open. Prior to heavy rain warnings staff are required to check the condition of the choke. Typically, tree blockages require a contractor to mobilize and remove tree blockages prior to heavy rain.

### **2008 / 2009 Works Programme**

The Financial Report on Awanui Flood Management Scheme was distributed to committee members and discussed.

Tony Phipps outlined the Financial Plan advising that because of large flood events the last two years were significantly overspent. He advised that NRC had funded \$350,000 out of Emergency River Works Fund and this would not come out of Awanui River rates. The Draft Estimates and 2008 -2009 works programme were explained. There was a general discussion on tendering versus hourly rates and it was agreed that tendering was very expensive and that a good contractor with good operators, hourly rates, local knowledge and supervision was the preferred option.

Awanui Flood Management Draft Estimates for planned works and additional works were circulated to committee members.

The committee passed a resolution agreeing to the works programme tabled (see attached)

**Resolved: Committee agree in principle to the 2008 /09 works plan as shown in the Cap-ex and Op ex tables displayed in the 'Awanui Flood Management Works (Draft Estimates)'**

**Fiona K : Mike M**

### **Additional Works:**

These included Bells Hill slip, which Mr Camuso explained posed the greatest risk to Kaitaia and that a contingency plan should be formulated. At a minimum, continued surveying to monitor the slip movement and implementing the recommendations from the February 2008 Tonkin and Taylor report should be undertaken. This would include installing an additional 8 horizontal drains. Two test drains were installed in February 2008, and have been monitored fortnightly. The results of these test drains suggest that the additional drains should be installed as recommended by the T&T February 2008 report. The existing Factor of Safety (FOS) was calculated to be 1.04 which is classified as "unstable". T&T calculated that if the fan drains are successful in lowering the water table a FOS of 1.34 "marginally stable" would be achieved, however this is shy of the target FOS 1.5 which is considered "stable".

A contingency plan for Bell's Hill Slip should include modelling the river flow to determine the alternative flow path of the Awanui River in the event of Bell's Hill Slip blocking the river and identifying and constructing a preferred flow path in the event of a slip. NRC staff is obtaining costing to be presented at the LC next meeting.

An additional 9 slips have been identified and will require surveying and prioritising for the LC to move forward. In addition, urgent floodgate repair work is being identified during the on

going conditional asset assessment. This is being prioritised and costed and will be presented to the LC next meeting.

Funding for this additional work would need to be addressed by the LC as no funding is targeted for this work.

### **Progress with Floodplain Computer Modelling**

Vijesh Chandra outlined the model developments, describing data collection involving extensive surveying of Awanui catchment which consisted of 195 sub-catchments, 46 river branches, 8 bridges and 3 culverts. He explained that a computerised model is needed to accurately assess the flood hazard, depths and flows of flood waters over the flood plain, and for the testing of effectiveness of flood plain management and works options.

The model is based on detailed flood plain and channel surveys, catchment rainfall, soil type, vegetation cover, and calibrated with measured rainfall, river and flood heights.

An accurate survey of the flood plain has been carried out by Australia Aerial Mapping using the LiDAR aerial survey mapping method. The LiDAR survey has been completed, compiled and processed and is used to develop the model. The LiDAR aerial survey as well as the field surveying and model development was funded by NRC.

General discussion followed on the model and data collection.

### **Asset Management Plan**

Tony Phipps explained that councils were required to prepare an asset management plan for council assets and this was underway with some data still to be collected including condition of all assets. The level of service for assets was also to be identified.

### **Prioritisation of works**

Prioritisation discussed and staff to prepare a robust procedure for prioritising works and provide to the committee. Priorities identified included:

- Bells Hill slip was identified as the top priority slip because of the number of properties potentially affected.
- Property boundaries on slip sites need identifying before any works can be carried out. Staff to obtain quotes for surveying.
- A floodgate priority list is to be formulated.

### **Other Issues raised**

- Bells Hill discussed, report to be circulated to committee members. Discussion followed on who should fund the works given this is a big risk to Kaitaia Township.
- Rules and bylaws relating to the scheme need identifying and circulating to committee members so they can familiarise themselves with these rules.
- Some committee members had concerns over slumping of recent works and considered work methods need reviewing particularly around old munga sites. Benches also need to be suitably installed so material does not slip back into the river.
- Landowners need to be given advice on stormwater management in order to minimise effects on slips.
- Old poplars upstream of Kaitaia need removing before they cause problems further down stream. (This is in the works programme agreed to).
- Stock on stopbanks needs addressing to ensure works are not undone by stock damage. Bylaw to be investigated.

- FNDC sewer line structure across Tarawhataroa Stream requires re-engineering to reduce restriction to flood flows and the process needs reviewing so this sort of thing doesn't happen again and risk compromising the scheme.
- It was suggested that the Liaison Committee needs to be consulted with by FNDC when consideration is being given to the issuing of building permits for houses in low lying areas within the scheme area.

### **Potential Scheme Improvement Options**

The committee were requested to provide a list of suggested improvements that could be made to the scheme, these were:

#### Bells Hill

- Explore alternative flow paths of Awanui River

#### Spillway improvements

- crest modifications – model
- Drainage easements when consents come up alongside the spillway
- Investigate earthworks on Wayne Browns side of spillway to ease flows
- Vegetation – bend realignment - bridge constrictions (spillway is effective but can be made more effective)
- Owner / farmer compensation
- Silt trap area – rock ledge area
- Mechanical gate at choke to control water flow
- Harbour cleaning
- Private bridging for farm access

#### Tarawhataroa improvements

- Control gate at Larmers Road depending on peaks in catchments as to whether water is sent down Awanui River or Tarawhataroa. Discuss with Transit - would improve highway if under highway
- Divert down Bonnetts Road – Awanui River bypass to Lake Tangonge

#### Waihoe gates

- Realignment downstream to draw water through gates

#### Waipap cut

- Control gate needs to be wider not deeper (cost / benefit needs investigating)

#### Awanui Gills Road

- Divert flows to Waipap cut
- Any works to reduce impounded water will have environmental benefits especially in summer
- Time of water on pasture – (3 days) level of service (72 hours – benchmark)
- Ponding (contentious issue)

#### Upper Catchment

- Streambank erosion and gravel management in the upper catchment has effect on lower catchment
- Need to identify silt / erosion areas

A reminder to committee members that NRC website provides rainfall and river level data and can be accessed at [www.nrc.govt.nz](http://www.nrc.govt.nz) / Environment / River & Rainfall data.  
(This provides telemetric data from all sites in the region.)

Next meeting in approximately 1 month

Meeting closed 2.pm

## RECORD OF ACTIONS

### AWANUI RIVER WORKING GROUP

Discussion held at the Te Ahu Centre, Kaitaia,  
on Friday 12<sup>th</sup> July 2019, at 10.30 am

#### **Present – Working Group Members:**

Cr Mike Finlayson	(NRC Councillor – Chairman)
Bruce Howse	(NRC)
Russell Cantlay	(Awanui Ratepayers Assn)
Adelle Gardner	(Te Hiku Community Board)
Gary May	(Southern Area)
Michael Masters	(Western Area)
Fiona King	(Kaitaia Drainage Board)
Joe King	(Eastern Area)
Steve Little	(FNDC)
Roz Popata	(Ngati Kahu)
Hone Popata	(Ngati Kahu)

#### **Also in Attendance:**

Peter Wiessing	(NRC)
Joseph Camuso	(NRC)
Sher Khan	(NRC)
Matt Johnson	(NRC)
Michelle Shine	(NRC)
Sarah Boniface	(Civil defence)

#### **1. Apologies:**

David Neho, Marie Berghan

#### **2. RECORD OF ACTIONS FROM PREVIOUS MEETING**

The Record of Actions from the meeting held on 9 November 2018 was received.

#### **3. Matters Arising**

Points raised by Fiona King regarding Flood Mapping and FNDC Consents have been dealt with as action points under other items.

#### **4. BUDGET 2018 – 2019 AND 2019 - 2020**

Budget for the 18/19 year and an update on the 19/20 Budget was discussed.

**Presented by:** Bruce Howse

#### **5. WORKS PROGRAMME 2018 – 2019 AND 2019 – 2020**

Discussion on completed works for 2018 – 19 and planned works for 2019 – 20.

**Presented by:** Joseph Camuso

## **6. AWANUI SCHEME UPGRADE**

Presentation given covered the Programme and Budget; Acquiring land for scheme upgrade; Archaeology and Cultural monitoring; Project Delivery Risk; Resale of surplus land at Bells Hill works site (Firth). Oturu Marae tabled a proposed plan for the use of the Firth Site. Discussion held on these items.

The Committee felt that affected landowners should be approached in person prior to any circulation of letters advising of the upcoming Awanui Scheme Upgrade.

### **Presented by:**

Joseph Camuso

### **Agreed action points:**

- Michelle Shine - Provide Link to the Working Group of the Edgecumbe report.
- Sarah - Present a briefing from the CDEM at the next Awanui Working Group meeting.
- Bruce Howse - Arrange meeting with three iwi representatives regarding Cultural Monitoring for upcoming works.
- Peter Wiessing - to liaise with affected landowners and deliver correspondence.

## **7. FLOOD MODELING UPDATE**

Presentation given covered current flood mapping incorporating 2018 LiDAR survey results, hydraulic and catchment hydrology calibration and design storms. Discussion followed on NRC / FNDC flood hazard lines for building consents.

### **Presented by:**

Sher Khan

## **8. OTHER BUSINESS**

Peter Wiessing outlined the Tangonge Working Group and the work that is being proposed to restore wetlands and improve drainage. A presentation is planned for the next Awanui Working Group meeting.

Land Drainage Bylaw – Discussion was held and a request was made for the NRC to investigate if the FNDC bylaw can also apply to the NRC Awanui Flood Scheme Assets.

### **Agreed action points:**

- Bruce Howse - Investigate the feasibility of this and also review the overall bylaw and make a submission.
- Fiona King is to send Bruce Howse some examples of FNDC consent applications where the NRC has not been consulted as an affected party.

**Meeting closed:** 1 pm