

Whangarei District Council

Tuesday 13 and Wednesday 14 April 2021

Submissions relating to the Long Term Plan 2021 - 2031

Volume Three

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From: Whangarei District Council
Sent: 25 Mar 2021 05:26:36 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Jo Griffiths - 2021-LTP-SUB-189

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Long Term Plan 2021-2031 Feedback - Jo Griffiths - 2021-LTP-SUB-189

Receipt Number: 2021-LTP-SUB-189

Your details:

Name:	Jo Griffiths
I am making this submission as:	As an individual
Organisation name:	
Postal address:	1 Waetford Road Matapouri
Best phone number:	0275805204
Email:	Jozefa.griffiths@gmail.com

Hearing:

Do you wish to be heard	No
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	We need to invest to grow and to get a good return

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hīhīaua Cultural Centre, and existing facilities at Forum North).
Why?	A lot of time effort and funding has already gone into this already and it looks fantadtic

Key issue - Climate change and sustainability (see page 28)	OPTION 3: No new funding towards climate change or waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

From: Whangarei District Council
Sent: 15 Mar 2021 03:10:34 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Carey Hablous - 2021-LTP-SUB-53

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Long Term Plan 2021-2031 Feedback - Carey Hablous - 2021-LTP-SUB-53

Receipt Number: 2021-LTP-SUB-53

Your details:

Name:	Carey Hablous
I am making this submission as:	As an individual
Organisation name:	
Postal address:	265 Cullen Rd, RD2
Best phone number:	021612234
Email:	carey.hablous@gmail.com

Hearing:

Do you wish to be heard	No
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	There will (supposedly) be an automatic rates increase based in rising property values. Increasing rates beyond a minimum threshold will lead to financial hardship for those least able to pay

Key issue - Spaces for gathering (see page 24)	OPTION 3: Build a Whangarei District Council-owned theatre on the current Forum North site.
Why?	<p>Whangarei is a small provincial city with a widespread rural population, most of whom have limited interest or financial stake in the arts or the likelihood of conferences coming to the region. Whangarei is also very close to Auckland which means most significant events can be accessed by driving 2 hours down the road. It does not need significant expenditure in conferences or events. Furthermore expenditure in areas of the city recognised as being vulnerable to flooding or undulation through sea level rise is short sighted.</p> <p>Option 3 would seem to be the cheapest option and is more elevated than the others.</p>

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	<p>Climate change mitigation is the role of central government. Many people have knowingly bought property in areas susceptible to the negative effects of climate change because of their desire to be close to the ocean. It is not the role of the council to attempt to save at risk properties. Long term the cost will be wasted.</p> <p>Waste minimisation however is extremely important. I would like to see local recycling and composting facilities set up in the various small waste collection points in the Whangarei area, especially Waipu. This could be manned by local volunteers and would be cost neutral. Follow the model of the waste recycling center set up in Raglan. See http://xtremezerowaste.org.nz/</p>

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	<p>The city center is changing in response to the rise in on-line shopping. Spending large amounts of money on improving the periphery of the city center is unlikely to change this process. Better to ensure Cameron Street remains an attractive, pedestrian friendly hub and only improve the surrounding streets if the number of people visiting the city center increases, not following a "build it and they will come" philosophy.</p>

Tell us what you think - any further comments on key issues or other points

raised in the Consultation document:

I feel the emphasis on Whangarei in the LTP is misguided. The growth in this region is more likely to occur in the Bream Bay area. WDC should be looking to purchase the road bounded by Nora Scotia Drive and Cove Road and use this as the basis of a planned, attractive, mixed commercial, light industrial and residential precinct. This is a better option than the current ad hoc growth in Waipu.

The LTP is very light on vision for the Bream Bay area.

From: Whangarei District Council
Sent: 18 Mar 2021 07:19:16 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Eden Hakaraia - 2021-LTP-SUB-89

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Long Term Plan 2021-2031 Feedback - Eden Hakaraia - 2021-LTP-SUB-89

Receipt Number: 2021-LTP-SUB-89

Your details:

Name:	Eden Hakaraia
I am making this submission as:	As an individual
Organisation name:	
Postal address:	77a Tarewa road
Best phone number:	0211211699
Email:	edenhakaraia@gmail.com

Hearing:

Do you wish to be heard	No
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North).
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

Section of Beach Road, Onerahi, is dangerous for pedestrians

The section of Beach Road, from the Onerahi Yacht Club to Hill St is extremely dangerous. The road is narrow and barely wide enough for two vehicles to pass each other, especially for large trucks and cars towing boats. It is potentially dangerous for pedestrians because this road finishes at the sea wall and there is no footpath for people and their families.

The WDC has created a well-used, safe, shared path from Beach Road, along the Waimahanga Track and Riverside Drive, to the Town Basin. Many more people are using Beach Road because there is now a safe pathway. It is great to see people of all ages enjoying the area every day - walking, running, cycling and taking their dogs for a walk, families with babies in prams and young children riding their bikes. Many people like to complete a circuit of Beach Rd and have to use a dangerous, narrow road with no footpath to do this.

Frequently reckless drivers choose to use Beach Road to drive as fast as they can, sometimes with groups of cars. It is frightening when cars speed past and are dangerously close to you. These drivers have a complete disregard for the safety of people and their families who enjoy walking along this scenic part of our harbour.

Many species of birds live in this area. I regularly walk around Beach Road and I frequently witness cruel drivers deliberately mowing down flocks of birds, killing and maiming them. Many people do not realise that some species like the Red-billed Gull is native to NZ and their numbers are in decline. Caring people do not like to witness this deliberate cruelty. This creates additional work for the Native Bird Recovery Centre volunteers. Traffic calming measures would slow drivers down and make Beach Road safer for all bird life too.

The WDC has encouraged people to use this beautiful area and now needs to complete the circuit of Beach Road and make it safer for people and birdlife.

Suggestions - make Beach Road:

- a one way street from the Onerahi Yacht Club to Hill St
- continue the concreted shared path to Hill St
- put in traffic calming measures from the Raurimu Road intersection to Hill St

First name Billie Haldane

Street name 2a Whau Valley Road

Suburb Whau Valley

From: Whangarei District Council
Sent: 25 Mar 2021 00:21:02 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Dean Halvorson - 2021-LTP-SUB-182

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Long Term Plan 2021-2031 Feedback - Dean Halvorson - 2021-LTP-SUB-182

Receipt Number: 2021-LTP-SUB-182

Your details:

Name:	Dean Halvorson
I am making this submission as:	As an individual
Organisation name:	
Postal address:	147 Harris Road Glenbervie RD5 Whangarei
Best phone number:	021556313
Email:	dean@formable.co.nz

Hearing:

Do you wish to be heard at the hearing?	No
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
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Why?	As a district we need to keep pushing ahead to develop ourselves as both a destination and a great place to live. This can only happen by choosing to make the sacrifices needed to see development continue.
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Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North).
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Why?	Development of our district needs to be bold and innovative. However we should place all our eggs in one basket, but look to fund a number of projects that can work towards creating a great district to visit, work, live, and play in.
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Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
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Why?	Climate change is an important issue for our district, but needs to be addressed in a balanced and sustained manner so as to
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	not over burden current available funding.
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Key issue - Revitalising our city centre (see page 32)	OPTION 1: Spend \$13m to make improvements to James and John St.
Why?	Linking the CBD with the Basin is vital to create a cohesive central city environment.

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

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From: Whangarei District Council
Sent: 1 Apr 2021 03:54:07 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Lew Hart - 2021-LTP-SUB-489

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Long Term Plan 2021-2031 Feedback - Lew Hart - 2021-LTP-SUB-489

Receipt Number: 2021-LTP-SUB-489

Your details:

Name:	Lew Hart
I am making this submission as:	As an individual
Organisation name:	
Postal address:	14 Ranui Road Ocean Beach
Best phone number:	0211797201
Email:	lewhart14@gmail.com

Hearing:

Do you wish to be heard at the hearing?	No
---	----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 3: Build a Whangarei District Council-owned theatre on the current Forum North site.
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 1: Spend \$13m to make improvements to James and John St.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

I would like to see a foot path down Ranui Road before someone is seriously injured

FEEDBACK FORM

THURSDAY 1 APRIL 2021



We would love your feedback on some key issues for our District.

POINTS TO REMEMBER WHEN SUBMITTING YOUR FEEDBACK

- Please print clearly. Make sure it can be easily photocopied, read and understood.
- All feedback is considered public under the Local Government Official Information and Meetings Act, so it may be published and made available to elected members and the public.
- Your feedback will not be returned to you once lodged with Council. Please keep a copy for your reference.
- You can also attend a hearing, scheduled for 13-14 April, to speak to your submission.

HOW TO GET THIS FORM TO US

Mail to: Long Term Plan feedback, Whangarei District Council, Private Bag 9023, Whangārei 0148

Email to: mailroom@wdc.govt.nz

Deliver to: Customer Services, Forum North, Rust Ave, Whangārei or Ruakākā Service Centre, Takutai Place, Ruakākā

YOUR DETAILS

Name Heather Hayes

I am making this submission as: ☒ An individual ☐ On behalf of an organisation

Organisation name _____

Postal address 91 Lowell Crescent

Whangarei 0112

Best number to contact you on 09-437-0969

Email honeshame@xtra.co.nz

Do you wish to be heard in support of your submission at a traditional hearing on 13-14 April?

☐ Yes ☒ No

YOUR FEEDBACK

Please give us your feedback on the key issues raised in the Consultation Document.

KEY ISSUE – HOW WILL WE PAY FOR WHAT WE NEED – RATES OPTIONS (SEE PAGE 17)

- ☐ **OPTION 1:** Rates increase in year one (2021-22) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'.
Rates increase in years two to ten (2022-31) of 2% + 2.5% LGCI.
- ☐ **OPTION 2:** Limit the rates increase to LGCI plus 2% only across ten years of the Plan

WHY?

KEY ISSUE – SPACES FOR GATHERING (SEE PAGE 24)

- ☐ **OPTION 1:** Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hīhīaua Cultural Centre, and existing facilities at Forum North).
- ☐ **OPTION 2:** Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hīhīaua Cultural Centre, or existing facilities at Forum North. Please state which site in your comments.
- ☒ **OPTION 3:** Build a Whangarei District Council-owned theatre on the current Forum North site.

WHY?

Please see my email for my submission and reasons.

SharePoint document links:

 [Submission re Theatre, Option 3](#)

From: hayeshome
Sent: 30 Mar 2021 12:40:20 +1300
To: Mail Room
Subject: Long Term Plan
Attachments: tmpFEC.tmp.gif

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.

To whom it may concern:

Further to the attached form, I hereby make a submission towards the building of a new large theatre at Forum North as proposed in the Whangarei District Council LTP – “Space for Growth” Option 3. I have seen the \$55M, 1000-seat lyric theatre design submitted by the Forum North Trust and this would be very suitable for the musical and creative arts needs of Whangarei.

I am a musician and have performed in the Whangarei community over many years. Back in the 1970s, Whangarei recognised the need for a larger performance venue for concerts and the performing arts. Around that time, I attended a special concert put on by Michael Hill (a violinist as well as a jeweller) with the purpose of seeding a fund for such a venue. 40 years have passed without any such space being built. I, and others, feel very let down. I wonder what has happened to the promise and to the funds, and whether that money was invested and has been growing at all over the decades. Our population has grown immensely since then and this need has become really urgent. The touring circuit of major artists and musicians always bypasses Whangarei because Whangarei does not have a suitable venue for them to perform in. Also, local talent cannot be developed and showcased suitably here. Consequently, our people miss out on the enrichment such performances bring. If some of these great concerts could be performed here, Whangarei would become a more vibrant and attractive place.

In Whangarei we are thankful for the wonderful facilities we have for many sports codes which encourage participation, skill development, and tournaments with visiting teams. That’s what we ask for our music-and-arts-minded people. Not everyone is totally sports-minded and we need to develop and encourage the creative types - thinkers, dreamers, artists and musicians – in order to have a balanced community with good mental health and wellbeing. For everyone, creative expression such as music and the arts can be cathartic and therapeutic. We have a thriving Whangarei Youth Music movement which began 40 years ago that trains young musicians, and these would benefit and be inspired from experiencing in their own city great performances from outside, and the opportunity to perform to greater audiences. There are many in our community who have a passion for the arts and the more cultured side of life, who long for a large and suitable theatre space that can cater for the full range of major performances. For decades, the lack of such a facility has given these people the message that they are inferior to their more “sporty” neighbours and their interests and skills are not valued. Our current Forum North complex has served us well over many years but is now far outgrown and lacking the technologies and stage design needed in this day and age.

Now, at this time, WDC has given us the choice of building a 1,000-seat performing arts lyric theatre (Option 3) or some other options. We already have several venues that have been provided for other particular pursuits, and a major hotel/conference centre can probably wait until Covid settles down.

I am only one person but I know I speak for many who understand the immeasurable value of music and the performing arts. With humility and passion I propose that we need this, and we need it now. This is our golden opportunity – seize it!

Kind regards,
Heather Hayes

From: Whangarei District Council
Sent: 17 Mar 2021 05:48:25 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - marion haywood - 2021-LTP-SUB-78

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Long Term Plan 2021-2031 Feedback - marion haywood - 2021-LTP-SUB-78

Receipt Number: 2021-LTP-SUB-78

Your details:

Name:	marion haywood
I am making this submission as:	As an individual
Organisation name:	
Postal address:	524 Ngunguru Road Rd3
Best phone number:	0274844571
Email:	marion.haywood.mh@gmail.com

Hearing:

Do you wish to be heard at the hearing?	No
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	After covid too many people are suffering financially.

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hīhīaua Cultural Centre, and existing facilities at Forum North.
Why?	Funding put towards a conference and event centre. Whangarei needs a decent event centre so we can attract world class shows.

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
Why?	The city centre is dying. It needs funds spent to revitalize it.

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

From: Whangarei District Council
Sent: 31 Mar 2021 12:38:04 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - June Pitman - 2021-LTP-SUB-391

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Long Term Plan 2021-2031 Feedback - June Pitman - 2021-LTP-SUB-391

Receipt Number: 2021-LTP-SUB-391

Your details:

Name:	June Pitman
I am making this submission as:	On behalf of an organisation
Organisation name:	He Manu Kōtuku o Tamaterau Working/Steering Group
Postal address:	C/- 603 Whangarei Heads Road Whangarei 0174
Best phone number:	0274811719
Email:	junejitman@outlook.com

Hearing:

Do you wish to be heard at the hearing?	No
---	----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	
Why?	

Key issue - Spaces for gathering (see page 24)	
Why?	

Key issue - Climate change and sustainability (see page 28)	
Why?	

Key issue - Revitalising our city centre (see page 32)	
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

Climate Change - Funding to relocate Public Toilets located a short distance back from the foreshore at Tamaterau Domain, away from traditional Māori food cultivation, kai moana beds, and fishing ground areas, and to ensure no pollution issues arise from climate change rising sea levels.

Environment - Funding for the installation of composting/waterless toilet in the vicinity of Tamaterau Layover area.

Environment/Cultural Heritage - Funding for the long term care of heritage Puriri trees at Tamaterau Beach

Environment/Cultural Heritage - Funding for Iwi/Hapū representatives to act as kaitiaki in the Tamaterau Beach area (e.g. monitoring of activities long term)

Environment/Cultural Heritage/Education - Funding to establish Kopunu Stream and its surroundings as an informative fun family/educational focussed environmental resource of cultural and heritage significance - marine-life spawning grounds, native plantings and rongoa, monitoring and maintenance, information signage, stream enhancement and erosion protection (human/nature).

Environment - Additional funding for increased monitoring and management of freedom camping areas in Tamaterau Beach Domain Site of Significance

Culture & Heritage: Funding for wayfinding pou whenua, signage, historical and cultural narratives for the entire Whangarei Heads Road area from The Loop, Whangarei all the way to the end of Whangarei Heads Road, and its laterals. This area was heavily occupied pre-historically, yet people know little about its early pre-colonisation history. Funding for Iwi/hapū/Pākeha participation in enabling and establishing cultural and dual-heritage narrative, conducting research, writing historical accounts, production of interpretation panels/signage/maintenance.

Culture & Heritage: Funding for creation, installation and maintenance of pou markers to protect archaeological/environmental taonga features at Tamaterau Beach.

From: Whangarei District Council
Sent: 31 Mar 2021 08:08:54 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Raewyn Tipene - 2021-LTP-SUB-371

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Long Term Plan 2021-2031 Feedback - Raewyn Tipene - 2021-LTP-SUB-371

Receipt Number: 2021-LTP-SUB-371

Your details:

Name:	Raewyn Tipene
I am making this submission as:	On behalf of an organisation
Organisation name:	He Puna Marama Trust
Postal address:	POBox 6020, Whangarei
Best phone number:	021830604
Email:	rj.tipene@mokonoz.co.nz

Hearing:

Do you wish to be heard	Yes
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hīhīāua Cultural Centre, and existing facilities at Forum North.
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

I wish to have the pedestrianisation of the lower end (171 - 193) Reyburn House Land considered and teh renaming of this stretch of the road as well.

We have raised this numerous times with council and dont get a mention in any planning. Its time to change this part of the road to suit its use.

From: Whangarei District Council
Sent: 25 Mar 2021 23:28:16 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - SHAYNE HEAPE - 2021-LTP-SUB-203

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Long Term Plan 2021-2031 Feedback - SHAYNE HEAPE - 2021-LTP-SUB-203

Receipt Number: 2021-LTP-SUB-203

Your details:

Name:	SHAYNE HEAPE
I am making this submission as:	As an individual
Organisation name:	
Postal address:	PO BOX 26 WHANGAREI
Best phone number:	021932184
Email:	shayne.heape@whangareiitm.co.nz

Hearing:

Do you wish to be heard	No
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	The only way Whangarei can progress with necessary infrastructure is for the ratepayers to look to the future and commit to paying for it as we go. Failure to do this will only leave valuable projects undone or burdon future generations with costs that can not be avoided. Whangarei has come a long way in my lifetime and this makes me proud of my hometown, it would be sad to see the progress of the last few years waisted by lack of forward planning

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hīhītaua Cultural Centre, and existing facilities at Forum North.
Why?	Because we already have a number of cultural facilities in Whangarei but no ability to attract major conferences and events. My understanding is that 60 million dollars has been committed by the government to the Oruku Landing Conference Centre subject to support from local councils, this seems a no brainer to me

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	because it seems like a reasonable figure from a less than fully informed individual

Key issue - Revitalising our city centre (see page 32)	OPTION 1: Spend \$13m to make improvements to James and John St.
Why?	further enhancement of the City centre along with the existing remodeling seems the sensible thing to do at this time without going over the top. further enhancement can take place as time and money allow

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

Lets keep Whangarei moving forward so we continue to be proud to live in and call home. Being a born and bred Whangarei resident i have seen the the advancement of this city, promoted by forward thinking councils and i would love to see it continue

From: Whangarei District Council
Sent: 30 Mar 2021 06:20:32 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Terry and Bev Heappey - 2021-LTP-SUB-125

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.



Long Term Plan 2021-2031 Feedback - Terry and Bev Heappey - 2021-LTP-SUB-125

Receipt Number: 2021-LTP-SUB-125

Your details:

Name:	Terry and Bev Heappey
I am making this submission as:	As an individual
Organisation name:	
Postal address:	967 Snooks Rd, RD8, Whangarei 0178
Best phone number:	0211670016
Email:	bevandterryheappey@gmail.com

Hearing:

Do you wish to be heard at the hearing?	Yes
---	-----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	Reasoning thoroughly explained at consultation meeting.

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hīhītaua Cultural Centre, and existing facilities at Forum North.
Why?	Conference and Events centre is the most needed. But plan where it should be. Consider a new city centre planned from the get go in a new accessible site. Parking, toilets. shopping mall etc our old site is just too small and cramped.

Key issue - Climate change and sustainability (see page 28)	OPTION 3: No new funding towards climate change or waste minimisation.
Why?	<p>Climate change has been blown out of all proportion.</p> <p>0.2% problem in New Zealand! Absolutely minimal.</p> <p>We are the least at risk in the world other than small island nations by a long shot.</p> <p>www.taxpayers.org.nz/taxpayer_talk_oliver_hartwich_on_the_climate_c</p>

	<p>hange_commission_report</p> <p>now here is a submission answering this report</p> <p>www.taxpayers.org.nz/emissions_budgets_submission</p> <p>if you want to help use the following submission form</p> <p>www..taxpayers.org.nz/climate</p> <p>Sealing our roads has been an on going problem for over 30 years.</p> <p>\$ 1 million would seal the 2 kms unsealed part of Snooks Rd, which is an official bypass and through road.</p> <p>This road was widened ready for sealing. It was a councillor who changed that decision so that Old school Rd was sealed in stead of the last 2kms of Snooks Rd</p>
--	---

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	<p>The area is too small and too cramped and is no longer fit for purpose.</p> <p>Look ahead. It cant happen overnight, but it needs to be planned.</p>

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

The main issue for us is the tarsealing of rural roads, in particular, Snooks Rd. Those roads that are bypass roads and through roads should have priority. Snooks road is the bypass road between SH1 and SH14. Last time we put in a submission. we were given a favourable response, and were told you hoped to seal Snooks Rd in the next couple of years. Unfortunately this has not happened.

\$1 million would seal our road, 2 kilometres. But If sealing started at the Maungakaramea

end of Snooks, 10 houses in that 1 kilometre, out of the 13 on Snooks Rd, would get relief from the dust hazards.

After the community meeting, we spoke with Sheryl Mai, who was extremely sympathetic, and her response was promising.

DUST HAZARDS

a: Vision. Clouds of dust kicked up by all traffic. Worse on windy days.

b: Health: Chronic sinusitis, asthma, lungs, eyes.

c: Water Quality: Dust on houses and rooves. Our only water supply is rainwater.

d: Washing can only be hung out on weekends when there is less traffic flow and the wind direction suits.

e: Danger to pedestrians. Visibility is extremely poor with dust from traffic, especially trucks. Especially as the thick loose metal in the water tables adds to the problem of pedestrian safety.

TRAFFIC increased a lot when the roadworks south Whangarei started. We had a number of logging trucks diverting through Snooks Rd, back and forth, 2-3 times a day, causing road deterioration as well as hazards mentioned before. There was also an increase in general public for the same reason.

Sealed road drivers do not know how to drive on metal roads.

We have had to tow cars out of our paddocks after they slide off the road, on several occasions. Leaving us to fix the damage.

The roads have been the worst ever because of the lack of maintenance. We have to ring to get anything done.

Photos will be provided.

On a positive note, Downers have upped their game, and the grader drivers are doing better.

STOP

since writing this, the road has been graded properly with a water truck, metal and some new product. It has certainly improved.!

BUT

6 O'clock this morning we were awakened to pull out yet another car , which went over the bank after sliding on the very slippery surface, in the damp weather.

The saga continues

We still need the road sealed

From: Whangarei District Council
Sent: 28 Feb 2021 22:45:52 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Carol Hemara - 2021-LTP-SUB-5

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Long Term Plan 2021-2031 Feedback - Carol Hemara - 2021-LTP-SUB-5

Receipt Number: 2021-LTP-SUB-5

Your details:

Name:	Carol Hemara
I am making this submission as:	As an individual
Organisation name:	
Postal address:	P.O.Box 6059 Otaika, WHANGAREI 0147
Best phone number:	02108966010
Email:	aranaucarol@gmail.com

Hearing:

Do you wish to be heard at the hearing?	No
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
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Why?	Provide rate payers & MSD tenants with recycle & h/hold wheelie bins - yellow lid for glass & plastic, green lid for household rubbish.
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Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hihihua Cultural Centre, and existing facilities at Forum North.
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Why?	I choose option 2 as I am unsure how many & how often events occur in Whangarei requiring the facilities. There are several empty shops & buildings in the CBD. Consider renovating an empty building to cater for the above purposes? You really don't need to spend mega-bucks on building more buildings, that would be wastefully crazy!
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Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
---	--

Why?	Provide more rubbish bins in public areas; parks, carpark, tourist stops. In urgent need of more public showers & toilets. Provide for
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	<p>freedom campers.</p> <p>You the Council can contribute effectively by providing more public facilities & therefore employ/contract more locals to work them..</p>
--	--

Key issue - Revitalising our city centre (see page 32)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
Why?	<p>The city centre is an absolute eye-sore for local residents, NZrs and tourists. It has been like this for too long! Retail businesses shut down, empty shops! WDC have failed to keep our city centre open. Personally, I am angry and appalled with the current 'dead looking CBD' The death of our city is a pure reflection on the Council. How can Council even consider "fixing" John & James St without encouraging, financial support, planning & consultation, building & supporting a retail & hospitality industry?</p> <p>I & many others are often happy to travel to Albany to support their retail, food courts & cafes because they have what we want! In Whangarei we have a few shops between the CBD and Okara Drive, wow (?)</p>

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

Whats happened to the Strand? Why is it almost empty? What a waste of money, resources, empty shops, planning, building & so on...Council should stand ashamed! Rate payers are contributing their hard earned money toward empty shops & dead malls, why? And why not create more rooftop car parks? Kensington gym & chemist complex for example. Rather than having cars line the streets why not create a carpark on top of the building? The idea works in some cities in NZ & mostly in other countries. Bring young

people into your planning committee & get rid of your old fuddy-duddy-farts who rarely seek to implement change. It shows!!!

You need people with fresh ideas, innovative, futuristic people who embrace vision, change & passion.

Nga mihi..

From: Whangarei District Council
Sent: 20 Mar 2021 18:45:24 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Adelaide Henderson - 2021-LTP-SUB-113

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Long Term Plan 2021-2031 Feedback - Adelaide Henderson - 2021-LTP-SUB-113

Receipt Number: 2021-LTP-SUB-113

Your details:

Name:	Adelaide Henderson
I am making this submission as:	As an individual
Organisation name:	
Postal address:	166 Pataua South Road RD1 Onerahi 0192
Best phone number:	0211175610
Email:	adelaide.m.henderson@gmail.com

Hearing:

Do you wish to be heard at the hearing?	No
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	We are on an economic downturn currently so people are short of money. Better to spread the load a little.

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hihītaua Cultural Centre, and existing facilities at Forum North.
Why?	It seems that Whangarei is not big enough to support more than 1, especially when you consider that there is already the stadium as well.

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	Once again, in an economic downturn we have to tighten our belt and budget accordingly.

Key issue - Revitalising	OPTION 3: No additional funding for the city centre.
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our city centre (see page 32)	
Why?	Enough money has been spent there in the last few years already.

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

I'd like to raise a further issue which isn't mentioned and that is parking. There seems to be a shortage of workers parking not to mention visitor parking and then the transformation of the car park next to the Hundertwasser centre leaves even less parking so that we can have yet another park. The whole town basin is a park, but where are the visitors to it going to park their cars?

On the subject of parking, I understand that encouraging the use of public transport and/or other means of transport, eg bicycles, is being kept in mind but if reducing worker parking is being done to encourage the use of public transport then the public transport must be provided in its place. I live in Whangarei Heads where we have just been given a new bus service as a trial. This bus service was provided at a time when the only people who can use it are unemployed or retired people therefore it cannot be used by workers who need parking in town meaning that there is no alternative but for them to take their cars and struggle to find a park.

Further on the subject of parking, I see that nothing has been done to increase the number of parks at Kensington sports fields. Can some of the extra grass areas that aren't used for sport be annexed into the car park? Surely it would be reasonably cheap to put angle parking along the side of Kensington Ave? The space is there on the edge of the park. Perhaps there is more danger to children if they run on the road - so make it a limited speed zone like we have for schools. There is already parking there now, so it seems logical to increase it if possible.

Yesterday I drove past Pohe Island where I saw many people gathered at what I assume

was a rugby tournament. Many of them were parked on the grass surrounding the fields. I really hope that a generously sized car park that focuses on providing stress free parking is going to be built there, rather than focusing on giving parking tickets to people who are just trying to eek out a car park somewhere like seems to be the case at Kensington park.

What's the point of amazing, beautiful, new facilities in our town if we can't visit them because we can't find a car park. We need some focus on practical concerns rather than only on beautifying.

From: Whangarei District Council
Sent: 10 Mar 2021 04:37:30 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Chrissy Henderson - 2021-LTP-SUB-36

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Long Term Plan 2021-2031 Feedback - Chrissy Henderson - 2021-LTP-SUB-36

Receipt Number: 2021-LTP-SUB-36

Your details:

Name:	Chrissy Henderson
I am making this submission as:	As an individual
Organisation name:	
Postal address:	11 Opau Rd Oakura
Best phone number:	0210699211
Email:	chrissyhenderson@me.com

Hearing:

Do you wish to be heard at the hearing?	No
---	----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
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Why?	I think it is already a catch-up situation from 2020, so there is a need to claw that back to get ongoing progress.
------	---

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North).
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Why?	Shoot for the moon
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Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
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Why?	Already behind the 8 ball - need to get ahead of this if that is a possibility.
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Key issue - Revitalising our city centre (see page 32)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
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Why?	The city is used by us all so lets make it as easy to get around, as nice and as safe as it can be.
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Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

No all good thanks.

From: Whangarei District Council
Sent: 16 Mar 2021 23:35:04 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Lodewijk Henneveld - 2021-LTP-SUB-72

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Long Term Plan 2021-2031 Feedback - Lodewijk Henneveld - 2021-LTP-SUB-72

Receipt Number: 2021-LTP-SUB-72

Your details:

Name:	Lodewijk Henneveld
I am making this submission as:	As an individual
Organisation name:	
Postal address:	29 Rauhomaumau Road RD3 Whangarei
Best phone number:	021782772
Email:	lodewijkhenneveld318@gmail.com

Hearing:

Do you wish to be heard	Yes
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	Need to increase rates at realistic level.

Key issue - Spaces for gathering (see page 24)	OPTION 3: Build a Whangarei District Council-owned theatre on the current Forum North site.
Why?	+Hihiaua Cultural Center should be fully supported. Oroku Landing Conference centre on flood zone, tsunami danger zone, and wrong side of river. Should be developed at different site by private investors

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	Should be part of all WDC activities.

Key issue - Revitalising our city centre (see page 32)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
Why?	Also develop some commercial empty buildings as appartments.

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

From: Whangarei District Council
Sent: 24 Mar 2021 08:21:30 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Rachel Herbert - 2021-LTP-SUB-162

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.



Long Term Plan 2021-2031 Feedback - Rachel Herbert - 2021-LTP-SUB-162

Receipt Number: 2021-LTP-SUB-162

Your details:

Name:	Rachel Herbert
I am making this submission as:	As an individual
Organisation name:	
Postal address:	1478 State Highway 14 Maungatapere
Best phone number:	0211277744
Email:	rachel.herbert@gmail.com

Hearing:

Do you wish to be heard at the hearing?	No
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 3: Build a Whangarei District Council-owned theatre on the current Forum North site.
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

I'd like WDC to look at establishing walking trails on Maungatāpere Mountain, in consultation with local iwi.

24 MAR 2021

WHANGAREI
DISTRICT COUNCIL

HAVE YOUR SAY KŌREROTIA!

This Consultation Document outlines what we are proposing for the next 10 years.

We want you to tell us what you think of this Plan, the options we have outlined, and what we are proposing. We are also consulting on changes to our fees and charges and various policies. All of the supporting documents are available on our website. If you do not have access to the internet or would prefer a hard copy, please call us to request them.

CONCURRENT CONSULTATIONS

Alongside this Consultation Document we are also consulting on our:

- Revenue and Financing Policy
- Rates, Remissions and Postponement Policy
- Development Contributions Policy
- Fees and Charges 2021-22

Consultation on these policies and fees and charges will be publicly notified on Council's website. People interested in the proposals will be able to present their views during a formal submission period from 1 March to 1 April 2021. This will be followed by formal hearings where any submitter may choose to speak to their submission.

GIVING US YOUR FEEDBACK

You can tell us:

- through the online submission form on our website www.wdc.govt.nz/HaveYourSay
- via email to mailroom@wdc.govt.nz
- in person, by dropping off a completed feedback form at any Council Service Centre, or by calling our contact centre on +64 9 430 4200 (0800 932 463)
- by post, by sending your feedback to our mailing address as shown on the feedback form

You may also like to support your formal submission by posting or messaging on Facebook, www.facebook.com/WhangareiDC.

How to make your feedback as effective as possible

- Use the feedback form and attach extra information, if required. This means we have all the information we need to process your feedback.
- Provide us with your contact details so we can email you, write to you or call you to keep you informed.
- Submissions on operational issues will be directed through our Customer Relations Management (CRM) process.

LONG TERM PLAN 2021-31 FEEDBACK FORM

**THE CLOSING DATE FOR FEEDBACK IS
THURSDAY 1 APRIL 2021**

We would love your feedback on some key issues for our District.

POINTS TO REMEMBER WHEN SUBMITTING YOUR FEEDBACK

- Please print clearly. Make sure it can be easily photocopied, read and understood.
- All feedback is considered public under the Local Government Official Information and Meetings Act, so it may be published and made available to elected members and the public.
- Your feedback will not be returned to you once lodged with Council. Please keep a copy for your reference.
- You can also attend a hearing, scheduled for 13-14 April, to speak to your submission.

HOW TO GET THIS FORM TO US

Mail to: Long Term Plan feedback, Whangarei District Council, Private Bag 9023, Whangārei 0148

Email to: mailroom@wdc.govt.nz

Deliver to: Customer Services, Forum North, Rust Ave, Whangārei or Ruakākā Service Centre, Takutai Place, Ruakākā

YOUR DETAILS

Name CHERRY HERMAN

I am making this submission as: ☐ An individual ☒ On behalf of an organisation

Organisation name FORUM NORTH TRUST 2013 (FNT13)

Postal address 100 Western Hills Drive,
Kerangah
Whangarei

Best number to contact you on 021 529 929

Email c.hermone@tra.co.nz

Do you wish to be heard in support of your submission at a traditional hearing on 13-14 April? ☒ Yes ☐ No

YOUR FEEDBACK

Please give us your feedback on the key issues raised in the Consultation Document.

KEY ISSUE – HOW WILL WE PAY FOR WHAT WE NEED – RATES OPTIONS (SEE PAGE 17)

- ☒ **OPTION 1:** Rates increase in year one (2021-22) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% ‘catch up’.
Rates increase in years two to ten (2022-31) of 2% + 2.5% LGCI.
- ☐ **OPTION 2:** Limit the rates increase to LGCI plus 2% only across ten years of the Plan

WHY? THE CATCH-UP MAKES SENSE.

KEY ISSUE – SPACES FOR GATHERING (SEE PAGE 24)

- ☐ **OPTION 1:** Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North).
- ☐ **OPTION 2:** Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, or existing facilities at Forum North. Please state which site in your comments.
- ☒ **OPTION 3:** Build a Whangarei District Council-owned theatre on the current Forum North site.

WHY? SEE ATTACHED SUBMISSION.

KEY ISSUE - CLIMATE CHANGE AND SUSTAINABILITY (SEE PAGE 28)

- ☐ **OPTION 1:** Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
- ☒ **OPTION 2:** Put \$7.4 of new funding towards climate change mitigation and adaptation and waste minimisation.
- ☐ **OPTION 3:** No new funding towards climate change or waste minimisation.

WHY? THIS MAJOR ISSUE FACES US ALL,
AND OUR FUTURE GENERATIONS.

KEY ISSUE - REVITALISING OUR CITY CENTRE (SEE PAGE 32)

- ☒ **OPTION 1:** Spend \$13m to make improvements to James Street and John Street.
- ☐ **OPTION 2:** Spend \$21m to make improvements to James Street and John Street as well as either Robert Street or Cameron Street.
- ☐ **OPTION 3:** No additional funding for the City Centre.

WHY? START SMALLER - SEE HOW IT
GOES, + WHETHER IT ENCOURAGES
INNER - CITY LIVING + VITALITY.
THIS CAN BE AN ONGOING PROJECT.

TELL US WHAT YOU THINK - ANY FURTHER COMMENTS ON THE KEY ISSUES OR OTHER
POINTS RAISED IN THE CONSULTATION DOCUMENT

1. We recognise the special character of this site...a site special to the people of Whangarei as 'their space'. And we applaud the foresight of Councils past in amalgamating around 15 titles to attain this space. With the new Civic Centre being developed next door, now is the time to plan for the new larger performance theatre in this valuable civic space. A theatre to take us forward into the next 50 years. And please bring the box office back here, or to the new civic centre.

2. We support refurbishment of Forum North and the Capitaine Bougainville theatre complex, which has been highlighted as necessary from the Shand Shelton 2013 report. We are unclear what the \$12 million is actually for but believe much of it involves demolition costs for the engineers block and asbestos removal. We believe funding for this needs to come forward to when the WDC moves out of the building to prevent deterioration and to protect the Capitaine Bougainville as a working viable theatre.

3. But just as WDC has outgrown its present premises at Forum North in the 45 years since leaving the old Town Hall, so has the arts community grown out of the Capitaine Bougainville, a theatre built when the population hovered around maybe 40,000, compared to the nearly 100,000 is today. We too need space, we have waited 45 years to get our replacement Old Town hall theatre, and we still do not have it.

4. There has always been talk to supporting all three projects.... And there may be some here today who think Option One will satisfy all 3 projects and that the proposed theatre at Oruku will satisfy our theatre needs. But we are here to tell you in all sincerity that it will not. We must point out the different requirements of the Oruku landing stage/theatre for conference and the very different requirements of the lyric theatre for performance we are proposing. Lachie will expand on these differences soon.

We don't want to stand in the way of Oruku, or of Hihiaua. That is not our intention. We want to be helpful. But we don't OWN this

site. So we cant run off and get outside funding...we are hamstrung and completely in your hands. HELP US HELP YOU.

5, We also expect that the proposed Oruku stage, being in a conference centre located next to a hotel, will have very strong demands on it by the conferences themselves, and associated activities related to the hotel. If the conference centre is successful, this will heavily compromise the stage use for the community. We also are concerned that the Council will build and operate the facility "in the hope" of attracting a 4 star hotel. We submit that this would be a symbiotic relationship and both the proposed hotel and the proposed conference centre need to come to firm agreements before final commitment is made.

5. Here's what we ask. We ask WDC to commit to building a new theatre on the Forum North site within this current LTP, and submit that it is a most opportune time to borrow for such a venture. We believe this request aligns with the recent Jasmax Report. And we submit that the best time for this to begin is when you vacate Forum North for the new Civic Centre. Bring the upgrade funding for the existing theatre forward to your departure date, and commit to borrow the extra funding needed to build a new larger theatre a few years later.

We ask that WDC takes the first steps towards this in the coming financial year by

A. providing funding for the provision of a resource consent

B. and to proceed with detailed planning and costing.

We, FNTB13 have already done work towards planning and costing which we gladly share with you, and a plan for a proposed theatre by NZ renown theatre architects Shand Shelton, which we will gift you.

Our plan comprises technical workings and draft design specific enough for cost estimates thanks to a significant \$25,000 donation from a local family. Our reviewed estimate for the theatre as a

stand alone building is around \$35 million. We understand you have a figure of closer to \$50 million, which we believe encompasses all the other upgrades already committed to, including demolition work of the council offices, and all the associated asbestos removal. This should not be included as part of the theatre cost. It probably more belongs with the new Civic Centre costs.

We expect funding required for the above 2 items to be around \$1.5 million.

6. We ask that WDC meet with the Forum North trust to advance these ideas and to see how we can contribute financially to this outcome, as we are ready, willing, and able to do so.

We have a \$1 million dollar donation, but this will need to be refunded to the donor if it cannot be used towards construction by 21.6.2027. We also have smaller amounts from a fundraiser held last year and we would like to plan more.

The reality is however that we can't ask the public for donations nor hold fundraising events, nor apply to major funders, without some understanding and commitment from WDC towards our goal of a new lyric theatre. We don't own or control this land. We are hamstrung for now, waiting to hear if you will support us. HELP US HELP OUR COMMUNITY.

7. We have garnered community support and our concept plans for a lyric theatre have heavily detailed tech requirements and we have the Shand Shelton technical experts just waiting to be invited up for a briefing.

8. We recognise that much current CBD development is focussed towards the Town Basin area, and we submit that there are very real advantages to CBD revitalisation if a large theatre and more frequent concerts and performances were happening in the Forum North site. We can see the revitalised night life and dining opportunities emerging and strengthening with a major community space at this end of the CBD.

9. Our youth and our aging population in particular will appreciate the opportunity for symphony events here rather than

Auckland....the restaurants and bars in the CBD will feel the vitality from such events. Except for the heady days of the refinery expansion, when the NZRefining Co sponsored the Auckland Philharmonia Series up here, we have not been able to enjoy symphony performance. It is simply unaffordable without generous sponsorship for the orchestra to come north to a 350 seat theatre. Why is Whangarei missing out on this facility that the rest of New Zealand enjoys? What missed opportunities for our young people. When you look at what the other centres in NZ have in the way of large theatres, our situation is a travesty!

10. We submit that the new theatre must get on the list and stay on the list to completion. No more procrastination. 45 years is long enough! The new aquatic centre is a must have for families in Whangarei, yet before it was built there was limited understanding of just how popular it would be. The skatepark was the same. Getting the library over the line...and all the other big projects...the gymnastics/athletics building.....enormous effort. The new lyric theatre would be one of the last big builds needed to cement our place in NZ as a city with a strong arts and heritage culture. Some may see a new lyric theatre as being the icing on the cake.....a "like" to have rather than a "must" have. But we beg to differ. We see it as the foundation stone. It is the foundation that was removed with the demolition of the Old Town Hall, and we ask that this strong foundation stone be replaced to support all the other arts and cultural activities for our region. We submit that the community will retain its love and ownership of Forum North as it expands and offers more to the community...more performance, more variety, ...it will be "their" space....where people come together and enjoy local and national and hopefully one day again, international events.

Summary;

* We ask for WDC to commit to building a new 800 plus seat theatre in this current LTP.

*We ask for the Forum North Trust to sit down with WDC and work through the process regarding timelines and how we can help with fundraising...what vehicle will work for this community facility so that we can assist you.

*We ask WDC to allocate up to \$1.5 million for the preliminary work and the resource consent to be done in the first year of this new LTP. We ask that the resource consent has an extension clause allowing up to 10 years for it to be given effect.

*We ask for the new theatre to be included in the LTP, preferably by 2027 so we don't lose our one million dollar donation. In return we will fundraise within the community and apply to outside funders and willingly assist you in this magnificent community legacy project.

*We ask WDC to borrow the remainder of the funding needed, for the following reasons:

- because the planned theatre spaces at Oruku Landing and Hihiaua will not satisfy the requirements for a lyric theatre
- because costs continue to escalate and it will never be cheaper to do in the future.
- and because this is an inter-generational legacy project to last our community for the next 50 to 100 years.

PUT US ON THE LIST, KEEP US THERE, AND LET US HELP YOU.

Thank you.

LONG TERM PLAN 2021-31 FEEDBACK FORM

THE CLOSING DATE FOR FEEDBACK IS
THURSDAY 1 APRIL 2021



RECEIVED - CUSTOMER SERVICES

1 APR 2021

WHANGAREI
DISTRICT COUNCIL

We would love your feedback on some key issues for our District.

POINTS TO REMEMBER WHEN SUBMITTING YOUR FEEDBACK

- Please print clearly. Make sure it can be easily photocopied, read and understood.
- All feedback is considered public under the Local Government Official Information and Meetings Act, so it may be published and made available to elected members and the public.
- Your feedback will not be returned to you once lodged with Council. Please keep a copy for your reference.
- You can also attend a hearing, scheduled for 13-14 April, to speak to your submission.

HOW TO GET THIS FORM TO US

Mail to: Long Term Plan feedback, Whangarei District Council, Private Bag 9023, Whangārei 0148

Email to: mailroom@wdc.govt.nz

Deliver to: Customer Services, Forum North, Rust Ave, Whangārei or Ruakākā Service Centre, Takutai Place, Ruakākā

YOUR DETAILS

Name

Patricia Marie Culina

I am making this submission as:



An individual



On behalf of an organisation

Organisation name

Hikiawa Cultural Centre Trust

Postal address

62 Arahuri Rise RD1
Onerahi

Best number to contact you on

021 137 9290

Email

triciaculina@gmail.com

Do you wish to be heard in support of your submission at a traditional hearing on 13-14 April?

☒ Yes
Yes



YOUR FEEDBACK

Please give us your feedback on the key issues raised in the Consultation Document.

KEY ISSUE – HOW WILL WE PAY FOR WHAT WE NEED – RATES OPTIONS (SEE PAGE 17)

- ☒ **OPTION 1:** Rates increase in year one (2021-22) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'.
Rates increase in years two to ten (2022-31) of 2% + 2.5% LGCI.
- ☐ **OPTION 2:** Limit the rates increase to LGCI plus 2% only across ten years of the Plan

WHY?

I'm really not sure why-- I know if you are allocating funding, you have to obtain it from somewhere. ~~It's not~~ Increasing rates at a rapid rate does put financial pressure on many with lower incomes. We have to put our trust in our Council to spend our dollars wisely.

KEY ISSUE – SPACES FOR GATHERING (SEE PAGE 24)

- ☐ **OPTION 1:** Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North).
- ☒ **OPTION 2:** Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, or existing facilities at Forum North. Please state which site in your comments.
- ☐ **OPTION 3:** Build a Whangarei District Council-owned theatre on the current Forum North site.

WHY?

Hikiawa Cultural Centre will be cherished locally, nationally and internationally. Indigenous people from all over the world are and will be coming for cultural exchanges and passing of knowledge. It will lift the mana of our city and especially enhance the lives of all who live here.

KEY ISSUE – CLIMATE CHANGE AND SUSTAINABILITY (SEE PAGE 28)

- ☐ **OPTION 1:** Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
- ☒ **OPTION 2:** Put \$7.4 of new funding towards climate change mitigation and adaptation and waste minimisation.
- ☐ **OPTION 3:** No new funding towards climate change or waste minimisation.

WHY?

Like our Prime Minister says "Climate change is our biggest threat." We need to do all we can to mitigate the cost to our environment caused by human inhabitation. E cars, other clean energy and reduced waste are very important. Protecting our flora and fauna is our responsibility. We can become a model city, a leader of Kaitiaki policies.

KEY ISSUE – REVITALISING OUR CITY CENTRE (SEE PAGE 32)

- ☐ **OPTION 1:** Spend \$13m to make improvements to James Street and John Street.
- ☐ **OPTION 2:** Spend \$21m to make improvements to James Street and John Street as well as either Robert Street or Cameron Street.
- ☒ **OPTION 3:** No additional funding for the City Centre.

WHY?

Too many projects at once can be ineffective. Better to fund something progressive like Hitiava. City Centre has already had major uplifts and is looking good and working well.

Hihiaua Cultural Centre has begun to fill a great void that has existed in the Whangarei district. This became obvious from the moment it opened. A large diversity of groups use the facility. Hihiaua speaks strongly of a Maori Cultural centre, but it truly embraces the kaupapa that all are welcome there.

Hihiaua, unlike the other options is a living entity with heart and soul. I strongly feel it deserves full support of WDC long term funding. It brings pride and cohesiveness to our community. The potential there is impressive. Phase 1 of Hihiaua has been completed, but to make it reach the vision that was birthed by the great tupuna of Whangarei, it needs financial support. Phase 2 will materialise only if supported by WDC.

Significant things happen at Hihiaua too many to list here, but to name a few Matariki Festival, Pasifika Festival, visit from the Prime Minister and many cabinet members, the creation of waka, pou and other taonga. Become a part of Whangarei's cultural history, past and present, by giving funding priority to such an incredible entity. Be a part of the uplifting of Maori culture in Te Tauwhanga a Repae Whangarei.

From: Whangarei District Council
Sent: 31 Mar 2021 02:47:03 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Auriole Ruka - 2021-LTP-SUB-337

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.



Long Term Plan 2021-2031 Feedback - Auriole Ruka - 2021-LTP-SUB-337

Receipt Number: 2021-LTP-SUB-337

Your details:

Name:	Auriole Ruka
I am making this submission as:	On behalf of an organisation
Organisation name:	Hihiaua Cultural Centre
Postal address:	58 Herekino Street, Whangarei
Best phone number:	0272930774
Email:	auriole.ruka@gmail.com

Hearing:

Do you wish to be heard	Yes
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at the hearing?	
-----------------	--

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hīhīāua Cultural Centre, and existing facilities at Forum North.
Why?	<p>Hihiaua Submission</p> <p>Ahakoā he iti, he pounamu</p> <p>Even a small piece of greenstone has significance and the voices of tangata whenua will always have significance</p> <p>Hihiaua and its supporters are committed to a long term partnership with WDC to ensure that we honour the principles of the Declaration of Independence and Te Tiriti o Waitangi. Therefore, it is with this first and foremost that we acknowledge the journey and relationship we have forged together to date</p> <p>In regards to this what commitment and investment will the council undertake to consider the enablement of tangata whenua led initiatives like Hihiaua Cultural Centre both at a governance and operational level.</p> <p>For example, the impact of putting in slipways mooring or landings for Hihiaua so that there is a place for our traditional waka to be moored and the resources of in-kind staffing to support our capacity. Hihiaua is set a part from other</p>

developments as a unique opportunity for council to prioritise these types of developments taking into consideration the resource consents, earthworks, landscape, environmental impacts and providing ongoing staff support to work effectively on this plan going forward.

As a social and cultural initiative, it is well acknowledged that Hihiaua is bringing together different cultures and communities expressing a collective and cultural heritage that is deeply grounded by tangata whenua of Te Taitokerau whilst welcoming other cultures and contributing to thriving Northland communities for example the uia 250 celebrations hosted by Hihiaua and tangata whenua was an insight into what the centre represents ensuring it is not just about the place but about the people of the place first and foremost.

In summary our key points are:

The continued partnership with Hihiaua and its plan for development and council should be seen as a priority and a recommendation that further investment is required at a planning level that is cognisant of the resourcing required to do this work.

- In driving economic activity the crown will invest where they see projects that are shovel ready – HHCC is more than shovel ready – it is generationally ready for our all our citizens to be able to share their stories beyond this long term plan into the next 50 years given its been a kaupapa alive and well nurtured for 20 years.

- As we continue to advocate with the Crown to ensure funding is commensurate with their view of investment into new initiatives like Oruku; our voice is to ensure that our local government is considerate of what they have already invested in to make Whangarei an area of cultural heritage including Hundertwasser and Wairau Art Gallery, investment and

	<p>commitment to the development of Toll Stadium and the regional sports centre/fields at Pohe. HHCC will only add to the uniqueness that Whangarei and Northland has to offer the world – driven by grass roots communities, hapū and iwi</p> <ul style="list-style-type: none"> • HHCC has set a course for Phase 2 of the cultural centre securing shovel ready funding and the inclusion of \$5m in the WDC LTP so we have confidence that we have the support not only in principle in this next phase of planning but want to ensure that the next stages and priorities for such a legacy development is seen as a priority for the future council and ongoing long term planning processes.
--	--

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 1: Spend \$13m to make improvements to James and John St.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

<p>Hihiaua Submission</p> <p>Ahakoā he iti, he pounamu</p> <p>Even a small piece of greenstone has significance and the voices of tangata whenua will always have significance</p> <p>Hihiaua and it's supporters are committed to a long term partnership with WDC to ensure</p>

that we honour the principles of the Declaration of Independence and Te Tiriti o Waitangi. Therefore, it is with this first and foremost that we acknowledge the journey and relationship we have forged together to date

In regards to this what commitment and investment will the council undertake to consider the enablement of tangata whenua led initiatives like Hihiaua Cultural Centre both at a governance and operational level.

For example, the impact of putting in slipways mooring or landings for Hihiaua so that there is a place for our traditional waka to be moored and the resources of in-kind staffing to support our capacity. Hihiaua is set apart from other developments as a unique opportunity for council to prioritise these types of developments taking into consideration the resource consents, earthworks, landscape, environmental impacts and providing ongoing staff support to work effectively on this plan going forward.

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world – driven by grass roots communities, hapū and iwi

- HHCC has set a course for Phase 2 of the cultural centre securing shovel ready funding and the inclusion of \$5m in the WDC LTP so we have confidence that we have the support not only in principle in this next phase of planning but want to ensure that the next stages and priorities for such a legacy development is seen as a priority for the future council and ongoing long term planning processes.

SharePoint document links:

 [Support Letters](#)  [LTP Submission 2021 - 1 April 2021 FINAL](#)

From: Justine Rowe
Sent: 1 Apr 2021 02:57:04 +0000
To: Mail Room
Subject: WDC Long Term Plan Submission - Justine Rowe - 2 of 2 emails
Attachments: tmpE833.tmp.gif

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Good Afternoon

RE: 2021-LTP-SUB-467

Please find attached a feedback submission on behalf of 9 Hikurangi Swamp Scheme Pocket Representatives in regard to the Whangarei District Council Long Term Plan – support letters attached from each.

We are available to present the submission in person to the Council as may be required.

The attachments are a large size so I would acknowledge receipt for this email please (this is the second email of two)

There are 3 separate documents:

LTP Submission – 1 April 2021 FINAL.pdf
9 x individual support letters in one PDF form (consolidated as one now)
Zip file – Appendix 1 HSS Book Merv Rusk

Please ensure all are collated to ensure this is complete

Thank you

Regards
Justine Rowe
M: 021611192

SharePoint document links:

 [Appendix 1 HSS Book Merv Rusk](#)

From: Justine Rowe
Sent: 1 Apr 2021 02:43:31 +0000
To: Mail Room
Subject: WDC Long Term Plan Submission part 2 of 2 Justine Rowe
Attachments: tmp5B2E.tmp.gif

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Good Afternoon

RE: 2021-LTP-SUB-467

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We are available to present the submission in person to the Council as may be required.

The attachments are a large size so I would acknowledgement of receipt for this email please (this is the first email with a second to follow)

There are 11 separate documents:

LTP Submission – 1 April 2021 FINAL.pdf
9 x individual support letters in PDF form
Zip file – Appendix 1 HSS Book Merv Rusk

Please ensure all are collated to ensure this is complete

Thank you

Regards
Justine Rowe
M: 021611192

To: Mayor & Councillors, Whangarei District Council

From: Geoff Crawford / Evan Smeath / Justine Rowe and Members of the Hikurangi Flood Scheme Working Group

Date: 31st March 2021

Purpose: Long Term Plan 2021-2031 Submission

- Revise Flood Protection in proposed Long Term Plan for Year 1 & Year 2 2021/2022 to remove capital reserve forecast of \$632,000 & \$656,000 from the Hikurangi Swamp Scheme

- Revise Flood Protection Targeted Rates Funding to decreased from \$1,161,000 to \$537,000 (Year 1 2021/2022) & \$1,190,000 to \$555,000 (Year 2 2022/2023) from the Hikurangi Swamp Scheme

- Suspend replacement of pump station or assets for 24 months (Year 1 & 2 of proposed LTP 2021 - 2031) and establishing a steering committee working group to develop a strategic plan for sustainable improvements to the Hikurangi Swamp Scheme

Please note that this is a ringed fence Hikurangi Swamp scheme. Only rate payers in the catchments pay this rate.

- Farming landowners have paid off significant swamp scheme debts twice and a revised approach is critical for the 2021 -2031 Long Term Plan to avoid incurring new debt by replacing pumps which fail to provide sufficient flood protection to farmers & Iwi. If the proposed 10 year Long Term Plan for the Flood Protection of the Hikurangi Swamp proceeds the local Hikurangi Dairy farmers will not economically & financially survive to continue farming in the Hikurangi Swamp, this outcome will remove considerable economic benefit & employment for the wider region.
- Due to climate change which was not envisaged in 1960, there has been an increasing intensity of rainfall events the Hikurangi Swamp Scheme is now not fit for purpose as the council's flood protection & management is failing, at the detriment of the farming land owners and Iwi.
- The Hikurangi Swamp Scheme has had a history of conflict which is unproductive to achieving progress and an actionable working model must be implemented to make informed decisions on the schemes future & deliver approved improvements [see appendix – The Hikurangi Swamp Scheme by Merv Rusk]
- To strengthen & inform strategic decision for the Hikurangi Swamp Scheme the services of EWater have been engaged by WDC Waste & Drainage Manager as of 8th March 2021 (circa 12 week delivery) to produce updated modelling data across the topography of the Swamp

This submission seeks consideration and approval of three points by Council:

- Amend Year 1 & 2 of the proposed 2021-2031 Long Term Plan suspend replacement of pump station or assets for 24 months and establish a steering committee working group (with a terms of reference & decision rights) with representation from Iwi/Hapu, Farmers, DOC, NRC, WDC & scheme experts (suggest Andrew Carvell) tasked to develop innovative & sustainable improvement strategies for the Hikurangi swamp scheme across Year 3 - 10. All improvement proposals will aim to reduce operational cost, reduce resource cost, protect & preserve the Tuna life, protect the land pasture from flood waters and satisfy the existing Resource Consent conditions
- Remove the proposed budget items from the LTP Year 1 2021/2022 totalling \$632,000; and Year 2 202/2023 totally \$656,000 – forecast for capital reserve increase, replacing existing

assets and improve levels of service. Note - the scheme holds a capital reserve of \$521,000 from 20/21 after the final debt is repaid.

- **Reduce the LTP Targeted Rates proposed as Year 1 \$1,161,000 to \$537,000 & Year 2 \$1,190,000 to \$555,000 to collect the only operational funding costs as capital replacement of assets will be suspended for Year 1 & Year 2.**
- *Please note prior to the commencement of Year 3 of the Long Term Plan, revised capital funding provisions & the targeted rates for Year 3 to Year 10 based upon the outcomes of the steering committee working group will be known.*

BACKGROUND

The purpose of the Hikurangi Flood Scheme is to help to minimise flooding across the 5,600 hectares of farmland within the Hikurangi Swamp area (this is water from catchment areas outside of the scheme which flows down the river into this scheme catchment). The aim of the scheme is to protect the farming productivity of land within the swamp area. This is highly productive agricultural land that generates considerable economic benefit to the region.

WDC has ownership of the Hikurangi Swamp Scheme and is responsible for managing, operating and maintaining the scheme to achieve required environmental, cultural and economic results. The Swamp Scheme is funded by targeted rate activity which applies to properties in the Hikurangi Swamp Special Rating District to defray (provide money to pay) costs of the Hikurangi Flood Scheme.

In recent years the Hikurangi Flood Scheme stakeholders who own the land in the seven farming pockets have significantly reduced the scheme debt with the annual operational funding surplus during the 2010/2020 10 year LTP (circa \$3m).

Farmers have no ownership of the scheme and no financial control of the funds spent or budgeted, they simply have an advisory role when the council seek feedback. There are farmers who pay over \$220,000 in targeted rates annually to the scheme – this is a substantive figure without any ownership or asset control but all the cost. WDC charge management cost of over \$100,000 annually to manage and administer this scheme.

The Hikurangi Swamp Scheme is failing to achieve the scheme aims:

“to protect the farming productivity of the land” – The scheme is designed for flood protection from small sized floods, in recent years the floods which have occurred in the swamp have exceeded the capacity of the scheme. In 2020 farms within the swamp scheme were under water for over 3 weeks which killed the pasture. Farmers either sent their cows away from their farms to be fed elsewhere whilst they re-seeded new grass (therefore losing all their income for 3 months) or they brought imported feed supplies on to their farms at an uneconomic cost for their herd whilst also re-seeding new grass (again lost their income benefits) – both options have caused significant financial hardship for swamp farmers in addition to the impacts of the 2020 drought and Covid-19.

“Environment results” – Through the Hikurangi Swamp Scheme meetings there have been on going conversations on how to protect 50 year old tuna with the local Iwi who monitor on the swamp. In June 2020 the farmers and local Iwi collaborated to agree & advise to WDC a pump activation procedure to support the safe passage of Tuna during their annual migration (late summer/early autumn) & the flood mitigation for the farm pasture. WDC Scheme Management committed to communicate the agreed procedure to the contractor however did not, this lead to avoidable Tuna mortality in February 2021.

“Cultural results” – Understandably there has been significant upset with the northland Hapu following the Tuna deaths including threats of prosecution for the WDC failure. This has negatively impacted the culture of the scheme with the media coverage and stress caused to all stakeholders.

“Economic results” – The Hikurangi Swamp Scheme has been successful in repaying the scheme debt through operational surplus from the farmers targeted rates however at the personal financial hardship of farmers. It will be economically irresponsible of WDC to commence the proposed next 10 year Long Term Plan which forecasts to build up capital reserves annually of over \$600,000 - \$700,000 of capital funding for the scheme to systematically renew pump stations which do not protect farm pasture and fail to achieve environment & culture results.

Now the Hikurangi Swamp Scheme is debt free there is a valuable opportunity to use Year 1 & 2 of the Long Term Plan to make informed strategic decisions for deliver in Years 3- 10 without the financial pressure of debt repayment.

By forming a specific steering committee working group the EWater modelling data can be used to digitally simulate scenarios across various flood sizes as proof of concepts testing ideas suggested to improve the swamp scheme. By way of an example only for this submission & without seeking to favour any future outcomes, a scenario to simulate could be installing additional flood gates set above the existing flood gates at points within the swamp. This example is used to demonstrate that there are alternatives to consider in addition or instead of the existing pumps, which do not require electricity to work as is required by the existing pumps (reduces operational cost); allow Tuna to migrate safely & alive (improve environment and cultural outcomes of the scheme); less cost to install than a pump station renewal (reduces capital funding requirements); allowable within the existing NRC Resource Consent (supports an shorter delivery timeline & meets requirements); and provide a sustainable solution to the future of the swamp.

Prior to the end of Year 1 of the Long Term Plan the Steering committee would have validated capital funding proposals to recommend strategic swamp scheme initiatives to WDC Scheme Management for decision. Investigations of Government funding for environment initiatives would also be applied for. During Year 1 if WDC Scheme Management decide to commence with capital improvements based upon the steering committee proposals WDC have the reserve of \$521,000 available for capital funding.

The targeted rate activity is ring fenced for the Hikurangi Flood Scheme and therefore this sits outside of the Whangarei District Council budget.

Please find appended to this submission signed support by Hikurangi Flood Scheme land pockets

Junction Pocket - Stephen Brown
Te Mata Pocket - Evan Smeath
Mountain Pocket –Barry Thorne
Tanekaha Pocket - Philip Bayly & Justine Rowe
Ngararatunua Pocket - Ken Finlayson
Okarika Pocket - Geoff Crawford, Wayne Sampson
Otonga Pocket - Philip Hindrup
Whakapara Catchment – Simon Donelley

Additional support documents also appended to this submission:

1. The Hikurangi Swamp Scheme – Merv Rusk

31 March 2021

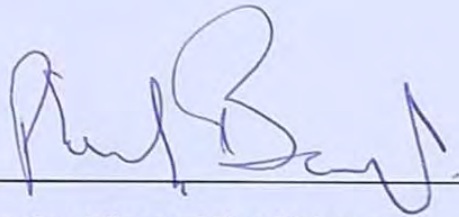
To: Mayor & Councillors, Whangarei District Council

From: Philip Bayly, Tanekaha Pocket Representative, Hikurangi Flood Scheme

I support this submission to request a change the proposed Whangarei District Council Long Term Plan regarding Flood Protection by removing the Year 1 ⁺² capital forecast, decreasing the targeted rates and suspending the pump station renewals whilst a steering committee working group develop a sustainable strategic plan for the Hikurangi Swamp Scheme

Thank you

Signed by Philip Bayly :



Tanekaha Pocket Representative, Hikurangi Flood Scheme

Email: philipbayly1@gmail.com

Date:

31st March 2021.

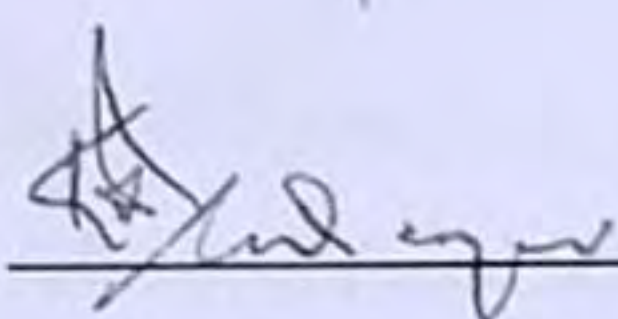
31 March 2021

To: Mayor & Councillors, Whangarei District Council
From: Ken Finlayson, Ngararatunua Pocket Representative, Hikurangi Flood Scheme

I support this submission to request a change the proposed Whangarei District Council Long Term Plan regarding Flood Protection by removing the Year 2 capital forecast, decreasing the targeted rates and suspending the pump station renewals whilst a steering committee working group develop a sustainable strategic plan for the Hikurangi Swamp Scheme

Thank you

Signed by Ken Finlayson:



Ngararatunua Pocket Representative, Hikurangi Flood Scheme

Email: mezandken@gmail.com

Date:

31 March 2021

31 March 2021

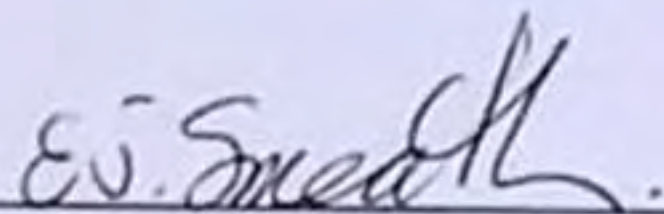
To: Mayor & Councillors, Whangarei District Council

From: Evan Smeath, Te Mata Pocket Representative, Hikurangi Flood Scheme

I support this submission to request a change the proposed Whangarei District Council Long Term Plan regarding Flood Protection by removing the Year 1/² capital forecast, decreasing the targeted rates and suspending the pump station renewals whilst a steering committee working group develop a sustainable strategic plan for the Hikurangi Swamp Scheme

Thank you

Signed by Evan Smeath:



Te Mata Pocket Representative, Hikurangi Flood Scheme

Email: e.s.smeath@gmail.com

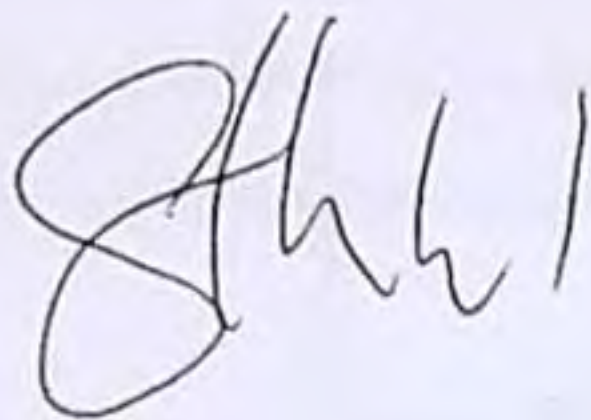
Date: _____ 31 March 2021 _____

31 March 2021

To: Mayor & Councillors, Whangarei District Council
From: Geoff Crawford, Okarika Pocket Representative, Hikurangi Flood Scheme

I support this submission to request a change the proposed Whangarei District Council Long Term Plan regarding Flood Protection by removing the Year 1⁺₂ capital forecast, decreasing the targeted rates and suspending the pump station renewals whilst a steering committee working group develop a sustainable strategic plan for the Hikurangi Swamp Scheme

Thank you



Signed by Geoff Crawford:

Okarika Pocket Representative, Hikurangi Flood Scheme

Email: nvct@xtra.co.nz

Date: _____30/3/21_____

31 March 2021

To: Mayor & Councillors, Whangarei District Council
From: Barry Thorne, ~~Mountain~~ Pocket Representative, Hikurangi Flood Scheme
Ngararatuna

I support this submission to request a change the proposed Whangarei District Council Long Term Plan regarding Flood Protection by removing the Year ~~1~~² capital forecast, decreasing the targeted rates and suspending the pump station renewals whilst a steering committee working group develop a sustainable strategic plan for the Hikurangi Swamp Scheme

Thank you

Signed by Barry Thorne :



~~Mountain~~ Pocket Representative, Hikurangi Flood Scheme
Ngararatuna
Email: sheryl_thorne@hotmail.com

Date:

30 - 3 - 2021

31 March 2021

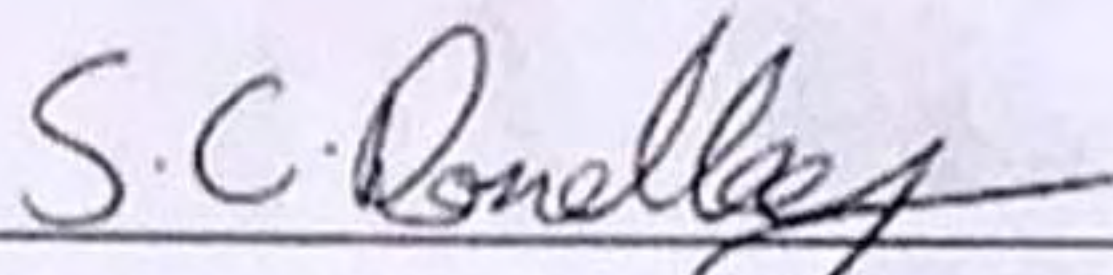
To: Mayor & Councillors, Whangarei District Council
From: Simon Donelley, Whakapara Catchment Pocket Representative, Hikurangi
Flood Scheme

I support this submission to request a change the proposed Whangarei District Council Long Term Plan regarding Flood Protection by:

- ^{year 2.}
1. removing the Year 1 capital forecast,
 2. decreasing the targeted rates
 3. suspending the pump station renewals for the Hikurangi Swamp Scheme

Thank you

Signed by Simon Donelley :



Whakapara Catchment Pocket Representative, Hikurangi Flood Scheme

Email: kimdonelley@xtra.co.nz

Date:

1-4-21

31 March 2020

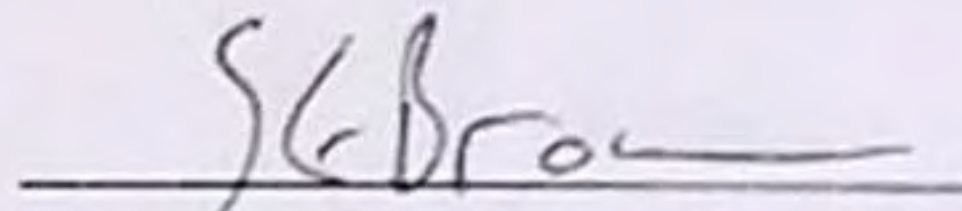
To: Mayor & Councillors, Whangarei District Council

From: Stephen Brown, Junction Pocket Representative, Hikurangi Flood Scheme

I support this submission to request a change the proposed Whangarei District Council Long Term Plan regarding Flood Protection by removing the ~~year~~ capital forecast, decreasing the targeted rates and suspending the pump station renewals whilst a steering committee working group develop a sustainable strategic plan for the Hikurangi Swamp Scheme

Thank you

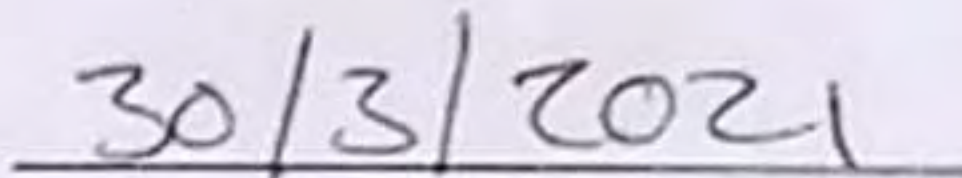
Signed by Stephen Brown:



Junction Pocket Representative, Hikurangi Flood Scheme

Email: amber_male@hotmail.com

Date:



From: Wayne Sampson sampsonwj77@gmail.com
Sent: Thursday, 1 April 2021 2:20 PM
To: Justine Rowe justine@baylyrowe.co.nz
Subject:

In support of action against rate increases and support a rates decrease need to look at long term options for the swamp scheme.

From: Justine Rowe
Sent: Thursday, 1 April 2021 2:20 PM
To: Sampsonwj77@gmail.com
Subject: Electronic support of submission for LTP

Hi Wayne

Thank for the time to discuss our submission and give your support. Given time to print the letter and scan is not possible, can you please reply by email to give your electronic support

Thank you
Regards Justine

1 April 2021

To: Mayor & Councillors, Whangarei District Council
From: Wayne Sampson, Okarika Pocket Representative, Hikurangi Flood Scheme

I support this submission to request a change the proposed Whangarei District Council Long Term Plan regarding Flood Protection by removing the Year 1 capital forecast, decreasing the targeted rates and suspending the pump station renewals whilst a steering committee working group develop a sustainable strategic plan for the Hikurangi Swamp Scheme

Thank you

Signed by Wayne Sampson : ____Email support provided 1 April 2021 ____

Okarika Pocket Representative, Hikurangi Flood Scheme
Email: Sampsonwj77@gmail.com

31 March 2021

To: Mayor & Councillors, Whangarei District Council

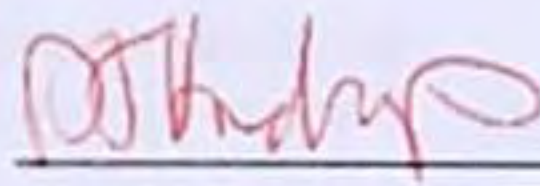
From: Philip Hindrup, Otonga Pocket Representative, Hikurangi Flood Scheme

I support this submission to request a change the proposed Whangarei District Council Long Term Plan regarding Flood Protection by:

1. removing the Year 1 ^{#2} capital forecast,
2. decreasing the targeted rates
3. suspending the pump station renewals for the Hikurangi Swamp Scheme

Thank you

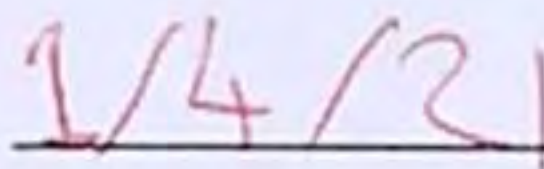
Signed by Philip Hindrup:



Otonga Pocket Representative, Hikurangi Flood Scheme

Email: kaseyhindrup@gmail.com

Date:





THE HIKURANGI

SWAMP SCHEME

HISTORY AND PERFORMANCE OF NORTHLAND'S LARGEST FLOOD CONTROL AND DISTRIBUTION SCHEME

Including:

- **Design and construction**
- **The 1998-2011 Review**
- **The Resource consent**
- **Scheme Restoration**

By Merv Rusk

The Hikurangi Swamp Scheme

History and performance of Northland's largest flood control and distribution scheme

By Merv Rusk

This Draft printed July 2020

Cover Photo:

The Falls in flood taken by the author 22-6-02 at 1345.
This is the lower boundary of the scheme.

Back Photo:

The start of restoration after the Review, taken by the author.
McKenzie Contracting starts work on Ngararatunua stopbank.

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About the Author

Merv Rusk lived and farmed in the upper catchments of the Hikurangi Swamp Major Scheme from 1942 until retirement in 2018. He followed three generations from the 1860's on both sides of his family who farmed in Ruapekapeka, Paiaka, Towai and Tapuhi districts, all in various Waiotu River catchments.

Merv's adult farming life began in 1958 at Paiaka in the north-western catchment overlooking the Hikurangi swamp then he worked on several farms on the swamp itself. He remembers moving cattle from the flooded area now called the Okarika reserve in the 1969 flood just before scheme construction began. Since then he has dairy farmed forty-five years at Marua, a high rainfall district in the Whakapara catchment from where the Whakapara River drives much of the flooding within the scheme. He has a lifetime of experience within the scheme's upper catchments, rainfall, catchment flows and with flooding.

His wife Maureen, who was formerly a McKegg from Matarau, was employed by the Ministry of Works gauging rainfall and river flows, essential work supplying Northland Catchment Commission engineers with the required rainfall, discharge and flow information for the design of the Hikurangi Swamp Major Scheme in the 1960's.

Merv saw the beginnings of the HSMS and attended a number of meetings in Hikurangi when ratepayers grappled with the decision, construction costs and other problems. Through his close association with several members of parliament he was able to see the scheme from a different perspective during the 1970's and 1980's.

He agrees that he is no expert and has no university qualifications, being the only one in his own family without any, but he has wide community experience with various issues. Like many farmers Merv has generally been cautious about experts and consultants. He believes his hands-on life experience with rainfall and flooding is his only qualification for writing this book. Merv was 55 years old at the time the review of the HSMS started and over 75 years old when the works were completed.

In earlier times Merv was a very active Young Farmer's Club leader rising to serve on the National Executive for a number of years and represented New Zealand as an overseas exchangee. He was on the National Safety Association and took a leading role in the nationwide introduction of tractor safety frames during the 1960's. For over three decades he served in various offices of the NZ National Party including a decade on the Auckland Policy Committee and introduced Citizens' Initiated Referendums to New Zealand before retiring in 1995. From 1996 he served as a Justice of the Peace for 23 years. In 2013 he was one of four recipients of the annual Whangarei District Civic Award for outstanding service to the community.

Merv and Maureen had four children, three of them were homeschooled and all four are now professional adults with degrees. A software architect, doctor (anesthetist), nurse/music teacher, and a mechanical design engineer with a doctorate in psychology. Maureen was recognized as a Massey Scholar and obtained a BA in education aged 56 and she then worked providing literacy and numeracy skills to adults seeking employment.

FOREWORD

It has been widely known for many years that the Hikurangi Swamp Scheme ¹ has had its share of troubles and contention, ² has had a dubious reputation, ³ and has been plagued with controversy over its entire life. ⁴ Thirty-seven years after construction it was still described as "contentious." ⁵ Compounding the mystery and intrigue, some farmers on the swamp scheme appear to have had a poor understanding of its history or how their flood distribution scheme actually works.

As older farmers move on, there is a real need for the next generation to learn more about their scheme. I believe more knowledge of the scheme and an openness to communicate could eventually bring change toward making the scheme fair to all landowners, and more progressive in the future. It is for these reasons that I have made a small contribution in writing this book.

When considering writing about the swamp scheme I needed to choose between writing a volume in that bland technical style used of necessity by professional consultants and engineers, or a more interesting, and hopefully readable history of the scheme. I chose the latter style and have endeavoured to cover a cross section of historical interest, including how the scheme was designed, early flooding, what went right and wrong, some idea of what occurred during the review process, and where things are at now.

Obviously my research and mundane number crunching cannot be included for space reasons. For the same reasons, the very large volumes of work and reports by other more qualified people, are neither included nor greatly commented on, as those are available elsewhere in their own right. However, I have included a small number of my own tables and graphs for your interest plus a few pages in the Appendix.

In attempting to write about the Hikurangi Swamp Scheme I openly acknowledge my weaknesses. Apart from several short periods on three properties and some farm contracting, I have not actually lived long term on the swamp proper, I have never owned and risked investment on the swamp lowland, and nor would I want to. I did not interview every single farmer that lives, or has lived on the swamp, therefore in relative terms I initially began from a position of considerable ignorance and inexperience.

I expected and certainly found that to have any credibility, I would need to work much harder to make a point than those with professional qualifications. Furthermore, I am skeptical of my own ideas until I have worked on them long enough to prove them either right or wrong, being both enquiring and thorough.

On the plus side, my living ten kilometers away from the swamp proper was an advantage as it may have allowed me to exercise more rational and independent thinking than some of those who lived there.

I believe that eventually time will always tell the truth because good data will speak for itself regardless of who collects and records it. With local government change always in the wind, this publication may be useful if local government continues to become more remote from ratepayers.

Another goal of this publication is to help future swamp farmers better understand their flood distribution scheme, and perhaps avoid some of the expensive

¹ The full name is The Hikurangi Swamp Major Scheme (HSMS)

² More than 80 Northern Advocate headlines and articles from 1976-1979 are held by the writer

³ Written Statement by Swamp Ratepayer's to meeting 24th July 1978

⁴ E J Smith submission to resource consent hearing Spire Pavilion Whangarei 18th March 2010

⁵ The NZ Farmers Weekly August 4th 2014 pg 10 Hugh Stringleman report

pitfalls and misunderstandings that have handicapped the Hikurangi Swamp Scheme to date.

One wise sage once said, "The only thing we learn from history is that we don't learn anything from history." Another said, "Life is lived by looking forward, but it is interpreted by looking back."

I have no interest in any property on the swamp, and my voluntary work comes from my general philosophy and commitment to helping people in the community. While it may not have been obvious at the time it was people and families who mattered most. My work has been people and family focused because at the end of the day, it is people and their needs and livelihoods that count.

What began as a short-term project in 1997 to help people eventually turned into a commitment lasting through seventeen years, and the technical challenges during that time were often demanding.

After some years it became apparent that a handful of swamp farmers may have become displeased with my involvement particularly as I was an 'upstream' ratepayer, in spite of the fact that we had often been farming acquaintances for decades. Nevertheless, I went out of my way to share information with those who may not agree with me, and my position was to always contribute information freely to any who requested it and to be unbiased and fair when doing so.

In the beginning I knowingly challenged a significant multinational consultancy company and the District and Regional councils, but eventually we were all able to work together to reach the best outcome for the swamp landowners that was economically and practically possible.

During some of those years local government administration and the Whangarei District Council in particular, had poorly developed processes for defining problems, and working through to the position where they were evaluated and solved. That situation was compounded by vested interests defending the status quo. Right from the start I knew that I would need to be flexible, and adapt to constantly changing challenges in order to see the day when the scheme repaired.

Hopefully, over time, the farmers on the Hikurangi Swamp Scheme will realise what has been achieved. And that they will understand for economic survival they must hang together or they will surely hang separately. And perhaps the old-timers did bite off more than they could chew, but now it's time for the community to build on that courage together and help each other and the District prosper.

I believe that the welfare of all people depends on each one of us treating our neighbour as we would like our neighbour to treat us, for there is no better code of conduct in the world than this. For this reason I have endeavoured to record both the historical details in this book and my honest opinions as accurately and truthfully as I can. There are more than 800 footnotes to show where information has come from.

I trust that my contribution may be of some interest and of use in the administration and operation of the Scheme, as it returns to a path of improvement to cope with the challenges of the future.

Merv Rusk.
Whangarei
2020.

Thanks and Appreciation:

First up I want to record my appreciation for the various levels of assistance given from the following people: ex Northland Catchment Commission staff members: Peter Q. Palmer, Colin N Anderson, Gary W Rusk, Mr Ken Rushbrook, Mr Bruce Judd and to Mr. Rob Andrews, ex Works Consultancy surveyor. And special thanks to the legendary Mr. Dale Hansen of NRC Hydrology Office for millions of numbers, his faithful support, and never ending encouragement.

Mr. Murray Menzies of Water Resources Consulting Group NZ in Albany taught me a little on the engineering side, and Dr Steven Joynes of Hydraulic Modelling Services of Hamilton and more recently of Golovin, who set very high standards and managed to get me to cut my teeth on data collection for the hydrology and to locate and process official information for computer modeling. I am very grateful for the encouragement and professional assistance given by these two men.

I would also like to thank those landowners who encouraged me and believed in me through the difficult times and in those hard slogs that seem never ending.

Greatest thanks go to my wife Maureen whose patience has been sorely tested during the twenty years this has taken. Maureen previously did field measurements, river gauging, rainfall maps and records, and number crunching before computers in her job with the Whangarei Hydrological Survey Team of the Ministry of Works during the scheme's design years. As a result she was able to give me technical assistance and has been a tremendous help during the early years leading to the restoration of the scheme.

Hydrological records are the very foundations on which any river and drainage scheme must be built.⁶ Maureen assisted me with the early field work and without her experience in aspects of the original scheme design and her mathematical skills, together with her knowledge and skills in hydrology, this project could never have begun.

⁶ Alan Moores Chief Engineer Catchment Commission NCC Volume 2 page 43

Getting Up To Speed:

Farmers tend to be busy people and often find it very difficult holding their own against today's onslaught of experts and consultants that seem to come at them from every direction. Sometimes officials take a somewhat disparaging view of what farmers may say, leaving these productive hard working people at a real disadvantage as they try to defend themselves against more educated and powerful people who may have much less 'on the ground' practical experience. So having been approached by a number of farmers I agreed to do what I could to help.

Early in 1997 I had been asked to go and take a look at some overspilling where I quickly realized that the first thing I needed to do was get up to speed on the scheme itself. Walking through overspill was a new experience and as I attempted to cross the last 90 metre stretch of overspill that was swiftly running 750 mm deep across Ngararatunua inflow crest I was shocked at what I saw. At that time I had relatively little knowledge of the scheme, but right there on Ngararatunua inflow spillway I met a bearded straight-talking man who I'd never met before, Mr. Ray Hindrup, who was also out inspecting the flooding, as he often did.

Later, on the same control bank, I met recently returned engineer Mark Simpson, now back at Whangarei District Council. He confidently told me on the spot, "I will have this scheme repaired within a year". Little did either of us expect it was going to take over fourteen years to even begin repairs and that much of the dirt moved in that time would be thrown at the people who were trying to fix it by getting the scheme to operate in a fair way, as it was designed.

There were two sides and they soon manifested as those who believed they were disadvantaged, wanting the scheme restored, opposed by those who were beneficiaries and wanted to keep the status quo. A wide-ranging review of the whole scheme was agreed to and embarked upon in February 1997 and a Whangarei District Council ⁷ contract was let to Montgomery Watson Harza Ltd ⁸, an international consultancy then running at a profit of half a billion dollars a year.⁹ So throughout 1997 I searched various council archives and collected all the relevant contour surveys, stopbank surveys, monitoring data and a host of records, NCC photographs of early floods, various reports, NCC minutes and everything else I could lay my hands on, many cartons of it. Most important was obtaining and digesting the five NCC design documents, especially the hydrology, river flows and flood calculations.

After working my way for months through the 1960's design calculations I then used the original scheme design formulas to build my own computer model, but unlike the 1970 design engineers I was able to include the pumps and the pumping heads, along with upstream and internal pocket rainfall records.

By collecting rainfall in a baked bean tin nailed on a post ¹⁰ and measuring depth with a ruler I was able to predict the Wairua river levels up to 24 hours in advance, often to within 70 mm. This enabled me to know whether or not to drive over to the swamp to be in the right places at the right time to measure lengths and depths of any overspilling. This was a huge help and saved a lot of time.

I was out on the scheme during a total of 17 inflow flood events from 1996 through 2004, walking inflow crests, taking detailed measurements for up to 36 hours at a stretch, often overnight. Apart from Mr. Ray Hindrup of Otonga pocket and his

⁷ Referred to as WDC

⁸ Later changed to MWH it was originally just Montgomery Watson

⁹ From MWH literature at Head office Wellington 28th Feb 1998

¹⁰ Yes I later installed a new rain gauge for the purpose!

consultant Dr. Steve Joynes of Hydraulic Modeling Services,¹¹ I never saw or met any landowners, engineers or consultants out inspecting the scheme during floods except for the people who were assisting me. Inspecting and measuring just one inflow crest can require more than a two kilometre walk, parts through quite deep flowing water with floating logs, trees and debris and often in darkness. Written notes were augmented where possible with photographs. I also have NCC pre scheme flooding, aerial photo surveys of the first scheme floods, plus many still photographs, and have closely examined those and more recent aerial surveys of flooding. Altogether I have over one thousand photographs covering the life of the scheme.

I worked through all the scheme design calculations checking through for any discrepancies. This included channel flows and storage. I was able to follow and recalculate the design calculations for both inflow share percentages and lengths of inflow crests. I collected Catchment Commission records of areas and levels of early flooding, river and pocket levels, plus Commission minutes and monitoring reports until I had a good understanding of how the scheme was designed, built, and operated. I obtained the only drawings of the extent of the 1966 design flood and located the drawings of some NCC checks and aerial photo surveys of the scheme performance after construction. I processed 300 Pump Station Log sheets, containing 2,500 signed off entry lines of river and pocket water levels and pumping details. For each of the 7 pockets I processed 91 logged flood events 14 being major floods since construction. As they were produced I also became conversant with the nine Montgomery Watson Harza Report volumes.

Engineering is simply commonsense made expensive. I am in no way an engineer but I can and do converse with them. For ten years I was kindly mentored by both an engineer from Auckland, Mr. Murray Menzies of Water Resources Consulting Group,¹² and Dr Steve Joynes of Hydraulic Modeling Services Hamilton. I also met with people who helped build the scheme including Mr. P.Q. Palmer ex Chief Rivers and Drainage Control officer of Northland Catchment Commission, scheme surveyors for NCC including Gary Rusk and Crichton Christie, original staff member Colin Anderson who did many of the early drawings and monitored the first floods, long term landowners, and others.

I attended various meetings of the liaison committee with the council plus some special meetings with engineers and various professionals who were involved. One milestone was contributing a detailed submission to the resource consent hearing. I received over 1,000 emails and sent as many. Swamp scheme research and data took up hundreds of megabytes on my computer. Fourteen years after the process began my log record had more than 1,300 entries covering 3,700 hours of unpaid voluntary work.

It is now forty-two years since the Hikurangi Swamp Scheme was constructed. The Scheme Review and subsequent repairs took eighteen years. Here is my account of that story.

Merv Rusk.
2019.

¹¹ Hydraulic Modelling Services are referred to as HMS. Dr. Joynes later went into private practice

¹² Water Resources Consulting Group New Zealand referred to as WRCGNZ of Auckland

DREAMERS AND SCHEMERS

Early plans

"The name Hikurangi Swamp is a misnomer because much of the 12,910 hectares of flat land upstream of Lewis Bridge¹³ on Matarau Road was actually high producing farmland long before the scheme works started.¹⁴ There are also 7,284 ha of flats that are off the main swamp.¹⁵ Of this, about 809 ha of floodable land are located upstream along the valleys of the tributaries.¹⁶ Before the scheme, up to 3,700 ha of the swamp proper flooded.¹⁷ For comparison the significant inflow floods over the first twenty years since construction of the scheme have averaged 1,624 ha of farmland covered.

Of the main 'swamp' of 12,910 ha only 465 ha can be classed as deep peat, 3,318 ha of shallow peats and the balance of 9,127 ha has alluvial soils. The average flat land is almost 88 metres above sea level.¹⁸

Settlers from early days were attracted to these fertile flats.¹⁹ The main valley is in private ownership and although it was swamp in 1875, the determined efforts of settlers and the work of the Lands and Survey Department between 1919 and 1937 converted it to a potentially fertile valley. By 1962 when the Northland Catchment Commission was formed, the slightly higher fringe areas were already high producing and much of the low land was in grass, but with limitations on production due to frequent flooding. In 1962 one third of local dairy company milk came from around the swamp²⁰ and the new scheme was concerned with upgrading the main valley land.²¹

The catchment of the Hikurangi swamp is only one tenth²² of the total catchment flowing into the Northern Wairoa River. But the problem is that the inflow into the Swamp from the 530 sq kilometers of catchment above Lewis Bridge²³ during cyclonic storms was and still is, about four times greater than the capacity of the outfall channel below.²⁴ This gives rise to storage by flooding of the flatland in the Swamp. Prior to the Scheme some land was inundated five to six times a year with two to three floods being of significance and each of two to three weeks duration. The low area of land subject to flooding at frequent intervals was some 4,500 hectares with some 5,500 hectares flooded during the more serious floods.²⁵

Back in 1879 drainage works at Mangere Raids and upstream were considered and costs estimated after surveyors prepared a feasibility report²⁶ but nothing was done until 1913. Twenty settlers then met to form a drainage board with an elected committee of Mr. W. Carter, Mr. A. Carter, Mr. Ellis of Tanekaha, Mr. Lewis, Mr.

¹³ NCC Vol 2 page 15

¹⁴ NCC HSMS Submissions on Financing Local share of Costs March 1975 pg 4 (6)

¹⁵ NCC Vol 2 Inside front cover, History Hikurangi Swamp Major Scheme

¹⁶ NCC Vol 1 Mr A Moores page 1 and also Vol 2 page 15

¹⁷ NCC flood mapping series by Colin Anderson of March 1966 flooding

¹⁸ See pocket surveys by NCC

¹⁹ NCC Volume 2 page 6

²⁰ R G Dickson Chairman Hikurangi Cooperative Dairy Company submission 14 Nov 1962

²¹ Paragraph from NCC HSMS Submissions on Financing Local share of Costs March 1975 pg 4 (6)

²² The NCC wrote one seventh of the NW catchment (1978 Review) but today's figure is one tenth

²³ Review of Hikurangi Swamp Scheme 28 August 1978 NCC pg 1 para 2

²⁴ A Moores in NCC Report to Soilcon & Rivers Control Visit September 1965

²⁵ NCC Review of the HSMS September 1978 pg 1. Design Criteria

²⁶ Northern Advocate February 6th 1976 pg 4

McLennan, Mr. Finlayson, Mr. Kerr, Mr. Grantham, and Mr. Jim Peat.²⁷ It's doubtful they could have ever thought works would still be continuing 100 years later!

In 1915 the Hikurangi Town Board 'urged government to drain the Hikurangi swamp where dairying could develop close to the Hikurangi butter factory.'²⁸ World war one intervened but in 1917 a parliamentary tour party visited.²⁹ Two years later F. Mander M.P. announced, "Drainage is in sight." By then the Kaitaia scheme had already been completed through landowners there being unanimous and not afraid of the cost.

The Hikurangi scheme was delayed for years by acrimony and "opposition to the scheme was very pronounced."³⁰ Then the announcement came that "Survey work is to begin' with a 14 foot cut at the rapids"³¹ but like its modern day successor called Federated Farmers, the then Farmers Union intervened complaining that, "The Government is dallying around and not finding plant."³² Such plant, however, was in very high demand. By late 1920 tenders were called for the diversion at the rapids.³³ But there was an ongoing problem with landowners not pulling together.

Then the nation's visionary political leader Mr Gordon Coates PM visited the swamp with his coalition off-sider Forbes when on a Northland tour. They were, "dressed immaculately in spotless attire and polished shoes but their pristine outfits did not last long."³⁴ The very practical and progressive Mr Coates was recognized for introducing much of New Zealand's infrastructure in his day.

In 1938 reports were circulated locally of a proposal to divert water from the Whakapara Watershed into Whananaki Harbour but 5.5 miles of tunneling and 2 miles of channel made it uneconomic.³⁵

Support was soon forthcoming for the swamp and a slightly modified scheme was designed and drainage work commenced³⁶ with the Lands and Survey Department. Some cuts were put in the river using steam shovels running along rail tracks.³⁷ In 1936 there were some disastrous floods during a series of wet years³⁸ and so, at the end of the great depression, settlers petitioned for an investigation, however, departmental work slowed and plant and labour was withdrawn.³⁹ Nothing happened until 1953, after world war two, by which time the land had reverted back to near the original state. In 1953 the work was then taken over by the Whangarei County Council who received government subsidies and reopened the existing drainage channels. The Northland Catchment Commission was formed in 1962 on April Fools Day and responsibility for the scheme was passed to it. The NCC undertook to make improvements toward what is now the present scheme.⁴⁰

Mr Ross Finlayson played an early and a key part in planning and pressure followed from farmers in the central swamp Tanekaha area⁴¹ and a 'Liaison

²⁷ Northern advocate 15th September 1913

²⁸ Northern Advocate 25th August 1915

²⁹ Referred to in Northern Advocate 13th May 1918

³⁰ Public meeting of 30 landowners Hikurangi Hall with Mr. V. Reed M.P. Advocate 24th April 1919

³¹ Northern Advocate 26th April 1919

³² Quoted in Northern Advocate 29th December 1999

³³ Announced in Parliament by Hon D. Guthrie MP. Reported in Advocate 22nd July 1920

³⁴ Anne Valiant in Florence Keene's *Women Of Whangarei*. Anne's father worked on the scheme.

³⁵ NCC Interim Report of March 1963

³⁶ Scheme report quoted by S.M Wills SM during rates review hearing 1970

³⁷ See photo collection of Mr. Lou Pickens

³⁸ NCC Volume 2 page 9

³⁹ NCC Volume 1 page 2

⁴⁰ NCC Volume 1. Pg 2

⁴¹ NCC Submissions requesting more government assistance March 1975 pg 5

Committee' was formed.⁴² It was established in 1963 that an investigation to prepare a scheme to control floods in the whole catchment of the Northern Wairoa would take many years to do and that Hikurangi Swamp Ratepayers were not prepared to wait that long, particularly as difficulties in obtaining local agreement and finance for such a major scheme would almost certainly lead to a scheme being turned down.⁴³ With a long history of flooding on the land that would benefit most from works in the swamp, there was still a limit to the ability of ratepayers to finance a scheme. In 1968 the local share was estimated at a total of Scheme cost of \$1.4 million (pv \$8.2m), which, with a 3:1 subsidy, required \$470,000 (pv \$2.75m) of local input giving an anticipated rate of \$8.40 per Ha.⁴⁴ For the above reasons the scheme was restricted to land above the outfall of the swamp and outflows at Lewis Bridge would be restricted to existing conditions.⁴⁵ The economics of the scheme as originally proposed suggested a return on investment of 21.5% per annum.⁴⁶ The Catchment Commission produced a four page preliminary Scheme Report in 1965⁴⁷ and also produced a demonstration model of the scheme and ever since its job was done it has been the longest inmate in the Hikurangi Jail. In 1967 the whole catchment of the Wairua River above Mangere Rapids comprising 216 square miles was included in the rating districts defined in the NZ Gazette of 2nd February 1967.⁴⁸ It was proposed that the rating district for major scheme works would be the same area. The NCC reported that this was done to avoid complications and enable access to improvements in the future.

It then took only five years to design the scheme. Following governmental approval of the scheme in May 1969 for \$1.64 m (pv \$9.62m) work of the first channel excavation contract on the Wairua River started in November 1969⁴⁹ and it took only seven years to build it.⁵⁰ Forty years later using modern technology it took fourteen years to simply review it.⁵¹

The Northland Catchment Commission (NCC)

As a local authority the NCC was comprised of Government representatives, local body leaders, and residents representatives from throughout Northland and the following people were the members during the design phase of the scheme in 1978. The government representatives were Messrs A.W. Aitken, District commissioner of works, Auckland, A.R. Aitken, Lands and Survey Whangarei, S.R. Hewitt, Agriculture and Fisheries, of Whangarei, and C.D Sutherland, of Forest Service, Kaikohe.

Local body members were: the chairman since the scheme began Mr K. Haslett former Mayor of Whangarei, appointed by the National Water and Soil Conservation organisation, Mr J. Madden Whangarei city representative, and Messrs C. K. Munro Whangarei County chairman, swamp farmer B. Smith also a Whangarei County representative, W. A. Simpkin Hobson County, C. G. Biggar Otamatea County (replaced J.B.Crompton), R.P.Ward Northern Counties, M. Srhoj, Northern Boroughs, and L.H

⁴² Status Report D Jones 19/3/90 88/4/2

⁴³ NCC Interim Report. Review of the Hikurangi Swamp Major Scheme September 1978. Pg 23

⁴⁴ NCC Scheme Report Volume 2 Detailed Statement February 1968

⁴⁵ NCC Interim Report- Review of the Hikurangi Swamp Major Scheme September 1978

⁴⁶ G J Mathias in Opening Submission for WDC Resource consent 2010 item 8 and The Technical Proposals and Economic Report July 1966 B Burr ridge Pg 3

⁴⁷ Preliminary Report on HSMS Mr A Moores Sept 1965

⁴⁸ NCC Volume 2 page 15 and NZ Gazette No 4 page 136

⁴⁹ NCC HWMS Reappraisal dated June 1974 Para 1 Report to works committee to June 1974

⁵⁰ Reported hydraulically complete in NCC Review of HSMS 28/8/78 pg 25

⁵¹ WDC Review decision 13/2/97 contracted to Montgomery Watson Harza 9th January 1998

Roland Mayor of Dargaville. The chairman in 1968 was J.A. Simpkin. The NCC administrated numerous other drainage matters in Northland in addition to the Hikurangi Swamp Major Scheme. Meetings were always opened with a prayer.

Leading staff member was Chief Engineer Allan Moores, CEO, an engineer from England who guided the scheme from its inception. Moores had a long list of letters after his name: B.Sc. Tech., A.M.I.C.E., C.Eng., M.N.Z.I.E., A.M.I.W.E. "Moores was a hoity-toity Pom who said he wouldn't talk to the lower workers and never did. He was not a good communicator."⁵²

Other staff included the kindly gentleman Mr Peter Q. Palmer, Senior Engineer and Chief rivers control and drainage officer, and B.E Burrridge, chief water and soil officer (erosion control). Administration staff included Mr W.K.P. Graafhuis and later Mr. J.T. Howarth, and Mr. R.W. Cathcart. A legal representative representing swamp ratepayers was a home grown TeMata farming family member Mr. Ian McHardy LLB.

A small engineering section was responsible for the estimates and costing, and then there were the all important field staff. This was a tiny but key group that included Mr. Colin Anderson Engineering Assistant, surveyors Crichton Christie, and Gary Rusk plus several others. (Yes, Gary Rusk is a close relative of the author). Anderson, Christie and Rusk were also surveyors and did most of the surveying and drawings as well as construction and field-work of various kinds.

Local government was 'reorganised' in the late 1980's and the then Labour government went and both Whangarei County Council and the Northland Catchment Commission went out of existence. Administration of the Hikurangi Swamp Major Scheme was taken over for one year by the Northland Regional Council then hastily passed into the relatively inexperienced hands of the Whangarei District Council. The designation of a Drainage District ceased mid 1990. With the advent of the Resource Management Act the Northland Regional Council became 'a Catchment Board for Northland'.⁵³ The handover to the District council appropriately occurred on April Fools day 1990 and the era of change was interpreted by some longstanding farmers on the swamp as an opportunity to indulge in a free for all. One of them reportedly said, "It's every man for himself now."⁵⁴

Aim and Philosophy

The Hikurangi Swamp Major Scheme is a farmer funded scheme which limits flooding on farmland, containing and storing floodwater between the main control banks, with any excess to be spilled onto farmland in seven separate 'pockets' where it is temporarily stored in the relative proportions for each pocket that existed before the scheme was constructed.⁵⁵ This embodies the key scheme philosophy of fairness. The scheme is not a flood prevention scheme and while often referred to as a 'flood control scheme' it is better described as a 'flood distribution scheme.'⁵⁶

To quote the Catchment Commission's Chief engineer Alan Moores, *"It has to be emphasized that this control bank scheme does not prevent floods, it only controls them, limits the floodable area and reduces duration considerably, and in general, limits the effects of flooding."*⁵⁷

⁵² Interview with Crichton Christie NCC staff surveyor 16th August 2001

⁵³ Stated by NRC R. W. Cathcart, NRC Land Operations Manager in a submission 26/02/07

⁵⁴ Reported by Mr. Reudi Notter after he questioned a farmer why he was interfering with a bank

⁵⁵ NCC Volume 3 page 8

⁵⁶ The Review Project Manager B. Knowles at WDC Liaison meeting 23rd February 1997

⁵⁷ HSMS Preliminary Report 1965 Alan Moores

Today the scheme is still subsidised by upstream catchment ratepayers.⁵⁸ Hikurangi township ratepayers are presently exempted while some ratepayers in the Northland District area currently don't contribute and didn't from the beginning.

The original design principles included restricting outflow to present conditions of 230 cubic metres per second, done to speed up permission to build the scheme. For rating purposes the scheme is 'ring-fenced.' That is to say, no rates from other areas are directed to the scheme accounts and landowners pay the Scheme Rates for capital and operations. In addition the ratepayers within the scheme rating area pay their ordinary Rates to the District Council. Rating for the swamp scheme was set up under an act of parliament and like it or not, any local administration must abide by that act.

There are five specific publications by the Northland Catchment Commission that became the virtual bible of the scheme. These contain design discussions and engineering details showing why and how the design was carried out. They were written in the 1960's and are known as *Volume One, Volume Two, Volume Three, and also Technical Report And Calculations 1966, plus Technical Report And Calculations 1968*. All these were 'not made available to the public' and were kept secret from most people for thirty one years.⁵⁹ I first laid hands on these in 1997 via the WDC when a scheme review was first mooted. These technical volumes contain the hydrological design of the scheme and the philosophy. I recommend the reading of NCC Vols 1,2, and 3 as a minimum.

The scheme aims were stated as, *"Completing the work started by the Lands and survey Dept and constructing additional works so the main swamp land becomes free from floods lasting longer than 3 days up to a return frequency of 5 years. This contrasts with the present average of five floods per annum 2-3 of which last for more than a week. Considerable publicity has been given to the fact that the scheme will not eliminate flooding but that it aims at improving conditions to enable the country to be successfully farmed."*⁶⁰ The plan was to keep duration of regular flooding below three days to prevent destruction of pastures and the amount overspilling via a special inflow crest into each of the seven 'pocket' storage areas would be relative to pre-scheme flooding.⁶¹ A pump station in each pocket would be related to catchment area and each would have the capacity to remove 21.6 mm of rainfall per day however, overspilling into pockets was not included in the calculation. Also excluded in the plans was cropping. "It must be remembered that the scheme is based on providing conditions suitable for grassland farming and not on cropping. If any farmer wishes to venture into cropping it is to the higher land he should look."⁶²

Prior to construction of the Hikurangi Swamp Major Scheme it was stated by the design engineers that *"The scheme has been designed so that expected benefits are equal in all seven pockets in the swamp and in the areas above S.H.1."*⁶³ And *"During major floods banks will be overtopped and the consequences should be born equally by all (scheme) ratepayers."*⁶⁴ Thus the essential philosophy of the scheme is fairness to all landowners. This essential philosophy of fairness to landowners is also reflected in the modern Resource Management Act which requires that no landowner may

⁵⁸ Upstream ratepayers are rated to pay the equivalent of the scheme's annual power bill

⁵⁹ CEO to Swamp Works Committee, minutes July 1978 pg 4/5

⁶⁰ NCC Scheme Datasheet with scheme arial photo on front circa December 1973

⁶¹ NCC Vol 3 pg 8

⁶² NCC Engineer Alan Moores Classification of Land for Rating December 1977 pg 12, & 1973 Datasheet

⁶³ NCC Detailed Statement Vol 2. pg 34

⁶⁴ NCC Technical Report March 1966 pg 18

disadvantage others. The Catchment Commission enacted by-laws against "illegally defending property against water," with penalties,⁶⁵ and these have been written into present local body by-laws as well as the RMA.⁶⁶ Everybody knew that tampering with stopbanks or control banks to divert water was prohibited. Nevertheless, an ex NCC surveyor who worked constructing the scheme Mr Crichton Christie recently said, "Some people still cannot grasp that if water is stopped on one crest it goes over another one onto someone else's farm, not out the plug-hole."⁶⁷

The scheme design engineers wrote: *"Water quantities flowing over the inflow crests into pockets during major floods are to be controlled by the lengths of the overflow crests."*⁶⁸ *"These quantities will be distributed in proportion to the quantities of water stored in the sections during flooding under present pre-scheme conditions."* *"Only after observations during a long period, 20 years from completion, will it be possible to compare the predicted with the actual distribution..."*⁶⁹ Clearly it was the intention of the Commission and its design engineers that observations should be recorded and, if needed, adjustments made after say 20 years of operation. The fundamental requirement was and still is fairness. *"The control bank levels and overflow sections have been designed to distribute flood waters in the same proportion as occurs under present (pre-scheme) conditions thus giving equal benefit."*⁷⁰

Again the designers stated: *"It appears best to observe the river closely for a period of 15 - 20 years following construction and make adjustments to overflow levels (& lengths) should this prove necessary."*⁷¹ Therefore level records were kept for every flood and flooding was faithfully monitored.

The estimated cost was 4.5 million dollars (\$28 million in 2011 dollars)⁷² of which the scheme catchment ratepayers paid just over one quarter, only \$1.17 million⁷³ and the remainder was a government subsidy. The scheme was built with a tiny crew with primitive machines and technology and by today's standards the HSMS is a huge credit to those who built it. The amazing thing about this flood control scheme is not that it was so bad, but that it was so good. At least until it was tampered with.

Swamp Politics

Where we find democracy we usually find politics and in general politics have a reputation for being unpleasant at times and the Hikurangi Swamp variety is no different. Even the scheme's construction was born in suspicion, intrigue, anger and bitterness. One long time Tanekaha landowner lamented, "The scheme has been plagued with controversy over its entire life."⁷⁴ Unfortunately the common characteristic of controlling things from behind the scenes seems to be a part of human nature found in many forums.

In a constructive move a Liaison Committee was first formed by farming families in the middle of the swamp around the Tanekaha area⁷⁵ in 1963 with 7 members, 3 representing ratepayers, and 4 from the NCC. It was disposed of a number of times.

⁶⁵ NCC bylaw 31/5/67 re defence against water

⁶⁶ Resource Management Act

⁶⁷ Interview with Crichton Christie 16th August 2001

⁶⁸ NCC Vol 2 pg 21

⁶⁹ NCC Vol 2 p. 21

⁷⁰ NCC Technical Report Vol 3 1968 pg 8

⁷¹ Vol 3 Technical Calculations Feb 1968 pg 16

⁷² Reserve Bank

⁷³ Northern Advocate 27th June 1979

⁷⁴ Edwin Smith in pg 1 in his submission to the resource consent hearing of March 2010

⁷⁵ Status Report. D. Jones 19/3/90 88/4/2

The committee initially had a huge workload and appears to have functioned well during the planning and construction phases under the leadership of Mr Ross Finlayson. It was renamed the Hikurangi Swamp Works Committee in June 1976 with 7 ratepayer and 6 NCC representatives. The experiment was apparently unsuccessful as it later reverted to its former name and function.⁷⁶ Under the Regional Council's brief administration the Committee had 7 ratepayer representatives, 1 council engineer, with a councilor chairman, meeting only twice a year regarding the estimates and the works program.

The committee was described in 1990 thus: *"The constitution and status of the committee is an unusual one in that it is a corporate committee appointed by two separate parties – the council and property owners. As such, the committee cannot be deemed to be a committee of either the council or the owners, but rather is an independent one to which each party has appointed representatives."*⁷⁷ Perhaps as time went by, being a corporate independent committee it achieved more power and less accountability than some ratepayers found acceptable?

Decisions could be parochial at times. For example when Ngararatunua Pocket farmers asked for a flapgate to stop considerable back-flooding onto their land via Apotu Stream the committee declined it.⁷⁸

Over its lifetime the Liaison Committee met in a variety of venues. Initially there were members of the Northland Catchment Commission involved, so meetings would have been held in an office or public venue. Later on the committee met in private homes of members or the home of the chairman. During the 1990's at least, the committee not only met in private homes but met in council chambers or offices for larger meetings with council officers and engineers or consultants able to be present. The house meetings were more often for regular maintenance matters and no doubt for a little planning and strategy.

The Liaison Committee was later made a Sub-Committee of the WDC Works Committee then dispensed with by the WDC in February 2008.⁷⁹ At times when some meetings had been held in private homes people who did not agree with everything could be excluded⁸⁰ or not told about the meeting.⁸¹

One ratepayer submitted a view concerning the scheme itself, "I believe this scheme has been plagued with corruption and dishonesty, at least since Cyclone Bola of 1988",⁸² and another wrote, "The Liaison committee is so secretive on what it is doing."⁸³ One district councilor described how, "The scheme has been dickied around with."⁸⁴ Whether real or imagined, there was enough ratepayer concern to make changes and by 2010 it was replaced with quarterly Public Forum Meetings with direct and open communication between council and any farmers or public who wished to attend. But while informative these meetings became too unruly so the WDC continued with a Hikurangi Swamp Working Group with representatives from each pocket.

There is big money involved. Collectively farmers on the swamp proper generate many tens of millions dollars a year current value, not to mention the huge increase in

⁷⁶ Status Report. D. Jones 19/3/90 88/4/2 23/2/1

⁷⁷ Status Report 19th March 1990 Mr. D. Jones File 88/4/2 23/2/1

⁷⁸ Minutes of 5th February 1997 ref 88/7/22

⁷⁹ G. Oldcorn WDC announcement to farmer meeting

⁸⁰ Letter 29th June 1998 Hindrup to Liaison Cttee re chairman excluding Mr. Pickens

⁸¹ Mr. P. Atkinson 20th February 2007

⁸² Submission of T. W. Storey McLennan Rd Whakapara to resource consent hearing 2010

⁸³ Submission of John Scott to NRC 20th February 2007

⁸⁴ Councillor Halse to WDC Liaison meeting 25th May 1999

capital values when water is kept off farmland to enable its improvement. When water lies more than three days on pastures it can kill grass. One farmer said, "For this reason farmers cheat".⁸⁵ Tipping the scales, or rather the water, onto somebody else's property, could pay big dividends.

Some people quote a very high earning rate for the scheme but sometimes they inadvertently include a good deal of farmland that does not actually flood, land that was productive long before the scheme was built, so figures can be exaggerated.

For decades the perception of the Liaison committee by some other farmers was that it was dominated by a small group of landowners in order to advance their own protection. Requests for drainage maintenance on farms on the east side of the river were sometimes declined.

When the review began in 1998 I was told by the then WDC Drainage Engineer Mark Simpson, "I just can't believe the political pressure coming on me over this thing."⁸⁶ One ex liaison committee member said, "In the past this group has always worked for their own interests... I have been on this committee before and seen how it operates."⁸⁷ To be fair I found that nobody said the committee was like that all of the time, and there would have been good people who served on that committee from time to time and obviously much good work was done over the years. However, in spite of the good that was done there was suspicion and complaining.

Throughout its history the scheme has left a number of men and their families devastated if not destroyed and put off their land. Some families were without a voice, often being ridiculed until they simply gave up, got sick or left. Ironically some of the management that occurred has cost the scheme dearly and the financial effects rebounded decades later to affect the scheme's operation and progress.

There have been warnings like the one from the Deputy Mayor that, "History shows that (returning to) a Liaison Committee running it would result in parochialism and failure."⁸⁸ In seventeen years the writer has been unable to find any public record of the Committee initiating a call for the cutting down of the filled-in control bank crests when at times nearly half of the stored floodwater was going into the wrong places.⁸⁹ In February 1997 however, after some four years of debate, an initiative by the WDC engineer was agreed to, although it was another fifteen years before the repairs were actually done.

Was it significant that the three years from 2008 to 2011, a period when the Liaison committee was dispensed with, were the three years when the most progress was made toward repairing long standing issues within the scheme?

⁸⁵ Submission/statement by Ray Hindrup to NRC consent hearing on 17th March 2010 page 1

⁸⁶ M. P. Simpson to the writer in Simpson's WDC office 30th June 1998

⁸⁷ Mr. S. Donnelley Written statement to Public Forum at Fonterra Dairy 29th November 2010

⁸⁸ Acting Mayor Phil Halse to Public Forum at Fonterra Farm March 2011

⁸⁹ See both MWH modeling data and M Rusk's data provided to the Consent hearings March 2010

DESIGN AND CONSTRUCTION

Scheme Design, Construction and Costs

The original need was to further the development of some 4,500 to 5,500 hectares of the lowest peat land into more reliable and productive farmland which the district's economy desperately needed. About 4,000 ha were planned to receive benefit to a considerable degree.⁹⁰ Regular tropical cyclones caused flooding that lay around on this area for weeks. 'On average the swamp was subjected to five or six floods per year and the most critical rainfall period was four to six days.'⁹¹ From the back of the hill country on our Wallace Road family farm boundary at Paiaka on the extreme upstream end of the northwest catchment, we had often looked down over Riponui to the vast 'lake' that would exist over winter for weeks and sometimes months. It was a magnificent duck shooting area but to get the land into good pasture looked challenging. This required flooding to remain less than three days in summer or the grass would die. In dry summers peat fires would often burn for weeks. It must be acknowledged that in those days many upland farmers considered the Hikurangi swamp farmers to be slightly nuts, but time would tell.

After the Commission was formed in 1962 Mr Moores from England took up duties as Chief Engineer and the Liaison Committee was formed on the 9th of July 1963.⁹² A design engineer began in February 1965 and produced a preliminary Scheme Report later that year. The NCC then had a staff of eight and two office workers.

Preliminary polling regarding a scheme showed there "were 75 substantial ratepayers who were most affected by flooding."⁹³

A scheme was soon designed to channel the runoff from 36,650 ha upstream so this would be contained in the Waiotu, Waiariki, Whakapara, and Mangaharuru rivers and fed into a main stopbanked channel formed along the Wairua River. "The scheme was basically designed to keep river out and not to deal with catchment water."⁹⁴ To prevent most of the floodwater from spreading out over the swamp flats the stopbanked main channel, some 12km long, would be straightened and contain the flood by elevating it several metres, storing floodwater, and causing the contained flow to run down the Wairua river and out via the narrow rocky 10.5 km valley past Purua Bridge and over the Mangere falls. NCC chief engineer Alan Moores likened it to '*a bathtub with a plughole and the plug half out*'. When the plughole couldn't cope surplus water would be temporarily stored over the stopbanks then later pumped out.

The Works proposed were listed⁹⁵ and consisted of:

- 1 Removal of rock bars across the river channel together with other minor improvements, reducing the summer water level by 2.5 feet and flood levels in major floods by between 1 foot and 1.5 feet.
- 2 Reconstruction of the Whakapara, Waiotu and Waiariki channels up to the state highway.
- 3 Improvement of the Whakapara channel for a limited length above the state highway.
- 4 Construction of a floodway parallel to and north of the North Auckland Railway Line between Waiotu Bridge and Hukerenui.

⁹⁰ HSMS NCC Submissions On financing Of Local Share of Costs March 1975 page 2 (7)

⁹¹ NCC Report by CEO on Puhipuhi Rainfall to a Works Committee meeting in 1978

⁹² Status Report D. Jones. 19th March 1990 88/4/2

⁹³ Polling in 1968 at four locations

⁹⁴ NCC Chief Eng Moores Commission mtg 23 August 1976 minutes pg 2 5a

⁹⁵ In NCC Volume 2. The list inside the front cover is quoted here.

- 5 Construction of control banks along the Wairua river between the outlet at Lewis Bridge and the State Highway.
- 6 Construction of stopbanks linking the control banks with the hill lands, thus dividing the swamp into seven pockets.
- 7 Construction of seven pumping stations, one in each pocket.
- 8 Improvements to the drainage system.

NCC design Volumes one and two were produced and discussed with landowners at a number of meetings. An attempt was made to have the scheme declared as one of Local and National Importance⁹⁶ to speed approvals but government declined this. By 1968 design engineering had progressed and the estimated cost was \$1.6 million⁹⁷ however, the Technical design documents Volumes Three and Four were unavailable to the public and the ordinary farmers.⁹⁸ Government finally approved the scheme on 30th May 1969 with a 3 for 1 subsidy but the request for National Importance was declined. The Commission went into construction mode and contracts were steadily let for the next seven years.

There were 110 A class, B class, and C class ratepayers, 400 others in Hikurangi Township and 440 in the upstream catchments.⁹⁹ A ratepayer poll approved borrowing to build the scheme by 310 votes to 144, out of 950 landowners¹⁰⁰ which was only a 40% voter turnout. Voting was weighted using rating classes. So 200 acres of A class land got 2 votes the same as 1000 acres of D class land.¹⁰¹ Construction began in 1970 and the last of the seven pockets in the two thirds government subsidized¹⁰² scheme were sealed off in December 1977¹⁰³ and the scheme was hydraulically completed in April 1978.¹⁰⁴ In 1963 the planned total cost had been \$1.4 million¹⁰⁵ but the eventual cost \$4.5 million,¹⁰⁶ or \$28 million in 2011 dollars.¹⁰⁷ As expenditure wound down in 1978 the costs were itemized.¹⁰⁸ The 17 pumps were originally budgeted to cost around \$360,000.¹⁰⁹ The costs to build the scheme are compared here in current 2011 inflation adjusted dollars on the list overleaf.

⁹⁶ Ratepayer confidential meetings of 16th and 19th September 1968

⁹⁷ NCC Vol 2 page 40

⁹⁸ Hikurangi Swamp Works Committee Minutes (next one after July 1979) Page 4

⁹⁹ NCC Submissions on financing B (3) (10) March 1975

¹⁰⁰ NCC submissions on financing B (3) (10) March 1975

¹⁰¹ NCC Chairman Mr Haslett in a letter to ratepayers on the swamp 4th December 1969

¹⁰² Government subsidy 3:1. Landowners paid only a quarter of the scheme's construction costs

¹⁰³ Minutes Hikurangi Swamp Works Committee 23rd January 1978 page 7

¹⁰⁴ NCC Review of HSMS 28 August 1978 page 25

¹⁰⁵ Review of HSMS September 1978 page 23

¹⁰⁶ NCC. Re-appraisal HSMS February 1979 pg 9

¹⁰⁷ NZ Reserve Bank data

¹⁰⁸ NCC Minutes pg 17 24th July 1978 Hikurangi Swamp Scheme Expenditure 17th July 1978

¹⁰⁹ NCC Chairman M Haslett letter of 17th December 1971

HIKURANGI SWAMP SCHEME EXPENDITURE

NCC 17th July 1978.	(Inflation adjusted)	(Original costs)
	Total cost in 2011 dollars	Dollar cost at 17 July 1978
Wairua River Improvements	1,005,973.01	171,375.30
Waiotu River Improvements	2,848,894.79	485,331.31
Whakapara Improvements	2,254,982.10	384,153.68
Reinstatement of Pasture	623,745.73	106,259.92
Fencing	423,744.32	72,188.13
Internal Drainage	332,402.25	56,627.30
Pumping Stations	8,712,975.78	1,484,322.96
Control Banks	3,357,880.90	572,041.04
Land Purchase	1,153,125.40	196,443.85
Site Investigations	49,435.14	8,421.66
<u>Contingencies:</u>	-	
Miscellaneous	27,693.72	4,717.84
Okarika Stream Improvements	87,644.74	14,930.96
Wildlife	4,895.58	834.00
Railway Bridges	440,250.00	75,000.00
Farm Bridges and Outlets	706,223.46	120,310.64
Professional Fees and Engineering	-	
Services	2,204,532.27	375,559.16
Cost of Works (Subsidised)	24,234,399.19	4,128,517.75
<u>Non Subsidised</u>	-	
On Cost	334,125.33	56,920.84
Loan Servicing	26,522.66	4,518.34
Total Cost	24,595,047.18	4,189,956.93
Total Financial Approval	25,029,680.00	4,264,000.00
Balance Available on Approval	434,632.82	74,043.07

Note: The eventual completed cost **28,000,000.00**

LOANS:

No. 1 Loan	2,641,500.00	450,000.00
No. 2 Loan	2,993,700.00	510,000.00
No. 3 Loan	974,420.00	166,000.00
Total for Loans at 17/7/1978	6,609,620.00	1,126,000.00

Sources:

NCC 17th July 1978.

NZRB Inflation index Quarters 3 1978 and 2011.

In our modern technical age today it may seem amazing that this scheme could have been built so well without the use of computers. Also amazing was that the CEO Alan Moores said, "Great difficulty was experienced in obtaining qualified engineering staff during the 1970-1974 years."¹¹⁰ Post Scheme, the first effort at 'computer' modeling occurred later in 1977 in an effort to simulate the Okarika pump station.¹¹¹ Primitive computers were just arriving then. During design and construction the NCC did have a mechanical box that was a sort of "glorified adding machine."¹¹² The rest was done with the standard slide rule, pen, paper and headwork. I have owned an engineer's slide rule for 50 years and there are few calculations you cannot do on one.

Hydrology Without Calculators and Computers

Without electronic calculators or computers how did they calculate peak flow from a catchment?

Hydrology is a difficult and usually inexact science and can be frustrating.¹¹³ So here is a small example on how things were done in the 1960's without today's technology. The calculations used in design of the Hikurangi Major Scheme were based on procedure in the previously well known booklet on hydrology in New Zealand known as "Technical Memorandum No.61." This procedure was an adaptation of an American method and was produced by NZ National Water and Soil Conservation in the 1950's, updated in the 1960's and was referred to by all affectionately as "TM 61." To enable comparisons with NCC Vol 3 1966 the old Imperial system will be outlined here. (A metric version followed later.) The method evolved with development of hydrology in New Zealand and provided a simple means of estimating design flood discharges. I have checked through the design documents for the catchments using this method.

This ingenious method used the most important factors in peak flood discharge, ie: area, slope, infiltration, vegetative cover, rainfall and catchment slope. The tables are used progressively to find the peak flow rate.

The TM 61 formula is: $Q_p = CRS A^{3/4}$

Where:

Q_p = flood peak estimate in cusecs.

C = a constant that depends on catchment characteristics.

R = Rainfall Factor. (Derived from a chart on NZ rainfall)

S = Catchment shape factor. (derived from a chart)

A = Catchment size in square miles.

Other factors used are:

W_s = Catchment Slope factor. (read from a table of channel length and gradient. Range 0 to 100.)

WIC = Infiltration (soakage) and ground cover factor. (read from a table of conditions and observations. Range is from 1.8 in impervious catchments to 0.6 for deep absorbent soils with long grass cover.)

W = Weighted run-off factor. (Derived by multiplying W_s and WIC together.)

From a conversion chart this value for W is read to find the coefficient C for the TM61 formula.

¹¹⁰ In 6.2 of a post scheme report by Barr Burgess & Stewart on cost over-runs

¹¹¹ Report on computer simulation 12 Jan 1978 M.N. Dymond. Ministry of Works Computer

¹¹² Crichton Christie who worked for the NCC

¹¹³ Maureen Rusk 1998: "Often I hated it because there is no exactly right answer"

To illustrate how the design engineers did it we will follow the actual scheme design engineer's calculations of peak flow from the Whakapara river, using TM 61 to estimate peak rate of runoff. This calculation is on page 18 of NCC Volume 3 and is to find the peak flow for small two-year frequency storm. Note: For the Hikurangi Major Scheme runoff was calculated from the rainfall in the first 24 hours of a storm since research had determined this related to local conditions and storm types. Rainfall and storm types were categorised on a depth duration table see Vol 3 graph A.

Calculation of peak flow:

Twenty four hour rainfall measured at Puhipuhi for a small 2 year frequency storm is 5.7". Area rainfall (for Whakapara area) is therefore $0.9 \times 5.7 = 5.15"$.

(Whakapara catchment rainfall averages 90% or 0.9 of Puhipuhi.)

$W_s = 40$ (see page 3 NCC Vol 3)

$WIC = 0.88$ Therefore $W = 0.88 \times 40 = 35.2$.

And $C = 515$

$Q = (C) 515 \times \text{Rainfall factor (R) (Storm rainfall) } 5.15" \text{ divided by } 16" \text{ (from NZ standard curve)} \times (S) 1.22 \text{ (shape factor)} \times (A3/4) 22.2 \text{ (Area to power of 3 divided by 4)}$
 $= 4500 \text{ cusecs (cubic feet per second) or } 128 \text{ cubic metres per second.}$

Calculations like this were done manually to cope with the flow estimates for all storm types and rainfall depths, for each of the different catchments in the scheme. The flow estimates were then used in like manner to calculate the various channel dimensions and their gradients, peak flows, and the height of scheme stopbanks.

Flood Calculation on a Single Page

Today we experience years of consultants using computer programs but here is how it was done in the 1960's. A single page of 'water accounting' modeled the flood by calculating volumes for eight hourly intervals. Catchments inflow, storage between banks, storage by overspill, and outflow were calculated manually and figures carried forward to the next eight hour period. Events of 7 days, 11 days, 34, and 53 days were drawn up, all on a total of four sheets of paper. Yes, that's four different categories of flood sizes all modeled on just four pieces of paper! The 34 day flood is shown below¹¹⁴ and this was for the fifty year flood size.

Along with other NCC design data this method shown on the next page was used to build my own computer model of the scheme that, with the addition of catchment flows, the pumps and flapgates, models the scheme reasonably well. It must be said that to design a scheme that worked so well using such simplicity and economy makes modern expensive methods seem embarrassing. Those early engineers were probably under-appreciated in their day.

Here is how a fifty year flood was 'modelled' on just one sheet of paper. These workings, complete with overspilling volumes, are very close to the actual flood that occurred forty-eight years later on July 10th and 11th 2014.

¹¹⁴ From NCC Technical Report and Calculations March 1966

Appendix C-6 C-4.01 FIFTY YEAR FLOOD WITH CONTROLBANKS AT R.L. 39.0

Time	W.L. JORDAN	INFLOW	OUTFLOW	DIFFERENCE	TOTAL STORAGE DURING TIME PERIOD	Quantity stored between banks in time period	Quantity stored outside banks in time period	CORRECTION W.L. JORDAN OR FLOW OVER BANKS	A	B	C
0	19.0	400			$3600 \times 8 \times 0.5$	10^6 cu. ft.					
8	22.3	2550	1147	1403	$(0 + 1403) = 21 \times 10^6$			$(2\%) \frac{0.106 \sqrt[3]{1403}}{0.086 \sqrt[3]{1400}} = 0.14$	22.16	21	
16	28.8	7200	3100	4100	$(1403 + 4100) = 79 \times 10^6$			$0.086 \sqrt[3]{4100} = 0.17$	28.63	100	
24	32.7	15400	4610	10790	$(4100 + 10790) = 214 \times 10^6$			$0.069 \sqrt[3]{10790} = 0.18$	32.52	314	
32	36.8	23800	7032	16768	$(10790 + 16768) = 397 \times 10^6$			$0.054 \sqrt[3]{16768} = 0.16$	36.64	711	
40	39.1	27700	8389	19311	$(16768 + 19311) = 520 \times 10^6$	256		$0.039 \sqrt[3]{19311} = 0.13$	38.97	967	
48	W.L. at banks 39.1 - 2 x 0.13 = 38.84				Overflow = 0.34×10^6	4	264	$3600 \times 8 \times 0.5(0 + 18300) = 262$	262		264
56	39.1	27500	8389	19111	$(19311 + 19111) = 553 \times 10^6$	4	549	$0.029 \sqrt[3]{19111} = 0.09$	39.01	971	
64	W.L. at banks 39.1 - 2 x 0.09 = 38.92				Overflow = 0.42×10^6	-19		$3600 \times 8 \times 0.5(18300 + 22400) = 585$	38.84	952	813
72	38.9	24100	8271	15829	$(19111 + 15829) = 503 \times 10^6$	-19		$0.020 \sqrt[3]{15829} = 0.06$	38.84	952	
80	W.L. at banks 38.9 - 2 x 0.06 = 38.78				Overflow = 0.28×10^6			$3600 \times 8 \times 0.5(22400 + 14500) = 530$	38.77	945	1335
88	38.8	19600	8212	11388	$(15829 + 11388) = 393 \times 10^6$	-7	522	$0.011 \sqrt[3]{11388} = 0.03$	38.77	945	
96	W.L. at banks 38.8 - 2 x 0.03 = 38.74				Overflow = 0.24×10^6		400	$3600 \times 8 \times 0.5(14500 + 11050) = 370$	38.69	936	1735
104	38.7	15600	8153	7447	$(11388 + 7447) = 272 \times 10^6$	-9	281	$0.006 \sqrt[3]{7447} = 0.01$	38.69	936	
112	W.L. at banks 38.7 - 2 x 0.01 = 38.68							$3600 \times 8 \times 0.5(11050 + 7900) = 273$	39.27	3109	2016
120	39.3	12000	8507	3493	$(7447 + 3493) = 157 \times 10^6$			$0.002 \sqrt[3]{3493} = 0.03$	39.30	3174	
128	39.3	9500	8507	993	$(3493 + 993) = 65 \times 10^6$			0	39.30	3128	
136	39.3	7800	8507	-707	$(993 - 707) = 4 \times 10^6$			0	39.32	3136	
144	39.3	6300	8507	-2207	$(-707 - 2207) = -42 \times 10^6$			$0.002 \sqrt[3]{2207} = 0.02$	39.32	3056	
152	39.0	5000	8330	-3330	$(-2207 - 3330) = -80 \times 10^6$			$0.006 \sqrt[3]{3330} = 0.09$	39.09	2948	
160	38.7	4000	8153	-4153	$(-3330 - 4153) = -108 \times 10^6$			$0.011 \sqrt[3]{4153} = 0.18$	38.88		
168	37.2	2300	7268	-4968	$(-4153 - 4968) = -394 \times 10^6$			$0.039 \sqrt[3]{4968} = 0.66$	37.86	2554	
176	35.0	1000	5970	-4970	$(-4968 - 4970) = -430 \times 10^6$			$0.086 \sqrt[3]{4970} = 1.47$	36.47	2124	
184	32.7	400	4610	-4210	$(-4970 - 4210) = -397 \times 10^6$			$0.150 \sqrt[3]{4210} = 2.43$	35.13	1727	
192	26.3	400	2300	-1900	$(-4210 - 1900) = -794 \times 10^6$			$0.433 \sqrt[3]{1900} = 5.36$	31.66	933	
200	22.3	400	1147	-747	$(-1900 - 747) = -344 \times 10^6$			$0.870 \sqrt[3]{747} = 7.88$	30.18	589	
208	21.0	400	790	-390	$(-747 - 390) = -148 \times 10^6$			$1.125 \sqrt[3]{390} = 8.22$	29.22	441	
216	20.5	400	680	-280	$(-390 - 280) = -262 \times 10^6$			$1.125 \sqrt[3]{280} = 7.40$	27.90	179	
224	20.0	400	570	-170	$(-280 - 170) = -171 \times 10^6$			$1.125 \sqrt[3]{170} = 6.20$	26.20	8	
232					Duration 34 days						

TIME PERIOD IN 10^6 cu. ft.

A CORRECTED W.L. JORDAN OF TOTAL FLOW OVER BANKS DURING

-----B TOTAL STORAGE BETWEEN BANKS IN 10^6 cu. ft.

C TOTAL STORAGE OUTSIDE BANKS IN 10^6 cu. ft.

Construction Of Stopbanks

There were two purposes of the main stopbanking. The first for hydraulic reasons to guide the flood through the swamp and the second purpose of the stopbanks was to store floodwater between them thus reducing the difference between inflow and outflow. The idea was to have a large enough distance between the banks to store over a thousand hectares of water but this was opposed because it required so much good land, much of it peat. The river area and areas close to it were alluvial clay,

naturally eroded from the upstream hill country and stream banks over the centuries and deposited when the river had overspilled. This clay material would be used to construct the stopbanks.

So the width of the main floodway was reduced from 2600 feet to 1000 feet to allow another 1200 acres of land to be developed and in order to bring the stopbanks in off the peat nearer to the firmer clay riverbanks to reduce settlement problems. Chief engineer Moores agreed this regrettably halved the scheme's storage capacity in the river by some ten million cu M, a volume reduction equal to today's surplus stored in pockets during 5 to 6 year floods. He added that, "For storage purposes low-lying less productive areas will give sufficient capacity."¹¹⁵ Everybody missed this point because this trade-off meant there was going to be much more storage inside the pockets on good farmland than expected. Ten million cubic metres divided by ten thousand meant (at a metre depth) an extra 1,000 hectares would be flooded in the pockets. I believe this was one of the worst mistakes made.

The reduction in storage between the control banks also constricted the top of the scheme and had consequences that still affect the scheme today albeit in only the larger flood events. An engineers' proposal to stopbank Swamp Road and form an overspill detention storage area in Okarika pocket was turned down by landowners concerned.¹¹⁶

Stop-banks stop all water but control-banks, sometimes called inflow crests, allow for planned overspilling, an important distinction. Stopbanks had a batter of 2:1 but inflow control banks were battered at 3:1 to better control erosion during overspilling.¹¹⁷ NCC began construction in 1970 after six years of planning and design through the 1960's. The velocity of flow through the central swamp between the stopbanks at bank-full stage was planned to be less than one foot per second or about one metre every three seconds.¹¹⁸

Once, the Commission had big trouble with a wet 'spring' preventing construction of a control bank until Jack Ilich solved the problem by switching a neighbour's water pump off. The contractor had severed a buried waterpipe. The 'spring' dried up!

The Scheme's Lower Boundary

Hydrologically the scheme effectively ends at the Mangere Rapids. For that reason the early scheme construction works included improvements downstream to and including the rapids. The actual lower boundary is really the Mangere Falls just downstream of the rapids. These falls are shown on the front page of this book.

Initially the same boundary was proposed for rating purposes.¹¹⁹ "The whole of the catchment of the Wairua River above Mangere Rapids comprising some 216 sq. miles was included in the rating districts defined in the N.Z. Gazette."¹²⁰

"It is proposed that the rating district for major scheme works shall be this same scheme area. It will thus be possible to avoid complications which could arise in the carrying out catchment control work in parts of the catchment remote from the swamp but of benefit to it."

¹¹⁵ Chief Engineer Alan Moores Preliminary Report of September 1965 page 2 item 2

¹¹⁶ Tony Spiers and NCC Memorandum of Facts, Abandonment of Okarika Detention Dam 28/7/71

¹¹⁷ Works Consultancy Drawings 1995 repair contract

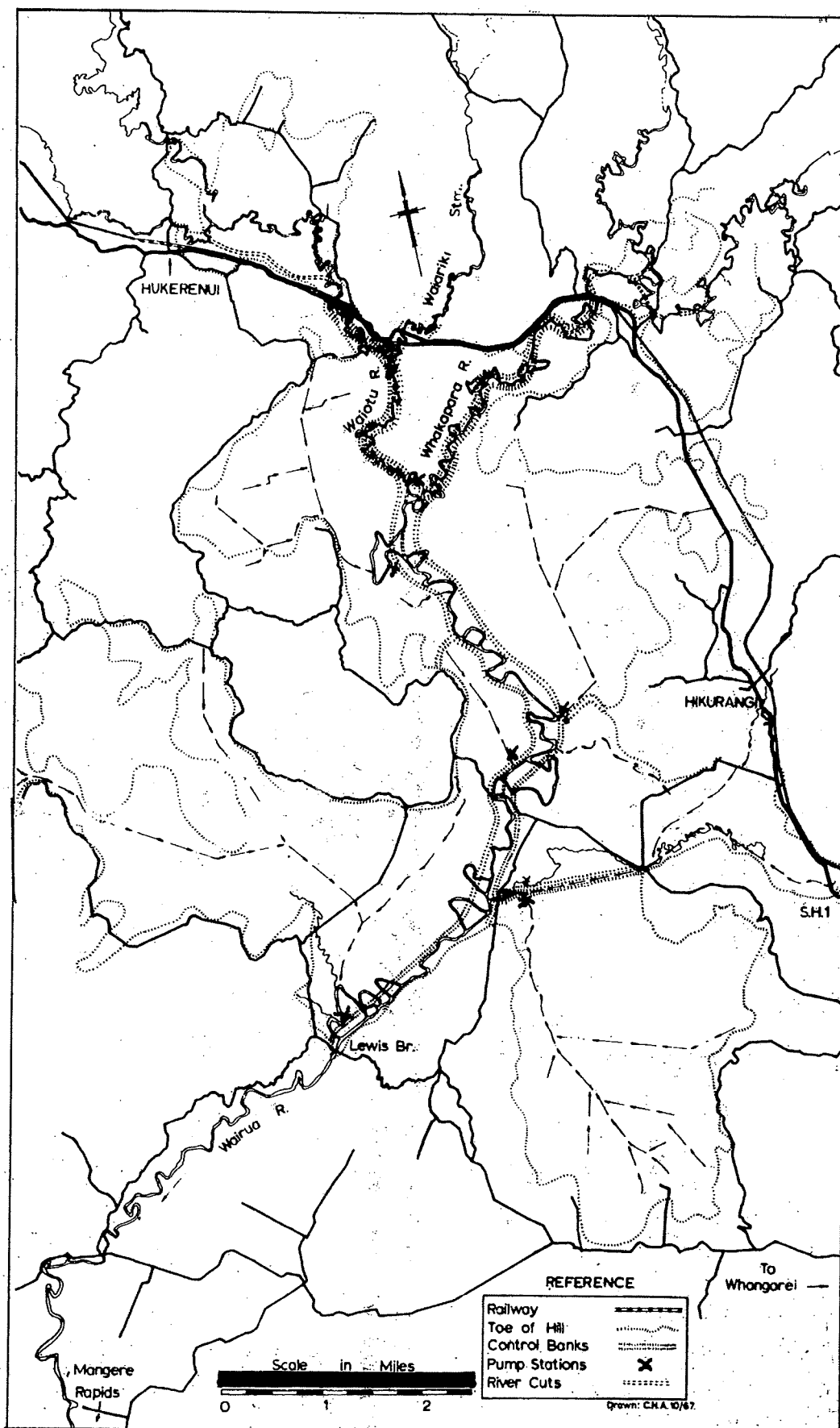
¹¹⁸ NCC Volume 2 back cover

¹¹⁹ NCC Volume 2 Scheme Report of February 1968 on Scheme Boundaries pg 15

¹²⁰ NZ Gazette 2nd February 1967 (No.4 page 136)

The front page of that NCC Volume 2 Report featured the 1968 aerial photo taken at 35,000 feet by photographer Mr Derek Messenger. That photo was used to design a scheme model which now obediently resides in the Hikurangi Museum jailhouse. The photo as shown in Volume 2 showed the lower boundary was down to the Rapids.

However, the rating boundary post construction only extended as far down as the bridge on Pipiwai Road, often referred to as Purua Bridge. The following drawing overleaf, (no longer to original scale) shows the winding path of the Wairua River down to the rapids and the dotted lines of planned stopbanks in the scheme proper.



According to one surveyor of the time, their level pegs in the central area of the swamp were in the habit of moving themselves at night or on weekends, so the surveyors learned to go back to a benchmark to safely begin their days work at the correct level.¹²¹ Also the downstream section of Tanekaha stopbank was started too narrow and that is why that section has always been steep and hard to keep up to correct elevation.

Channels were cut using dozers, scoops, and draglines. Rarely seen today, a dragline was basically a toothed bucket on the end of long wire ropes hanging from a long boom attached to the tracks and swiveling cab. It took a skilled operator to use one. They threw the bucket out and dragged it back then swung around and emptied out. There were no hydraulic diggers in those days. At one stage thirty earthmoving machines were working on construction.¹²²

The main channel from Junction to Jordan Bridge when full, had a water surface gradient of 1:250 and from Jordan Bridge to Lewis Bridge 1:300.¹²³ However the invert of the main channel, that is the riverbed, was finished to zero fall.¹²⁴ The intention was to improve that later on, however at the time of writing this has not yet been done.

By 1977 12 km of stopbanks were completed on each side of the river from Junction to Lewis Bridge and the seven inflow areas were cut in last, each one 228 mm deep. These "As Built inflow crests" were surveyed by NCC staff member Gary Rusk in 1978 and these drawings were still currently in use up to 2011.¹²⁵

Seven pump stations were installed with the pump capacities matched to remove rainfall from each pocket at an equal proportional rate. Remember that pumping capacity was proportional to rainfall catchment only and not to the quantity of overspill water into storage within the pocket. Construction of the scheme was mostly organized by only four men, P. Q Palmer, Colin Anderson, Gary Rusk, and Chrichton Christie.¹²⁶ Stopbanks and inflow crests were surveyed at least three times by Rusk and Christie from 1978 with any settling topped up but this was discontinued in 1982-1983 or so when the banks were considered stable.¹²⁷

How Did They Set Inflow Shares?

Surprisingly few people nowadays seem to know how the seven inflow shares were set, in spite of the distribution of floodwater into the pockets being a matter of critical interest to those who have land subject to flooding.

First let's look at the swamp as a whole. Prior to construction, total storage volume of the swamp appears to have been calculated on a mathematical water-in minus water-out basis with no use or sign of contour/volume calculations. This is demonstrated in the section *Storage Capacity* on p.12-13 of the NCC vol *Technical Report and Calculations* 1 March 1966. Using discharge observations a relationship was established between the water level at Jordan Bridge and the quantity in storage. To quote them: "...the water level at that point is a fair indication of the extent of flooding and the quantity in storage." Also "From this information and that shown on 05.00.03 approximate curves have been drawn up showing water quantities and flooded area at

¹²¹ Interview with Chrichton Christie 16th August 2001 ex NCC surveyor during construction

¹²² Northern Advocate file

¹²³ NCC Design Documents and MWH March 2003 Report pg 5

¹²⁴ NCC Plan 407 Long sections of Waiotu, Whakapara and Wairua Rivers

¹²⁵ NCC Plan 1371 Bank survey drawn by G. Rusk July 1978 also used by MWH in the Review

¹²⁶ Interview with Chrichton Christie ex NCC surveyor 16th August 2001

¹²⁷ Interviews with ex NCC surveyors Gary Rusk and Chrichton Christie

*different water levels." And by "using observations from 1963"*¹²⁸ it appears that this work¹²⁹ was later extended to produce the graph "F" on volumes shown in Vol 3. It seems that from this time on the designers used water level tables for Jordan Bridge to establish volumes. The process is detailed below. There is no mention in Vols 1,2,or 3, of any volume calculation using contour maps.

Now let's look at the pockets. It has often been said that the volume calculations for inflows into the pockets have been 'lost' over the intervening years. After discussions with the ex NCC chief field officer¹³⁰ who was technical assistant throughout design and construction, the very person who did most of the plans, graphs and drawings, the writer has concluded that these calculations were not lost - they never existed in the first place. In spite of a mass of other technical detail in NCC Vols 1,2,&3, there is no mention whatsoever of inflow percentage allocations being derived from pocket volume estimates. There is, however, plenty of evidence in NCC papers that volumes, and therefore the percentages, were simply derived from calculations based on flooded area with minor adjustment for any relevant other factors.

The ex NCC technical assistant I spoke to also believed that inflow percentages were calculated from area, because quite simply, as far as he knew, there was no other way to do it. He could not recall any other method being used. Another ex NCC worker, then a surveyor and draughtsman during construction of the scheme, also expressed the view that the inflow percentages for the seven pockets were simply calculated on the proportional area of pre scheme flooding.¹³¹

Alan Moores joined the NCC from the Ministry Of Works and would have known of any 1929 contour drawings that existed and he would have brought them across.¹³² We know these drawings were used for guidance to some degree but they were not particularly accurate being described in 1966 as 'approximate contour plans.'¹³³ It is obviously quite unlikely that the NCC would go through the huge job of surveying all of the pockets again in 1981-83, just three years after construction, if reliable contour maps had already been available only a few years earlier.

The 7 pockets had their floodplains contour surveyed progressively by the NCC between 1980 and 1983.¹³⁴ Therefore since the Catchment Commission did not do any contour surveys of the pockets until 1980-83, three years after construction finished, no basis existed within the design period for accurately calculating pocket by pocket inflow shares using volumes. The available evidence, supported by NCC staff of the time, clearly indicates that inflow percentages for the pockets were largely calculated using the percentages of flooded area during the 1966 flood. I have these drawings and the very strong correlation found between the two sets of figures supports this argument. But whatever method the NCC employed to calculate the inflow shares, they are 'set in concrete' having been checked over by MWH and others including myself. They underpin the essential philosophy of the scheme.

¹²⁸ NCC Vol 3 p8

¹²⁹ See NCC Vol 3 Appendix graph 05.00.03

¹³⁰ Mr Colin N Anderson Interview at his NRC office 20th February 1998

¹³¹ Mr Crichton Christie previously an NCC surveyor and field worker during construction

¹³² Several are now in Hikurangi Museum

¹³³ NCC Technical Calcs 1966 p13.

¹³⁴ See the NCC pocket contour map series drawn by surveyors Christie, Rusk, and Wilson

The list of inflow shares¹³⁵ was set down the by Northland Catchment commission engineers as follows:

Junction	5%
TeMata	20%
Otonga	23%
Mountain	14%
Tanekaha	3%
Ngararatunua	10%
Okarika	25%

The NCC explained that, "Because the overflows are a fixed and permanent feature of the scheme the distribution percentages have to be an average of different flood conditions. The water gradients of the river will differ for every flood and for every stage of a flood and the proportion of water quantities flowing over the bank will therefore never be constant."¹³⁶ The design inflow share percentages to storage and design objectives were confirmed in the Liaison Committee meeting minutes previous to the meeting held 17th May 2000.

In the 2010 Resource Consent application Mr. James Blackburn engineer for WDC explained that, "*The volume distributions are not directly related to the lowland area of a given pocket but are a function of land area, topographic height, and position within the hydraulic path of the scheme area.*" This engineer's description explains why the distribution shares do not exactly match the pocket areas subject to flooding.¹³⁷

Calculating Volumes Without Reliable Pocket Contour Maps

In the 1960's Holland was far ahead of other countries in hydrology and river hydraulics so it was no surprise that with the local shortage of engineers most of the hydrology and hydraulic design engineers of those days in NZ were of Dutch decent. Their methods were ingenious and the way they figured volumes on the swamp was a good example of that.¹³⁸ The process can be followed right through the NCC design documents. No computers here remember.

First the Hydrological Survey Party¹³⁹ recorded stage discharges for the rivers over a number of years for various sized storms and floods. My wife Maureen worked on this. Engineers then drew up hydrographs calculating the volume of water entering and leaving the swamp.¹⁴⁰ Eight hourly calculations from discharge observations were made for the duration of several floods, estimating 8 hourly water level and water volumes.¹⁴¹ Then an early stage curve was drawn to show the total flooded area in the swamp by static water level at Jordan Bridge.¹⁴² Additional input to this curve was supplied from observations from 1963 onward.¹⁴³

Water between the control banks was calculated¹⁴⁴ and the volume outside control banks deduced from the workings and shown.¹⁴⁵ Total storage outside banks

¹³⁵ After scheme design these were pasted into NCC Vol 3 on Graph G between pages 8 and 9

¹³⁶ NCC Scheme Report Volume Two Detailed Statement February 1968 page 21

¹³⁷ Statement by James Blackburn 4.3 page 6 of 46 to Resource consent Hearings Committee 2010

¹³⁸ NCC Technical Calculations Volumes 1966 and 1968

¹³⁹ Part of the Government department known as the Ministry Of Works

¹⁴⁰ NCC Tech Calcs 1966 pg 12 & 13, *Storage Capacity* and appendix 05 00 01 & vol 3 Graph E

¹⁴¹ NCC Technical Calcs 1966, appendix 05 00 02

¹⁴² NCC Tech Calcs 1966 section 05 00 03

¹⁴³ NCC 1966 Tech Calcs, appendix 05 02 01, 05 02 02), and this graph later became Graph F vol 3

¹⁴⁴ NCC Tech Calcs 1966, section 05 04 01.

¹⁴⁵ NCC Tech Calcs 1966, section 06 03 01

corresponded to a water level at Jordan Bridge matching the volume curve drawn¹⁴⁶ A graph of theoretical storage volume in pockets by area and level was then produced, see the total outside control banks "Storage/area" line on Vol 3 graph G. Area can be read off horizontally to or from the left and volume vertically downward.

The percentage share of overflow distributions were calculated separately by their respective area proportions of the large Feb 1966 flood and fixed to Vol 3 Graph G that deals with flooded areas in pockets, volume stored, and overflow distribution. Area flooded and volume for each pocket can be read from this page. The metric volume equivalent for a particular return period flood can be found by converting the imperial volume on the bottom line of Vol 3 Graph G, (total Storage). Extend this vertically to the "storage/area" curve then horizontally left to read "total Ha flooded. When this total area flooded is multiplied by the inflow allocation for a particular pocket it will produce the approximate area flooded in that pocket for that flood. The volume for a pocket in a certain flood can be found by taking the total Ha flooded on the left side horizontally inward to the curve line, then down to the total volume figure and multiplying by that pocket's inflow percentage. This was the page produced by design engineers from their observations and their 8 hourly volume calculations.¹⁴⁷ In short, the volume calculations were derived only to enable the design of storage and levels for stopbanks and pump stations while the actual inflow share given to each pocket was taken from the total flooded area pre-scheme and the Feb 1966 flood in particular.

I sought to check out the inflow share percentages for pockets compared to flooded areas within pockets after construction. If a good relationship is found it could then be used to gain information on past flooding and how well the scheme has performed in terms of the intended inflow proportions to the different pockets. Remember that rainfall within the pocket catchments were included in both cases, pre scheme and post scheme so to some extent internal rainfall is irrelevant.

The Flood Of February 1966

Rightly or wrongly the 1966 event has sometimes been described by farmers as the design flood. "Little information on flooding and river flows before 1960 was available and the original design had to be based on minor floods only. The flood of February 1966, of roughly 20 years frequency¹⁴⁸, generally confirmed the design,"¹⁴⁹ however, new knowledge was gained.¹⁵⁰ Before this flood the design had included hillwater canals and no pumps, but after this event the order was reversed to put in the pumping system first and leave out hillwater canals. This proved a wise change.

Although other floods were used during design much information from this flood was used in calculating and confirming inflow share percentages to the pockets. Being quite a large event reaching a peak of +89.95 MSL at the centre of the swamp,¹⁵¹ the February 1966 flood provides useful comparisons on design calculations. As the following drawings show, the flooding in those days moved progressively down the

¹⁴⁶ NCC Tech Calcs 1966 appendix 05 02 01

¹⁴⁷ NCC Technical Calculations 1966

¹⁴⁸ NCC Report on that flood page 1

¹⁴⁹ NCC Volume 2 page 5

¹⁵⁰ Memorandum of Facts and Events relating to the HSMS 14th April 1966 page 4

¹⁵¹ See NCC aerial photo at Tanekaha and contour level

swamp valley and in total this flood covered 4,937 ha¹⁵² at some stage but the total effective area of flooding was identified by the NCC after mapping to be 3,767 ha.¹⁵³

I drove down to Waiotu and observed this flood. Very high intensity rainfall over Hukerenui and the upper swamp caused a concentration time of only five hours. Water was above car headlight level across SH1 and littered with dead cows, sheep and wild goats from the bush. At Tapuhi my uncle counted some 250 slips in his bush and the same number on his grassed hills. At Paiaka, near Hukerenui, our neighbours emptied their overflowing six inch raingauge twice during the night and it was overflowing again at daylight. This indicated an overnight rainfall of more than 450mm.

The Catchment Commission collected information daily on the extent of flooding throughout this flood and maps were drawn for each 24 hour period.¹⁵⁴

The full size A3 drawings now provide a means to perform a check on the distribution of floodwater in the seven pockets. Remember "*These quantities will be distributed in proportion to the quantities of water stored in the sections during flooding under present pre-scheme conditions.*"¹⁵⁵ This was to meet the requirement for fairness to all landowners affected by flooding.

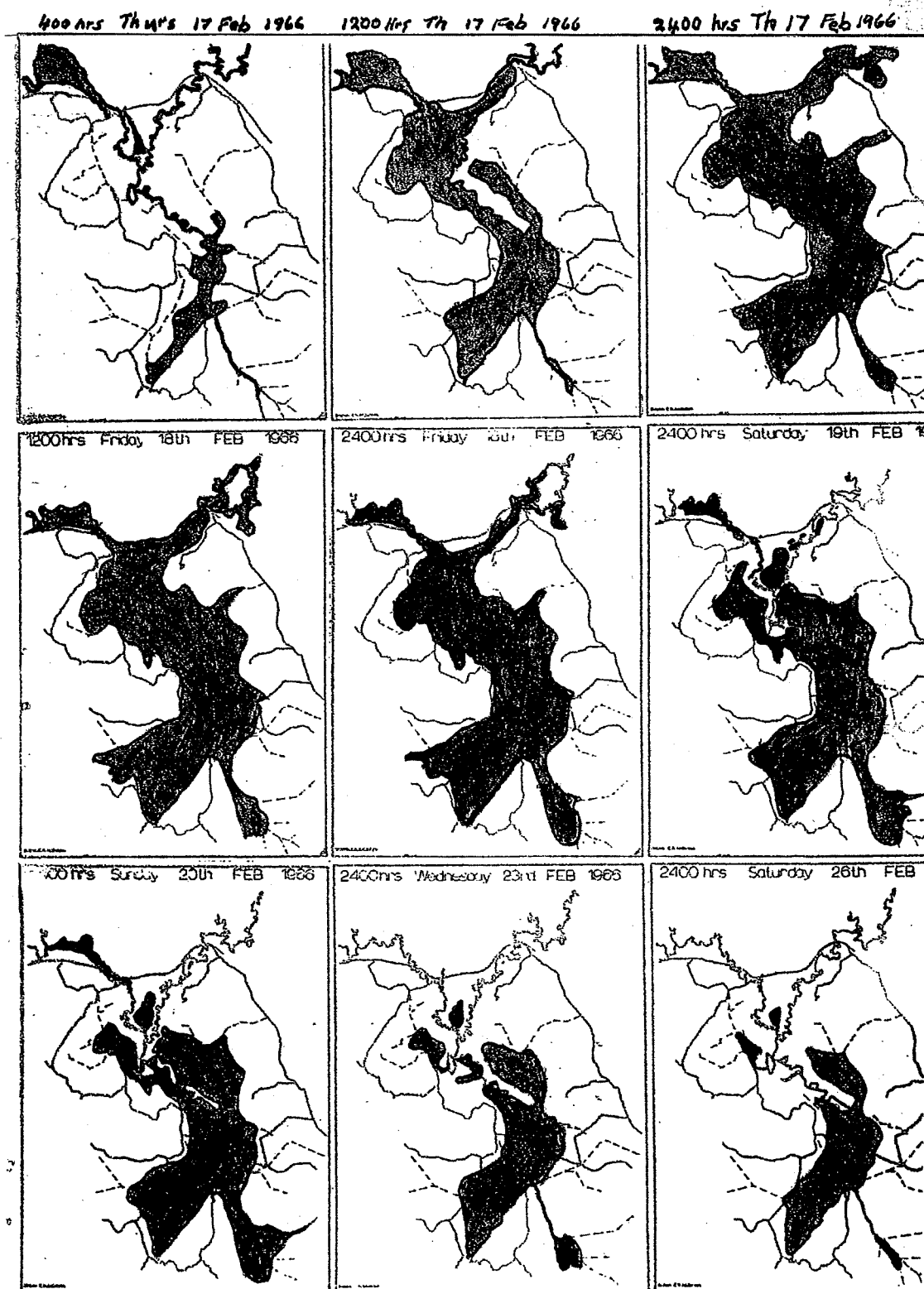
During the February flood on 1966 the NCC and landowners mapped the flooding as it concentrated and moved down through the swamp over a period of ten days. I have included some 'thumbnails' over-page of the nine large A3 drawings produced by the NCC that covered the flooding period of 236 hours.

¹⁵² NCC Finance Report page 1 Economic Report

¹⁵³ NCC staff drawings and data on February 1966 flooding by Colin Anderson

¹⁵⁴ Reduced size drawings are shown

¹⁵⁵ Vol 3 NCC

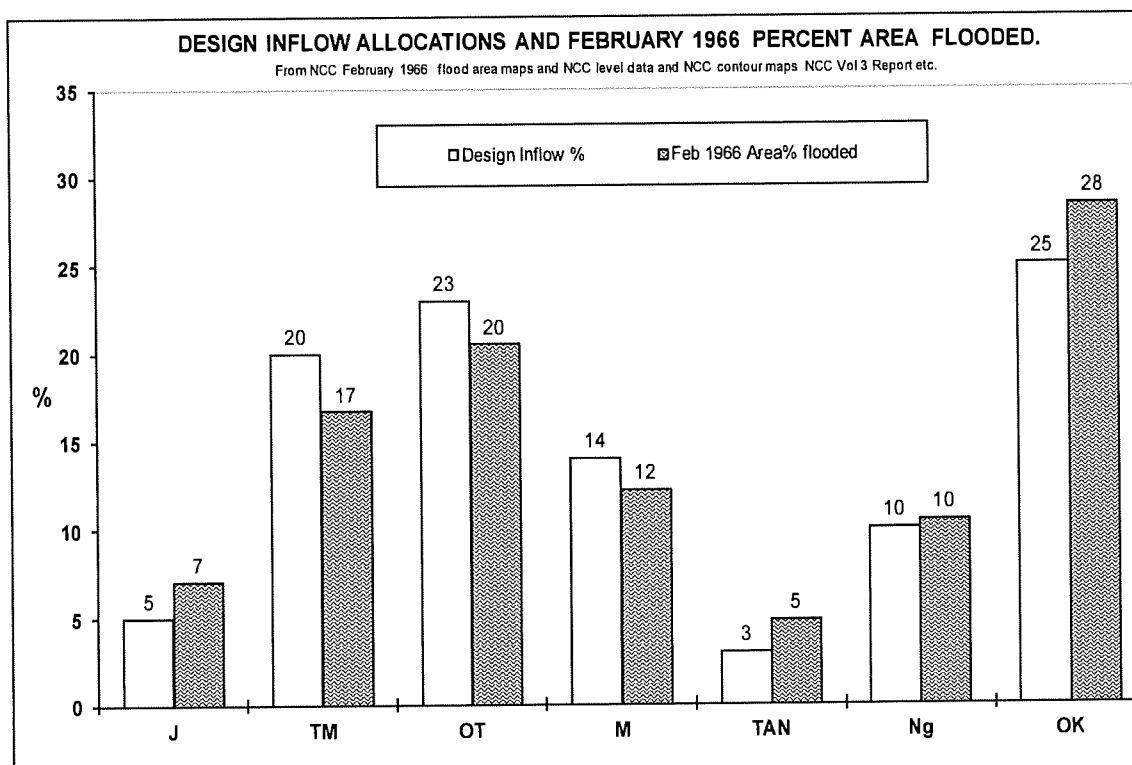


To test how well the maximum pre-construction areas flooded in each pocket for 1966 matched the subsequent storage shares allocated to the pockets, the peak flooded area for each pocket were calculated and expressed as a percentage of the total flooded area. The two sets of figures were then compared for correlation.

¹⁵⁶ The nine A3 sized drawings were done by Colin Anderson NCC staff member

I found there is a close relationship between these two sets of figures. In no case was the variation more than three percentage points of inflow share. Montgomery Watson also checked this later and found the same.¹⁵⁷ When compared together using Microsoft Corel (r^2) to find any correlation, the result was a correlation coefficient of .90 out of 1. Described as a good correlation.

So the close relationship of individual pocket inflow shares to their 1966 flooded areas clearly indicates how the inflow shares were basically calculated. Some small adjustments were made for other reasons.



INFLOW CREST DESIGNS

First Inflow Crest Designs

A matter of critical interest to owners of land subject to flooding is the correct distribution of floodwater into the pockets according to design proportions. First the durations of overspill should all be similar and then the inflow proportions are adjusted by the increasing or decreasing the relative length of the inflow crests concerned.¹⁵⁸ The following pages contain information on the design and subsequent changes, legal and illegal changes, made to the lengths of the inflow crests. In some cases the levels were also changed.

Catchment Commission documents and plans show the original design was for inflow crests to be much longer than they are now. The scheme was originally designed with a total scheme inflow crest length of 5 miles or 8 km.¹⁵⁹ The total scheme length was then apportioned to the seven pockets.

The required overspill volumes were set out in the table on page 14 of NCC Technical Report and Calculations 1966. The inflow rates for different storm categories

¹⁵⁷ The MWH 1999 Report data was also 3%

¹⁵⁸ Dr S Joynes and also NCC documentation

¹⁵⁹ NCC Technical Report and Calculations 1966, pg. 13 (f), and Scheme Report Vol 2 pg. 20, 1968

were calculated for the scheme as a whole on a single table.¹⁶⁰ The individual pockets were obviously, and quite simply, to be allocated their fair proportion of the above overspill according to pre-scheme flooding based largely on the flooded area of Feb 1966, although other floods were taken into account.¹⁶¹ Crest lengths were found simply by dividing the scheme inflow total into the proportional lengths of the inflow storage percentage share of each of the seven storage pockets. Examination of NCC Technical Calculations report of March 1966, for proposed improvements, indicates that early crest lengths were calculated as in the table below. Depths of all inflow crests were built nine inches (228 mm) below the top of the stopbank. To fine tune control of the volume of overspill to resemble pre-scheme proportions it was intended to adjust the length of each inflow crest after observing performance over time.¹⁶²

Inflow Crest Lengths in Metres as at March 1966 Design Stage.

METHOD OF CALCULATING CRESTS WITH ORIGINAL 8 KM SCHEME TOTAL. (8000 M)
Lengths indicated by Catchment Commission documents of 3/66.

Pocket	Scheme	x Inflow storage %.	= crest length.
Junction	8000	x 5%	= 400
Te Mata	8000	x 20%	= 1600
Otonga	8000	x 23%	= 1840
Mountain	8000	x 14%	= 1120
Tanekaha	8000	x 3%	= 240
Ngararatunua	8000	x 10%	= 800
Okarika	8000	x 25%	= 2000
Total length	8000	x 100%	= 8000

Table 2. below shows the crest lengths from drawings signed off by the NCC nine months after the calculations were printed on Feb and March 1966.

Inflow Crest Lengths At Dec 1966 Design Stage

LONG INFLOW DESIGN LENGTHS SHOWN ON NCC PLANS.

See NCC Drawings Series 412-1 to 7. Design: A. G Leenards, Approved A. Moores Dec 1966.

Pocket	Lengths shown on Plans. (converted to metres)
Te Mata	1248
Otonga	2014
Tanekaha	575
Okarika	2287

¹⁶⁰ Page 14 Technical Report and Calculations 1966

¹⁶¹ See also distribution of storage vol 2 pg. 20

¹⁶² NCC Vol 2 Feb 1968 pg 20

Catchment Commission drawings show the Mountain pump station and crest were originally planned to be opposite those of Ngararatunua on the Mangaharuru canal. Some NCC staff believed the TeMata inflow should be built at the south end (Hoult's) and indeed the early drawings did show this but later the plan was over-ruled.¹⁶³ Fortunately the original NCC design drawings of the 412 series are still available show four of the crests and these crest lengths are shown in the above Table. By deduction they supply the clues to the lengths of the other three crests. Lengths for the remaining three crests can be found by matching the lengths of the four known crests to their known inflow proportions which allows the total scheme length to be found. Then by using the inflow percentages of the missing three crests we can find their length also. This is shown in the Table below.

Crest Length % Related To Inflow % Shares

THE 5.3 MILE SCHEME DESIGN CREST.

Crest lengths from the NCC 412 series plans still existing are in bold.

Pocket	Crest Length	% Crest	Design inflow %	1966 flood % area
Junction	400	5%	5%	7%
Te Mata	1248	15%	20%	17%
Otonga	2014	23%	23%	20%
Mountain	1200	14%	14%	12%
Tanekaha	575	7%	3%	5%
Ngaratunu	850	10%	10%	11%
Okarika	2287	27%	25%	28%
Total	8574 m	100 %	100%	100%

An extra two columns showing the Design inflow allocation % and the 1966 percent share of flooded area are also given. Their relationship to the crest lengths of the 1966 design is very clear. There is a good match, as there should be.

Crests Lengths Halved Just Before Construction

Just prior to construction the total scheme inflow crest length was halved. This halving of total crest length from 8 km to 4 km was expected to provide improved control of otherwise very thin overspills on the somewhat uneven crest surfaces, particularly in smaller floods. Thus it would improve uniform performance of the control bank spillways. Engineers would also have expected less sinking of crest surfaces over soft areas thus providing better performance and lower maintenance costs. Access to some pump stations during overspill conditions would also be improved.

Following the decision to halve the total scheme crest length the crest lengths would have resembled the lengths in the following Table. This shows crests lengths were halved from the 8000 metres total inflow length of the scheme originally planned down to approximately 4000 metres.

¹⁶³ Crichton Christie interview 16th August 2001

THE HALVING OF CREST LENGTHS 1968-70

Pocket	Design crests 1966	Crests all halved	% of scheme crest
Junction	400	200	4.6
Te Mata	1248	624	14.5
Otonga	2014	1007	23.4
Mountain	1200	600	14.0
Tanekaha	575	288	6.7
Ngararatunua	850	425	9.9
Okarika	2287	1144	26.6
Total length	8574	4287	100

Inflow Crests Altered During The Construction Period

Following the halving of the scheme's total inflow crest length the percentage of the scheme length for each pocket was close to its design inflow share percentage. It then appears that during construction of the scheme from 1970 to 1977 crest lengths were altered again, some very substantially. No authorisation is given, no record, nor any engineers' explanation for the alterations is provided in any NCC scheme statements, and none in any documents nor in any of the appendixes.

One construction drawing was produced for the Ngararatunua inflow crest but curiously this drawing returned to the long crest scenario that had already been discarded. Not only that, another fifty percent was added! ¹⁶⁴ Why?

The changes departed very markedly from the planned design proportions and the substantial alterations to the inflow crest lengths manipulated subsequent inflow distribution away from the proportions of pre scheme flooding. Calculation methods used by the design engineers would naturally remain constant but since the lengths of some constructed crests were changed to a considerable degree this is an indication of influence on the construction process by persons who stood to benefit.

Changes were made to the proportional lengths of inflow crests that flew in the face of all previous NCC reports, plans, drawings and philosophy. If there were official reasons or discussions none were recorded.

The table below illustrates removals and additions made to the lengths of the inflow crests between the first 1966 design and completion of the scheme in 1977. The meddling is mind boggling.

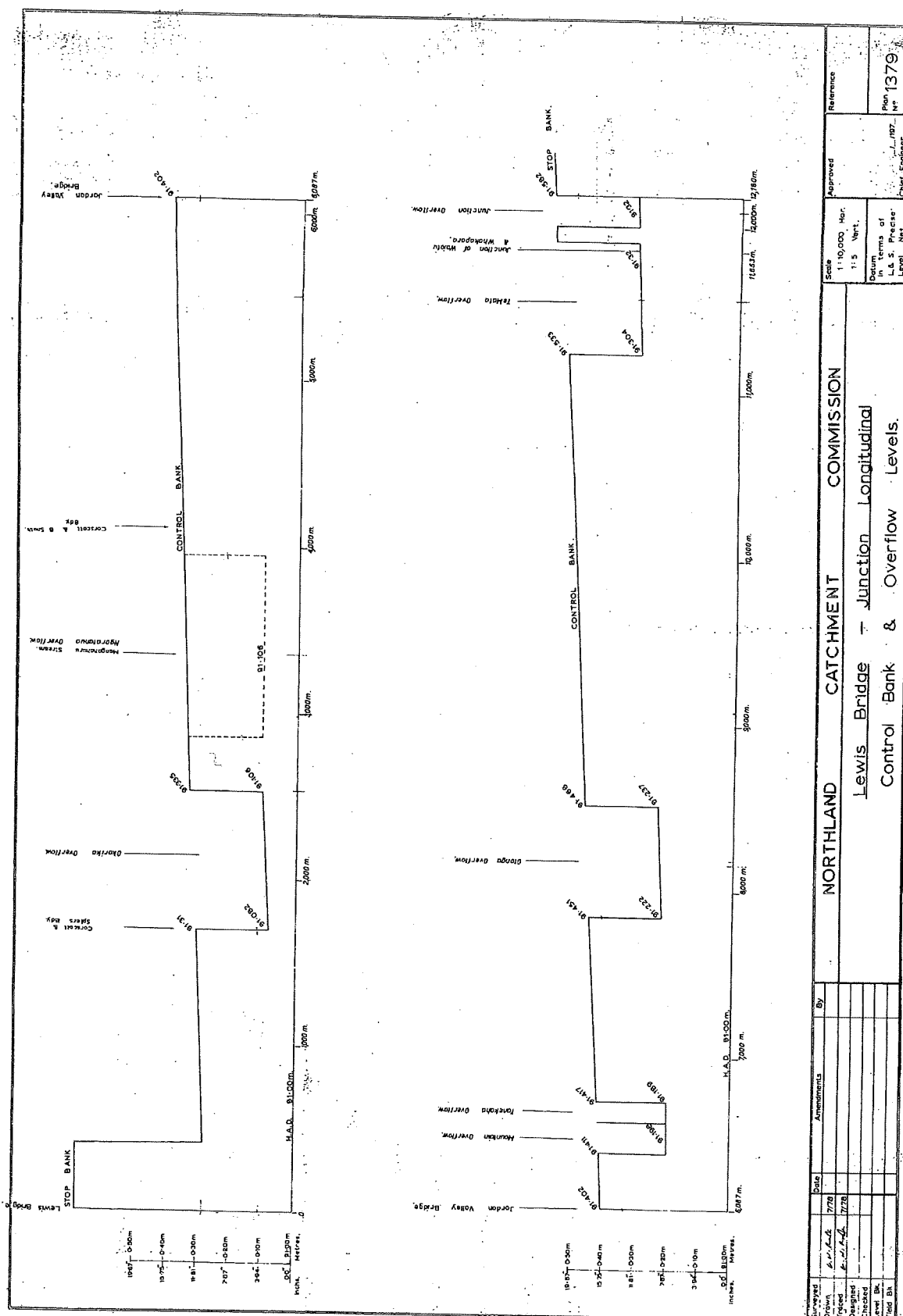
¹⁶⁴ See NCC Plan 471-1 600S Ngararatunua Inflow Crest

Crest Length Changes - 1966 to the As Built Drawing

Pocket	Design 1966 plans	Halved 1969-70	Changes made during construction		Crests halved Plus changes	As built Survey 1978
			REMOVED	ADDED		
Junction	400	200	-20		180	180
Te Mata	1248	624		+46	670	670
Otonga	2014	1007	-332		675	675
Mountain	1200	600	-400		200	200
Tanekaha	575	288	-88		200	200
Ngaratunua	850	425		+755	1180	1180
Okarika	2287	1144	-203		940	940
			-1043	+801		
Total	8574	4287	-242		4045	4045

The NCC plan # 1379 below, reduced to A4 from A1, shows the 'as built' July 1978 inflow crests surveyed and drawn after construction by Gary Rusk. This is the official drawing.

These dimensions were copied into the MWH Report 1999 Appendix 3.



THE FIRST FLOODS

Flooding During The Early Years

"There was much excitement on site during the first flood as they didn't really know until they saw it work." ¹⁶⁵ Unexpectedly the scheme began life with a baptism of fire, or rather water. Construction had ended after a long dry period and when the drought broke six storms struck in the four months from April to August and at the end of it farmers were left reeling, wondering what they had let themselves in for. Six floods in the first five months! To some the scheme appeared a mistake, however, as the first ten years ticked by it was demonstrated that the scheme worked remarkably well for the investment made. ¹⁶⁶ Not perfectly - but well and the few who had worked so hard to see the scheme built had good reason to be pleased. But some farmers were not so happy.

Flooded areas were carefully monitored by the NCC and enough detail of that is available to show in this book. I have NCC monitoring records plus the aerial photos of the early floods up to the time of cyclone Bola in 1988. The Table below uses available NCC data as recorded at the time and the results for the seven pockets are shown. Areas are taken from the pocket contour maps drawn after the scheme was built in the early 1980's. Levels were taken from recorded staff gauge readings (corrected to true levels), ¹⁶⁷ from NCC graphs, from NCC photographs and NCC aerial photographs using landmarks and surveyed contour lines. My data also closely matches the data of the NCC in those instances where they also calculated flooded areas. Ngararatunua and Mountain received wrong shares right from the start.

Table of Flooded Area Shares In First Twelve Years

EARLY AREA SHARES OF FLOODING. First 12 years.

For five floods - from the first flood June 1978 to Sept 1989.

Pockets	Average % Share	1966 flood Share	Design %
Junction	4%	7%	5%
TeMata	17%	17%	20%
Otonga	24%	20%	23%
Mountain	6%	12%	14%
Tanekaha	4%	5%	3%
Ngararatunua	22%	10%	10%
Okarika	24%	28%	25%
	100	100%	100%

¹⁶⁵ WDC councilor and ex NCC surveyor Crichton Christie interview 16th August 2001

¹⁶⁶ Crichton Christie interview 16th August 2001

¹⁶⁷ All staff gauges were surveyed in 2002 by Donaldsons Surveyors Ltd and readings adjusted

Farmers' Erupt in Anger

Criticism built when the scheme was only half built. Fifty ratepayers turned into irate payers at a meeting in the Jordan Valley Hall where some severely criticized the Commission over delays of the previous five years.¹⁶⁸

Because the basic philosophy of the scheme design was equal benefit and fairness the NCC carried out both aerial monitoring and ground monitoring, especially during inflow events. The first year of the scheme was a nightmare with six floods in four months but the NCC were able to report favourably on the first inflows over the crests to say that "Indications are that the inflows into the seven pockets are spread very evenly."¹⁶⁹ As banks settled down checking of banks was carried out annually by surveying and any low places topped up.¹⁷⁰

In non-inflow flooding, "more land was flooded in the pockets than had been expected, indicating that a problem lay in the run-off pattern within the pockets rather than the upper catchment."¹⁷¹ Anger erupted when farmers found more water ponded more quickly on their farms than they had expected and they made claims for compensation.¹⁷² But their main grievances were the escalation of costs for the scheme and material damage by flooding to their farming operations and their solicitor made submission to NCC for relief.¹⁷³ A year later, but still before the scheme's completion, ratepayer representatives to the NCC's Works Committee made the point that, "Any scheme that did not give five year flood frequency protection wasn't worth having."¹⁷⁴

In year one, 1978, the CEO of the Commission Mr Moores found himself defending the overtopping frequency. He said, "Some overtopping could be expected every two years but the winter floods would not have the significance of such a flood every five years in summer." "The Scheme is designed to overtop every two years but the damage does not equate with the damage done every five years in summer."¹⁷⁵ Mr Moores added that, "Some pastures might be under water for seven days in winter but only three days in summer."

The Swamp Ratepayer's Association then issued a written statement¹⁷⁶ expressing "Extreme disgust" with performance during the first two floods and claiming that, "The scheme has failed abysmally to protect the lower swamp to any worthwhile degree." "Conclusive proof of a design fault", they said. This popularised the slogan "Design Fault" a term still mentioned today. Submerging themselves in pessimistic criticism after only two floods saw farmers shaking their heads in dismay, feeling despair, and the swamp ratepayer's statement ended by saying, "The whole country is aware of the dubious reputation the swamp is acquiring." The NCC vainly attempted to defend itself against the onslaught. The facts actually were that the pre-scheme flood of 1966 had covered 3,767 ha and lasted 15 days while the first post scheme flood of similar ranking flooded only 2,004 ha and lasted only 8-9 days.¹⁷⁷

¹⁶⁸ Meeting of swamp Ratepayers at Jordan Valley Hall on 4th September 1974

¹⁶⁹ Interim Report Review of the Hikurangi Swamp Major Scheme Sept 1978 pg 25

¹⁷⁰ Interview with ex NCC Staff member, Surveyor Mr. G. Rusk 30th August 2001

¹⁷¹ Interim Report Review of the Hikurangi Swamp Major Scheme Sept 1978 pg 25

¹⁷² Report on Public Meeting 4th Dec 1975 in Hikurangi Hall 1:30pm

¹⁷³ Swamp Ratepayers Assn Submission to the NCC and NCC submissions to Wellington

¹⁷⁴ Northern Advocate November 23rd 1976

¹⁷⁵ Moores to NCC Hikurangi Swamp Works Committee 28th August 1978

¹⁷⁶ Statement of complaint to NCC issued by Hikurangi Swamp Ratepayers Association 24th July 1978

¹⁷⁷ NCC Report on June 1978 flooding page 4

With a 46% reduction in flooded area and a 46% reduction in flooding duration the farmers still grizzled and complained. The Commission couldn't win. The scheme's administrators, good people who were trying to help the farmers, were under relentless attack from then on and they felt bad about it.

These were years of very high inflation after a Labour government spending spree and costs escalated seriously. NCC secretary Mr. Graafhuis produced a lengthy report, kept secret, on the failings, mostly overspending \$1.6 million to \$4.4 million and various delays from 4 years to 8 years. In retrospect it appears that the Commission tried to walk a balancing act: trying to rebuff farmer criticism and keep the scheme going positively while at the same time presenting a negative report to government citing accumulated construction difficulties and asking for better terms for the \$510,000 loan.¹⁷⁸ The Commission apparently decided on a voiceless vote without even the bat of an eyelid, to keep the lid on and conceal the report forever.¹⁷⁹ But it became a hot topic and farmers objected to the cost escalation of the scheme at a special meeting of 30 ratepayers.¹⁸⁰ The estimates for the February 1968 Scheme Report had been \$1.64 million, revised June 1974 to \$3.46 million, revised again at completion in June 1977 at \$4.26 million, revised in September 1978 to \$4.24 million¹⁸¹ and reported at \$4.51 million in 1979.¹⁸²

I remember attending the special public meeting¹⁸³ in Hikurangi Memorial Hall where the mood of swamp farmers was, as usual decidedly angry. A motion was moved by Max Dempster seconded C. Palmer and carried, *"That the ratepayers on the Hikurangi Swamp are opposed to having to pay for the extra escalation in costs of the Scheme caused by delays in its planning and construction. The NCC has already admitted responsibility for these delays and should be prepared to act on behalf of the ratepayers to negotiate more favourable terms for the loan the ratepayers were forced to accept. They request the NCC to negotiate with the new (National) government on the grounds that they should not have to meet the whole increase in costs."*

A lengthy legal dust-up ensued but no court action. The government was asked to bail the scheme out to avoid having another poll of ratepayers and the risk of failing to get support from them.¹⁸⁴ The NCC agreed to apply to the new government for better loan terms and later, through my close association with National M.P. John Elliott, I was involved when the Minister discussed the situation with him. The government offer was a 20 year loan of \$510,000 at 6.25% repaid by 1995¹⁸⁵ and a new loan deed was signed between NCC and Her Majesty in July 1982. Repayments were deferred to July 1983 as was interest for two years after completion to allow farmers to regain their financial feet. Also a government grant of \$15,000 was sought and was granted for rates relief of \$7/ha for A and B class land¹⁸⁶ or about 50% of their rates total.

But the other problems and complaining didn't go away. Within just four years there were more than eighty newspaper articles covering the dissention¹⁸⁷ plus a

¹⁷⁸ Graafhuis Report in Northern Advocate June 28th 1978

¹⁷⁹ Northern Advocate May 13th 1976 pg 3 "Swamp ratepayers refused copy of mysterious report"

¹⁸⁰ NCC minutes Dec 1975. Report on Public Meeting 4th Dec 1975 in Hikurangi Hall 1;30pm

¹⁸¹ Summary of Estimates presented to NCC Works Committee meeting 28th August 1978

¹⁸² In the Northern Advocate meeting report of the Works Committee March 2 1979

¹⁸³ Public Meeting of Hikurangi Swamp Ratepayers at Hikurangi Hall 4th December 1975

¹⁸⁴ Submissions Report March 1975 page 6

¹⁸⁵ NCC minutes of an emergency meeting of 30 June 1975

¹⁸⁶ Soilcon letter advising of Government payment to rates account 13th November 1978

¹⁸⁷ Northern Advocate press articles held by the writer

damning Editorial.¹⁸⁸ Agricultural reporter Doug Guiney, who I knew well, gleefully said he, “really enjoyed the endless supply of copy” for the local newspaper.

A compensation claim of one million dollars was mooted by angry farmers complaining of delays in completing the scheme.¹⁸⁹

Overall, the effect on the morale of NCC staff was profound as they had done so much to help the farmers who unfortunately had unrealistic expectations of what they were getting for their money. Nineteen NCC staff members signed a petition presented by Mr. R. W. Cathcart to the Commission.¹⁹⁰ (Bob Cathcart stayed on with the NCC then the NRC until retirement around 2013). The petition said, “All Advocate articles in the last six months have been against the scheme and the Commission,” that was the truth as I’ve got the clippings to prove it. Cathcart maintained that, “Two thirds of the NCC staff have nothing to do with the scheme, staff feel ashamed to introduce themselves socially or on work related matters as employees and say they were loyal under duress but expect the commission to show loyalty in return.” The Commission expressed sorrow that so many staff felt like second class citizens. Commission member and swamp landowner Mr Ben Smith Snr, representing ratepayers, sympathised but said, “We also have the view of the ratepayers, the thing has got them up in arms.” Mr Ben Smith Snr himself also took the criticism hard and he still felt sore about it into his old age.¹⁹¹

It seems that the landowners of the 1970’s initially showed more confidence and were less afraid of debt than the landowners of today. But as the construction period dragged on and the cost of the scheme escalated their confidence took a battering and the economic viability of many farming operations was in doubt. In real dollar terms the original landowners were confronted with nine times the cost that today’s generation faces, and well over double the debt burden. It was written that, “farmers have been deprived of the benefits of the scheme.”¹⁹²

From the press clippings it seems some farmers were certainly rarking the Advocate up on the issue. A long string of headlines included such headings as ‘SCHEME WATERLOGGED’. ‘INVESTIGATION NOT RESOLVED’. ‘INQUIRY SOUGHT’.¹⁹³ And so it went on. And on. And on.

Commission member Mr R P Ward said, “A highly organized group of people had tied down the whole region over the matter”¹⁹⁴ and the group had been lobbying the Minister in Wellington.¹⁹⁵ In a foretaste of the next century a Review of the scheme was made¹⁹⁶ but that never settled the dust either.

The years of ruckus over the early flooding and costs left bitterness that lasted many years, in some cases people’s lifetime, and the negative tone of the scheme remained, tainting it far into the future. To their credit, members of the NCC and its Works Committee worked very hard and against great difficulties and were never given the credit they undoubtedly deserved. It was reported that the Catchment Commission, faced with so much farmer criticism, wanted an independent assessor

¹⁸⁸ Northern Advocate July 26th 1978

¹⁸⁹ Item 19 Soil Conservation and Rivers Control Council report 13th December 1976

¹⁹⁰ Northern Advocate article sometime after the 26/07/78 Editorial and before August 12th 1978

¹⁹¹ The writer was informed by Smith’s grandson Ben Smith 11th Sept 2009 who said, “Grandfather won’t talk about the scheme anymore”

¹⁹² Memorandum of Counsel for the Ratepayers Assn pg 2 22nd February 1979

¹⁹³ Advocate 26th July 1978, January 24th 1979

¹⁹⁴ NZ Herald August 10th 1978 pg 2

¹⁹⁵ Mr Haslett NCC Chairman NZ Herald August 10th 1978

¹⁹⁶ Review of Hikurangi Swamp Major Scheme September 1978

appointed to determine 'once and for all' that the scheme was working to its original design criteria.¹⁹⁷

Then the 'secret' Graafhuis report saw the light of day two and a half years late¹⁹⁸ and in it this man, who was secretary treasurer of the Commission for 15 years, pointed to "avoidable delays, inflation, and discrepancies in estimating." Legal instructions were made from a law firm¹⁹⁹ to an accountancy firm²⁰⁰ which resulted in a 20 page expose' of the Graafhuis Report and commented on damages due to persons affected in support of rates relief.

NCC Chief Executive, engineer Alan Moores commented "If I were to have my time over again I would not recommend a scheme with such a low level of protection."²⁰¹

On that score, there is still a current view that the scheme had a minimum protection level to prevent any floods overspilling from the 5 year frequency floods and below. That view however, may not be factually based. Whether it was just a defensive fallback position or not, the NCC Interim Review Report of September 1978 stated, "*The design concept of flood frequency has proved difficult to express in layman's terms and as given in various reports has caused confusion. It can however, in terms of the original design concepts, be expressed as the removal of floodwaters from inundated land so that regrassing is not required, on average, more frequently than once in five years. Scheme design was based on damage producing floods rather than less harmful but more frequent winter floods.*"²⁰² Works were soon listed to alleviate problems with the scheme which was described as "a base on which future works can be built."²⁰³ The need for hillwater canals were discussed at length particularly in Okarika pocket.²⁰⁴ To complete the scheme further works were intended. Short term works concerned urgent drainage in the pockets and two of these works were fixing the problem of not getting water to the pumps in both Otonga and Ngararatunua pockets but these were never done.²⁰⁵ Long term future work was listed as, "Regrading of the Wairua River from the Junction to the Rapids below Purua Bridge."²⁰⁶ Notably some thirty four years later and unaware of the NCC's earlier but unfulfilled intentions on this regrading, Mr. Ray Hindrup on his own initiative and at his own expense, employed Dr. Steven Joynes in 2011 to explore the very same line of improvement.²⁰⁷ More on this later.

FARMER INTERFERENCE

Was Ngararatunua Crest Extended To Relieve Other Pockets?

During later stages of the design phase the NCC decided to halve all crest lengths, as already discussed but the long Ngararatunua inflow crest design was kept to occupy almost all of the available stopbank. No reason or any explanation for this action was

¹⁹⁷ NZ Herald August 10th 1978 pg 2

¹⁹⁸ Printed in the Northern Advocate June 28th 1978 after the scheme's completion

¹⁹⁹ Messrs Davenport, Buxton, Gibson, McHardy and Partners

²⁰⁰ Barr, Burgess & Stewart Chartered Accountants New Zealand

²⁰¹ Hikurangi Swamp Works Committee Minutes Page 4 meeting after July 1979

²⁰² NCC Interim Report. Review of Hikurangi Swamp Major Scheme September 1978

²⁰³ Interim Report Review 1978 pg 5

²⁰⁴ Reported in several articles in the Northern Advocate November 23rd 1976 and elsewhere

²⁰⁵ Chrichton Christie NCC surveyor, interviewed 16th August 2001

²⁰⁶ Interim Report Review 1978 pg 5

²⁰⁷ Mr Hindrup paid many tens of thousands of dollars for his own computer modeling to be done

provided or recorded by the Catchment Commission. Clearly this crest was never halved because after twenty-five years it still occupied all of the available stopbank.²⁰⁸ Instead of halving Ngararatunua crest it was simply drawn and left at the long length of the first pre-scheme proposal while other crests were mostly halved. If Ngararatunua inflow crest had been given the same treatment it would have been constructed 310 metres long - not 1180. (850 halved equals 425, then reduced by the average 27% like all the others equals 310). Instead it was extended by 280 percent to 1,180 metres - almost three times its design length and four times the length it would have been if it was treated like the other crests. The manipulation of crest lengths of the Ngararatunua pocket can be followed through in the section above on inflow crest designs.

The flooding record shows that from year one the Mountain pocket received much less storage water than its inflow allocation said it should. Conversely the Ngararatunua pocket received more than double its proper inflow amount right from the start, twenty percent flooding instead of ten percent. The causes can be linked directly to the mysterious changes shown above. Further mystery is added by some recalculations penned in the back of volume three, pg 27, in the hand of Mr. P.Q. Palmer Chief rivers control and drainage officer, a kindly man who got walked over²⁰⁹ and who long felt hurt by management decisions that he had strongly opposed but he was over-ruled.²¹⁰ Palmer's notes clearly indicate Moore had underestimated the Mangaharuru flow. In his older age Mr Ben Smith (senior) commented, "There is no way Ngararatunua crest should be that long, it should be only three or four hundred metres long."²¹¹ Additionally, "This crest gave trouble over the years on account of peat layers settling up to 75mm but this small amount can result in large inflow volumes and the balance of overflows to pockets are not correct."²¹²

When the 'scheme design' was discussed during the recent WDC scheme review Mr. Ross Finlayson's occasional comment was, "Which design are you talking about, the Catchment Commission's or Mr Alan Moores'?" Reading between the lines suggests the scheme as designed by engineers and the scheme that was built by CEO Moores might have been two different things. The two largest discrepancies mentioned above were first identified by this author in 1998 then again some years later in computer modeling by two groups of consultants. However, inflow crests in the consented and constructed 2011-12 repair works are still being contested.

The Secret Bulldozing Down Of Otonga Stopbank

About seven years after the scheme was completed the inflow crest of the Otonga pocket was privately and illegally extended from its construction dimensions. At that time Otonga pocket was mostly owned by Wilsons Cement Company for access to limestone and so farming the land was of secondary importance. Some of the area was undeveloped and this could have appeared as an invitation for the inflow crest to be illegally extended, thus storing extra water and relieving flooding in neighbouring pockets. While the exact year is not known it has been ascertained by ex NCC staff members in charge that all banks and crests were monitored and well maintained until

²⁰⁸ See all surveys from 1994 to 2002. Works, Hodges & Elrick and Donaldson Surveyors

²⁰⁹ Ex NCC surveyor Chrichton Christie who worked closely with him, interviewed 16th August 2001

²¹⁰ Interview with Mr. P. Q. Palmer 21st January 1998

²¹¹ Mr Ben Smith Snr to M Rusk during a conversation on Swamp Road 2.46 pm 16 July 1998

²¹² NCC Works approval Reconstruction of Overflows file 855 dated 11th July 1984

1983.²¹³ Banks were topped up each year from 1978 to 1983 at an average cost of 550 dollars per year.²¹⁴

Therefore the Otonga stopbank cutting was likely to have occurred after 1983, which surprise surprise, had been the year of a sizable flood.²¹⁵ The Otonga flood control bank was secretly bulldozed down for an extra distance of one kilometre. A smooth extension of 1000 metres was cut down on the northern end of the existing 675 metre crest to make a total inflow crest of some 1700 metres.²¹⁶ The NCC flood level monitoring and aerial photos indicate this unauthorised work may have been done during the dry summer of 1983-84 or thereabouts.

How was this kilometre bulldozed off the top of this prominent stopbank unnoticed by the farm manager who regularly used the stopbank as a farm road? Obviously his employers the Wilsons Cement Company were not told. There were some possible family relationships on the swamp at that time but no speculation on that is made here. Flooding in Otonga pocket became very extensive, sometimes taking up to 76% of scheme overspill.²¹⁷ The largest landowners within Otonga pocket, Wilsons Cement Company, had already made several complaints about flooding to the Catchment Commission early in the 1980's^{218 219} and had then filed a writ and claim for damages.²²⁰ A firm of agricultural consultants then wrote on behalf of the Golden Bay Cement Company to the Catchment Commission complaining about excessive flooding in Otonga pocket.²²¹ Alas the Northland Catchment Commission belatedly undertook a survey to check the levels of Otonga pocket stopbank and crest.²²² The result was a big shock to the owners.

The Wild West Returns

As a result of that survey the illegal and secret cutting down of the Otonga stopbank was officially exposed in 1987 but this did not become public knowledge. Logically the Catchment Commission then let a contract to restore the lowered stopbank up to proper design level. Surveyor's level pegs were driven and the earthmoving contractors²²³ duly arrived and commenced the earthworks restoration. But at that point an angry posse of local farmers came up from Jordan Valley and pulled out the pegs, throwing them away.²²⁴ These persons made a big fuss and ordered the contractors in colourful farm language to depart-off and stop repairing the stopbank! And so without leveling pegs left to work to, the contractors had no choice and left the job. They never returned. This repair job was stopped by farmers on the swamp. It begs the question: did they have a vested interest in diverting floodwater into Otonga Pocket? But the die was cast. The swamp scheme would see contractors driven off similar restoration contracts on three more occasions. And the idea of using Otonga pocket as a cheap flood detention area would resurface.

²¹³ Interview on 30/08/02 with G. Rusk previously a NCC Surveyor. Also C. Anderson, 20/02/98

²¹⁴ Liaison committee Chairman Mr Ross Finlayson Annual Report

²¹⁵ Flood of June 10th 1983

²¹⁶ See special NCC survey plan 2153 of Feb 87, also 1994 Works Consultancy Survey - Jordan Bridge to Junction, Left control bank, Distance points 1850 -3400

²¹⁷ From Dr. Steve Joyne's work with using Cyclone Fergus aerial data

²¹⁸ Wilsons Cement Co Letter to NCC 16/10/80 requesting a report on flooding of February 1980

²¹⁹ Hunter Assessors letter 4/3/81 to NCC post meeting confirmation on flooding and other matters

²²⁰ Letter Nicholson Gribben & Co Baristers and Solicitors to NCC 29/6/81

²²¹ David Smith and Associates Ag Consultants letter to NCC 26/7/85

²²² NCC survey drawing Plan No 2153 dated 1/2/87

²²³ Walker Bros Contractors of Hikurangi

²²⁴ As recounted by eyewitness Mr. Bull Taylor, earthmoving machine driver on that day

The Catchment Commission failed to fix the Otonga stopbank before the 1989 local government rationalisation which saw the NCC go out of existence and administration moved into the hands of the Northland Regional Council, then to administration by the inexperienced Whangarei District Council. Perhaps the NRC simply chose to off-load the hot potato although it does administer a number of other flood control schemes. After being devastated during Cyclone Bola in 1988 the Cement Company gave up the fight and sold its property to Mr. Ray Hindrup who beat the underbidder, a Mr. Stan Semmenoff, who also wanted to buy Otonga Station.²²⁵

After his first big flood in 1993 Mr. Hindrup promptly discovered what had been done, and there ensued a long acrimonious battle with the Liaison Committee who tried to block his every move for a survey of the scheme's banks. Ex-Catchment Commission staff member and WDC councilor Crichton Christie admitted what occurred saying, "*We always knew that one day someone would start farming in the Otonga pocket, previously we knew it was farmed by a cement company and it didn't really matter.*"²²⁶ Apparently the prevalent attitude was, 'it didn't really matter.'

At the request of Liaison Committee interests the NRC had investigated using Otonga pocket for a detention basin to relieve flooding on the other landowners. "Preliminary calculations indicated Otonga basin would make a substantial improvement."²²⁷ So with the NRC stalled over fixing the cut-down bank while at the same time considering detention of other people's floodwaters on the Otonga land, is it any wonder nothing was done to repair the lowered Otonga crest? After local government changes the illegal cutting down of the Otonga stopbank was not addressed by the District Council until 1997, ten years after certain landowners stopped the restoration contract. The 1985 success was followed by successful moves to block other restoration contracts in 1995 and 1998 followed by strenuous efforts to block the repair contract in 2011-2012.

TeMata Inflow Crest Filled

This inflow crest had the most unauthorised work done on it. Like the other two crests mentioned below, this work was also done without any of the required authority, permits or resource consents. You would expect that if any council did it there would be records and drawings but no paperwork exists.²²⁸

The only record is a 1989 report to a Liaison Committee meeting by Engineering Assistant Colin Anderson where he stated, "Earlier this year repairs were carried out where damage had occurred"²²⁹ listing every crest but Mountain crest.²³⁰ The TeMata crest was not filled then because when I interviewed Mr. Anderson he assured me it was not by saying, "*I would have known if any work was done on TeMata crest.*"²³¹

Later, when it was illegally filled, a large volume of earth was spread on top of this crest giving it a distinctive rounded cross section.²³² TeMata inflow crest was reduced totally in length 50%, from 670 metres down to only 325 metres.²³³ Some 345 metres

²²⁵ Mr. Ray Hindrup

²²⁶ Ex NCC surveyor Mr. Crichton Christie at WDC Liaison meeting of 25/05/99

²²⁷ WDC Otonga File ref 88/7/12

²²⁸ WDC reply 13th Sept 2000 to Hindrup's letter of 5/2/00, NRC letter 6/1/00 to Hindrup's 2/12/99

²²⁹ Following Cyclones Bola of March 1988 and Delilah of January 1989

²³⁰ WDC file 466 810-02 Pg 9 16th August 1989

²³¹ Interview 6th March 2000

²³² See Donaldsons Survey May 2002 Sheet 23 cross sections Q-Q and R-R

²³³ MWH 1999 page 70 Table 9.3

was completely filled and the remaining 325 metre centre portion raised over 5 inches (130 mm)²³⁴ which kept out all but the larger floods.

When I interviewed surveyor Rob Andrews in 2000 at Opus he told me that when the Works Consultancy survey of this crest was done in 1994 he was the leader of the survey team on the swamp. *"We were sent back to do the TeMata job a second time because the boss thought we had made a huge surveying mistake but after surveying it again we found there was no mistake."*²³⁵

The filling of TeMata inflow crest is shown on the Works survey drawing below in yellow cross hatch. The filling could only have been done after the very large flood of Cyclone Bola of March 1988 or more likely after the next flood of Cyclone Delilah January 1989. (This is discussed under 'Scheme Review' in the section 'The Misleading Letter From TeMata.')

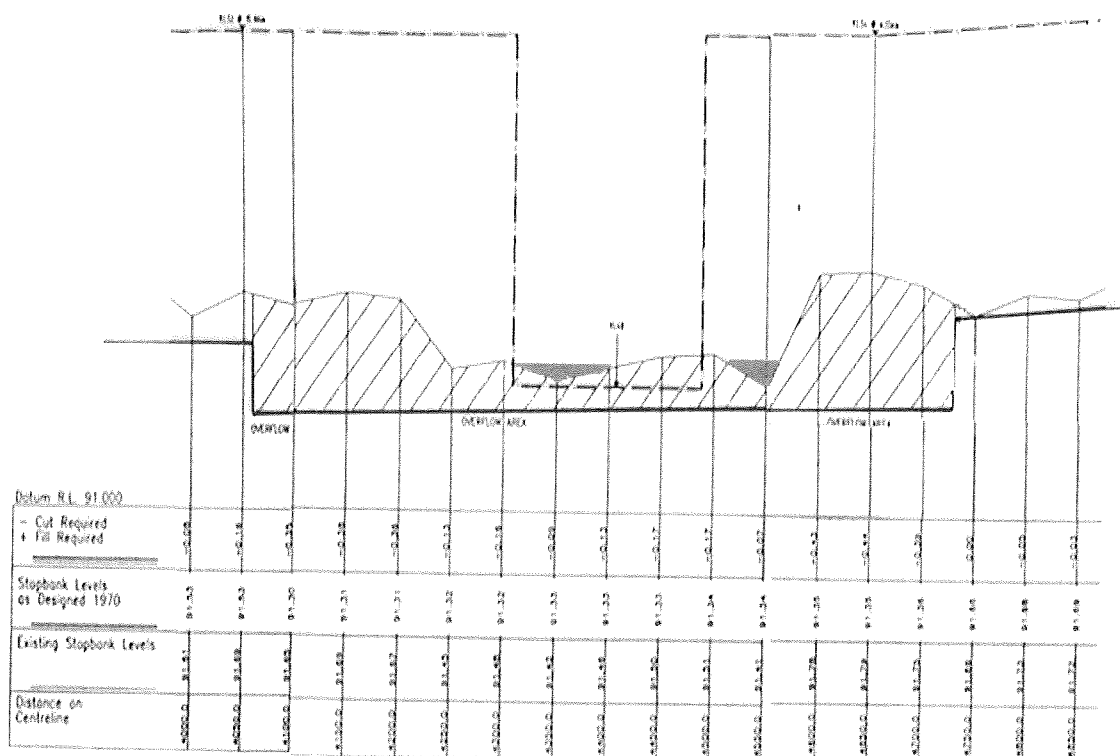
TeMata inflow crest remained filled and shortened for some twenty one years. The reduction of inflow in the numerous 3 to 5 year floods as shown below in blue, has been calculated to be as high as 90% diminishing with the increasing size of the flood.

Details of the drawing shown below is scanned and taken from MWH's 1999 Report and includes the cross hatched filling from the 1994 drawing done by Rob Andrews' team at Works Consultancy. The filling has been highlighted in yellow. Whatever was done the earthworks did not simply move on their own accord, humans were involved somewhere.

Also shown on this drawing by a dotted orange line drawn by MWH is the narrow inflow crest and the very high stopbank levels that were proposed in 1999 by MWH for the TeMata pocket as a result of having modeled their water gradient too steep throughout the main channel of the swamp. More on this later.

²³⁴ See WDC Pump Station log sheets level entries by B Cutts and landowners

²³⁵ Works Consultancy Survey April 1994 Sheets 5 & 6. Donaldsons 2002 Sheet 23



Junction Inflow Crest Filled

Junction inflow crest was unintentionally if not illegally filled in. The euphemistic politically correct description is referred to as 'ad-hoc'. Consultants MWH said, "*The Junction crest appears to be filled in, approximately to the level of the stopbank*"²³⁶ The filling was brown rock and earth and virtually eliminated the inflow. This can be seen on the 1994 Works Consultancy survey drawings.²³⁷ In this 2002 drawing shown below the profile is the same but done every 25m rather than 50m.²³⁸ The illegal filling is highlighted in yellow. Most floods did not overflow here, as in Cyclone Fergus.²³⁹ The June 2002 flood peak level was examined here²⁴⁰ just after the overspill and the grass was not bent over for 50m in the middle section between two overspills of 30 and 50 m. This established that flood peak, shown here in blue, was close to 91.54 MSL with most of the inflow blocked.

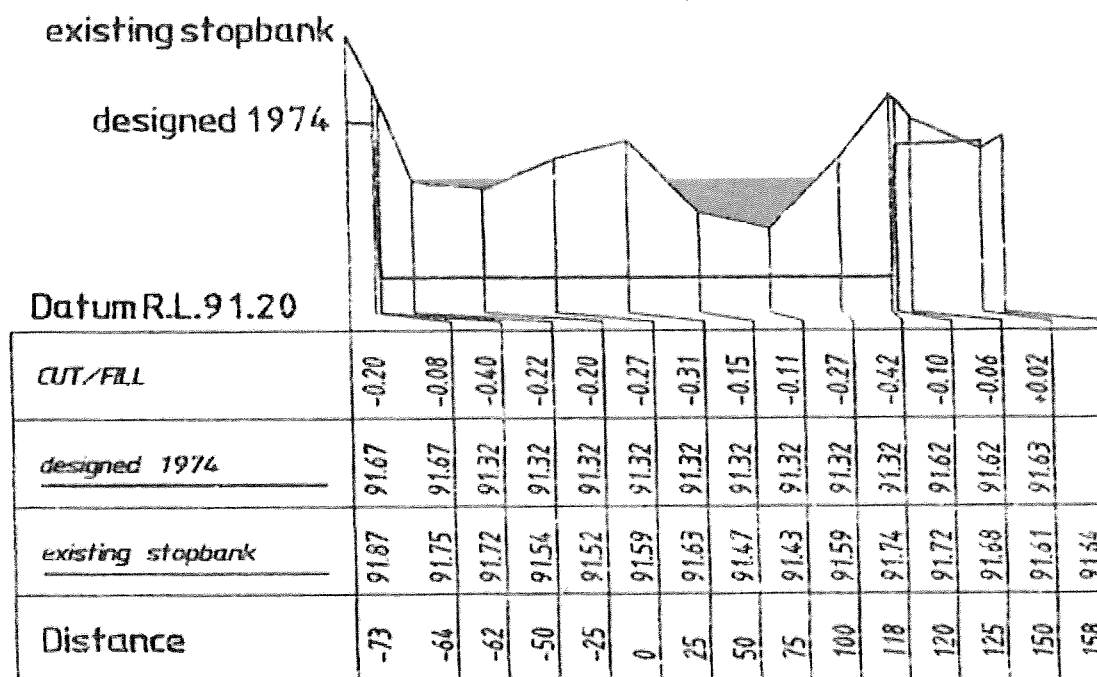
236 MW Report 1999 page 26

237 9/1036/20 Sheets 5,6,12 15

²³⁸ Donaldson survey 2002, 11 weeks before the 2002 flood. Same as Works Consultancy survey 1994

Landowner concerned Mr Lou Pickens said he inspected the crest and that there was no overspill

²⁴⁰ See photographs of Ray Hindrup inspection 23rd June 2002 15.30 hours



Scale Horizontal 1:2000 Vertical 1:10

Waioitu River - Junction Crest - Whakapara River

The Junction filling job was obviously motivated by the large floods of cyclones Bola and Delilah in the late 1980's but this crest remained almost completely filled in for 18 years. The District Council unknowingly helped financially²⁴¹ to have this illegal work carried out by letting a normal contract to repair a small washout immediately around the pump station where the stopbank had been stock damaged.²⁴² But the contractor, Jonda Enterprises, based in this pocket, filled in far more than was contracted to do, filling in Junction inflow crest almost totally.

WDC engineer of the time Mr. Green wrote to the contractor asking him to explain why he used 310 cu M of blue rock for such a small job and questioning, "That was a lot, where did it go?"²⁴³ The filling of Junction crest was also noted in the WDC Pump Station Log record by Field Officer Brian Cutts as, "*Big repairs to Stop banks and a large wash out by pump station.*"²⁴⁴ Mr. Cutts knew the inflow crest very well and must have known the inflow area had been filled in with metal because that was how he drove his ute to the station. The Council was thus partly liable for this silence, which perhaps explains why the WDC maintained a silence on the matter afterward.

Mr Hindrup later asked WDC whether it had any paperwork regarding the filling inflow crests²⁴⁵ but WDC reply was negative saying, "We understand the work was done in the early days by the Catchment Commission," then went on to admit regarding Junction Pocket that a Mr Beasley did the metalling job. "Partially over-running the overflow area."²⁴⁶ Mr Hindrup also asked the NRC if it had any records of

²⁴¹ Account #825102 Transaction Listing 1/7/93 to 30/6/94

²⁴² WDC Account 825 102 Contract No. W82074 to Jonda Enterprises of Junction Pocket. \$13,351.75

²⁴³ WDC Letter of 6/8/93 File 88/7/4

²⁴⁴ Junction Station Log May 1st 1993

²⁴⁵ Letter Hindrup to WDC 5/2/00

²⁴⁶ Letter WDC 13/9/00 to Hindrups letter query of 5/2/00

alterations to the inflow crests on the scheme and received a clear cut no, there were no works done in the NRC's time.²⁴⁷

Mountain Inflow Crest Filled

The original Mountain Pocket inflow was designed to be located on the bank of the Mangaharuru Stream opposite Ngararatunua inflow crest but it was moved considerably upstream.²⁴⁸ This move enabled pumping from the loops but unfortunately incurred some head loss against the river. Then again, "The Mountain overflow is to be shifted to a section of the control bank where there is no peat layer underneath."²⁴⁹ Soon after that this crest was partly filled in and thereby further shortened. WDC surveys and others clearly show this. A Mountain pocket farmer who owned a truck carted and dumped loads of drain cleanings and spoil containing kikuyu from Rushbrook Rd onto the crest.²⁵⁰ This filling in started in the 1980's and remained in place some twenty five years.

Table of Crests illegally Altered During Ten years 1983-1993.

Pocket	"As built" crests Survey 1978	"altered" crest lengths As in 1994 survey.
Junction ¹	180	100
Te Mata ²	670	325
Otonga ³	675	1500
Mountain	200	150
Tanekaha	200	200
Ngararatunua	1180	1180
Okarika	940	940
Total length	4045	4445

The above table does not show crest levels, only lengths. The shortened crests were also raised as well. The fair performance of inflow crests in the distribution and storage of floodwaters is a fundamental but contentious issue for farmers on the swamp. The unauthorized "fiddling" with the inflow crests had a marked effect on the operation of the Scheme and the fortunes of landowners. Some profited while others went broke. Some just got sick, literally, of the backstabbing and innuendo and simply sold up and left the district. Some of those who had benefitted sold out, cashed up and went off elsewhere while the going was good.

You Can Figure Out Crest Lengths On The Back Of An Envelope

Off the top of your head you can figure the lengths of sample inflow crests using basically the same method the design engineers did. The actual consented total inflow length for the scheme is now 3,360 m but let's take a total scheme inflow length of say 3000 metres just to make it easy. Apply the inflow shares for the 7 pockets.

²⁴⁷ NRC reply 6/1/00 to Hindrup's letter of 2/12/99

²⁴⁸ Chrichton Christie NCC surveyor interviewed 16th August 2001

²⁴⁹ NCC motion adopted for Works Approval File 855 dated 11th July 1984

²⁵⁰ The farmer reportedly trucked draincleanings with kikuyu from the farm of Mr G. Martin

Ngararatunua has 10% so 10 into 3000 equals 300m length.²⁵¹ TeMata has 20% that's double Ngaratunua or 600m. Junction has 5% so half of Ngararatunua is 150m. Okarika has 25% so add TeMata's 600 and Junction's 150 giving Okarika 750m. Tanekaha has 3% so three times thirty (hundreds) equals 90m. Likewise for Mountain 14% is ten into three thousand equals 300m, plus four per hundred (4x30) is 120 equals total 420m. This method is the "rule-of-thumb linear" assumption, ie: crest lengths made proportional to their required volume fraction.²⁵² This was the method largely used by design engineers in the 1960's.²⁵³

SCHEME PERFORMANCE

Flooding In The Seven Pockets 1966 To 2000

Some people may be interested to see the areas flooded by various floods over the years. The writer has searched for all available information on flooding and has collected information covering thirteen significant inflow flooding events of different sizes between 1978 and 2002. Information was extracted from Pump Station Log sheets, from a private commercial aerial photographic survey, from more than 60 aerial photographs taken by NCC staff between 1978 and 1984, and from NCC monitoring graphs, reports and NCC meeting records. This information spans the whole period from the scheme's beginning to the present - including the years for which log records were destroyed.²⁵⁴ In addition, the observations and Catchment Commission drawings of the flooding of February 1966 have been used, along with a photo of that flood. The contour maps of pockets that were surveyed by NCC 1980-83 also include some information on highest flood levels in pockets for specified floods with detail noted on those maps. Importantly, these contour maps also include flooded surface area by elevation tables, thus enabling any recorded flood levels, past or future, to be converted to Ha flooded. This method is quite accurate, as I found when comparing results with some NCC monitoring figures located later.

I was asked to do a slide presentation to landowners in the Ngararatunua pocket and this was well received by those who attended at Mr Ross Finlayson's residence.²⁵⁵ No farmer groups from other pockets availed themselves of the opportunity. Ngaratunua farmers then made a joint complaint to the WDC about their flooding,²⁵⁶ describing the unfair flooding contrary to the scheme's philosophy and asking the WDC for action to lower the high upstream spillways that had existed for many years.

However one views the flooding records they confirm what a number of landowners have been saying for many years, that some pockets have been receiving much less than their allocated share of storage floodwater while several pockets have been regularly inundated far beyond their design limits. The comparison of flooded areas that I have shown is confirmed in later studies using overspill volumes, both from my own work and by consultants MWH. These are

²⁵¹ A NCC drawing shows the length as 280m – but with a handwritten 1 inserted in front = 1280 m

²⁵² M.Menzies of Water Resources Consulting Group

²⁵³ Lengths on NCC Drawings series 412 -1 to 7. Design: A. G Leenards, Approved A. Moores 12/66

²⁵⁴ Field Officer Brian Cutts as he noted in Ngararatunua Log 6th May 1997 also verbally to author

²⁵⁵ This meeting was held at Mr Ross Finlaysons home was on 15th November 2000

²⁵⁶ Joint letter from 13 ratepayers farmers in Ngararatunua pocket to WDC 17/11/00

discussed later. The following tables of flooded area and several graphs record what has occurred over the years.

Data On Flooding 1966 -2002

The table below illustrates the shares of peak flooding by area for 14 floods. The first event is the February 1966 flood which played a large role in setting the inflow shares to pockets based on pre-scheme flooding. That role was confirmed when after inspection the first large flood of the new scheme in April 1968 led the NCC to report that, "No changes are required to the design."²⁵⁷ In practice the differences between pockets are more pronounced in the more numerous annual to five year ARI events while the differences caused by low level overspilling reduces in the bigger the floods that may occur on fifteen to twenty year interval. Historically faulty distribution proportions are easily seen in the most common one to five year type floods and this is clearly shown by the professional aerial photographic survey of the 1st January flood of 1997 aka Cyclone Fergus. Distribution of floodwater to storage in the pockets improves in the very large floods because the inflows operate better at greater depths.

The work done by the author on 9 floods and the work by MWH has shown that the average of the 1 to 10 year ARI floods overflows to storage around six million cubic metres of water in the pockets.

SUMMARY OF AREAS FLOODED DURING INFLOW EVENTS: 1966 to 2006.											
From detailed pages with referenced levels and Ha.											
Flood Date:	mm	mm/days	Rainfall	Area	Area	Area	Area	Area	Area	Area	Area
& method	24hr rain	Total rain	Return	Ha	Ha	Ha	Ha	Ha	Ha	Ha	Ha
	Puhipuhi	Puhipuhi	Period	Junction	Te Mata	Otonga	Mountain	Tanekaha	Ngararatunua	Okarika	Total
18-Mar-66	228	306 (2)	20	265	629	772	459	180	393	1069	3,767
19-Jun-78	268	287	8	39	410	479	148	86	458	450	2,070
10-Jun-83	312	372 (2)	20	100	380	865	155	87	667	487	2,741
24-Oct-83	125	199 (3)	1	no record	297	595	72	82	246	526	1,818
8-Mar-88	197	518 (5)	20	265	653	776	225	192	749	719	3,579
2-May-93	185	285 (2)	10	138	388	602	150	112	770	624	2,784
30-Mar-95	265	308 (3)	10	no entry	305	640	45	109	494	594	2,187
1-Jan-97	139	268 (2)	5	20	65	372	30	59	431	98	1,075
2-Jun-97	145	171 (2)	1	no entry	203	330	19	82	455	70	1,159
1-Jul-97	180	207 (3)	3	no entry	263	466	90	90	523	327	1,759
14-Jun-98	153	193 (2)	2	no entry	141	330	20	45	230	90	856
29-Nov-98	178	253 (3)	2	0	103	290	71	65	376	68	973
5-Nov-00	Dale to supply		1	16	76	198	11	91	119	47	558
20-Jun-02	(Weather Bomb - non Tropical storm)			76	370	474	150	144	610	700	2,524

A larger table is shown in the appendix.

²⁵⁷ NCC Technical Calculations Feb 1968 page 30

A Check on Accuracy Of Reading Aerial Photographs

Several weeks after I estimated the water levels from NCC monitoring photographs some NCC monitoring graphs were located. These were for the flood of June 1983 and were found to be recorded on a full 24 hour basis on a set of graphs drawn from pump station gauge readings recorded at the time by Catchment Commission staff. With some interest these were checked against the earlier calculations made using contour maps to find levels from aerial photos. The levels recorded by the photos at mid-day (tree shadows indicate the flight time was about noon) were compared against the noon levels plotted by Catchment Commission staff from the pump stations log records.

Levels estimated in year 2000 from aerial photos taken mid-day 10th June 1983:

TeMata	Otonga	Mountain	Tanekaha	Ngararatunua	Okarika
89.25	88.20	88.00	88.00	89.50	87.81

Levels actually recorded in NCC logs at mid day 10th June 1983:

89.30	88.20	88.19	87.65	89.50	87.85
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This comparison of results has a high correlation coefficient (r^2) of .95 which shows that aerial photographs and map reading using contour maps can have a good degree of reliability for finding levels to make comparisons of flooding between pockets.

Two years later in 2002 the flooded areas for the June 1978 flood were found in a set of minutes of the NCC Works committee. These were compared against the estimates made from the aerial photos of the same 1978 flood as follows:

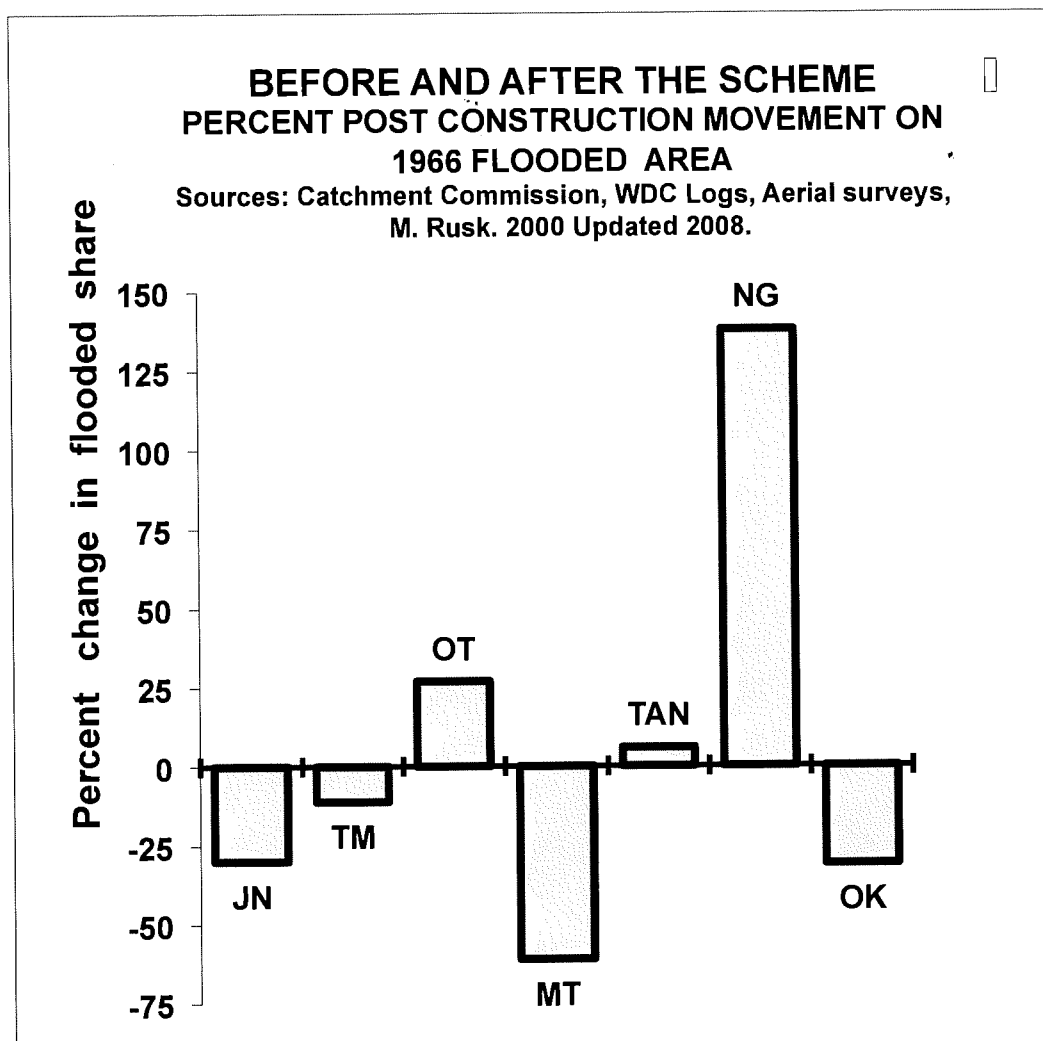
	Junction	TeMata	Otonga	Mountain	Tanekaha	Ngararatunua	Okarika
Aerials	80	489	458	155	85	490	407
NCC	39	410	338	148	86	459	523

A reasonably good match. The correlation here is .93 and the (r^2) is .86. The above check was interesting in that it is confirmed that old photographs, even faded ones, can yield good indications of flood levels using contour maps to find the areas and volumes of flooding in past events.

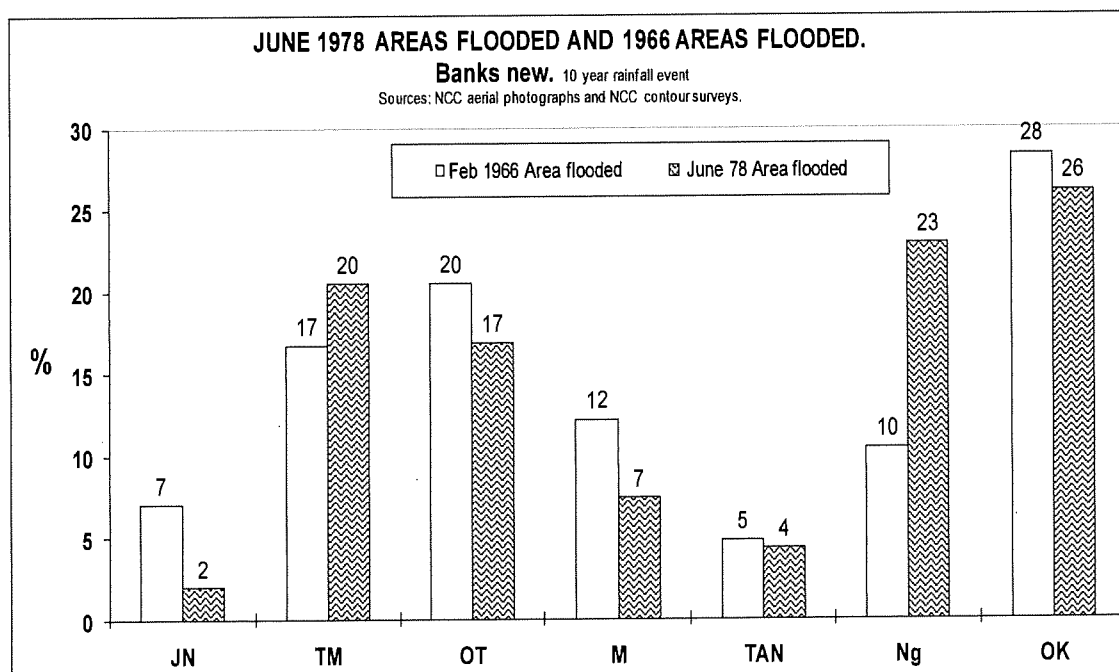
Changes in Flooding above SH1 at Whakapara

In 1999, the second year in the review process, I looked at flooding above SH1 Whakapara. There were two reasons. Firstly, some upstream landowners had long complained the scheme gave them little if any benefit and secondly there was the question of whether or not the filling of inflow crests downstream and poor scheme maintenance had caused flooding to become worse on farms in the Whakapara area above SH1.

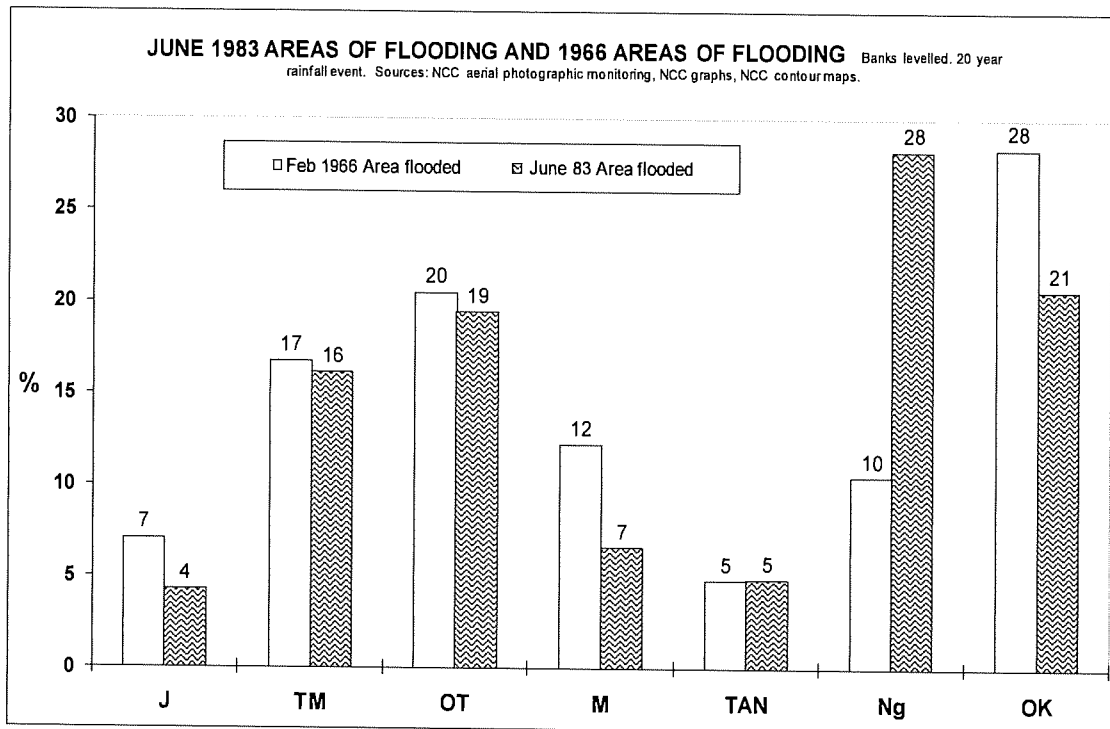
I set out to examine the official flood records in order to find whether any change had occurred over time in flood trends above and below SH1 at Whakapara. Data was kindly made available by the Northland Regional Council from the NIWA TIDATA series. Records from the automatic level recording station were used from Site 46632. The water level recorder at the old cableway site records every 15 minutes. Data used is for Year, Date, time of rise above lowest ground, time of fall below lowest ground, and Peak Level. Coverage included every flood during the 39 years from 1960 - 1998 inclusive was examined. 104 flood records were selected where the levels exceeded



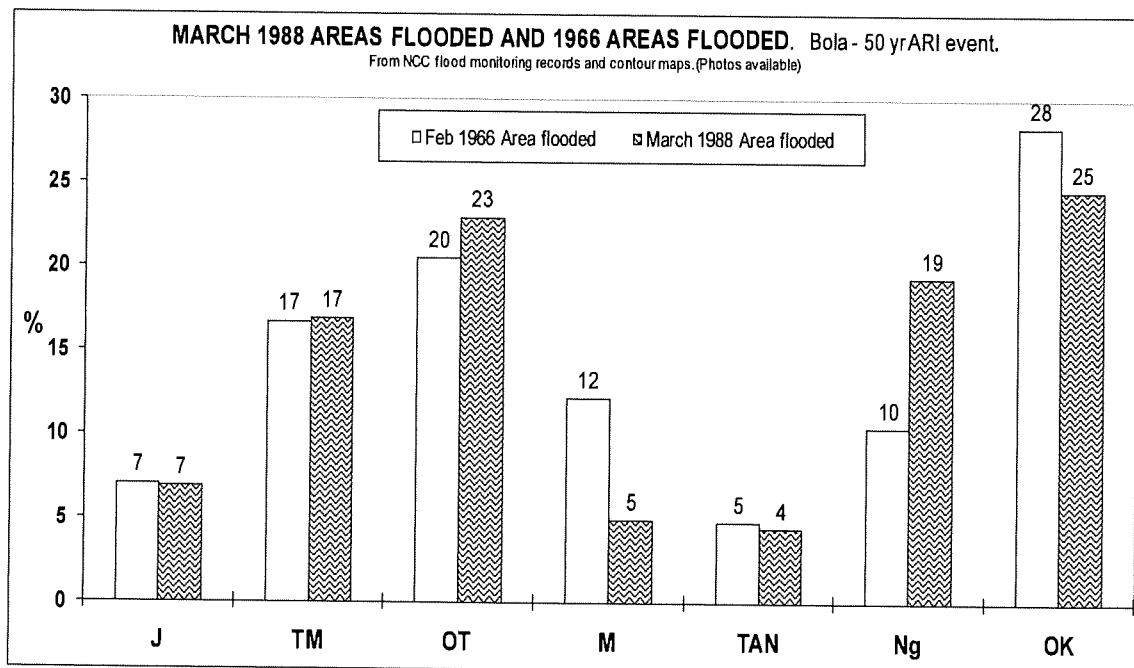
From the very first flood it was apparent that the Ngararatunua inflow crest was built far too long and Mountain crest much too short.



The inflow crests were well maintained annually over this period but the problem with Ngararatunua and Mountain remained and also with Okarika as the biggest player.



The first really big test came ten years after construction with Cyclone Bola. As commented above, the distribution functioned better on account of the deeper overspill depths but as the water remained for over two weeks it was all rather academic with most of the grass being killed anyway.



A Check on Accuracy Of Reading Aerial Photographs

Several weeks after I estimated the water levels from NCC monitoring photographs some NCC monitoring graphs were located. These were for the flood of June 1983 and were found to be recorded on a full 24 hour basis on a set of graphs drawn from pump station gauge readings recorded at the time by Catchment Commission staff. With some interest these were checked against the earlier calculations made using contour maps to find levels from aerial photos. The levels recorded by the photos at mid-day (tree shadows indicate the flight time was about noon) were compared against the noon levels plotted by Catchment Commission staff from the pump stations log records.

Levels estimated in year 2000 from aerial photos taken mid-day 10th June 1983:

TeMata	Otonga	Mountain	Tanekaha	Ngararatunua	Okarika
89.25	88.20	88.00	88.00	89.50	87.81

Levels actually recorded in NCC logs at mid day 10th June 1983:

89.30	88.20	88.19	87.65	89.50	87.85
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This comparison of results has a high correlation coefficient (r^2) of .95 which shows that aerial photographs and map reading using contour maps can have a good degree of reliability for finding levels to make comparisons of flooding between pockets.

Two years later in 2002 the flooded areas for the June 1978 flood were found in a set of minutes of the NCC Works committee. These were compared against the estimates made from the aerial photos of the same 1978 flood as follows:

	Junction	TeMata	Otonga	Mountain	Tanekaha	Ngararatunua	Okarika
Aerials	80	489	458	155	85	490	407
NCC	39	410	338	148	86	459	523

A reasonably good match. The correlation here is .93 and the (r^2) is .86. The above check was interesting in that it is confirmed that old photographs, even faded ones, can yield good indications of flood levels using contour maps to find the areas and volumes of flooding in past events.

Changes in Flooding above SH1 at Whakapara

In 1999, the second year in the review process, I looked at flooding above SH1 Whakapara. There were two reasons. Firstly, some upstream landowners had long complained the scheme gave them little if any benefit and secondly there was the question of whether or not the filling of inflow crests downstream and poor scheme maintenance had caused flooding to become worse on farms in the Whakapara area above SH1.

I set out to examine the official flood records in order to find whether any change had occurred over time in flood trends above and below SH1 at Whakapara. Data was kindly made available by the Northland Regional Council from the NIWA TIDATA series. Records from the automatic level recording station were used from Site 46632. The water level recorder at the old cableway site records every 15 minutes. Data used is for Year, Date, time of rise above lowest ground, time of fall below lowest ground, and Peak Level. Coverage included every flood during the 39 years from 1960 - 1998 inclusive was examined. 104 flood records were selected where the levels exceeded

'lower ground'. Lowest ground above SH1 is 7.687 on the NRC Gauge, = 92.149M RSL or 42.3 ' swamp datum. This level was taken from a NCC contour map and Vol 3 page 17. There were 83 records before construction of the control scheme and 21 after construction. Of the 21 floods after construction 13 were with the scheme as designed and 8 were since the raising and shortening of inflows at Junction and Te Mata around 1990. Thus my study was divided into three periods:

1. Before construction the scheme.
2. After construction with the scheme as designed.
3. The eight years following alterations to adjacent inflow crests.

The construction period of the Major Scheme extended from Sept 1969 to July 1977 and affected flood levels unevenly, therefore the 104 floods used here do not include any from that construction period. The recorder itself was not functional from 1981 to 1982 but no substantial floods occurred in that period. The site was closed with no records available from March 1984 to March 1986. From rainfall records a small flood of May 1985 went unrecorded but otherwise no significant flooding was missed. Cyclone Bola of March 1988 does not have a level record owing to machine malfunction and is included in the frequency count only.

The recorder site on the SH1 bridge had been moved some 300 metres downstream on 22/6/83. To achieve accuracy the new records since the move have been calibrated back to the old site using the L&S benchmarks for the two sites. A surface water gradient of 1:2900 was used²⁵⁸ being the average for 5 and 10 year events, and so an allowance of 100 mm gradient was made between the sites. The method employed was to identify the times when the rising flood exceeds then falls below lowest paddock level above SH1 then find the hours duration of flooding. The peak depths for each event were also found. The results are illustrated on two graphs: One showing average hours that water covered the lowest ground for the three periods, and the average depth of the floodwater on the land.

Several weeks after completion of this research on Whakapara flooding I observed a relevant comment by the NCC concerning construction of control banks.²⁵⁹ *"No overflows will be provided for in the banks along the Whakapara and Waiotu Rivers. These banks will only be over-topped on very rare occasions so that flooding of the land along these rivers can only occur from water backing up following overflows on the spillway at the Junction."* The rare occasions spoken of here would likely refer to the Cyclone Bola 1988 and Cyclone Delilah 1999 type of events, as history proved. What is important to note is that even back in 1968 the design engineers knew that if the water level was raised at the Junction it could back up and overflow further up the Whakapara River. The engineering principle of the water level backing up the Whakapara from lower down is thus clearly acknowledged and could have played some part in recent changes in peak levels.

Results my study of water levels and durations were as follows. Before the scheme was built, flooding over lower ground averaged 8 floods per year. Since construction the average is 1 flood per year. This shows that construction of the scheme must have been of considerable benefit to land above SH1 at Whakapara. After construction of the Major Scheme the average duration of floods immediately above SH1 at Whakapara was reduced by 60 percent, from 46 hours down to 18 hours. This must also have been of considerable benefit to that area. After construction of the

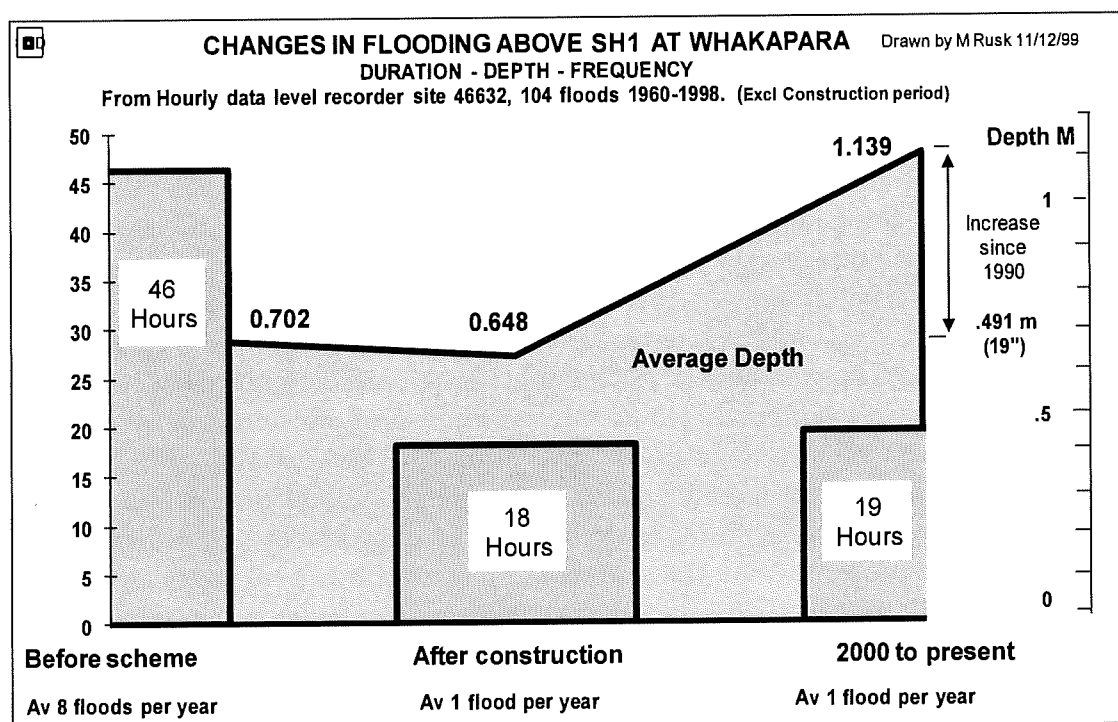
²⁵⁸ Montgomery Watson report pg 47 table 5:2 & NCC Vol 3 pg 19

²⁵⁹ NCC Scheme Report Volume 2 of Feb 1968 page 20 para 3

stopbanks the average peak depth of flooding on farmland just above SH1 fell marginally by 54mm from 0.702 to 0.648.

The point to note here is that construction of the scheme did not increase the depth of flooding. Since the raising and shortening of the two inflows at Te Mata and Junction the average duration of flooding above SH1 did increase by around 7%. Also, since the alterations to the inflows at Te Mata and Junction, the average depth of flooding on farmland above SH1 has increased by 0.491 M (19") from 0.648 M to 1.139 M, an increase of 75% percent. The depth, however, now averages 1.6 times what it did before there was a flood scheme. Apart from the two unusually large tropical cyclones 'Bola' and 'Delilah' of 1988 and 1989 results show the Whakapara left stopbank was never overtopped in the first twelve years of its existence. The record does show that the Whakapara left stopbank overflowed substantially 6 times during the 8 years from 1990 to 1998, coincidentally since the inflow crests at Junction and Te Mata were altered. Seventy five percent of floods have overtopped from that time compared to fourteen percent before. The average peak level of floods above SH1 at Whakapara has increased by 0.491 (19") since the two inflow crests downstream were filled in. These changes may or may not be related, or may be partially related.

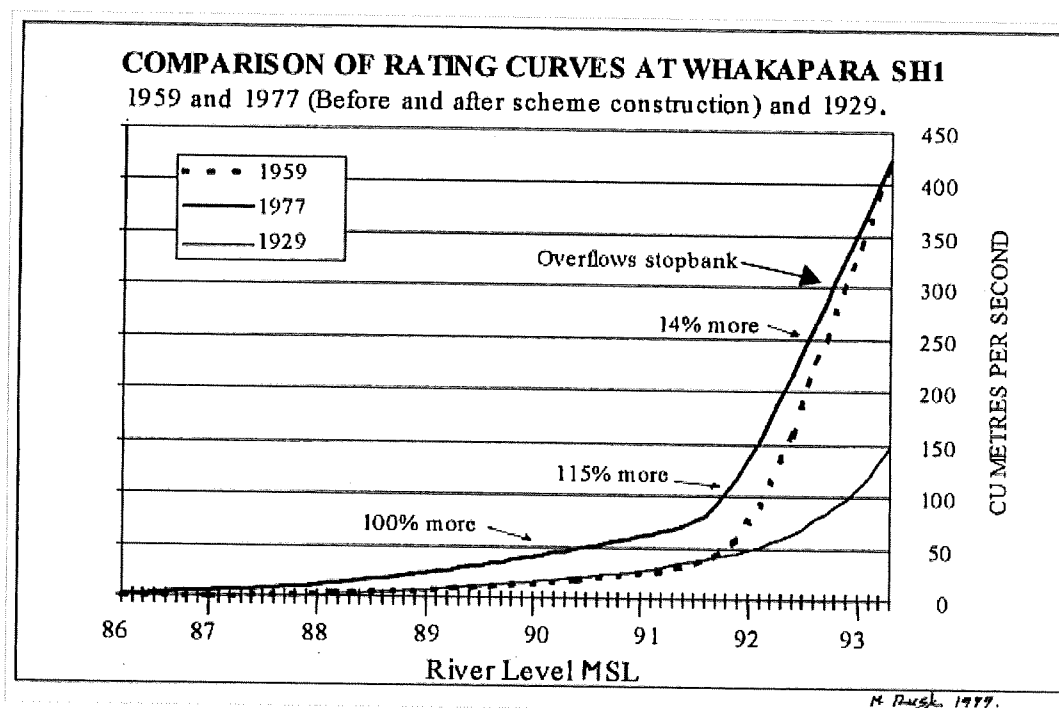
In the scheme as built the average peak level for floods at Whakapara was well below the stopbank crest but since alterations downstream the average level for flood peaks has been above the stopbank. Water has lately been entering houses just below the railway at Whakapara²⁶⁰ and on 70 year old dwelling had to be removed.²⁶¹ The results of this study appear to confirm that the flood protection scheme worked satisfactorily on the Whakapara river, at least when inflows were at design specifications. But there is some indication that the scheme began overtopping the stopbank for a higher proportion of floods after alterations were made to downstream inflow crests circa 1990.



²⁶⁰ See author's photographs January 2011 flood

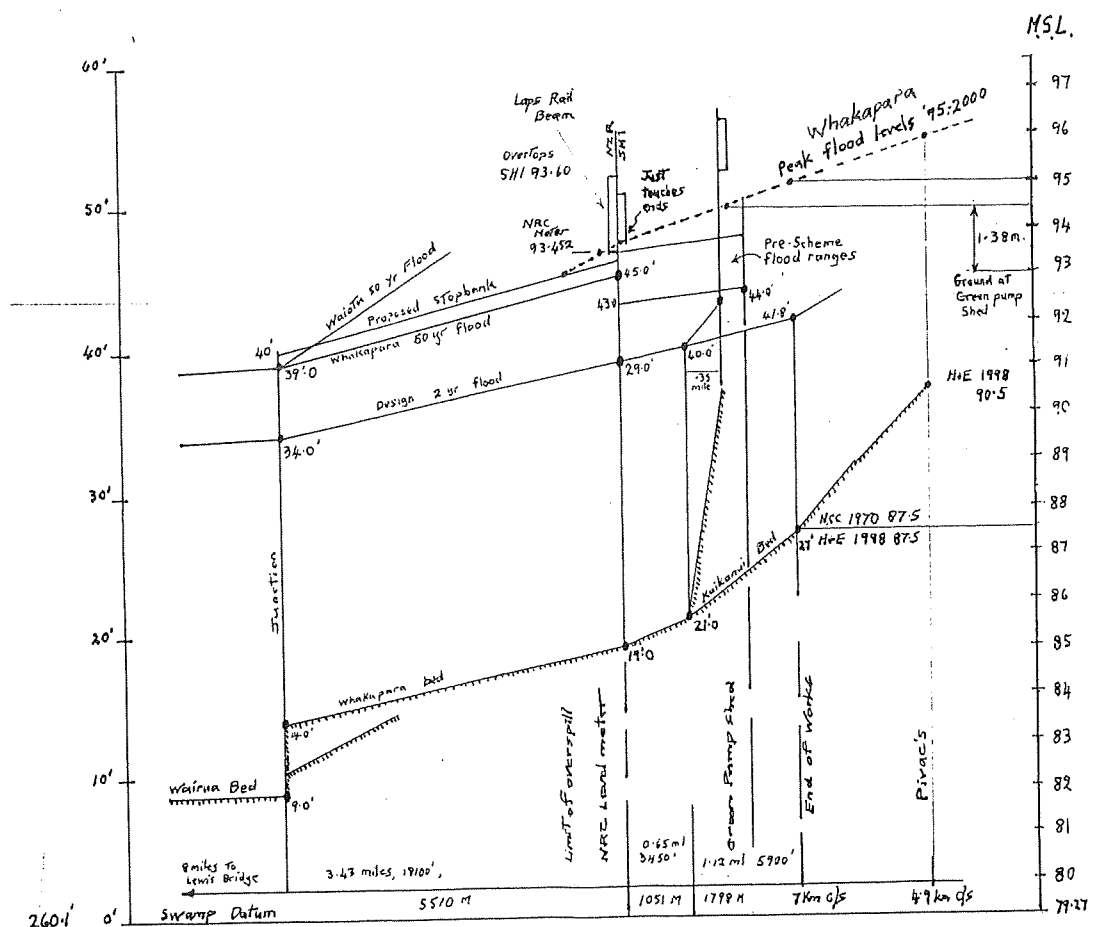
²⁶¹ T. Storey and Lou Pickens. Several foundation blocks remain

I have also produced a graph below showing the flow curves for the Whakapara River at SH1. The 1929 curve is from an old Northland Catchment Commission record. By 1959 improvements had trebled maximum flow from the 1929 situation. The 1959 curve is from Northland Regional Council records from gauging done during the years before construction of the Major Scheme. The 1977 curve is from NRC records of measurements taken just after construction of the scheme. NCC records show the flow rating curve has remained virtually the same from 1977 to the present time. It can be seen that construction of the Major Scheme has in fact substantially increased the flow rates from the area above SH1. At mid range of the river the flow rate has been increased by well over 100%. At higher levels the increase in flows obtained appear to be in the order of 14%.



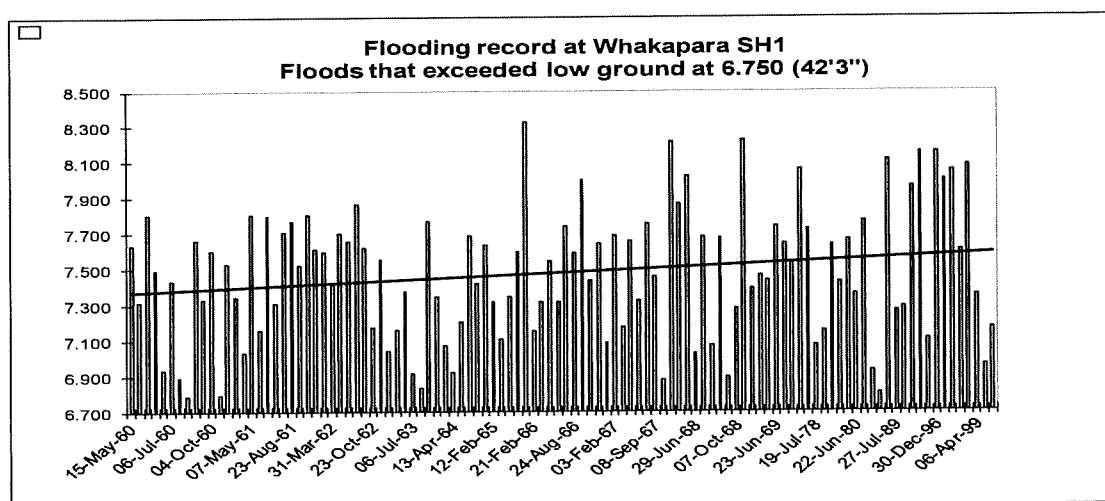
The benefit of increased outflows following construction of the scheme tends to be confirmed by a considerable reduction in the time that floodwater remains on land immediately above SH1, as shown by readings from the level recorder as discussed. Estimated volume discharges at the old Whakapara SH1 site did not include the overflow that went around the overland bypass. This water was later included when the site was moved downstream in 1983, but accurate recording of peak volumes (but not levels) has since been prevented by the overtopping of the stopbank which began from 1990. The tendency to overtop in larger events just downstream of the highway and rail bridges may be exacerbated by the NCC underestimating flows at this point.

I have drawn peak water levels post construction onto an old NCC drawing and it can be seen that the dotted line I have drawn (top right) shows peak water levels much higher from 1995 than was expected during 1960's design. Peak level in January 2011 was 93.93 MSL just lapping up the SE end of the SH1 bridge beam. Obviously the narrow State Highway 1 and railway bridges are acting as a much needed choke on the river. Without this restriction the Hikurangi Major Scheme would be in trouble. Care may need to be exercised if future works are carried out on State Highway One.



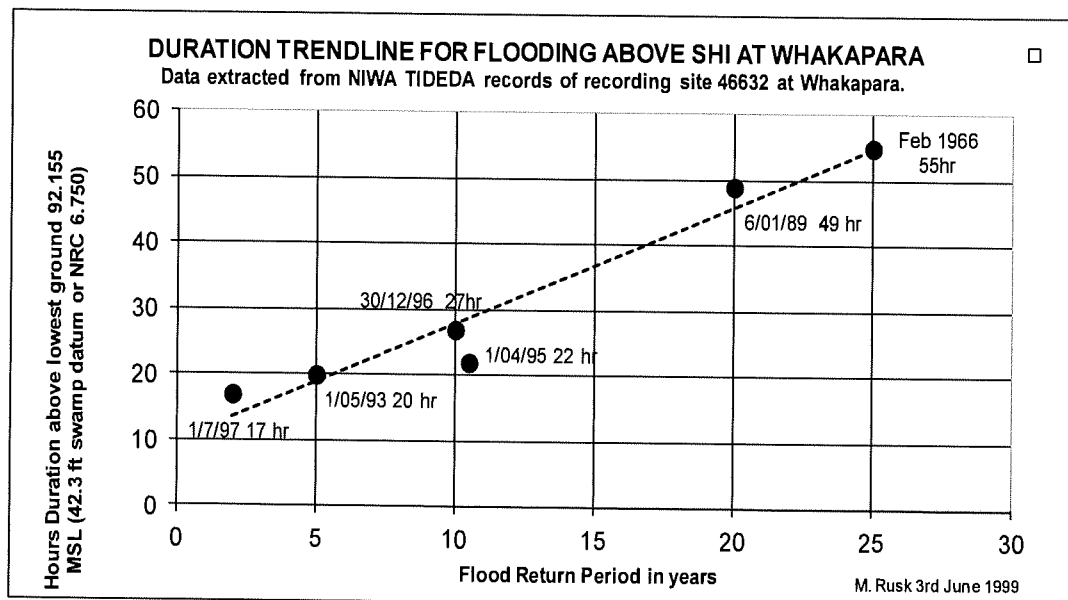
DESIGN LONGITUDINAL PROFILE - WITH PEAK FLOOD LEVELS 1995-2000
 TRACED FROM 2/1970 DRAWING No. 377/1 N.C.C. AND SMITH SINGLETON McNAUGHT & PARTNERS.
 Original Scale: 1" = 1 mile Horizontal 1" = 10 feet Vertical
 M. Rusk Sept 2002

Below: The linear trend of peak flood levels over thirty years to 1990 also indicates a slightly increasing height of peaks. This trend has continued.



The farmland below SH1 on the Whakapara river flats do receive occasionally some overspill flooding, but as all the seven pockets on the scheme also receive overspill this does not seem unfair, considering the huge benefits along the river provided by the

stopbanks in most floods. In the less common large events approximately 1.5 million cubic metres of overspill is taken off right at peak flow which is of great benefit to the main swamp downstream and this also reduces electricity costs for everybody. The flooding along the Whakapara River is not known to kill pastures as it drains away by gravity relatively quickly. It will be interesting to see what occurs after inflow crests downstream are repaired and if the river beds are cleaned after thirty years of use.



Duration of Overspilling Into Pockets

This subject can be hotly debated and gives rise to more contention among farmers within the swamp scheme than almost any other topic. There are two important factors in getting the overspill proportion into the seven pockets right. The first is to get the duration of over-spilling, or the time water flows in to each pocket, to be about the same in all cases. This is a matter of matching the gradient line of the inflow sections to the average gradient of the river channel. The second factor is simply to then adjust the volumes of inflow distribution by controlling the length of each inflow area into its pocket.

Anyone who has gone around the scheme often enough during flooding will know that the overspill durations vary far more than they should.

While overspill into the 7 scheme pockets is a critical matter in the operation of the scheme the recording of such events has been poorly documented. This arises largely because farmers are under pressure during the height of a storm doing other chores and partly because of the difficulty in getting about the swamp in some of the larger floods. The main reason, however, is that the river often overflows at night, and in the past there has been no reliable means of predicting the timing of such events. However, there are quite a number of entries in the pump-station log sheets and these provide us with the best information available.

Over-spill durations are listed below for the six floods that have over-topped the stopbanks from March 1995 to November 1998. This is the period since some inflow crests were altered but excludes the 1993 flood which was not as well documented.

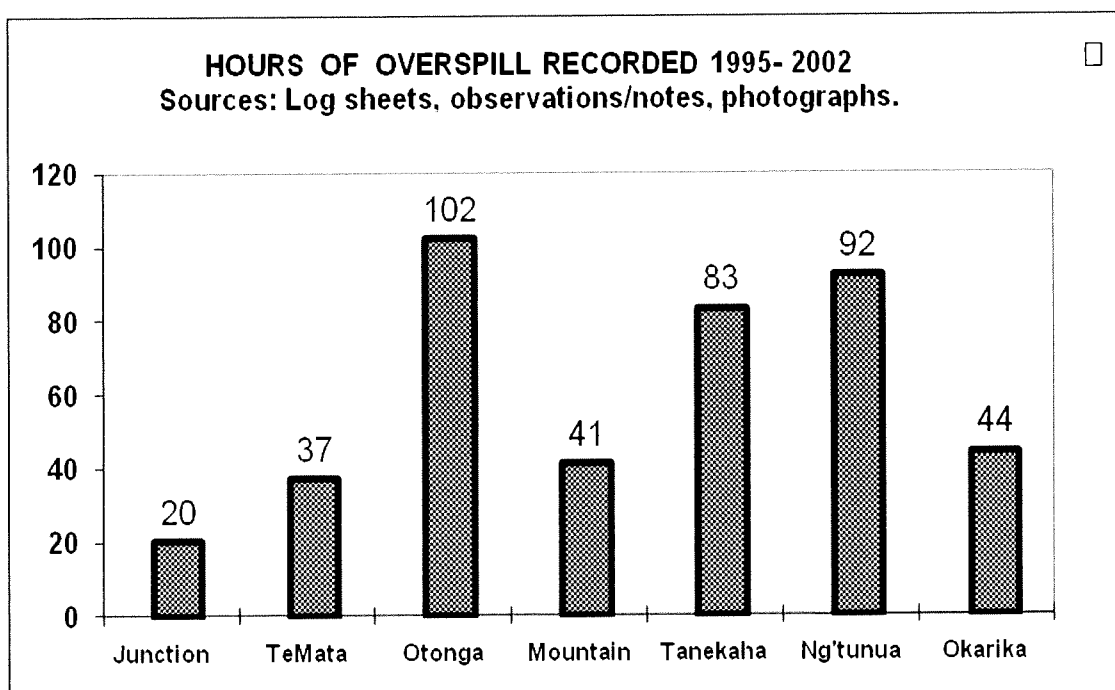
Because of the limitations in recording some caution needs to be exercised in using these figures. Several entries had to be best estimates. The total hours of overspill listed for each of the 7 pockets were:

Junction	There appeared to be little overspill.
Te Mata	20+ hours.
Otonga	69 hours.
Mountain	21+ hours.
Tanekaha	52 hours.
Ngararatunua	68 hours.
Okarika	25+ hours.

While not too much should be read into these totals several points are reasonably obvious from the log sheet records. The target is to have all overspill durations equal averaged over a number of floods but this is clearly not so. (Compare with durations after repairs from 2014.)

There can be little doubt that Otonga and Ngararatunua experience the longest periods of over-spill. This would reflect their longer duration on pastures and their larger flooded areas as illustrated elsewhere including computer modeling. The Te Mata pocket, just upstream of Otonga, appears to receive only about one third of Otonga's inflow duration. This reflects the difference in overspill volumes. Tanekaha also seems to receive a considerable duration of inflow. Prior to repairs over-spill was seen to begin first in the centre of the swamp and those pockets were also the last to cease overflowing. The Junction pocket at the upstream end appears to get off fairly lightly. Okarika at the downstream end also gets off lightly, especially as this pocket does have the largest percentage of inflow storage allocated to it. These durations are from recorded levels and comments in the pump station logs as well as, in some cases, from direct and timed observations. The installation of crest depth and duration meters in 2012 will provide better means of comparison in future, but here is past performance.

The graph below extends the number of floods to 2002 but the uneven performance of the inflow crests over many years is still apparent.



It should be noted that in very large flood events such as March 1988, March 2007, January 2011 and March 2012, that the scheme is so inundated that the pockets

actually receive more even treatment, however, these events are not within the design criteria of the scheme. The scheme is designed to protect land during the more numerous smaller floods and these show a wide variation in over-spilling hours. According to NCC minutes this was not the case when the scheme was first built.

Duration of Flooding Inside The Pockets

The flood control scheme was designed to prevent floods having a frequency of up and including 5 years, and from remaining on pastures for more than three days.²⁶² The pumps were to have enough capacity to remove flooding within 3 days for storms up to 5 years frequency.²⁶³ The scheme was constructed with these criteria. *"The fact that flooding for longer than 3 days during summer storms will kill the grass, has been taken as design criteria."*²⁶⁴ The design criteria were quoted by WDC consultants Montgomery Watson in their review report page 36: *"The rule of thumb indicated by farmers spoken to on the Hikurangi Swamp was that the limit in summer for grass to survive submersion was three days."* The four year period from March 1995 to November 1998 saw six inflow floods that overflowed the banks onto farmland. The scheme was designed to keep five of these six floods from overflowing into the pockets.

By using the water levels and comments recorded in Pump Station log sheets, it was possible to calculate the duration of flooding for farmland in each of the 7 pockets for each of the six floods. Reference was made to the relevant Catchment Commission contour survey maps with regard to the height of the land surface. It will be observed that for Otonga and Ngararatunua pockets almost every flood has resulted in flooding lasting longer than the three day period. The combined total for these two pockets is as great as the total for all the other pockets in the scheme. In 1997 Otonga had three periods in just seven months with flooding of six days or longer in each case, and this is not counting the additional internal flooding caused by internal catchment rainfall events. Ngararatunua was not far behind. During the period Te Mata had flooding for just over half the time that Otonga did. Apart from Ngararatunua, Otonga pocket had about twice the time under water that the other pockets did. It is quite clear that the scheme has not been a working properly, particularly since it was "dickied around with."²⁶⁵

The results for the five main overspill events 95-98 are shown overleaf:

²⁶² See NCC Vol 2 pg 8 and the two page 1973 Data sheet with Aims, and aerial photo of the scheme on front

²⁶³ NCC Vol 2 pg 21

²⁶⁴ NCC Vol 3 pg 14a attachment

²⁶⁵ Councillor Halse to WDC Liaison meeting 25th May 1999

DAYS DURATION OF FLOODING ON PASTURES IN THE SEVEN POCKETS 1995 -1998

For recorded floods that distributed overspilled river water to storage in the pockets.

Sources: WDC Station log sheets. NCC & NRC maps. Some photographs were referred to. (excludes drains, river loops etc)

Rainfall Return period	Flood	Junction	Te Mata	Otonga	Mountain	Tanekaha	N'tunua	Okarika
10	Mar-95	2	7	12	5	4	8	5
5	Dec-96	2	3	6	3	3	5	5
1	Jun-97	-	4	6	2	0	4	3
3	Jul-97	-	5	8	3	2	6	3
2	Jun-98	-	3	5	3	2	3	2
3	Nov-98	0	3	5	3	3	5	2
Days flooded:		4	22	37	16	12	28	18
% floods over 3 days		0%	50%	100%	17%	17%	83%	33%
MSL Lowest ground :		89.0	87.8	87.0	87.0	87.0	87.9	86.6

Of course flooding in the seven pockets can occur (without any river overspill) from rainfall that exceeds 21.6 mm per day for a number of days. This was the very thing that caused widespread anger among the swamp farmers only six months into the scheme's life, however the only pocket to seriously suffer in recent times has been Otonga and Mr Hindrup was a lone voice crying in the wilderness. There are eighty kilometers of scheme water courses to clean and decision making has not always been even handed. The following table uses official level data from official pump station logsheet records to indicate water lying above lowest ground. Exact detail may be arguable but the general picture is fairly clear.

DURATION OF NON INFLOW EVENT FLOODING. 1990 TO 1999.

Sources: Whangarei District Council Log sheets.
Northland Catchment Commission contour maps etc.

Duration Days:	Junction ¹	Te Mata ³	Otonga ⁵	Tanekaha ⁴	Mountain	Ngararatunua	Okarika ²
1	0	7	8		4	1	
2		4	3			2	
3		1	3			1	
4		2	3				
5			4				
6			0				
7			0				
8			1				
Total	0	26	63	0	4	8	

¹ The Junction Pocket records show no 24 hrs flooding over low est ground for non- inflow events.
² The Okarika pocket has no staff gauge in its pocket proper therefore logsheet data was not applicable.
³ Minor flooding for 28/9/97 at Te Mata was not included as no level entries were entered in the Otonga record.
⁴ There were no non-inflow records for Tanekaha showing any flooding above low est ground for 24 hrs or more.
⁵ No log sheet records were available for Otonga pocket from 1990 to July 1993.

Pumping Can Indicate Overspill Shares

Early in the Review when MWH began to estimate inflows to pockets using computer modeling of theoretical floods, I explored a different approach. The capacities of the seven pump stations were each designed to match the size of their individual catchment. This matching was examined by taking the total volume pumped for each pump-station (at average head) and comparing its percentage pumped with

its percentage of swamp catchment. This was done by using recorded pump clock hours and the average delivery for each pump. The regular non-tropical type of rainfall from the north and west is on average, evenly distributed. Using log sheets I was able to obtain continuous clock hour records which took care of any clock changes.

When compared during a 21 month period and a 15 month period with no inflows from the river, just rainfall only, there was an excellent correlation between the percentages pumped and the percentage catchment area for each of the seven swamp pockets. My research was checked out by Montgomery Watson in their review of the scheme and was then printed in their 1999 report.²⁶⁶ The original design engineers would have been pleased to see how well their pump stations matched the rainfall as that is exactly what they tried to do and it has turned out well.

Given that individual recorded hours of pumping for the pumps within a pump station accurately reflected the non- inflow situation the difference in hours pumping out overspill events must reflect the inflow volume to a fair extent. This was examined through the 1990's for a number of inflow events and the two pockets Otonga and Ngararatunua clearly showed they were proportionally getting rid of much greater amounts of water than the other pockets.

Gravity Gates Compared

Pump stations and the size of their gravity gates were designed relative to the catchment area of the pocket they drained. There was an extra small gravity gate left in Mountain pocket after construction. Then after an engineering study of TeMata Pocket in 1987²⁶⁷ two extra gravity gates, estimated to cost \$145,000 were installed there, bringing the total gates in that pocket to four. TeMata farmers pressed for even more gates and as part of the \$80,000 1998 WDC review and MWH investigated the addition of further gravity gates in TeMata pocket but in a three page report said no advantage would be gained from more gates.²⁶⁸

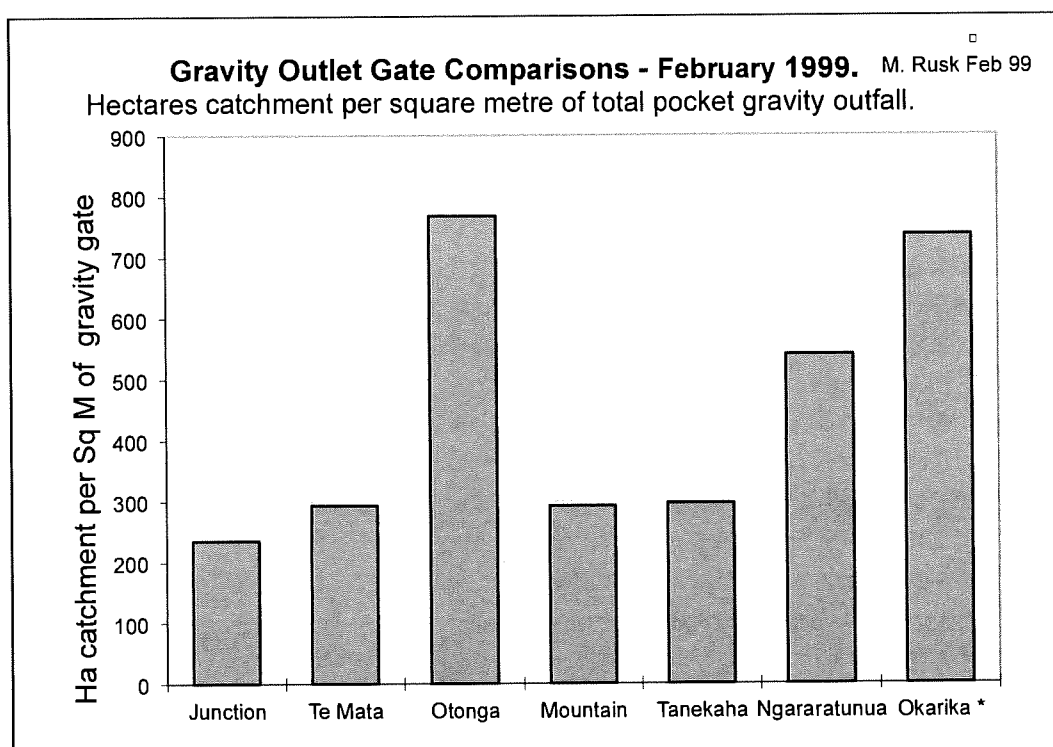
The present sizes of gravity gates are no longer evenly related to catchment areas. The graph overleaf illustrates the relationships of Gravity discharge gate cross sections existing at February 1999 showing how things have been changed. It shows the amount of catchment area in ha for each square metre of Gravity gate.

The higher the number of hectares catchment the more water per square metre of flapgate. The short graph bars show best situation and the long bars worst situation.

²⁶⁶ MWH Report 1 of 1999 Pages 52,53, and 54 see 6.1 *Analysis by Merv Rusk*

²⁶⁷ TeMata Pocket Investigation to Reduce Flooding B Judd Senior Engineer 15th July 87 ref 466865

²⁶⁸ MWH 1999 report TeMata Gravity Drainage Investigation pages 35-37



Hill water canals are installed at both Te Mata and Okarika and in both cases achieve much higher discharges. Okarika pocket also achieves both higher gravity output and pump deliveries with intake water being elevated 1.2 metres or more.²⁶⁹

The Te Mata catchment has the same ratio as the small pockets. Te Mata and Otonga catchments are both exactly the same size but Te Mata has 2.6 times Otonga's gravity gate capacity. Put another way, Te Mata has a 35% less Ha/sq metre than the scheme average while Otonga has 70% more than the scheme average.

Otonga is the worst affected pocket with the worst ratio, and not surprisingly, the worst record of rainfall flooding. Ngaruatunua is the next worst affected. Both of those pockets have, since construction had problems with getting enough water to the pump stations,²⁷⁰ problems that have never been addressed. Okarika's situation is somewhat offset by the raised head achieved by its hillwater canal system and its slightly lower tropical storm rainfall being on the southwest, however, rainfall variations do not affect catchment gravity outlet ratios substantially. Given the amount of ponding in pockets from rainfall and rising costs of pumping it would seem prudent to increase gravity flows from all pockets on an even handed basis where economic and feasible.

The DOC Wildlife Reserve by the Okarika Inflow Crest

Some mention is warranted on the way this area functions as a de-facto detention area. The issue of wildlife reserves and old loops was discussed and presented a problem described as a painful road to travel.²⁷¹ In 1983 NCC produced a report and cost estimates of three options to construct a reserve that would serve wildlife interests as well as flood detention purposes. The reserve was to hold some water in old loops and low places for the benefit of ducks and other wildlife. The Minister of Works & Development wrote, "The survey of the Okarika pocket which the commission is carrying out is to enable the establishment of a reserve that would function as a detention pond as well as being beneficial for wildlife. When completed,

²⁶⁹ NCC Hikurangi Swamp Works Committee meeting 28th April 1980

²⁷⁰ Interview with ex NCC staff member Crichton Christie and NCC surveys post construction

²⁷¹ Mr Alan Moores NCC Mtg of 22nd November 1976 in Advocate 23/11/76 pg 3

this reserve will contribute further to the relief of flooding by storing water during storms.”²⁷²

The NCC report²⁷³ describes the area as being 90 hectares which was surveyed. With the lowest ground level pre-scheme being 87.5 MSL the Reserve is actually higher than much of the surrounding pocket. A ring stopbank to 89.30 MSL was proposed with a top water level of 88.80 MSL. This would give a depth of between one and two metres over the whole reserve. The lowest metre would cover 23 ha.

The stated seven hours of pumping indicated that the maximum volume of the reserve would be about 265,000 cubic m. However, the capacity of the reserve by the late 1990's would seem to be more like 860,000 cubic m. The ring stopbank height has been added to again circa 2007 ad-hoc from maintenance. DOC says the reserve now covers 157 Ha and it measures 162 ha on the WDC GIS website. Flooding in Cyclone Bola of March 1988 was reported by NCC at 154.0213 Ha. This area suggests the max capacity of the reserve is just over one million cu M.

The proposal, which was mooted prior to construction of the scheme, also had a trade off in that it was agreed that Okarika pump station would be given one less small Pleuger pump in return for the considerable benefit of holding significant inflow storage within the stopbanked Reserve equal to at least seven hours operation of the pump station although in reality with its higher banks this figure has increased. In the more frequent events of 5-10 year ARI and less the reserve has tended to contain all of the overspill from the Okarika inflow crest into Okarika Pocket, which is of great benefit to the low lying farms there. In the March 2012 event the reserve easily contained the relatively small amount of crest overspill.²⁷⁴

The aerial survey²⁷⁵ photo of 1/1/1997 shows that the extent of yellow flood water from overspill occupied some 40 ha and after allowing for the 23 ha gives a volume of about 430,000 cubic metres in that flood event. It is worth noting that the aerial photo of the reserve during the March 2007 “150 year event” indicates the effectiveness of the stopbanking. Much of the dirty overspill water was contained in the reserve however some over-spilling of the stopbank above the reserve also occurred. The paddock to the south, which is also closed in by stopbanks was covered along with the whole Reserve.

While the DOC reserve complicates measurement of flooding levels in Okarika pocket there is not even one staff gauge on farmland in that pocket. The internal gauge at Okarika pump station has been mounted to date inside the ‘ad hoc’ hillwater canal which provides a false reading as far as flooding on land is concerned. It would be best if there were four internal gauges, the existing one in the hillwater canal, one in each area outside side the hillwater canal, plus one in the Doc reserve that would be handy for reading overspill and readable from the main stopbank. The stopbanked hillwater canal was mooted in an investigation requested by Okarika ratepayers in 1980 but benefits were ‘not thought to be great’. The proposed canal was to raise intake water levels by some 1.2 metres²⁷⁶ which it did, increasing total output from Okarika pumping station considerably.

²⁷² Letter of the Hon Bill Young MP Minister of Works to G. A Spiers 4th October 1976

²⁷³ Report of 29th July 1983

²⁷⁴ See photographs taken by Mr Ray Hindrup at the end of overspill

²⁷⁵ The private arial photographic survey paid for by Mr. R. Hindrup. Done by Danny Stevens

²⁷⁶ NCC Hikurangi Swamp Works committee meeting 28th April 1980 item (12) page 1 & (4) Page 20

REPAIR CONTRACTS THWARTED

Failure of the First Contract to Repair the Scheme

A maintenance program began in 1987.²⁷⁷ But it was the extent of a large flood in May 1993 that alerted a new landowner in Otonga Pocket Mr Ray Hindrup to the fact that something was very wrong with the distribution shares of floodwaters within the scheme. Mr. Hindrup then tried to get a survey of all inflow crests done but that was deliberately blocked at every turn by the Liaison Committee. Eventually, in 1994, the WDC engaged Works Consultancy to survey the inflows and stopbanks.²⁷⁸ The unauthorized filling of inflow crests circa 1989-1993 was revealed. The council then passed a decision to restore all stopbanks and all inflow crests back to 1970's as built levels²⁷⁹ with earth-works over the 10 km listed at 8000 cubic metres.²⁸⁰ As a result a WDC contract was let to Donovan Drainage and Earthmoving. The contract included cutting down all the filled in crests as well as reinstatement to the 1970's as built dimensions of low inflow crests and stopbanks, a total of some 10 km of banks with about 8000 m³ of spoil to shift.²⁸¹ Works started on the lower downstream crests but later surveyed spot checks showed a only very thin layer, less than half the fill had been added to Ngararatunua crest and then the machinery went to Okarika crest and it was repaired. The Ngararatunua crest was still virtually as low as it was before the contract work when Cyclone Fergus hit only 12 months later. This WDC repair contract that had included cutting the high crests and repairing the whole scheme was stopped for reasons publicly unknown and never completed.²⁸² The filled in crests remained filled in and this failure was destined to come back and bite the scheme in the future.

Failure of the Second WDC Contract to Repair the Scheme.

Following the failure of the first WDC repair contract in 1995 and Cyclone Fergus flooding in January 1997 pressure mounted, again led by Mr. Hindrup of Otonga pocket, for repairs to be carried out. In February 1997 a stormy WDC/Liaison meeting took place where then WDC engineer M. Simpson²⁸³ reported and made a recommendation THAT ALL INFLOW CRESTS BE RETURNED TO DESIGN LEVELS AND PROPORTIONS. This was passed and the WDC Works and Services committee resolved to reinstate all inflow crests back to design dimensions, both raising the low ones and cutting down the high ones. The engineer Mark Simpson had said, "The high areas were not addressed." This was, in effect, an official Council admission that the first Donovan contractors had gone nowhere near the filled in overflow crests.²⁸⁴ And so a second contract²⁸⁵ was let, this time to Mr. Brian Gwyn, an experienced earthmoving contractor who had worked building the original scheme over twenty years earlier. This would put the shortened and filled crests back to the as constructed lengths and levels with the rest of the scheme. But again, for the second time, and in spite of the Whangarei District Council Works Committee decision to do this work, the contract was mysteriously halted after Okarika and Ngararatunua were repaired, just like three

²⁷⁷ NCC Financial Estimates 87-88 CEO R W Cathcart

²⁷⁸ Job 9/10/36/20 April 1994

²⁷⁹ WDC minutes of 28th September 1994

²⁸⁰ Works Consultancy letter and Drawings dated 24/1/95 to Mr. A. Spiers dated 26th January 1995

²⁸¹ Notification Letter Works Consultancy 26th January 1995 C69/40/69/19

²⁸² The cut and fill drawings were used for years afterward. See MWH 1999 report appendix

²⁸³ Swamp and Drainage engineer Simpson was made CEO in Sept 1998 by Mayor Stan Semmenoff

²⁸⁴ Mark Simpson's comment on filled crests to Liaison meeting Forum North 13th February 1997

²⁸⁵ WDC Contract No. 97066 May 1998 with drawings showing all crests were to be repaired

years earlier in 1995. The only bright spot was the length of Otonga stopbank that had remained illegally cut down fourteen years earlier was repaired in 1997.²⁸⁶ Unfortunately they overfilled the inflow crest area when leveling it but to his credit Mr. Hindrup reported this and he got it lowered to the proper level. Few men would have been that honest to their own detriment. But upstream the filled crests still remained in place after two contracts to fix the scheme. So the second repair contract had now been blocked and scuttled. Preserving ad-hoc alterations had now succeeded three times and it would be tried yet again.

THE SCHEME REVIEW

Cyclone Fergus Flood January 1997 – The Catalyst for Action

The flood caused by Cyclone Fergus was the catalyst that set the paddle wheels of change in motion. Three big floods in four years on his new farm got Ray Hindrup going in desperation. Within hours he organized and paid for a commercial aerial photographic survey²⁸⁷ which recorded all the flooding in the pockets. The 10 am photos taken as pumping began starkly contrasted with the proportions set out in the scheme design.

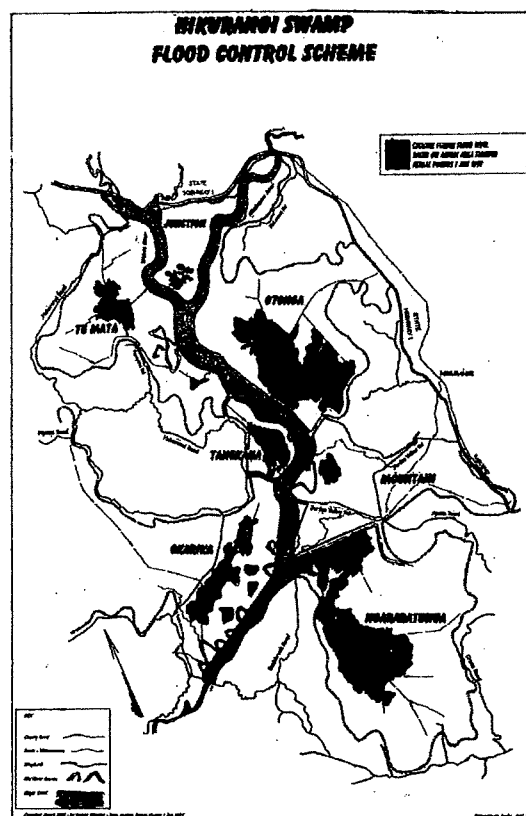
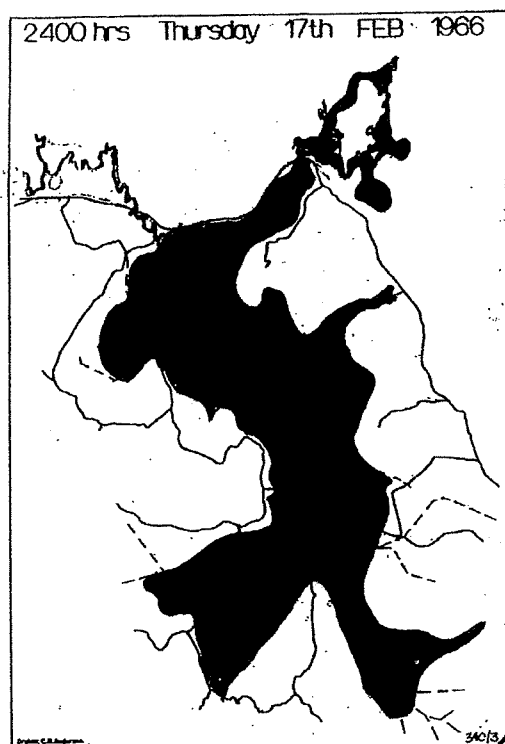
To date there have been two mapped surveys of flooding, one by the NCC in 1966 before the scheme²⁸⁸ and the other by Mr Hindrup in 1997. By comparing distribution of flooding prior to the scheme with flooding shares occurring in the 1990's it is possible to see how flooding in the 1990's shown overleaf on the right compares to flooding before the scheme shown on the left. Note that while the pre scheme flood shown was a larger event the flood shown on the right, the 1997 event was of the five year ARI²⁸⁹ size that the scheme was apparently supposed to retain between the stopbanks and is of special interest.

²⁸⁶ A WDC Contract to Springs flat Contractors. Previously known as Works

²⁸⁷ A professional commercial Aerial Photographic Survey carried out by Consultant D Stevens

²⁸⁸ This was the flood, mapped by the NCC, that featured in the design of the scheme

²⁸⁹ ARI is hydrologist speak for 'Average Return Interval' which is a rough method of comparison



The 1997 aerial survey confirmed what was going on and also confirmed the later computer modeling of the scheme. Here was hard evidence, a consent Commissioner later said “irrevocable evidence,” that made the situation abundantly clear and now Mr Hindrup wanted something done about it, so handed the aerials to the WDC who said they would forward them. However, the aerial photographic survey was rejected by some members of the Liaison Committee and the WDC did not forward it. MWH later wrote, “We were unaware of the photos of the Cyclone Fergus flood of Jan 1997 at the start of the study and they were received directly from Mr Hindrup late in the study.”²⁹⁰

This flood was a ‘model 5 year event’ and consultants MWH used it in their computer model simply because the classic shape of its hydrograph was so very typical of what the scheme was designed to control. The distribution of flooding in Cyclone Fergus was fairly typical of what occurred in the majority of events through the 1990’s after some inflow crests were filled in. The aerial survey hit the bullseye.²⁹¹ Having survived drowning on the swamp the cat was now out of the bag.

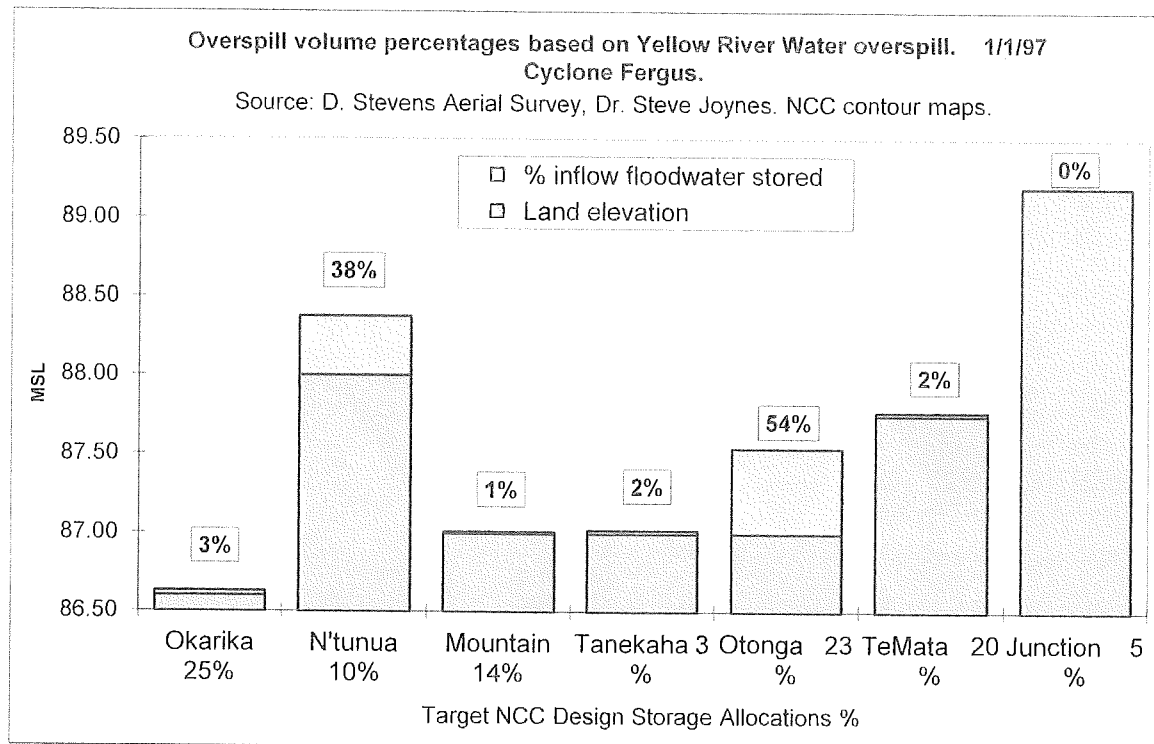
Proportions of Cyclone Fergus flooding

The proportion of overspill into storage has been modeled and estimated by a variety of methods during the review and some of these will be shown later. Following the granting of the resource consent the hydraulic model belonging to Mr Ray Hindrup was further developed by Dr Steven Joynes. Coincidental to that work was the mapping of the December 1996 ‘Fergus Flood’ according to the amounts of “yellow river water” in the pockets. This is a very tell-tale method of ascertaining relative sizes of inflows. The only difficulty was allowing for the clear water from the Glenbervie Forrest that overflows into the east end of Ngararatunua crest while yellow water from

²⁹⁰ MWH Sept 2000 response at 2.3 pg 2 to Mr Hindrup’s reviewer report on MWH’s 1998 Report

²⁹¹ Commissioners described the photos as irrevocable evidence at the Consent hearing March 2010

the Wairua comes in from the west end. A combined approach was used for that pocket whereby the modeled flow volumes for the hours concerned were added to the figure for that pocket. The picture below for that flood tells the story of what had been going on.



The volume of yellow river water in the pockets really told the story. Nevertheless, the other pictures showing total area of flooding in pockets was highly indicative also. The following picture is from the aerial of the same flood with the areas of water shown in black.

Comments have been inserted to give the reader some idea of what the relative proportions should have looked like according the scheme design.

WHERE IT HAD GOT TO IN THE 1990'S

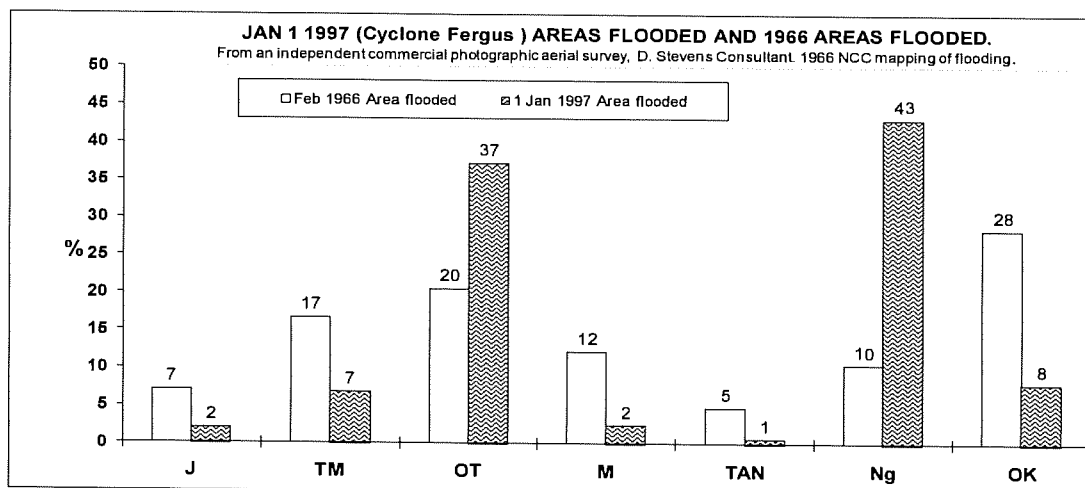
TeMata (top left) should be nearly the same size as Otonga (top right)

Tanekaha (centre left) should be one third of Mountain (centre right)

Mountain (centre right) should be 40% bigger than Ngararatunua (Bottom right)

Okarika (bottom left) should be just bigger than Otonga (upper right)

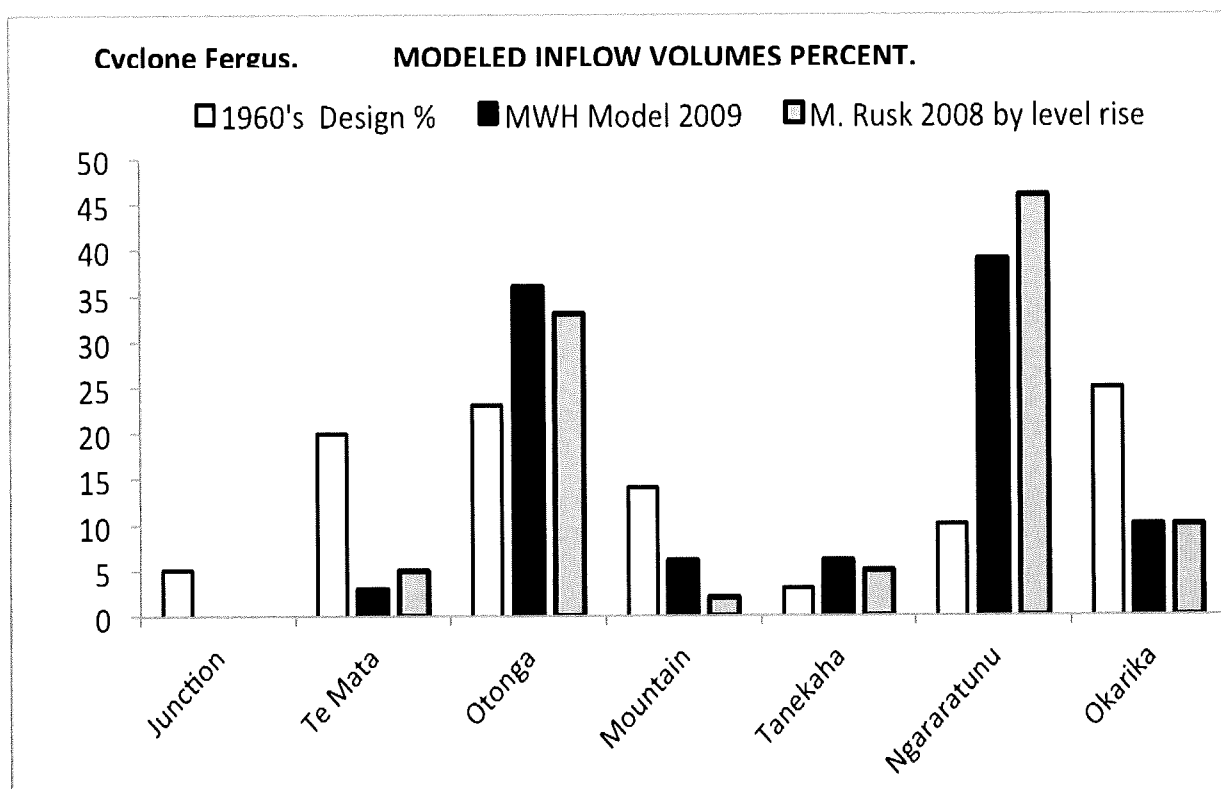
Ngararatunua (bottom right) should be half the size of TeMata (upper left)



Additional overspill calculations were done on this flood for each of the seven pockets using computer modeling.²⁹² The results of these overspill volume calculations for each pocket were compared against the flooded area in each pocket as surveyed by the aerial photographic survey of Mr. D Stevens privately funded by Mr. Ray Hindrup. The correlation coefficient (r^2) between area flooded and volume overspill was .94, again a very good result showing a high relationship between volume and area. The comparisons made here do not suggest area relates exactly to volume but they demonstrate it is very close.

I then developed a method to find volumes calculated from the rise in pocket levels caused by inflows using updated NCC contour maps and tables. This method was appraised by MWH, WRCGNZ, and HMS and all approved of it as an acceptable and reliable method. My results for the Cyclone Fergus Flood are shown below for comparison alongside the results of WDC consultants MWH. Calculating volumes from the rise in pocket water level during inflow compares very favourably with the infinitely more expensive computer modeling.

²⁹² See Report of Independent Review Study. Water Resources Consulting Group Ltd



Decision to Review the Scheme

Forty four days after Cyclone Fergus a WDC Liaison meeting was called as pressure mounted to fix the scheme.²⁹³ During the meeting the Waste and Drainage Manager M. P. Simpson presented a report read under agenda item (2) Hikurangi Swamp Stopbank Design.²⁹⁴ He explained that the scheme had been surveyed in 1994.^{295 296} Mr Simpson added that stopbanks were, in places, 200mm low and in others 500mm high. Also that, "Lengths of inflow areas were up to 350mm higher than design grade." He reported that, "All stopbanks below grade were built up to design grade level by Donovan Drainage and Earth Moving in late 1995," although he did not mention the work was not done properly nor the fact that the 1995 Donovan contract had included cutting the filled in crests that were 350mm high and that this work was never done. The cutting was clearly in the contract as Mr P R Waldrom for the Manager of works consultancy had written to landowners²⁹⁷ advising of the cutting of high crests and filling of low crests and enclosing drawings and maps of the works²⁹⁸ that all six inflow crests excluding Tanekaha would be cut or filled. The filling work carried out had been very poorly done²⁹⁹ and the high crests themselves were never touched. The intended cut and fill was still shown four years later.³⁰⁰

Mr. Simpson did report that, in accordance with 'Council Policy' for the Swamp, the following was required to be undertaken:

- I. All inflow areas to be cut down to design grade,

²⁹³ WDC Liaison Meeting held on 13th February 1997

²⁹⁴ File Ref 88/7/22 3rd Feb 1997. Detailed written copy obtained

²⁹⁵ A full survey of stopbanks and overflow crests by Works Consultancy Services

²⁹⁶ Liaison Committee minutes 7th August 1997

²⁹⁷ Letter P Waldrom to landowners incl A Spiers 26th January 1995 ref C69/40/69/19 File C69/40/55

²⁹⁸ Works consultancy drawing 'Approved 24/1/95 P R Waldrom WDC Job 9/1036/20 code 7114

²⁹⁹ Donovan's poor 1995 job showed up in a 1998 survey for MWH, also in Donaldson's Survey 2002

³⁰⁰ On drawings printed by Review Consultants MWH Volume 1, 1999 Appendix section

- II. Stopbanks below design grade be built up to design grade, and
- III. Stopbanks above design grade be cut down to design grade.

He also reported that to check validity of the works four sample areas had been surveyed in January, just a few weeks earlier. (A second survey was carried out five months after this meeting). The objectives of the Hikurangi Swamp Liaison Committee were quoted as, *"To maintain the assets of the scheme to provide the level of protection they were designed for"*. The estimated cost to reinstate to design grade for the stopbanks is \$120,000 plus \$20,000 for the cutting and filling works. That was a total of \$140,000.

The WDC Drainage Manager then recommended:

1. "That tenders are called for a comprehensive review of Hikurangi Swamp stopbanks.
2. "That tenders are called to reinstate the Hikurangi Swamp stopbanks to provide the level of protection they were designed for, subject to approval of funding."

At that time there was no reason at all why the council could not have simply completed the two earlier decisions to put the scheme back to its original levels of protection for every pocket. Why not? It would have saved over half a million dollars, but conversely a lengthy review prolonged protection for some and the status quo suited those landowners.

During the stormy meeting WDC councillor Dave Culham led the charge with Mr Ray Hindrup in strong support. The Chairman, Hikurangi Ward Councillor Graeme Broughton, appeared to be dragging his feet while most members of the Liaison Committee opposed change. I attended as one of the members of the public and took 'minutes', something I had a fair bit of experience in doing. A discerning reader may get some insight here into what a struggle it was for the disadvantaged landowners to get a fair hearing. It was a critical meeting and my notes of discussions during the meeting indicate how the meeting went. It was obvious that some members of the Liaison committee seemed bent on retaining the status quo to keep the ad-hoc works in place. Of interest later is the fact that Liaison committee member Neville Thorne was present.

Meeting of February 1997 moves for Review

NOTES TAKEN OF THE DISCUSSION DURING THE MEETING OF THE WDC SUB-COMMITTEE AND THE HIKURANGI SWAMP LIAISON COMMITTEE HELD IN COUNCIL CHAMBERS AT 10 AM ON 13TH FEBRUARY 1997.

Chairman: Councillor G. Broughton.

Present: Cr Culham, The Mayor (arrived later), WDC Drainage manager Mark Simpson, Sec J. Francis, Swamp Committee members G Imeson, E. Smith, A. R. Finlayson, N. Thorne, H. Le Clerc, R. Hindrup, and T. Storey. Also in the public gallery were 8 members of the public.

Chairman Broughton declared the meeting open and announced that "It appears that after the last two floods the scheme is not working as it is designed to do."

Mr. Hindrup gave notice that the meeting was being tape recorded.

Chairman Broughton stated that "this was not council policy". A vote was taken.

Mr Hindrup said he wished to record the meeting to protect his interests.

A motion was moved "That the use of tape recordings shall not be permitted at this meeting." The motion was lost, by the chairman using a casting vote against.

The chairman announced agenda item 1. (Apotu Drain flood protection)

Mr Hindrup moved "That this item not be on the agenda."

Mr Storey said "Some areas are not to design, we need to look at all areas."

Chairman: "We'll bring all these points out."

Cr Culham "The scheme does need an overall review of the design and scheme should be brought back to its original purpose."

Chairman: "I guess that is the path to follow."

Cr Culham: "There is some sense of urgency with the stopbanks."

Chairman: "We will move on to item 2."

Mr Simpson read his report (as outlined above) on reviewing and restoring the scheme.

Cr Culham: **"I MOVE THE COUNCIL REVIEW THE ORIGINAL SCHEME TO ENSURE IT IS BROUGHT UP TO RECOMMENDATION. A COMPREHENSIVE REVIEW OF THE WHOLE SCHEME."**

Mr Finlayson: "I would like a definition of that. As I understand it a comprehensive review is a huge job."

Cr Culham: "We are talking about the 'contract with users.'"

Chairman: "There seems to have been changes to the stopbanks over the years - there have been various complaints about being dis-advantaged. It amounts to a survey of all the stopbanks."

The Chairman continued: "I have ruled that we have discussed item 1 and we are on item 2 of the agenda."

Cr Culham: "There are items that have not been attended to in the original scheme. Unless we get a comprehensive review we will not get a solution and will be here in five years doing the same thing."

Edwin Smith: "I see problems."

Mr Hindrup: "Since 1990 I have observed 1.8 km of inflow into my area."

E.Smith. "We did a survey 18 months ago."

Engineer Simpson "Works Consultancy contracts were done toward building up low areas, done in 1995-96. "The high areas were not addressed." The Mangaharuru channel (Ngararatunua crest) is still low and should be built up."

Mr Hindrup: "We have got to address why this situation exists."

E Smith: "Bank levels vary over the swamp."

Mr Hindrup: "My banks are on clay, the only low places are over old river beds."

Chairman: "The scheme is working very well. This council has got to administer the scheme as it was designed."

Chairman: "There is no motion on the books at this stage."

E Smith: "What will a comprehensive survey do that the one 18 months ago didn't do?"

Cr Culham: "Will we do it piecemeal or all at once, it is no use bit by bit. If the scheme is not right then let's put it right."

At this point Mayor Semmenoff arrived.

Mayor Mr Semmenoff: "If you're going to do it - let's do it."

Cr Culham: "We are not wanting to re-design it."

Mr Finlayson: "Who is going to do the physical work?"

Cr Halse: "Everything needs to be checked."

The Mayor Mr. Semmenoff: "Everything but re-design it."

Mr Culham defended his motion saying the whole thing needed to be brought up to standard, but not a re-design.

Chairman: "Re-design is not an issue. The pumps were re-designed. Ray Hindrup has got a problem, we have to get back to bringing the stopbanks up to the original design."

Mr Edwin Smith then read an alternative motion.

Mr Hindrup spoke against it.

Chairman: "We must get back to the motion."

Cr Culham: "My motion! That one is only a refinement. Mr Culham read his motion: **"THAT TENDERS BE CALLED FOR A COMPREHENSIVE REVIEW OF THE HIKURANGI SWAMP SCHEME WITH A VIEW TO THE SCHEME BEING BROUGHT UP TO THE STANDARD OF THE ORIGINAL CONTRACT."**

Mr Hindrup seconded saying, "For ten years there has been evidence that the scheme has not been run properly."

Chairman: "Is there any further comment?"

Mr Finlayson and the Mayor both made comment.

Cr Culham: "That is not comprehensive."

Chairman: "This time we'll start off with the surveyors."

Cr Culham: "We are talking about getting the scheme onto the level. If the council fixes it then I'll be happy."

Engineer Simpson: "We haven't surveyed all of the whole area yet."

Chairman: "When the mistake was found the work was done."

Cr Halse: "No! - it has not been done."

Chairman: "Work in Mr Hindrup's pocket could be proceeded with."

Cr Culham: "Let's get onto it."

It was moved: **"THAT REMEDIAL WORK ON THE OTONGA STOPBANK BE PROCEEDED WITH IMMEDIATELY SUBJECT TO SURVEY."**

Mr Hindrup: "In Cyclone Fergus Otonga had 1,160 metres of inflow while there were 600 at Ngararatunua."

Cr Culham: "Let's proceed with the Ngararatunua pocket after that."

Mr. Semmenoff -The Mayor: "Some of you have been (thinking the work will never be done) "let me assure you it will be."

The motion was read amid considerable noise and talking.

The motion was not put yet.

Mr Storey: "Mr Hindrup wants his stopbanks fixed now! It is not a big job, it can be done now!"

Mr Hindrup: "There is a lot of work to get started. There is no reason not to survey the Otonga bank now and get it done immediately. I have a bill for \$137,000 damages."

This motion was put and carried on the voices.

E. Smith: "We can survey the overflows and see where the trouble is."

T Storey: "Some inflows have been built up and need to be lowered as well."

Engineer Simpson: "The ones that will have to be checked are where the banks have been built up."

R. Hindrup: "I table an account here for my aerial survey that brought this meeting about."

This was not supported and was lost.

N. Thorne: "I have been left in the dark about what is going on behind the scenes."

The meeting closed at 11:30 am.

It was a close call but the decision was made. The WDC works and services meeting later moved that the crest works be done and tenders were let for the Review contract on 9th January 1998.

Soon after the meeting to have a Review Mr Hindrup wrote to Mr Simpson³⁰¹ about the earlier decision on filled crests being cut down and Simpson replied seven days later reiterating his recommendation and the motion adopted by the WDC Works committee to cut the high inflow crests down to design and that if the motion was not rescinded the work would be done.³⁰² But behind the scenes the political pressure came on in earnest. Council CEO Mark Simpson privately said to me, "I just can't believe the political pressure coming on me over this thing."³⁰³ Certain landowners and certain members of the Liaison committee were screwing the scrum right from the word go. Then seven days after his confirmation to Hindrup that the cutting would be done Simpson received a joint letter from the TeMata landowners.

The Letter from TeMata Pocket April 1997.

As soon as the move was made toward a review and to cut the filled crests down a group of ratepayers in TeMata pocket sent a jointly signed letter to the General Manager District Council defending their high inflow crest.³⁰⁴ I thought their swift reaction was inappropriately fast, suggesting that here was a group proactively going on the defensive. The letter asked that the TeMata inflow crest not be lowered, saying, *"It is obvious the TeMata inflow has been altered at some stage."* *"We suspect it was altered in 1978. In June 1978 we had 544 ha at 89.75 whereas Ngaratunua had only 243 ha"*.

The first historical point to consider here is that the NCC reported back in 1978 at the time of the first inflow into TeMata saying, "This overflow weir was found to be 75mm lower than it was designed to be in two places, consequently the overflows were up to 200 mm deep not the 100 to 125 expected design depth."³⁰⁵ TeMata crest had then been promptly repaired back to design level in the course of normal maintenance in 1979.

The TeMata landowners submission letter of 1997 to WDC was misleading regarding timing of the ad-hoc alterations and misleading to claim their pocket had received worse flooding than Ngararatunua pocket. Worse flooding? Not so. Here is why.

Surveyors' documents and notes written on those survey plans at the time show the 1978 flooded ha were almost exactly equal, with 507ha for TeMata and 505 ha for Ngararatunua.³⁰⁶ Furthermore TeMata's design inflow share is 20%, which is double Ngaratunua's 10% therefore the boot was actually on the other foot! TeMata should receive double the inflow volume of Ngararatunua not the same. Later in the review the project manager for MWH Mr Brian Knowles told me *'the TeMata letter seriously influenced'* their first report and *'threw the review process badly off course'*, adding heavily to the costs.

The TeMata pocket letter claimed their inflow crest had not been filled in by them, claiming instead that it had been, "Filled in by the Northland Catchment Commission just after construction around 1978 or so." Mark Simpson the WDC engineer then wrote to the Northland Regional Council³⁰⁷ asking when and why the NRC had raised

³⁰¹ Letter Hindrup to Simpson 25th March 1997

³⁰² Letter Simpson to Hindrup 1st April 1997

³⁰³ M. P. Simpson to the writer in his WDC office 30th June 1998

³⁰⁴ Letter by TeMata landowners submitted to WDC 8th April 1997

³⁰⁵ Supplementary Report Regional Water Board Hikurangi Swamp works cttee agenda 24/7/78

³⁰⁶ NCC Survey Plans 1542 & 1534

³⁰⁷ WDC to NRC Letter 19th December 1997

the crests. Mr. Cathcart who had previously worked for the NCC replied ³⁰⁸ quoting an 'un-named source' who 'advised' him that the change was made because of wind fetch, that is to say the effect of wave action. In reality an undocumented opinion from an 'un-named source' holds little credibility nor does TeMata's claim that the crest was filled and shortened by the NCC itself after the first floods of 1978.

The fact was that after the scheme's construction NCC staff constantly inspected the stopbanks and inflow crests. Mr. Gary Rusk, an NCC surveyor through the construction phase, was given the task along with several others, of annually surveying the banks and crests. He did this for five consecutive years from 1977, filling any low spots each summer. When interviewed ³⁰⁹ he was adamant that any alterations to levels would have been found and corrected in those surveys. After Gary left the NRC in 1982 inspection and maintenance of banks and crests was carried out by fellow staff member, draughtsman, field worker and Engineering Assistant Mr. Colin Anderson. Colin had also worked right through the construction and settling in phase of the scheme and when I interviewed him regarding this very matter ³¹⁰ he told me, "No it was not filled in then, I would have known if any work was done on TeMata crest."

As a result of the letter from the TeMata landowners the scope of the WDC Review included instructions to examine wind fetch at TeMata crest. ³¹¹ Subsequently it was reported that this crest, "Was not unusually prone to wind fetch" ³¹² and "the effect on overflows will be negligible." The 1966 design engineers knew all about wind fetch but they made no mention of it whatsoever in their technical design volumes. It is a matter of fact that the river runs from North to South while cyclones blow east to west resulting as MWH have said, in negligible effect and no more than in other pockets.

What grounds would the NCC or anybody else have for raising this crest when all their reports of the time were saying the inflows were working evenly? The NCC Interim Report after first flooding ³¹³ states, in discussing the general overtopping of the scheme's first flood in June 1978, "*Present indications are that the overflows into the seven pockets are spread very evenly.*" Likewise, the Works Committee Report on the June 1978 flooding gives data and states that "It appears reasonable to compare the flood of June 1978 with (the design flood) of March 1966." Therefore I believe the levels of crests were not placed in doubt but in fact were confirmed.

And then this: In its March 1980 *Progress Review of the Scheme* the NCC reported on the 1979 October flood stating that "Flood levels in the pockets were generally lower than in 1978 '*particularly in the TeMata and Okarika pockets.*'" These two reports show the NCC had no grounds to contemplate raising the TeMata inflow crest.

The truth is that the dead opposite of the TeMata letter occurred. The NCC held a special meeting in committee to discuss flood relief to affected farmers for flooding in the first winter of operation. ³¹⁴ After mapping the flooding ³¹⁵ a table of areas flooded in each pocket was drawn up. ³¹⁶ Total internal flooding was 2004 ha and TeMata is shown at 410 ha. That equalled 20% which is exactly TeMata's design share! So why would the NCC want to fill in the crest? And I note that this report was compiled by none other than the recent NRC Land Operations Manager Mr. Bob Cathcart himself

³⁰⁸ NRC to WDC Letter 24th March 1998

³⁰⁹ Interview 30th August 2002 with G. Rusk ex NCC construction Surveyor

³¹⁰ Interview 29th April 2003

³¹¹ Schedule A pg 18 iii

³¹² MWH Report of 1998 pg 56 7.4

³¹³ NCC Report dated Sept 1978 pg 25

³¹⁴ Minutes of Special NCC Flood relief meeting 11th Sept 1978

³¹⁵ Plan 6005 No 1442

³¹⁶ NCC 6/12/78 1978 pg 32, & Table by R Cathcart for committee to disburse \$15000 in rates relief

who had worked for the Commission at the time! Mr. Cathcart's own figures actually validated the design performance of TeMata crest. However, it was strange of him to write decades later to the WDC³¹⁷ quoting an anonymous source on windfetch affecting the inflow when his earlier work had already disproved the idea. But then the passing of three decades could make detailed memory of such an event difficult.

I have the NCC aerial photographic monitoring of flooding done after construction from 1978 through 1983. Analysis of these shows no reason at all to believe TeMata received more flooding than its 20%. By referencing NCC Plan #1442 the extent of winter flooding of 1978 is seen to be very close to the 1966 pre-scheme areas, giving again, no reason to believe TeMata got more than its fair share. Existence of these maps and aerial photos and drawings clearly demonstrates flooding was constantly monitored and that no change TeMata inflow crest was ever warranted.

The face-saving attempt by TeMata landowners blaming the NCC for filling in TeMata's crest around 1978 does not hold water. Especially as the NCC did its as-built survey of the banks at that very same year!³¹⁸ These crest drawings are shown by MWH in the appendixes to the Review Report of 1998 and in this book.

More hard evidence is found in the form of a thick steel surveyor's pin driven deep into the TeMata inflow crest in 1979. Surveyors Hodges and Elrick are documented as using this pin on 8th February 1982 on Plan # SO 9642. Surveyors do not use bent pins. This pin was located by Donaldson surveyors in 2002, buried 400 mm under TeMata inflow crest. I know, because I had to dig down to it with a pocket knife because the chainman forgot to put his spade in the boat! Not only was it buried but some 100mm was bent over at right angles along the direction of the crest, obviously by earth moving and leveling equipment when the crest was filled. As the pin was bent over after its use in 1982 the ad-hoc filling of TeMata crest was also done after 1982, certainly not in 1978 as claimed by the TeMata landowners group.

Surveyed cross sections show the TeMata crest no longer have the correct shape of the other inflow crests.³¹⁹ This work could not have been done by a local authority such as the NCC or WDC who are required to build to designated profile standards. For twenty-one years the TeMata crest has been very narrow and rounded rather than wide and flat. There is no documentation of any kind whatsoever for the filling of TeMata inflow crest. In my searches of the archives I had found no suggestion of any paperwork. Later the WDC replied to a query from Mr. Ray Hindrup stating "There is no evidence of any paperwork for any of the raised inflows."³²⁰

The truth is more likely that following the scheme's first large cyclones of Bola in March 1988 and Delila in January 1989 some new and younger farmers were obviously alarmed and so took independent action themselves. This was after local government changes when some folk on the scheme were taking action themselves saying, "It's every man for himself now."³²¹ Filling of the crest benefitted the protected TeMata farmers but eventually proved very costly to all ratepayers in the scheme. Not to mention the huge costs that would be added to the review exercise. The more delay the longer the filled in crest would remain and the longer protected farmers would benefit. The TeMata letter asked for:

1. Control banks to be brought up to and not lowered to 1974 design levels.
2. TeMata inflow remains as it is.

³¹⁷ NRC Catchcart to WDC Letter 24th March 1998

³¹⁸ G. Rusk Plan 1371 dated July 1978 details reprinted in MWH Report to WDC of January 1999

³¹⁹ Both 1993 and 2002 surveys

³²⁰ WDC letter to Mr. Hindrup 13/9/00

³²¹ Interview with Mr. Reudi Notter who had witnessed a neighbour's comment and activity

3. A full hydrological investigation of the whole scheme.
4. A written statement from WDC that nothing be done until points 1,2&3 done.
5. That money for the cuttings down to design levels be spent on the investigation.

The signatories felt that, "the removal of high spots was fruitless." The idea of a comprehensive scheme review would undoubtedly delay the unblocking of their inflow crest. It was fourteen years.

Meeting Votes for Immediate Review - July 1997

I attended a Ratepayer's meeting in July. A Ratepayer meeting, not a Liaison meeting.

NOTES MADE OF THE DISCUSSION DURING THE RATEPAYER'S MEETING OF THE HIKURANGI SWAMP MAJOR SCHEME, HELD IN THE HIKURANGI BOWLING CLUBROOMS 3rd JULY 1997.

There were approximately 40 ratepayers present.

The meeting was opened by the Chairman Mr A. R. Finlayson.

An apology was tendered from Mr. Greg Martin.

The minutes of the previous meeting were read.

Matters arising included trees and the Jordan Bridge being an impediment.

The Chairman said "A review of the scheme will raise those issues."

The financial situation was outlined.

Chairman's Report: Mr Finlayson mentioned that the survey of banks in 1994 had found some banks were 200mm under height and a second survey found they were still low. Then a full survey found "All were low to varying degrees." (Quite incorrect – see the surveys. Some were high. Ed.)

Mr Cutforth asked when the review would commence. Mr Simpson, WDC engineer, said "Say the Liaison meeting approves it in three weeks then tenders are called, I estimate the review would be done in eight months."

Mr Hindrup asked "Does this mean no work will be done on the scheme until then?"

Mr. Simpson replied : "Some areas are bad -and we all know which ones those are. Any questions anyone has should be addressed in this review."

Mr T. Storey asked: "Does this (Ratepayers) meeting take precedence over the Whangarei (Liaison Committee) meeting?"

Chairman: "The Liaison committee will decide."

Mr T. Storey asked: "Why has the Ngararatunua pocket not been done (since the meeting in Whangarei six months ago) ?

Mr R. Hindrup asked: "Why was the committee not informed of the intention to delay? Will the low banks stay low until the review?"

Chairman: "I don't know."

Mr Hindrup: "Will the low ones be raised to specification height or higher?"

Chairman: "To original specifications."

There were other questions re the Ngararatunua bank.

There were general comments from Messrs. Pickens, Hoult, and Cutforth.

Mr. B. Hoult (TeMata pocket) recommended the committee act and he moved **"THAT THE COMPREHENSIVE HYDROLOGICAL SURVEY OF THE SCHEME BE IMPLEMENTED IMMEDIATELY."**

Mr. G Hoult (TeMata pocket) mentioned water levels in the Te Mata pocket.

The motion was put and CARRIED WITHOUT DISSENT.

Further questions were asked regarding work on the low banks.

Mr Ray Hindrup said: "After the February meeting with the council fill had been placed on his bank but the contractor had to come back 5 times. It cost \$11,000 and was a Mickey Mouse job, the worst I've ever seen. The levels fell out half way. It was not battered on the inside. I wrote to council to re-survey and the overflow was 8 inches too high. The job was re-done prior to this latest flood and during this inflow the water was even over the whole length."

General business:

Mr Terry Storey moved "THAT THIS MEETING RECOMMEND TO THE DISTRICT COUNCIL THAT AN EXTRA MEMBER TO THE LIAISON COMMITTEE BE PROVIDED FROM THE FARMS ABOVE THE WHAKAPARA SH1 BRIDGE."

This was CARRIED 20 votes to 12 against.

The committee was to be Ross Finlayson Chairman, the secretary Mr Imeson, E. Smith, T. Storey, H Leclerc, and N. Thorne.

Under AGM standing orders Mr M. Rusk gave notice of motion from the floor "THAT THIS COMMITTEE ELECT ITS CHAIRMAN FOR A TERM OF 1 YEAR, WITH RE-ELECTION AT THE COMMITTEE'S DISCRETION FOR UP TO TWO FURTHER CONSECUTIVE TERMS."

The chairman then declared meeting closed.

The above notes were taken in my own handwriting during the meeting.

M. T. Rusk. 3rd July 1997.

It is notable that, after the Whangarei decision to make repairs and vote to review the scheme at a joint meeting in February, moved by District Councilor Culham, and again moved by Mr Hoult and passed by the Hikurangi meeting, that the all-powerful Liaison Committee still had the power and authority to decline it or let it go ahead. The Liaison committee would decide.

Following the meeting the TeMata pocket landowners sent another letter to the WDC. This was an eight page list of sixty six obtuse questions that set the tone for a very lengthy and expensive review of the scheme.

The Review Contract is Let to MWH

Multinational company Montgomery Watson Harza won the Review contract ³²² on 9th January 1998. One of the top people in the business missed out on the contract but would become involved later. His name was Dr. Stephen Joynes of Hydraulic Modeling Services Hamilton. Eventually Dr. Joynes who was engaged to work for Mr. Ray Hindrup, ³²³ would get the modeling to be based on actual flood events.

The Contract included many things to be done within the fundamental design philosophy of the scheme. Inflow proportions were set in the 1960's shares as already mentioned. The MWH review contractors were to confirm or otherwise comment on the distribution of inflow shares. It clearly said 'The consultant shall model a number

³²² Hydrological Review Contract WDC No. 91733

³²³ From 10th February 2000

of flood events.”³²⁴ But as we shall see later the modeling of ‘a number of flood events’ was not actually carried out for ten more years.

I believed that the reviewers would need all the maps and records from the scheme that they could lay their hands on therefore I assisted in locating as much information from NRC and District Council archives as I could. With permission of the WDC I gained access to the archives and spent many sweltering days in a searing hot tin warehouse searching hundreds of cartons for anything to do with the swamp³²⁵ knowing that the reviewers would need them. I located a great number of NCC design documents and drawings that were copied and eventually forwarded by the WDC to the consultants. I say ‘eventually’ because the MWH Project Manager informed me by phone that many were delayed for up to 5 months saying, “I was very disappointed the council was so tardy and late in sending us much needed information.”³²⁶ It was not difficult to figure out what was going on behind the scenes.

Failure to Use Log Sheet Records and Noted Water Levels

The review process quickly became bogged down and frustrated through being starved for information. “We were very short of data.”³²⁷ The consultants MWH were no nearer producing a reliable model of the scheme’s flooding. Respected hydrology engineers who conducted a peer review of the WDC consultant's recommendations, as well as a senior NZ hydrologist,³²⁸ all deplored the lack of calibration with historical data that was available. They also deplored the delays and installation of level recorders when ample information was already available from a long time period.³²⁹ No analysis of actual recorded flooding was undertaken although records were available. Immediately after the 1997 decision was made to review the scheme the then WDC field officer Mr. Brian Cutts apparently destroyed the vital logbooks covering the fifteen year period mentioned by design engineers, from 1977 to 1993. The event was recorded in the log by Mr. Cutts himself³³⁰ and when questioned by this writer he replied, “*The logs were damaged by mice.*” However, several people who had read them just beforehand, including Ray Hindrup myself and others, had thought they were in quite readable condition. This destruction of 20 years of records immediately after sanctioning a review was privately described by the review project manager as “*a disaster.*”³³¹ I agreed with him and said the scheme’s designers would have been horrified. This was an intriguing time to suddenly destroy 13 years worth of records.

It is the actual flooding in pockets that is the measure of performance. The degree of flood control in terms of fairness and scheme philosophy is a critical issue in all such flood control schemes and was a very hot potato in Hikurangi. Strangely the Whangarei District Council swamp chairman Councillor Graeme Broughton said repeatedly from the chair at meetings that “*We will not look back.*” Who was he listening to? Looking back at flood records and monitoring records is precisely within the philosophy of the scheme, and the very reason why the pump station logs were kept in the first place! Why keep records if you won't look back at them? Looking back

³²⁴ Scope of Services Schedule A page 18

³²⁵ Searches of records by Rusk, Jan 1998, 5th 11th 13th 16th 20th, Feb 1998, 4th March 1998, 20th April 1998

³²⁶ Phone call logged 11th February 1999 2:18 pm from MWH office

³²⁷ Project Manager Knowles to WDC Liaison meeting of 23rd February 1999

³²⁸ Dr. Steven Joyner of Hydraulic Modelling services

³²⁹ This point was questioned by Ross Finlayson at WDC Liaison meeting of 23rd February 1999

³³⁰ Logs dumped by Mr. Cutts, noted by himself in Ngararatunua Log 6/5/97 & verbally to M. Rusk

³³¹ MWH Project Manager Knowles 11th February 1999

was exactly what was needed and this obstinate refusal to do so was eventually a big factor in driving the scheme back into debt.

NCC chief engineer Alan Moores wrote, "*A review of the control banks will be necessary but to be fair to all parts of the swamp a period of 20 years or so will elapse before sufficient flood data under post construction conditions is available for such a review.*"³³² Sadly, 21 years after construction after faithful taking of records by so many people, the flood data for the review mentioned by Mr. Moores was totally ignored.

Those who designed the scheme also plainly wrote that water levels should be "observed closely to facilitate the planned updating of the scheme later".³³³ That was the intention. In undertaking a review of the performance of this scheme the Whangarei District Council has had its own water level records available but did not use them, nor did the consultants use them. Thus, the 1997 review was flawed from the start. Some claimed this was deliberate.

Reasons given by the consultants included statements like "the records are incomplete," "some logs were not supplied, (either lost or destroyed)," and "data not fully recorded on the logs." Is it not curious that a local body would continue collecting records for ten years if it considered them unsatisfactory? Moreover, the consultants MWH capped it all with, "Not enough detail is known about historical floods to make a calibration."³³⁴ Also, "Insufficient data was available to model performance to an acceptable degree of confidence."³³⁵

Hydrologists and engineers regularly make good use of "incomplete" records to do their work. There had been an abundance of records in cartons in Ngararatunua Pumpshed where Mr. Hindrup and I had examined them. The project manager in charge of the review, when he was told of the destruction of the early log sheets was distressed and exclaimed, "That's a disaster, that's criminal."³³⁶ Criminal was obviously too strong a word, but it certainly was a disaster. It seems the Project Manager at MWH regretted the loss but the consultancy appeared to go to great lengths to avoid using any of the remaining data available.

The excuse by MWH that data was not fully recorded on the log sheets is questionable. It is questionable because of the large amount of data that actually was there but it was not sorted through and evaluated or else it was not forwarded to them. Furthermore, the claim is questionable because other people and this writer in particular, were able to sort the log sheets and glean considerable information during the inflow floods that the review was concerned with. If others can do it then review hydrologists and engineers could, and should have done it. Virtually all the log-sheets from 1990 to 1999 were still in my possession.

The District Council commissioned a \$15,000 report by Worley Consultants in February 1994. The No.1 priority listed in that report was "mandatory expenditure on an updated log sheet with updated requirements to fill in the details." If the records are now considered deficient for this period then the Council has been negligent in not complying with the Worley Report of 1994. Two years later a special meeting of the District Council committee in April 1996 was called to review progress on the recommendations of the Worley Report. If log entries were deficient this should have been addressed then.

³³² Page 8 of *Technical Calculations* 1968 (vol 3)

³³³ *Catchment Commission Technical Report* vol 3 Feb 1968, pg 16

³³⁴ MWH January 1999. 4.6. Page 43

³³⁵ MWH Dec 2002 3.2 pg 5

³³⁶ Author's notes on phone call to Project Manager Knowles 11th February 1999

The log records contain (or did contain) a continuous picture of what has been happening up and down the 12 kilometre length of the main river during the 23 year history of the scheme. The various field officers of the time attended all floods and made various entries. Generally speaking the record has been kept. Some bias in reporting is shown in several locations but that is a separate issue. Another separate issue was the rewriting of official log sheets with details altered. The field officer, and in many cases the local farmers, noted water levels on the pump station log sheets during flooding. They did the job expecting the information to be helpful to future operation of the scheme. It is certainly correct that some records are not complete, but what has not been stated about this is that the incomplete records pertain to the smaller floods that required the pumps to run, but as the river was nowhere near full there was no risk of over-spilling onto farm land. In those situations the filling in of all the blanks on the forms was superfluous and would be an impediment to the field officers who had more important things to attend to.

Floods That Mattered Were in Fact Well Recorded

There are three kinds of flooding. Firstly the numerous light rainfall variety that put some water into the scheme but turn out to be small events producing only some surface flooding within pockets which is normally pumped out, and the stations are reset. There is absolutely no need to record these events in great detail as far as river levels are concerned. They are non-events. Secondly there are the rainfall events that cause half-size floods that stay within the stop-banks while pockets are pumped out. A very small number of these floods get close to the top of the stop banks and river levels are recorded fully but no over-topping of banks occurs.

Then there are the large floods that cause inflows and require proportional distribution into the 7 storage pockets as designed. These are the floods that really matter. The record shows that in every single case these inflow floods have been monitored and records kept. Water levels have been recorded at pump stations until the river has receded, with level recording lasting up to 15 days in very large floods. If the field officer was not able to be present everywhere the local farmers often manned the pumps and made the entries, sometimes going down to the relevant pump station in the middle of a stormy night to do so. The number of these floods is relatively very small but these floods are the big ones and the critical ones, always caused by large easterly depressions or tropical cyclones. In what is now thirty four years of operation there have been no occasions where multiple recording of river level has not been done throughout these floods.

What Was in The Pump Station Log Sheets?

After construction of the scheme log records were kept throughout the years 1977 to 1990. There were several large boxes of these. These records were in hard backed books and covered the period up to alteration of the scheme but were destroyed by staff when the review was initiated. Although those were destroyed, there are some original 15 day x 24 hour flood graphs, drawn up from the old log sheets by the Northland Catchment Commission.³³⁷ It was obvious, that in the early days inflow floods were not only well recorded in the log sheets, but were monitored and processed by Catchment Commission staff. The previous management were obviously monitoring the scheme as set down by design engineers. Some of this data and many aerial photographs still exist. The major floods for the period for which the logs sheets were destroyed are covered by other means.

³³⁷ The only ones known at present are held by the author

The remaining Whangarei District Council record is virtually continuous with approximately 99% of the record intact. To the year 2000 when the review had been going for three years the records contained all log sheets for the period from 1991 to 1999 a total of 306 sheets. The number of initialled or signed off entries (visits) in these 306 sheets total 2,502 entries. The number of floods recorded on log sheets, of all sizes and categories from 1991 to 1999, total 87 floods. The number of major floods between 1978 and 1989 that caused overspill onto farmland totalled approximately 5 floods. The number of major floods between 1993 and 1998 that caused overspill onto farmland totalled 7 floods. The number of river levels sourced from log books 1983 to 1988 covering three large floods as analysed by Catchment Commission staff total 235 levels. The number of river levels recorded in log sheets 1990 to 2000 was 411 levels. River levels available from nine logged overspill floods total 646 river levels and of these, 123 are peak levels.

In addition there are aerial photos taken by the Northland Catchment commission covering the 5 large floods over the entire scheme 1978 to 1988 totalling 73 aerals. Ground level photos of 3 large floods 1983 - 1988 numbering 28 photos. Ground photos of flooding in pockets and crest overspills for years 96-98 58 photos. All that information was a goldmine to hydrologists and engineers. Why was it not used at the beginning of the review? The consultants agreed with Mr Finlayson's question but failed to act.

There were 411 levels available for the seven main floods from 1993 to 2000. They ranged from 41 observations in the 1993 flood up to 88 for the later flood. There were four fully reported stations. These are Te Mata, Otonga, Ngararatunua, and Okarika. These four stations took 386 levels between them and averaged 96 river levels each for the period. These four stations alone have provided 96 peak level readings for the seven floods. When the three small stations are included there are 411 readings available. When available flood level records from 1983 to 1988 (table 2) are included the total number of river level readings amount to 646. No storm had less than 9 peak levels taken and there are 123 levels available at or close to peak. No flood had less than 38 total readings, and the four best recorded floods had 93, 88, 81, and 73 river levels written in the log sheets respectively. It can be seen that there was a considerable amount of log sheet data available. In addition there are a large number of aerial photographs of earlier floods taken by the Northland Catchment Commission staff when monitoring the scheme. Why were the remaining records for the recent decades not used?

For example the very well recorded Fergus flood of Jan 1 1997 had all details forwarded to the WDC. However when the MWH Project Manager reported to a Liaison meeting he said, "The Fergus flood data can be run however, like the other floods it is limited by only downstream and upstream levels being available to calibrate the model." The centre swamp had been well recorded at Otonga so what happened to the information? Was it removed?

If the information from the logsheets had been looked at it would have immediately shown they had modelled the water gradient too steeply, and they could have adjusted their model and subsequent report accordingly but it took twelve years for the WDC and their consultants MWH to look at the flooding record. This failure, or perhaps deliberate avoidance of using recorded information, was to prove the major mistake that wasted ten years of time, frittered away consultancy fees and caused further huge losses to the disadvantaged landowners, not to mention the scheme as a whole going seriously back into debt. The 1999 Report by consultants MWH ignored all remaining historical information on flooding available from 1993, relying entirely on a computer model.

This model was not calibrated to actual flooding events³³⁸ therefore the findings soon became of little use. According to Mr. Hindrup one person involved with MWH had admitted to one of Hindrup's consultants that, MWH's earlier reports over a five year period were, "Just a heap of shit."³³⁹ The 1999 report proved a waste of some \$80,000 and was never heard from again.

Original Staff Gauges were Mounted at False Levels

Few people seemed to know that the scheme was built with many of the staff gauges deliberately mounted far from their true levels. Was this to disguise the real state of affairs so farmers could not understand what was going on? In 1997 I found it impossible to draw a proper grade of peak river levels from the log sheet figures that suggested the river flowed uphill as often as downhill. The draft review report had included errors of up to 2.1 metres at Junction and several of around .300 mm at Otonga and Tanekaha. Using a gauge that is 2.1 metres out over a long period is one thing but surveying it and saying it is correct is another thing. Following my polite complaint to WDC, Hodges and Elrick surveyors were sent to re-check levels of all staff gauges. The Junction gauge with the 2.1 metre error was again said to be correct. When I visited Hodges and Elrick's to point out the error³⁴⁰ I was given the disparaging 'just a dumb farmer' look and asked how I came to that conclusion. So I said, *"Well, we know the level of both stopbanks so sighting across them and reading the gauge poking up above the banks shows a 2.1 metre difference. That's not rocket science is it?"* I got an unsavoury look. It transpired that the surveyors had not even taken a boat and just reported the staff gauge OK without surveying it at all! To sort out the mess I first check-surveyed all the gauges with Maureen³⁴¹ and privately installed my own accurate staff gauge at Lewis Bridge³⁴² While most scheme gauges had errors of up to 50 mm, the inlet at Tanekaha read 250mm too low, Otonga's inlet was 170mm low while the outlet read 240mm low. At Junction the river gauge outlet was mounted to read a whopping 1.920 metres too low while the inlet read 2.350 metres too low. Such errors are far too large to be accidental! So what was the plan in fiddling the staff gauges levels at construction? To keep people happy? Or ignorant?

Fourteen years later the gauges were still not put right. From 2002 all of my level data was based on the corrected staff gauge levels using Mr. Hindrup's professional survey by Donaldsons, generally to an accuracy of within 5 to ten millimetres. I recalibrated data prior to the year 2002. For thirty four years the use of false levels was clearly a deception to farmers and contributed to eleven years of very expensive confusion of farmers and the council's consultants.

Draft Report Arrives from Consultants MWH

I was visiting Mark Simpson, then the Council Drainage engineer, when the Draft Report arrived 25 days late. He passed it to me asking, "Do you think we can sell them this?" I replied with a single word, "Doubtful."

Mark Simpson personally invited me to attend a meeting to discuss the Draft Report at Forum North³⁴³ which included Liaison Committee farmers, the Mayor, and

³³⁸ After ten years the author's collection of data was eventually used by the consultants

³³⁹ Phone call from Mr. Hindrup 24th June 2007 Consultant's name withheld

³⁴⁰ Visited 14th September 1998

³⁴¹ Completed 11th September 1998, using contractor Brian Gwyn's borrowed equipment

³⁴² Installed on 10th March 2000 then checked by Donaldsons 2002 accuracy within 10mm

³⁴³ Draft Report meeting 14th July 1998 at Forum North

NRC Land Operations Manager Bob Cathcart who sat down next to me. The farmer representatives were there plus Regional Council reps and others.

The draft report was not only late but it was a mass of errors, and notably one very big one that dogged the review for ten years. Unfortunately few people seemed to understand the detail of what was happening. Having studied the report in detail and highlighted the screeds of errors, I went along prepared to tackle the biggest error first up. This was the matter of the crazy steep water gradient as modelled. At that stage I was poorly versed in hydrology and engineering jargon and the drawing I took along to illustrate MWH's critical mistake was not well received. The CEO Mark Simpson, a water engineer himself, demolished my effort right in front of everyone by saying, "Merv's drawing is only a one dimensional drawing".

He shot the messenger but unfortunately missed the point. Over the next ten years it became painfully obvious that I had been correct in what I had just put together in less than an hour. Rough as it was, my hastily put together drawing had pin-pointed the very nub of the problem with the consultant's modeling - the river was modeled far too steeply throwing both their crest recommendations and the whole review off course for the next ten years. It was most unfortunate because defensively shooting me down eventually cost the council, the flooded farmers, and the swamp ratepayers many hundreds of thousands of dollars and another ten years.

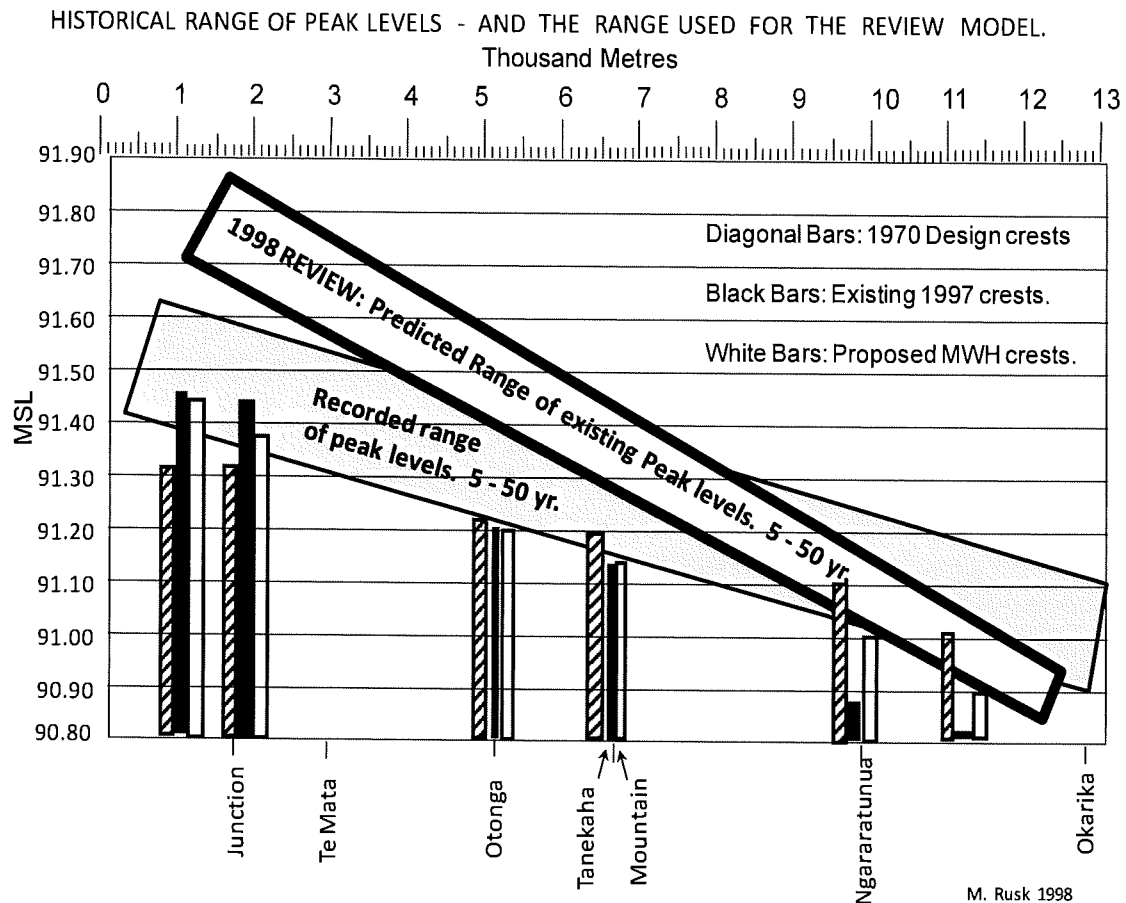
The fact was I had already been processing the flood records and log books but both the Council and its consultants blindly refused to listen, having never bothered to examine the evidence, or even wanted to. The result was a poor 'engineer's type' of report rather than one balanced by observations.

Later however, the consultants privately told me they were being starved of information by the council.³⁴⁴ It was almost like a conspiracy of silence that was operating. This deliberate starvation affected the review for many years. Most ratepayers never knew that this was the way certain people had wanted it.³⁴⁵

By starving the consultants and feeding in their own opinions they could continue controlling outcomes. The plan nearly came off.

³⁴⁴ MWH Project Manager phone calls of 11th February and 22nd February 1999

³⁴⁵ WDC's Mr. Simpson and Mr. Oldcorn to claims at Liaison Meeting 25th May 1999



References: MWH Vol 1. Pump station logsheet records.

I did the drawing above in 1998 to alert the meeting that the Council's consultants MWH had got it terribly wrong but it was ignored. Five years later the consultants took notice and partly corrected their model but full recognition of observed water levels did not occur until eleven years after the above graph was provided.

MY QUESTIONS ON THE 1999 MWH REPORT

Rainfall and Gradients

After the July 1998 rejection of my drawing that showed MWH had got the water slope too steep I was concerned enough to continue researching the rainfall and the scheme design in an effort to prove whether the MWH review computer model at that time was fatally flawed because of its extremely steep gradient.

By September 1998, only two months after the Draft MWH Report was released, I had produced research on the following points in the hope that critical errors could be addressed prior to the Final MWH report.

1. Scheme design and historical rainfall calculation methods.
2. Tropical rainfall storms in the Wairua Catchment.
3. Discharge from the Hikurangi swamp.
4. The steepness of the water gradient in the WDC Review model.
5. The peaks of the historical water gradient in the main channel.
6. The rainfall records as used by design engineers.
7. An up to date Isohyet map of tropical rainfall distribution.

8. Rainfall records from recording stations for tropical storms.
9. Downstream discharge records of the scheme at Purua.
10. Checked tropical rainfall again using the Thiessen method.

Two basic assumptions in the Review Report invited question. These assumptions could contain critical errors which are difficult to detect because while one is a plus the other is a minus, and both being about the same size they cancel each other out. Thus they are difficult to detect but may seriously affect the operation of the model.

My research was to examine whether or not the peak levels of the water gradient in the main channel were forecast correctly. If the peak river levels forecast do not approximate levels of available records taken over many years then the model would be unable to reflect reality. For all pockets this would have implications for costs and proposed changes to inflow spillway levels and lengths. Some upstream pockets could get no inflow at all while others in the lower swamp could be swamped. The following is a brief outline of my 1998 research to check the rainfall and main channel peak water gradient as predicted in the 1998 Review Draft Report. It was checked over by the NRC Hydrology Office and found to be "Technically OK."

Area Rainfall as Used in Scheme Design 1960's

The scheme Area rainfall rate³⁴⁶ was originally calculated to be 80% of the volume at the Puhipuhi Auto gauging site, upon which the scheme was based. NCC Vol 1 of 1966 reported that the 80% figure was based on Annual Rainfall totals from observations at 5 gauging sites around the swamp from 1927 to 1930.³⁴⁷ These calculations produced an accurate average for the whole of scheme catchment. The annual and monthly figures for Hukerenui, Puhipuhi, and Marua, were offset by the lower rainfalls at Jordan and Ruatangata. So the scheme "as a whole" was based on the Area Rate of 80% of Puhipuhi records. Contrary to popular belief, this figure for the entire scheme is found to be quite accurate over time when checked against post construction rainfall records of tropical storms.

Area Rate Rainfall as Used by MWH in 1998

The WDC review contractors MWH based their 1999 report on an area rate rainfall calculated only from annual totals.³⁴⁸ But unlike their predecessors they used local within-catchment Annual Rainfall totals to calculate the runoff from only the 4 upstream catchments. This produced an Area Rate of 102% of the Puhipuhi station, and this rate was used for the review computer model.³⁴⁹ Therefore the Review is based on a catchment supply volume that is somewhat greater than was used for design of the scheme.

It is important to note that while annual rainfall tends to even out over all the catchments for the year, flooding is certainly not caused by Annual Rainfall. Floods in the Hikurangi swamp are caused by easterlies during tropical storms only, and the distribution pattern of rainfall in the catchments from these storms is very different from Annual totals. This fact is well understood by farmers in the area. During the WDC Review no distribution figures for rainfall from Tropical Storms were calculated, so annual figures were used instead.

³⁴⁶ NCC Vol 3 pg.2

³⁴⁷ NCC Appendix 01.02.01

³⁴⁸ MWH 1999 Report 2.1.3

³⁴⁹ MWH 1999 Report 2.1.1 & 2.1

Does Present Rainfall Distribution Still Match 1960's Design ?

After the Draft Review release I acquired and processed daily rainfall data from 20 rain gauging sites in the Wairua catchment which supplies the swamp.³⁵⁰ I selected a range of 32 significant Tropical Storms covering the years from 1964 to 1997 including the storms used in the Review.³⁵¹ For each site the tropical storm rainfall totals were averaged. Thiessen weightings for the sites were then derived to produce Area rainfall rates for the upper catchment, as well as the catchment of the swamp pockets, and for the scheme as a whole. As a check I followed that with an alternative known as the Isohyetal method to produce Area rates from a "rainfall contour map". This work used to be Maureen's specialty in her Ministry Of Works job so she was brilliant at helping me out doing this. The two sets of results came out quite close. They are compared with design figures and those used by the District Council review by Montgomery Watson.

1960's Design Rainfall Estimates Compared to Later Rainfall.

Area Rate Rainfall as a % of Puhipuhi recording site # 545201.				
Source: Type of rainfall: Years examined:	N.C.C. 1966. Annual rainfall. 1927 -1930.	Review 1998. Annual rainfall. 199? - 1997	M. Rusk 1998. Tropical Storms. 1965 - 1997.	
Method:	Simple average	Thiessen	Thiessen	Isohyetal
Upper catchments:	89 % ³⁵²	102 %	86 %	88 %
Pocket catchments:	--	--	62 %	60 %
Scheme as a whole:	80 %	--	80 %	79 %

Comment on Rainfall From Tropical Storms

While the original NCC 1966 calculations appear to have been accurate for the "whole scheme" catchment 80% was said by MWH to be 'too light' for the upper catchment supply, but the real situation was not as light as the Review claimed. MWH had used local annual rainfall totals rather than tropical storm distribution which tapers off rapidly from Puhipuhi. The figure of 87% for tropicals should have been used rather than 102%. Before the Report of 1999 arrived I called on MWH hydrologist Tom Kerr in Wellington to say their rainfall rate was too high and should be around 93% of Puhipuhi. Tom agreed and said, "We'll change it" but it never was changed. Two years after writing this section in 1998, I discovered that the scheme design engineers did not use 80% for the Whakapara and Waiotu supply catchments at all. In fact they used 89% and 90%.³⁵³ It can be seen from the table that the figures I worked out were very close to those used by original engineers. But not so for the 1999 Review Report. In using the even spread of annual rainfall the review had, in effect, pulled the Area Rate right up to the Puhipuhi rate, producing a model for storms that was 14% too high for

³⁵⁰ Kindly supplied by Mr. Dale Hansen Hydrology Office NRC

³⁵¹ No significant storms occurred or were available for the years 1967, 70, 72, 87, 90, & 94

³⁵² This figure was discovered by the writer two years after first writing. The figures are found in NCC calculations in Vol 3 Technical Calculations page 18 (Whakapara catchment) and page 22 (Waiotu catchment)

³⁵³ NCC Vol 3 Technical Calculations Feb 1968, pages 18 and 22

the upper catchments and 27% too high for the whole of scheme catchment. It seemed that the Review had modelled some 14% too much water in at the top end. Little wonder that the MWH computer model was showing a very steep water gradient through the main channel and the crest recommendations were so ridiculous!

It should be pointed out here that rainfall is one thing but 'concentration time' is another thing. While rainfall patterns may not have changed concentration time has. In answer to ratepayer complaints³⁵⁴ it was stated by the Swamp Works Committee after the first floods that, "Since the scheme was completed, it has been observed that the time of concentration (time from beginning of rainfall to peak river flow) has reduced, so that flood producing characteristics of rainfall are now dominated by 24 hour storms rather than 3-4 day falls as was the case before works was started."³⁵⁵ Outflows reacted more quickly and peaks were shorter and sharper.³⁵⁶ The NCC expected this to happen and it has. The shift is not caused by climate change.

Peak Discharge Rate From The Swamp

The question then arose: If there was too much water going in wouldn't the discharge from the swamp need to be higher too? The maximum outflow from the swamp is reported by the NCC as 243 cubic Metres per second,³⁵⁷ and this figure is used on a number of occasions. In the first year of operation the outflow at Purua Bridge was said to be 10% above design at bankfull.³⁵⁸ The graph E in Vol 3 runs even off the page at 275 Cumecs. In practice, actual outflows from the swamp have been gauged over many years, and my wife Maureen was involved in carrying out and recording that work. After construction of the scheme the gaugings at Purua Bridge showed discharges slightly greater than design. Later Cyclone Bola reached 302 cumecs at level 7.659. One other storm reached 312 cumecs, but the upper limits have ranged around the 300-303 Cumecs mark. When this flow is reached the exit channel cannot take any more and any upstream excess simply overflows the banks into the swamp pockets for storage.

However, the 1998 Review peak discharges used in the computer model to produce the 1999 report proved to be much greater than actual volumes measured, ranging from 351 CuMecs up to 377.³⁵⁹ While these peak discharges in the report are actually listed for Lewis Bridge, logic dictates that, with little additional water available and no storage, the flow must also apply to Purua Bridge 5.7km downstream. The close flow relationship was confirmed by the NCC.³⁶⁰ High discharges are shown in MWH's 1999 report³⁶¹ with 400 cumec discharge past Jordan Bridge for 5 year events. Most, if not all such water from the 5 year event, should exit past Lewis and Purua Bridges. It simply cannot go anywhere else.

The Report section 2.6 commented on the computer modeling of the downstream boundary conditions, acknowledging 'some limitations', and using 'approximate extrapolation'. Being unaware of the very considerable willow growth blocking the

³⁵⁴ Statement from Hikurangi Swamp Ratepayers Association 24th July 1978 (extreme disgust letter)

³⁵⁵ NCC Swamp Works Committee meeting 24th July 1978

³⁵⁶ Report by CEO Moores on Analysis of flows based on Puhipuhi rainfall 1st December 1977 pg 40

³⁵⁷ NCC Vol 2 pg.2

³⁵⁸ NCC Scheme Review 1978 Page 3, C. Note: the comment was based on very few floods

³⁵⁹ MWH 1999 Report table 5.1

³⁶⁰ Technical Report of March 1966 Appendix 04.01.02

³⁶¹ MWH 1999 vol 1 Figure 2.16

river (until inspection after the review was completed)³⁶² it was no surprise that the consultant's modeling of the scheme discharge did not match reality.

The table below shows that the amount of water allowed to escape from the swamp by the review Model exceeded actual flow gaugings by a considerable degree. This was a fundamental flaw and it affected the entire 1999 report and MWH's work for several years.

Discharge from the Hikurangi Swamp - Cubic metres per second.			
Discharge shown by:	N.C.C. 1966	Gauging	MWH Model 1999
Expected design maximum Highest levels since 1960 Range for 5-50 yr floods Average at peak level	243	303 273 – 303 288	351 - 377 363
Average peaks as % increase over design Average Review increase over average found Predicted highest as % increase over actual		18%	49 % 26 % 24 %

In the MWH 1999 report³⁶³ even the smallest flood modelled, the 5 yr event, was given a discharge 16% greater than the largest of floods since 1960. The 50 year event was shown in the report to produce 25% more discharge than is found in practice, difficult to imagine when all inflows to pockets are fully flowing and the main stopbanks have no freeboard left. Five year events were listed at 351 cumecs when they actually peak around 272. Table 5.1, as used for modeling purposes, lists the Lewis Bridge 5 yr peak at 351 cumecs, yet 2.51 says this frequency peaks at only 238 cumecs further downstream at Purua. Impossible?

On average, the 1999 Report allows for discharges that are 26% higher than found in practice. Not surprisingly this difference reflects the overestimation of rainfall in at the top end as discussed earlier. Hence, the overestimates of inflow from rainfall that are fed into the model are offset by overestimates of outflow. This all suggests the inflow is too high and outflow is too great so the next question arises: Wouldn't these two effects cause the computer model to show the water slope in the main channel to be steeper than is actually found in practice? What would happen to the water levels in the main channel? Adding some 14% more water in at the top end of the model would require higher stop-banks at the top end of the channel, while increasing the outflow discharge limit would lower water levels at the bottom end. Not surprisingly, (again) these two changes are exactly what the 1999 Review report recommended.³⁶⁴

³⁶² MWH were unaware until 23/02/99 when Mr. Ross Finlayson showed the project manager

³⁶³ MWH 1999 table 5.1

³⁶⁴ MWH 1999 Table 9.3 and stop-bank recommendations

Historical Peak River Levels

As with both the rainfall and discharge figures, peak levels predicted by the MWH model for the main channel did not mesh with observed reality. As explained I used the pump station logs of river levels to draw two dimensional graphs of historical peak levels in the main channel. The peak levels for stations and the water gradients for a number of historical floods were compared to the gradients produced by the Review MIKE 11 modeling for the Review report. The MWH gradients were found to be very much steeper than actual peak levels observed over time. The steep gradient was perplexing and was the reason I went to considerable time and trouble to check the rainfall and swamp discharges. Later, when checking the Area rainfall used in the Review model, the reason for the increased gradient became apparent, and this was confirmed by the increased scheme discharge allowed for in MWH's review model. My findings of extra rainfall rate and extra outflow were consistent with the increased channel water gradients produced by the 1999 review model.

Model Peak Levels at Lewis And Purua Bridges

The MWH 1999 Review Report showed that the computer simulation had problems with the downstream end of the model. In that report the graph on page 15 fig 2.8 was already inserted because of my early questioning about the high peak levels at Purua Bridge by the MIKE 11 model. It was mentioned on page 14 that the recorded data "is not well fitted to the EVI due to flood water levels only rising to the top of the stop bank which limits recorded peaks." In reply to my questions via council it was acknowledged by MWH³⁶⁵ that the output from the model was about 17% greater than any recordings since 1963. This acknowledgement reflects the 14% over-estimate of rainfall in supply catchments.

The model treats all water as remaining between control banks with any overtopping only via spillways. It was claimed³⁶⁶ that these high results from the model occur because of stopbanks being overtopped (eg: at Whakapara River) but if that was the reason then why did the levels for small floods, when the banks are not overtopped show the very same discrepancies? When the MIKE 11 output curve is extended to the 2 year event position (not drawn in the report) the calculated peak flow is some 80% higher than recordings. Why is this so high when no overtopping of stopbanks occurs in these flood events?

Furthermore the review report is implying that when the Hikurangi Swamp scheme is working as the consultant's model suggests it should, maximum discharge from the swamp will be 55% greater than originally designed for.³⁶⁷

Measured Peak River Differences at Lewis And Purua

The 'head' differences for the 4.5 km stretch of river between Lewis bridge and Purua shown by the computer model are less than half of actual recordings. The discharge from the swamp scheme is a very critical factor in its operation. Why is this difference between actual recordings and the review prediction so large?

How is it technically feasible, without a reduction in flow, for peak water levels to reduce by about 50mm -100 mm below recordings up at the Lewis Bridge end, while at

³⁶⁵ Page 14 and 15 of the MWH 1999 report

³⁶⁶ On pages 14,15 and 2 (g) of the 1999 review report

³⁶⁷ Compare MWH 1999 Table 2.8 with NCC Vol 2 pg. 2

the same time rising more than 800mm above known recordings downstream at Purua bridge,³⁶⁸

<u>Event category and timeframe:</u>	<u>Difference.</u>	<u>Reference.</u>
Level difference at zero flow, Lewis to Purua	1.89 M	(NCC Feb 1966 8.01.00)
Difference for 5-50 yr events prior to scheme	1.95 M	(NCC Feb 1966 8.01.00)
Difference for 5 yr event recorded post scheme	1.80 M	(WDC, NRC, and MW p24)
Difference for 50 yr event recorded post scheme	1.30 M	(WDC, NRC, and MW p24)
Difference in Review model output 5 yr event	0.80 M	(MW review p47, p24, p15)
Difference in Review model output 50 yr event	0.63 M	(MW review p47, p24, p15)

It appears, from the recorded levels applicable to Lewis Bridge and those from Purua bridge, that the MWH computer model has a reduced head for this key stretch of river. This reduction in head is 55% on records. At the same time the model shows an increase in flow of 17%. Is it technically feasible that flow can be increased 17% at the same time as head is reduced by 55%? The modeling of the discharge section of the river has serious anomalies, as does the modeling of the main channel through the swamp. Regarding differences in peak water levels between Lewis Bridge and Purua bridge there is a wide discrepancy between the MIKE 11 model output and actual recordings.

These differences exist when comparisons are made across a wide period time, from prior to construction, the period when stopbanks did not over-top, and the latest ten years. Historically the water level differences between Lewis and Purua are reasonably constant, but those of the 1998 computer model do not fit them well.

Summary On Rainfall Used in The 1998 Review Report

The early Review computer Model used an Area Rainfall rate for the upper catchments that was about 14% higher than that found in tropical storms and 14% higher than the area rates used in design of the scheme. The computer Model produced discharge flows that were about 26% too high. The logical result, confirmed using the log records, is that the consultant's peak water levels modelled for the main channel produce gradients that were far too steep.

Recommendations were then made for critical changes to inflow spillway levels to allow for these theoretically steeper water gradients that did not exist in the real world. The changes were to build higher and shorter spillways at the top end of the channel and cut longer and lower spillways at the bottom end. This was a wonderful recipe for disaster. This plan had to be challenged because the water gradient would continue to run flat like historical records show with the result that the upstream pockets would then take little or no water while the downstream pockets would have been inundated further. Then all the earthworks would have needed doing again.

Full of optimism I supplied my improved research to the WDC having been rejected at the draft report meeting in 1998. This time CEO Mark Simpson said, "Your points are valid" and passed it on to WDC consultants MWH. There was no response and no change for another four years.

³⁶⁸ MWH report 1999 pages 47, 24

Volumes Left Out of the Early Review Model

About 7% of supply volume going into the swamp scheme was not accounted for in the 1999 Report of the MIKE 11 computer Model. Considering that a detention dam to hold only 2.5% was seriously considered in the report,³⁶⁹ it followed that a volume of 7% must therefore be worthy of consideration? Because of my knowledge of upstream sites I was asked to look at detention dam sites with the consultants and I saw their interest in accounting for relatively small catchment areas. So I was very surprised when the flow from the entire Mangawhero catchment was been omitted from the Model.³⁷⁰ This area was erroneously described as only 6 sq Km and disregarded as "internal swamp water" and not included in the model.³⁷¹ In fact this area covers 14 square kilometres and represents 4% of the total catchment supply.³⁷² This omission was not corrected until ten years later on 4th November 2008, when I was able to show the 1978 Mangawhero Diversion drawing the MWH consultants at a joint meeting in Whangarei and it threw the model out of calibration yet again.

The volume of water that flows into the main channel prior to the flap gates closing has been omitted from the model.³⁷³ This volume has since been calculated to equal approximately 1% of upper catchment volumes.

The volume pumped into the main channel from pumping prior to overtopping was excluded from the MIKE 11 modeling.³⁷⁴ "No account was taken of internal water "and "so pumping as the flood rises also fell out of the equation."

The runoff from the area of land between Lewis Bridge and Purua Bridge was not included in the 1998 model. This area is 13 square miles and is equal to 9% of the upper catchment area. While most of this runoff exits before the main channel fills it does contribute to filling the outlet of the swamp. During overtopping (peak level) periods this area has been observed to be providing considerable runoff into the river.

As stated, the flow from the Mangawhero stream (14 sq Km) was omitted from the Mangaharuru hydrograph in the 1998 review. The water from this catchment joins the Mangaharuru and enters the eastern end of the canal upon which the Ngararatunua spillway is situated. Why was the effect on this spillway being ignored when this was a written requirement of the WDC contract brief?

Effect of Filled Inflow Areas in the Computer Model

The District Council stated³⁷⁵ that currently lengths of stopbanks are above design level, and requested the consultant to calculate what effect this has on the distribution of inflow water for the four listed flood events. (The word *stopbanks* used here obviously refers to inflow crest levels as overly high control banks are irrelevant to this request). The inflow areas that have been raised and filled (circa 1990 following

³⁶⁹ MWH 1999 3. (k) page 2. The writer was asked to be part of the tour inspecting detention sites

³⁷⁰ MWH 1999 p22 para 5

³⁷¹ MWH 1999 p.41 para 4

³⁷² NCC plan 1384-1 and Vol 3 p.3

³⁷³ MWH 1999 p41 para 4

³⁷⁴ MWH 1999 p29 3.4.3. & p41 para 5

³⁷⁵ WDC Contract 97133 (p20 xii)

cyclones Bola and Delilah) were at Te Mata, Junction, and also Mountain pocket. The review report document does give MIKE 11 results for “existing” crests and “as designed” crests.³⁷⁶ The survey levels as used in the model are not now current and many of the inflow crests were at the time quite low and eroded. The report appears to have failed to address the requirement in the contract - specifically there has been no calculation of distribution percentages between the raised and shortened inflows and the rest of the inflows when at design level. (Since first publication independent modeling shows the inflows at Junction and Te Mata are restricted at average flood peak levels by up to 90% and 97% respectively) Some very low and eroded crests have masked the effects of those raised inflow crests in the model output in Table 5.4 and the analysis as requested in the contract is thus not provided. The model needs to be run again with the high crests of Junction and Te Mata and Mountain as they still exist, and with the other crests on design level (which they are now at.) A table similar to 5.5 needs to be produced but using Te Mata, Junction, and Mountain crest levels as existing. Will the Whangarei District Council therefore ensure that this part of the contract is fulfilled?

Validity of Evidence From Cyclone Fergus 29-30/12/97

A professional aerial survey of the Cyclone Fergus flood was taken and paid for privately. The survey was done by a commercial aerial survey firm. Unfortunately there was a refusal to use this survey. Various reasons were given, some including the line that the Fergus flood was not representative. However, if the review report is examined on page 19 it will be seen in the small print beside the hydrographs that this particular tropical storm has actually been selected deliberately and used by the consultants for the scheme hydrograph. So Fergus supplies about one sixth of the entire data for the unit hydrographs that drive the MIKE 11 computer model used in the review. Now, if the Fergus storm is good enough for the Consultants to use in modeling the hydrographs then how can the aerial survey of the same flood not be good enough to use? Why was this storm not modelled? Why was the valuable information in this aerial survey not used? Who wanted to block all use of this survey? Was it the west bank landowners or certain members of the Liaison committee who may have blocked their inflow spillways and opposed the use of this flood in the review because it was damning evidence of current unfairness? These questions have never been answered and never will be.

False logic

The 1999 MIKE 11 model showed peak flood levels at the Junction that are some 250-300 mm higher than recorded in practice. The reason given was that in practice floodwater escapes over the control banks (at Whakapara) and the model “includes” this water thus showing higher peak levels. However, why are the records of peak levels for smaller floods also 200-300 mm lower than modelled peaks at the Junction when such small floods do not overflow the control banks at all?

A second bit of false logic was shown where the 1999 Report predicts overtopping of the right bank of the Mangaharuru below SH1 and that the water would flow into the Mountain Pocket.³⁷⁷ This was plainly incorrect. This water would obviously drain back into the Mangawhero diversion below and flow down the Mangaharuru Canal

³⁷⁶ p.48 tables 5.4 & 5.5

³⁷⁷ MWH 1999 p51 para 3 & 4

would it not? How could it flood the lower reaches of the Mountain pocket on the other side of the diversion cut? (Nine years later I had the opportunity to show MWH MWH staff the drawing of the diversion and they included the Mangawhero flows into the Mangaharuru flow at last.)

Okarika Pump Station Capacity

The review Report stated ³⁷⁸ that Okarika pumping station is below design requirement. There are some historical reasons for this.

The first is that when the scheme was designed and agreed upon there was a Wildlife sanctuary included in the Okarika pocket of some hundreds of acres. It was agreed that this would be used to store inflow water and therefore pumping capacity was reduced equal to one Pleuger 60 kw pump.

The second reason is that this pocket has a considerable hill-water diversion system. This fact does not appear in the Review Report and may presently be unknown to the consultants as it was not mentioned in p.33 para 7. The Okarika hill-water diversion canal has been surveyed by the writer in flood conditions and effectively raises the water level on the top side of the pumps by more than 1.3 metres. This improves the pumping capacity by some 20%. ³⁷⁹

The third reason is that the 1966 designers of the original scheme took rainfall patterns into account but the 1999 review does not. Okarika pocket receives an average of 50% of Puhipuhi rainfall in tropical storms, or about three quarters of the rain that some other pockets get. Okarika's 50% of Puhipuhi compares with 70% at Ngararatunua pocket, 61% at Tanekaha, 62% at Te Mata, 64% at Mountain, and 68% at the Junction. Otonga being the most easterly pocket catchment receives over 71% and this pocket is probably the worst off in terms of rainfall, pumping capacity, and gravity outlet (see later graph and table on gravity outlets) The basics of the original design rainfall factor is still discernible in table 3.4 p32 of the 1999 Review Report.

The view that Okarika pocket is under pumped by 12% must be balanced against the original trade off with the reserve land, plus the probable 20% increased pumping capacity caused by the raised diversion canal, together with less tropical rainfall, leaving a net situation of plus 8%, as well as several hundred acres of reserve land to store inflow water. There are occasions of course when Okarika pocket is certainly subject to heavy westerly storms of brief duration which cause considerable surface flooding, but this is common to other western pockets as well, especially Te Mata. In view of the points illustrated above, is the expense of increased pumping capacity really needed at Okarika? Probably not.

Recent Use of Mean Annual Rainfall Instead of Tropical Storms

The review Report acknowledges that the original scheme design was based on a catchment rainfall of 80% of Puhipuhi. (p.7 para 1) The review states this was an "assumption" when in fact the figure was as carefully calculated as in the recent review. The review (p.7 para 2) goes on to explain that the 80% figure was examined by considering rainfall in the upper three catchments of Waitutu, Whakapara, and Mangaharuru but this was not how the figure was originally calculated. The original 80% figure was arrived at by averaging rainfall records from five stations spread over the whole Wairua catchment area, not just the three upstream catchments. The design figure was lower than found in the review because two of the stations,

³⁷⁸ MWH 1999 p.33 para 5, and concludes p.80 16

³⁷⁹ See Tables MWH 1999 Review Report appendix 1 Okarika

Ruatangata and Jordan, have much lower rainfall than Puhipuhi, or the upper catchments. In contrast the review uses annual records from only the high rainfall areas nearer the east coast. That is one reason how the higher figure of 102% of Puhipuhi is arrived at. The scheme designers did not underestimate rainfall, they merely calculated it by different methods using different records from the whole area of the scheme. This is all of background interest only.

The real point about the Review Report concerning rainfall is that the review model uses 'annual' rainfall. For years the modeling was not based upon real rainfall as distributed in actual tropical cyclone events. Annual rainfall does not produce flooding, but tropical cyclones do, and they are peculiar to this area of New Zealand. Neither of the two points outlined above are a major problem when separate, but when they come together there is a problem. The whole scheme cannot be designed on 102% of Puhipuhi rainfall. If modeling is later extended to cover the swamp pocket catchments themselves, this will become apparent very quickly. It remains to be seen whether the 102% figure can be used successfully for the upstream catchments either. Design engineers used 89% and 90% for Whakapara and Waitutu catchments respectively ³⁸⁰ not 80%. The 80% was used for the whole of scheme estimates.

The report sensibly suggests caution when using the flows that have been used for the Whakapara river. The highest gauging ever recorded at that site was 298 cu/M/sec. Because the flood overflows a nearby stopbank at this level it has been assumed flooding would rise 300mm to 600mm above this level if the banks were higher, so the curve has been arbitrarily extended and a figure of 521 cu/M/sec has been used. That is 75% more volume. This problem has been compounded by the raising of inflow intakes just downstream and the effects of this on gauging is unknown.

At present the results of the model are too diverse and unreliable to speculate, hence the need to install level recording meters to calibrate the review model, and work from there.

When the rainfall is calculated using tropical rainfall distribution from a large number of storms over the last three decades, the average equals 87% of Puhipuhi. (references noted elsewhere) and it is certain that if tropical cyclone type distributions had been used for the compilation of table 2.1 in the review then the average rainfall as a % of Puhipuhi would be listed as nearer 90% instead of 102%.

The use of a mean annual rainfall of 102% is 15 percentage points higher than Tropical distribution would be at 87% and 14% points higher than design calculations. So with the inadvertent assumption that volume is 15% greater than reality is it surprising that the Review Report admits to a 17% surplus over records in peak flows for its modeling of discharge at Purua Bridge? ³⁸¹

The Middle Swamp Crests Have Been Overflowing First

The computer model used in the Review calculates on a system of hydrographs (peak levels). A peak is believed to flow down the channel, overflowing into the various spillway areas as it passes by and reducing in size as it goes. The inflow percentages of the 1998 review model were largely calculated using this theory. ³⁸²

Historically however, except perhaps for 50 to 150 year floods, the centre of the swamp in recent years has always filled first. The spillways at Otonga, Mountain and

³⁸⁰ NCC Vol 3 pgs 18 & 20

³⁸¹ MWH Report 1999 p14 last paragraph

³⁸² See MWH 1999 report sec 9.3 page 70

Tanekaha have been observed to start first. Te Mata overflow has trickled a little half an hour later, starting flowing properly 45 minutes after the middle of the swamp. Ngararatunua started half an hour after Te Mata and an hour and a quarter after Otonga. The central inflows at Otonga, Mountain, Tanekaha and Ngaruatunua are always last to stop, after the upstream and downstream crests. Obviously if the computer model could not get the timing right the duration and the inflow volumes would tend to be inaccurate as a result. "When you are out watching the behaviour of the scheme throughout floods you gain insights that distant computer modellers never see," a comment of Dr Joynes to Ray Hindrup as they checked one flood.

The Trend In Spillway Lengths

While bearing in mind what the 1999 Report had to say on p70 para 2 on the subject, there needed to be further discussion on the lengths of several spillways. Discussion was needed concerning the comment by MWH in their 1999 Report that *"The Ngararatunua overflow area is significantly greater than any of the other inflows."*³⁸³ The WDC Review contract³⁸⁴ instructed that this question be addressed,³⁸⁵ however, only one single line of print is provided on the matter. And that states the obvious: that this inflow is too long compared to others – nothing more. There clearly seemed to be an anomaly in the length of the overflow into the Ngararatunua pocket. This pocket is the second highest in the scheme, has only ten percent of the storage water allocated to it, with river flows from two directions, yet its spillway length was far longer than Okarika Pocket's spillway which has an inflow allocation of 25%.

The old rule of thumb method used by the design engineers and engineers since is that the length of each overflow is proportional to its allocated storage percentage.³⁸⁶ The original design of the Swamp Scheme planned for **8.045** Km of inflow area on the scheme.³⁸⁷ At some stage just prior to 1979's construction the total length of scheme inflow was reduced by more than half and the total pre-repair length of scheme inflow areas in the late 1990's was only **3.975** Km.³⁸⁸

There is no way the Ngararatunua inflow area could ever have been twice as long as it is, because to this day it occupies almost all of the available length of stopbank. Therefore there is no way it could ever have been reduced in length when the scheme was modified to have only 4 Km of inflow instead of the original 8km. The halving of inflow length did not occur in this pocket as obviously has occurred elsewhere. Why did the 1999 Report not address this? Was there some lobbying going on? Fears that a big skeleton could flop out of the cupboard? This author questioned the matter.

A technical gloss over was given in the 1999 Report saying, "spillways are not relative to inflow percentage for the pockets, but rather they increase in a general trend as the flood flattens as it makes its way down the main channel."³⁸⁹ As we shall see later, that early assumption by MWH did not stack up against 1970's design and did not stack up in subsequent modeling.

³⁸³ MWH 1999 Report p27 last paragraph

³⁸⁴ WDC contract with MWH No. 9713.3

³⁸⁵ WDC Schedule A Scope of Services pag 19 xiii includes clever spelling 'mistake' (lower for longer)

³⁸⁶ Murray Menzies. WRCGNZ. Email 13th April 2009

³⁸⁷ NCC Vol 2, Statement p20 para 3

³⁸⁸ See Works and Donaldson scheme surveys

³⁸⁹ See Review page 70 paragraph 2

Te Mata Gravity Outflow Investigation

For a number of years this topic has been discussed.³⁹⁰ A hydrological analysis was actually done in July 1987. The conclusions were in many respects similar to the present review.

When the area H_a of a pocket is divided by the cross section area of the gravity outlets in square metres, an approximate comparison can be made with other pockets. The general slope of the swamp and level of the outlet is similar. Using this method it is seen that the Te Mata pocket in fact has among the best ratios of all pockets for gravity outflow. The worst off pocket is actually Otonga pocket. Te Mata has about three times Otonga's gravity capacity but exactly the same rainfall catchment area. The situation at Okarika is offset by the hillwater diversion channel there and drainage of rainwater appears to be satisfactory. Ngararatunua pocket is not well off when examined this way.

If there is to be any second study of hydrology in Te Mata pocket, then will there also be an examination of the situation in Otonga which empties poorly, has never had one hydrology report, and which has only a third of the gravity discharge of Te Mata?

Over Reliance on Computers Without Using Observations

During this review of the scheme at that time, undue reliance has been placed on "engineering theory" but almost non-existent inclusion of "observational" evidence. The opportunity to benefit from 20 years of valuable recording has been largely wasted. MWH admitted on various occasions that the review was restricted by lack of data.³⁹¹ It is indeed unusual that the consultants were not allowed access to examine the swamp when needed and were unable to make on-site inspections and have discussions with landowners concerning the modeling. The project Manager said they were well experienced at sifting farmer opinions. This ban was most unfortunate and caused deficiencies that took considerable time and money to correct. The WDC ban on landowner contact³⁹² may or may not have been well intentioned given the idiosyncrasy of the Liaison committee but a better way should have been found. Project Manager Mr Knowles said, *"This is the first time we have never been allowed to come into the area and talk to landowners when we started a review."*³⁹³ Mr Knowles also said, "It is the first time we have come onto a job and been shown around by the pump station attendant when we expected the engineer."³⁹⁴ The MWH project manager said it was the only time in some 20 flood scheme reviews that onsite visits were not allowed. As the consideration of anecdotal evidence was the first recommendation of the review³⁹⁵ why was there no willingness to take notice of this type of evidence from landowners and act upon it where necessary to improve the scheme? The reason for the Consultants being starved for information and extending the time and costs of the Review can be traced to guess who? Was it the Liaison Committee? WDC's Mr Simpson explained this to a meeting that it was good to have the consultants present, and then said, *"They did not come before as the (Liaison) Committee had wanted no contact with local individuals."*³⁹⁶ And afterward members of that same Committee complained about the costs.

³⁹⁰ See Whangarei District Council file 466865 *Investigation to Reduce Flooding in Te Mata Pocket*

³⁹¹ Review report 9.6.7. Priority 6

³⁹² See later minutes, 'Conflict at WDC Liaison Meeting 25th May 1999

³⁹³ Author's interview with MWH Project Manager B. Knowles at 2.18 pm 11/2/99. Logged

³⁹⁴ As told to Mr. Ray Hindrup in person

³⁹⁵ MWH 1999 p.80 (1)

³⁹⁶ WDC Liaison Committee meeting February 23rd 1999 after Final Report

Summary on Flooding to Year 2000

Shortly after the WDC's consultants first report in 1999³⁹⁷ I was able to report what the floods were telling us, but nobody was interested. Catchment Commission engineers always intended that records of flooding be kept and that these records be used when the planned time arrived to review the scheme.³⁹⁸ The flooding record shows that the scheme design and construction was reasonably successful, but as the engineers of the time envisaged, the time has arrived, or is well overdue, for the scheme to be restored and improved using the flood records taken during the intervening period. While I was doing this the WDC was spending hundreds of thousands of dollars of ratepayers' money to do computer modeling that was starved for basic information.³⁹⁹ Some said deliberately starved.⁴⁰⁰ The Liaison Committee had not wanted to see farmers offering flooding information as in normal scheme reviews rather *the committee had wanted no contact with local individuals*.⁴⁰¹ Catchment Commission aerial photographic records⁴⁰² show that right from construction the Ngararatunua pocket received double its 10% share of inflow to storage. This immediately brought the length of its 1.2 kilometre spillway into question. Not only was flooding in Ngararatunua pocket twice what it should have been at construction, it was increased again by other factors such as the Mangawhero flooding diversion⁴⁰³ adding to flows in the Mangaharuru river.

Mountain pocket conversely stands out as an area that from construction of the scheme has never stored the share of floodwater that it did before.

Okarika appears to have originally taken its share as the largest storage pocket but inflow calculations now indicate it has had its inflow volume reduce by about half. As this is the biggest player in the scheme this change has a large effect on other pockets. As Ray Hindrup had once said, "If the four big pockets are nowhere near right then the other pockets won't be either and the scheme cannot work fairly."

As discussed earlier, calculating flooded area using observed peak level was the method used by design engineers, therefore this method can also be used today to make comparisons. The contour maps now available make it even more reliable in comparisons of flooding share in pockets than in 1966. It is proven in this particular application to have a very high degree of reliability and correlation to design criteria. When the design calculations using percentage area of pre-scheme flooding are applied to actual flooding just after construction there is a correlation coefficient (r^2) reaching as high as .99 (out of 1) covering five of the seven pockets. This indicates that at just after construction the design proved fairly accurate for most pockets, however, Mountain pocket received too little, and Ngararatunua pocket took two and often three times its 10% share.

The simple records of flooded area provide facts that speak for themselves.

Recording water levels in pockets is therefore very useful and water levels should be accurately and regularly entered in logs in all pump stations as design engineers intended. Okarika's staff gauge is mounted in the elevated hillwater canal. A staff gauge should be installed in the storage area of Okarika pocket to enable records to be kept there as in other pockets.

³⁹⁷ MWH January 1999

³⁹⁸ NCC vol 2 pg 21

³⁹⁹ Project Manager Report 1 Meeting 23rd February 1999 & Phone call 11th February 1999

⁴⁰⁰ Mr. Hindrup was unable to get WDC to forward his Aerials of Cylone Fergus flooding

⁴⁰¹ Mark Simpson to Liaison meeting on 23rd February 1999

⁴⁰² Extensive aerial photograph monitoring of flooding in pockets in the early years by NCC staff

⁴⁰³ NCC drawings 910 and 1384-1. 17/10/78 of works to divert floodwaters from Mountain pocket

Unauthorised changes to the scheme clearly appear to have disadvantaged some landowners. Following the considerable flooding by Cyclone Bola of March 1988 the alterations made to upstream crests circa 1988-1992 diverted floodwater onto the farms of other people. Unauthorised defence against floodwater was an offence under a NCC bylaw then ⁴⁰⁴ and still is under the Regional Council Plan and the RMA.

Some pockets have benefited by decreased share of flooding over the years. The flood record clearly tracks changes that show some pockets have been receiving a diminishing share of storage floodwater. Area and volume calculations indicate some 45% of storage water was diverted and not going where it should.

Otonga and Ngararatunua pockets have consistently suffered from increasing flooding. Flooding in Ngararatunua pocket has increased to three and often four times its allocation set by pre-scheme conditions. The increase in flooding since unauthorised alterations upstream is shown to have occurred uniformly at both places with these two pockets taking close to two thirds of all water stored when their combined NCC allocation is only one third.

Otonga flooding has increased by 36% since private alterations were made that reduced certain inflow crests elsewhere. Volume calculations for inflow during the most recent flood which occurred after downstream repairs were made to the scheme show that Otonga still receives twice the inflow volume than identical neighbour Te Mata.

The duration of flooding also shows considerable inequity. The Otonga pocket is clearly the most disadvantaged with water remaining two and three times as long as in most other pockets. The marked deterioration of Otonga pocket's flood protection is shown by its increased flooded area, increased volume of inflow, its long duration of inflow over the bank, increased duration on pastures, and increased pumping to clear the stored water.

The recommendations of the Whangarei District Council's 1999 scheme review had very little if any relationship to historical flooding records.

The proposals were that some of the pockets that have been taking less than their share would have their crests raised while some of those pockets taking more than their design share would have their crests lowered and or lengthened. These recommendations appear contrary to logic and contrary to the evidence of the flood record shown in the council's own pumpstation logsheets.

An elementary law of physics requires that floodwater displaced by over-protected pockets must flow into the under-protected pockets. When operated unfairly, such activity contravenes the essential philosophy of fairness on which the scheme was based and agreed upon, and is also, of course, contrary to the principles of the Resource Management Act.

Beyond the theory, beyond new water level recorders in the river, and beyond the computer modeling, rests the historical and practical evidence of actual flooding. If any computer model does not calibrate with the historical evidence then in my view it is the model that needs to be changed - not the historical evidence - nor the photographs.

The historical evidence that was examined came from more than 2500 log sheet entries, together with Catchment Commission data and photographs, they covered some 93 floods that span the entire life of the scheme.

There were more than sufficient records to provide information presently required for a review. The log sheets are virtually continuous. While there are gaps in several major

⁴⁰⁴ Defense Against Water Bylaw 31st May 1967 B23 page 3

flood events through poor notation there are more than enough records and factual evidence available for decision making. Apparently peer review engineers and other professionals also held this view.

A considerable number of different perspectives have been considered in this publication when looking at the distribution of flooding in the Hikurangi swamp. The different perspectives examined have been found to be in fair agreement with each other. There is confirmation in every area. Volume calculations for the latest flood of November 98 indicate 42% of storage water is still diverted to the wrong places. My conclusions in the year 2000 were that the flood control scheme was clearly operating well outside design parameters since alterations were made to it, to the financial detriment of some landowners. Acknowledgment of the historical flood record, at this point in the year 2000 would have assisted modeling and could have saved ratepayers another eleven years of delay and wasted expenditure. Eventually the flood records that I assembled were in fact welcomed and used to get the scheme resource consent with, but of course the many years of delay was appreciated by those who were benefitting from their blocked inflow crests.

The MWH Report for WDC - Feb 1999

With MWH obviously having trouble, this report was seven months late. The 80 page report suffered from a lack of data, which MWH acknowledged. They used the wrong contour maps and did not have the proper NCC ones.⁴⁰⁵ They also said one of the saddest things, "The calculations and methods used by the NCC to design the scheme are now lost." Rubbish! The WDC has all of them and so do I. However, MWH did include six pages of justification in response to my earlier questioning.⁴⁰⁶ But the report was still full of errors, for example, "The Mangawhero River flows into the Mountain pocket".⁴⁰⁷ Another example: "The Waiotu peaks at SH1 approximately 30 minutes before the Whakapara at SH1." I had listed and timed these records for the review and the difference goes up to 6 hours either way! The report had been further misled by comments in the TeMata submission.⁴⁰⁸ The Project Manager had been mis-lead into believing TeMata was a basket case because the squeaky wheel got the oil. When told TeMata crest had been filled his words to me were, "Oh, I wish we had known the timing of that, it would have helped a lot."⁴⁰⁹ "It has been very frustrating and disappointing," he said, "to have the council withhold information."⁴¹⁰

Mr Knowles' work also suffered somewhat from misleading views on overspilling given by the WDC field officer who obviously never knew or informed MWH that the TeMata inflow crest was filled in. Also there was confusion and mis-information supplied from the direction of the Liaison Committee as well. The results were affected by lack of water level data⁴¹¹ simply because MWH refused to extract valuable information from the pump station log sheets. It was reported that, "Not enough detail is known about historical floods to make an accurate calibration."⁴¹² Really? Eventually, ten years later, MWH would welcome the chance to use of all the

⁴⁰⁵ MWH 1999. pg 29 3.4.2

⁴⁰⁶ MWH 1999 Report. Pages 15,20,22,52,53,54

⁴⁰⁷ MWH Report 1999 page 22

⁴⁰⁸ Letter by TeMata landowners submitted to WDC 8th April 1997

⁴⁰⁹ Call logged and detail noted 11th February 1999

⁴¹⁰ Conversation with the author on 11th February 1999 2.18 pm

⁴¹¹ MWH 1999 Conclusions pg 2

⁴¹² MWH 1999 Report 4.6 page 43

recorded information I had collected and they used those records to get the consent job done in only fifteen months.

The recommendations for crest heights and lengths were estimated from computer simulations of average return period floods instead of actual floods as the WDC contract had clearly instructed. In layman's terms the crest recommendations were developed from theoretical floods not actual floods.⁴¹³ How was it credible of MWH to produce a perfect weighted average of overtopping volume proportions that matched 1970 design targets⁴¹⁴ when the model used a ridiculously steep water slope that was later acknowledged as such and abandoned? There can be only one conclusion - the model was fitted (fiddled). On the plus side it was good to see it acknowledged that, "An alteration of 10mm in the base level of an overflow had a significant effect on discharge into a pocket."⁴¹⁵ At least that comment put the near total filling in of some crests by the transgressing farmers into context. But at the same time it made the model look even more stupid in producing perfect overspill proportions when the water slope modeled was in error by thirty times 10 mm. As a result the neighboring pockets TeMata and Otonga, with similar inflow targets, were given 180 and 900 metres overspill respectively,⁴¹⁶ a recipe to make the scheme even more unfair. The report stated, "The model does not calculate the discharges over the stopbanks other than at the overflow crests"⁴¹⁷ but then included 867 extra metres onto both Tanekaha and Okarika overflow sections.

The Report made three Recommendations:⁴¹⁸

1. That the conclusions of the Review be considered by the Scheme Committee in the light of anecdotal evidence. (Which begs the question: Why didn't MWH itself use the genuine anecdotal evidence that was already available?)
2. That the scheme Committee consider the priorities listed in 9.6.
3. That a cost benefit study determine feasibility of raising all stopbanks by 760 mm at the Junction end reducing to 380 mm down at Okarika.

In time this 1999 MWH Report proved to be an \$80,000 waste of farmers' money. The estimate by consultants of the cost of repairs payable by ratepayers on the scheme was put at more than two million dollars.⁴¹⁹ A few years later an MWH staff member reportedly commented that, "The 1999 Report was bullshit."⁴²⁰ The steep gradient drawing of mine described earlier under *Draft Report from Consultants* was ignored and that costly omission had continued to haunt the review and the scheme budget for years.

⁴¹³ Table 9.2 page 69

⁴¹⁴ See the perfect weighted averages in MWH 1999 Table 9.2 page 69

⁴¹⁵ MWH Report 1999 page 68

⁴¹⁶ See Table

⁴¹⁷ See MWH 1999. 5.3.6. page 50

⁴¹⁸ Page 80

⁴¹⁹ 1999 Report pg 78 which equated to 2.7 million dollars in 2011

⁴²⁰ Name withheld

MWH Crest recommendations 1999 table ⁴²¹

Pocket *	Upgrade		As built 1970's		Existing	
	Base Level	Width (m)	Base Level (m)	Width (m)	Base Level (m)	Width (m)
Ngararatunua	91.01	1180	91.11	1180	90.87	1250
Junction	91.45	90	91.32	180	91.45	100
Te Mata	91.35	180	91.30	670	91.41	325
Otonga	91.20	900	91.22	675	91.20	675
Mountain	91.15	600	91.20	200	91.15	200
Tanekaha	91.15	200	91.20	200	91.14	757
Okarika	90.89	940	91.08	940	90.82	1250

* In later Tables MWH finally adopted Rusk's practice of listing pockets from upstream to downstream.

REACTIONS

Reaction to The MWH Report - 1999

After the 'Final' Report came out late, early in 1999, MWH's Project Manager Mr. Knowles ⁴²² came to Whangarei to the WDC Liaison meeting to discuss the report. His visit was at the request of Mr. Hindrup. MWH did not come before as the committee had wanted no contact with local individuals. ⁴²³ The Project Manager spoke to both Mr. Hindrup and to me the evening before the meeting. I phoned him at the Sierra Motel and asked, "Why has the Report come out still based on the steep peak level water gradient driving your model causing such silly crest dimensions?" The Project Manager was honest and straight up about it. "*Merv,*" he said, "*We have got it way too steep. You are right - we have got it wrong.*" ⁴²⁴ I suggested that he should phone Mr. Hindrup which to his credit, he immediately did. Knowles told Hindrup the very same thing. And yet the Project Manager walked into the WDC meeting the very next morning and never said a word about having their water levels wrong.

I had received an early phone call warning me not to try attending this WDC Liaison meeting as I was banned from entering. "Fine," I thought, "I will go and let them actually throw me out!" So I walked in but alas nobody said a word, although Mr. Knowles did say, "I am very surprised to see you here Merv". Had he been told I would be kept out? I said nothing and sat down to use my shorthand skills to take notes of the meeting and here they are.

WDC Liaison Meeting with MWH - Farmers' Questions. 1999

NOTES TAKEN OF THE MAIN POINTS OF DISCUSSION OF THE MEETING OF THE HIKURANGI SWAMP LIAISON COMMITTEE WITH COUNCIL REPRESENTATIVES AND THE REVIEW CONSULTANT MR BRIAN KNOWLES, HELD AND THE COUNCIL CHAMBERS FORUM NORTH ON TUESDAY 23RD FEBRUARY 1999 AT 10:30 AM.

PRESENT: Councillor Broughton (Chairman), Engineer G. Oldcorn, General Manager M. Simpson, Engineering consultant Brian Knowles (Montgomery Watson), swamp ratepayers

⁴²¹ MWH report January 1999 section 9.3 Table 9.3 page 70

⁴²² Mr Knowles changed his name to Brian Kouvelis

⁴²³ M. Simpson to meeting February 1999

⁴²⁴ B. Knowles. Phone conversation from Sierra Motel with author 22nd February 1999

chairman Mr. R. Hindrup, N. Thorne, K. Alexander, E. Smith, A. R. Finlayson, T. Storey, L. Pickens, G. Crawford, meeting services officer J Francis, and observers from the rate paying public, W Bell, G. Martin, and M. Rusk.

GENERAL MANAGER ADDRESS: Mr Oldcorn (WDC drainage engineer) led the discussion and welcomed Mr Simpson WDC general manager who spoke for several minutes. Mr Simpson explained that it was good to have the consultants here, and said "They did not come before as the Liaison Committee had wanted no contact with local individuals." Mr Simpson left the meeting after his address.

OVERVIEW: Mr Knowles was then welcomed and invited to speak. He began by outlining the scheme and the work of Montgomery Watson in reviewing it. The meeting was then asked to participate in discussion and questions.

DATA: Mr Knowles explained that they "were very short of data." He outlined the need for further tuning of their model and the need to install level recorders.

LOGS: Mr Finlayson asked why the pump station records were not used. Mr Knowles said that "they were incomplete."

RECORDS DESTROYED: Mr Hindrup enquired, "Why were the older pump station records destroyed just three months after the Council undertook the review? They were destroyed by a council employee." Mr Broughton said he was unaware of this.

OVERTOPPING VOLUMES AND PERCENTAGES:

Mr Knowles took the meeting through the process of arriving at overtopping volumes and the tables on page 48, and discussed the situation at Whakapara above SH1

RECOMMENDATIONS: The meeting was then taken through the recommendations on page 80. Consideration of the review conclusions by the scheme committee, consideration of priorities, and a cost benefit study to determine feasibility of bank upgrading.

Mr Oldcorn resumed the chair at 11.20 am and opened discussion.

BENCHMARK: Mr Knowles told the meeting "we need a good process to get it recorded properly, it's pretty important to set the benchmark."

The meeting discussed the scheme objectives and protection levels. Mr Oldcorn said "We will have to make decisions."

RUN OFF VOLUMES: Mr E Smith asked "What volume percentage of runoff was used in the modelling. Would actual data be better?" Mr Knowles replied, "Yes".

DIFFERENT STORM TYPES: Mr Alexander asked "Were different storm types costed?" Mr Knowles answer was "No." (only the fifty year type)

PUMP STATION RECORDS: Mr Finlayson asked, "Would manual observations at the various pump station at specific times would give you a complete picture of every flood as details are kept?" Mr Knowles answered, "Yes."

COST OF RECORDERS: In reply to a question Mr. Knowles said, "The collection of levels data would be \$2,000 pa, and the cost of level recorders would be about \$5,000 each. (for three or four)

ACCURACY OF MODEL: Mr Alexander asked, "What is the + and - tolerance levels of the computer model regarding overflows?" Mr Knowles replied, "It depends on maintenance of the banks and channel. It would be plus or minus 30%. The recorders would verify the model." Mr Oldcorn said that "further monitoring would give information on channel roughness." Mr Knowles said "Rushes and scrub affect it considerably and the (berm) areas should ideally be pasture."

RECORDERS EFFECTIVE: Mr Hindrup asked "Will recorders produce accurate readings with two high inflow levels above design, or will readings be altered?"

Mr Knowles replied "Definitely. The set up for taking the levels has got to be one or the other. The spillways have to all be at design or review model levels. It has to be one or the other."

TAPE RECORDING: Mr Oldcorn asked Mr Hindrup to cease from tape recording the proceedings. Mr. Hindrup said he wanted a good record as the secretary never did it last time. The secretary said, "My job is to take minutes, not discussion." Mr Broughton said that council meetings were not recorded. Mr. Alexander said, "We agreed to ask for a scribe from the council and accurate minutes." Mr. Smith said he didn't see why it should be recorded. Mr. Broughton said "I really think you should turn it off." Mr. Pickens said, "I have no objection - I wish I had brought mine." Mr Broughton said, "They have led to problems, I have no problem if the whole meeting agrees." Mr. Hindrup turned it off.

LEVEL RECORDERS: Mr Oldcorn asked a question regarding data recording.

Mr Knowles said "You have to have the inflows at design or at the proposed levels." To a second question from Mr Oldcorn Mr Knowles replied that "The computer Model suggests the current setup is closer than design." Mr Oldcorn said "If the 1960's design shows they are better then they should be used." Mr Hindrup commented that "The actual has to be closer to reality."

INFLOWS TO BE CUT DOWN: Mr Storey said, "We should take the inflows down to the original level. Up to cyclone Bola in 1988 our Whakapara stopbanks never ever overflowed (in 20 years.) Since March 1984 they have over-topped eleven times." Mr Hindrup asked, "You mean the banks were built up since Cyclone Bola and there has been a dramatic increase in overflow?" Mr Storey, "Yes."

OVERFLOWS: Mr Oldcorn then asked "if there was any more on overflows?"

Mr Hindrup commented, "Since 1997 my (Otonga) bank was repaired. The water then invaded Ngararatunua pocket. That was repaired and the water went to Tanekaha. Last week they fixed that. Will Okarika be next?" Mr Broughton said, "That's what this study is all about. We will have to get this data. We will not be doing any work until the data is collected."

BERMLAND: The meeting then discussed the bermland and having leesees clean it up. Mr Knowles commented, "For proper performance they should all be similar or the same." Mr Pickens reminded the meeting, "that the old Volumes 1,2, & 3 show how important this is." Mr Broughton said, "We can't rush out and spend a whole lot of money without seeing some benefits." Mr Knowles said the decisions on the scheme "must be a community decision."

LAND ABOVE SH1: Mr Pickens said that, "The land up the top has been paying all along. On a cost benefit basis the land above SH1 will never be done. But I'm sure it will go ahead." Mr Finlayson asked Mr Knowles, "The whole objective of the scheme is based on three days is it not?" When the reply was "Yes" Mr Finlayson said that was "Too short." Mr Smith offered the view that "I can't see us agreeing on the Finlayson view or the Pickens view, I respect them both but can we move on and not be bogged down?"

PUMP STATIONS: Mr Knowles referred to pump stations. Mr Broughton said. "The more information we have the easier it will be."

SCHEME BENEFITS AND PROFITABILITY: Mr Alexander said he "Was concerned about falling farm profitability and benefits of the scheme.

DISTRIBUTION OF INFLOW: Mr Finlayson said, "The same volume exists (to dispose of), the distribution is the thing." Mr Knowles said, "The reason we used the 50 year event was to keep distribution fair up to the 50 year flood. It's a distribution scheme."

EXIT FROM SWAMP: Mr Alexander gave his view that, "On page 15 there is no bottom line (re exit volume from swamp) in a big flood" and that "the difference between paddocks being covered 17 and 14 days doesn't matter."

Mr Hindrup made the point "The water level has never kept on rising after overflows have commenced." The meeting then discussed different types of floods during the last ten years. Mr Finlayson wryly commented that he "had seen three 100 year floods in his lifetime."

There was some discussion on overtopping.

PUMPING CAPACITIES: Mr Knowles said "Okarika seems to be down in pumping capacity and Tanekaha's situation is very much the reverse."

BACKWATER EFFECT ON OTHERS: Mr Pickens asked "If cost benefits show the backwater effect on others?" Mr Knowles pointed out, "The Resource Management Act is there for public process."

The meeting was adjourned a half hour for lunch.

The written questions from the Liaison committee meeting were then discussed. (See Notes on separate paper)

DESIGN PERCENTAGES:

Page 1 e. re How Te Mata pocket got its percentage allocation. Mr Alexander said his object was "to explain the % so it's never challenged later."

Mr Knowles said their brief from Council was to examine the inflow percentages and they used the 1966 and 1968 maps of floods as they had the outlines of those floods." Mr Alexander said "A challenge could come from anywhere." Mr Pickens said "The situation at the forks is unique and we should work through it. The middle of Junction pocket used to be covered in driftwood." Mr Knowles said, "It may need a resolution to confirm the original design percentages."

OKARIKA: Mr Knowles said that he did not think the wildlife reserve would be having any backwater effect on the design inflow.

HARD SURFACING SPILLWAYS: Mr Knowles said " It would not pay to rush in - you could even have tar seal, or even weir boards (sharp crested weirs) but they are harder to move."

Items f.g.h. No comments as data was not available.

UPSTREAM OF SH 1: Mr Alexander believed the description of protection above SH1 was ambiguous concerning 2 and 5 year events, saying it was "Not clear enough to spend \$2.5M." Mr Pickens disagreed and Mr Knowles said that "The question is whether we continue with the 50 year concept." Mr Alexander asked "If we reduce from 50 to 10 year what heights are

required?" Mr Knowles said "The philosophy needs to apply upstream that applies downstream."

STOPBANKING AND PUMPS ABOVE SH 1. p2 (i) In reply to discussion Mr Knowles said "You have to consider bigger pump-stations and the costs climb and climb."

p 5 STOPBANK SUMMARY: Mr Knowles said "The same standards of stopbanking would apply."

BACKWATER: Mr Pickens asked "What is the height of the backwater?" Mr Knowles said, "It's in the report."

NO PUMPS ABOVE SH1: Mr Pickens said there were to be no pumps above SH1 even though one pocket would be 1200 acres- the size of Mountain pocket that has a pump." Mr Knowles said the brief related to stopbanks and there was no mention of pumps."

THE CUTFORTH BANK: Mr Pickens said the Cutforth bank was at the 100 year flood level and he "was concerned that it could be cut down to the 50 year level." Ross Finlayson said "The original bank was constructed years prior to the Major Scheme. There had been a government subsidy. The catchment commission held that the (Cutforth) area had obtained protection and would be given no more."

UPSTREAM: Mr Story claimed Mr Finlayson believed there was no backwater but that was denied by Mr Finlayson who said the Whakapara river had been cleared of willows.

Mr Knowles said, "Of course the area would be rated according to changes."

WATER LYING BEHIND BANKS: Mr Pickens commented about water behind any banks above SH1 and said "The water drops with the river and with no pumps we need large floodgates 8 ft square."

p6 DETENTION DAM: Mr Pickens asked if the dam went ahead would it equal a 2% improvement. The answers to this were not clear.

COMPENSATION: (If some banks were not built and land flooded worse.)

Mr Knowles said some of the areas were not big and may not be worth banking. On compensation he said "There would have to be a rate adjustment." He referred to the Soil-con Act and the Rating Powers Act 1988. "There is justice through a public process."

Mr Pickens said "There is no protection for an area just above SH1." Mr Knowles said "You will have to work through that."

SH1 RECONSTRUCTION AT WHAKAPARA: Mr Knowles said that "Changes by roading authorities Transit etc are very critical (to flood schemes) and are to be watched. It could be significant."

pg 7

DOWNSTREAM RESTRICTION: Mr Knowles explained that this constriction is covered in the report saying also that this is the control factor on the bottom end of the scheme.

JORDAN BRIDGE: Mr Smith said "This is the first report acknowledging bridge restriction, and could the Tanekaha overflow be moved upstream?" Mr Knowles said "This is not important, the distribution percentage is what is important."

PG 7

TE MATA GRAVITY GATE: Mr Knowles said "Perhaps we mis-interpreted the question in the brief." In further discussion he said "You are not going to get large benefits, some individual pockets could look at it. In theory the pumps cater for rainfall."

Mr Pickens said "Higher pocket gravity outflows aggravate flaps shutting lower down the swamp." Mr Hindrup said "An extra gate for Te Mata is an inequality that should not be there."

WILLOWS DOWNSTREAM: Mr Finlayson inquired if Mr Knowles was concerned about willows in the river below the swamp. Mr Knowles replied "The whole (review) is significantly affected by (friction) below Lewis Bridge." Mr Hindrup commented "There are more willows in the 250 metres below Purua bridge than in the whole 4 km above."

Mr Knowles said "The point is - you've got to clear them."

BERMLAND:

The meeting discussed the maintenance of the bermland and the need for it to be kept clear. The subject had been discussed earlier in the meeting.

STRAIGHTENING MAIN CHANNEL: This was not considered to be of major concern

Mr Smith asked "Is there any merit in draglining the main channel?"

Mr Knowles "It would assist summer drainage but not affect winter flooding."

pg 8

OLD NORTH ROAD: Mr Storey explained that near the Whakapara hall the flood escapes down the road around the back of the stopbank into the pocket. "The whole area has got worse since cyclone Bola. (March 1988)" The need for a larger floodgate in (Story's) pocket was discussed.

COST ESTIMATES: Mr Alexander asked if different cost estimates had been done for 5,10,15,20, and 50 year ARI. The answer was only for the 50 year which includes all.

NGARARATUNUA INFLOW LENGTH: Mr Finlayson asked "Why is the inflow for this pocket so long. It is 1200 metres long. Also there has been no mention of the effect of the Maungaharuru on this. Mr Knowles said, "There are no records for the Mangaharuru." Mr Rusk offered, "I would be able to find these records, my wife did them in the 1960's".

Mr Finlayson said "It has **never** gone over the right bank" (see report pg 78). The Ngararatunua left bank is virtually all inflow. I have trouble with raising the right bank which has never overflowed while lowering the left bank inflow spillway."

Mr Hindrup said "The Maungaharuru flows down and meets the main channel coming up under Rushbrook Rd Bridge and they both go over into Ngararatunua pocket. The Maungaharuru never flows past the spillway during inflows." Mr Knowles, "We have a piece of fine tuning to do there."

REPORT ON NGARARATUNUA AND TE MATA:

Mr Hindrup said "Regarding the report saying that Ngararatunua and TeMata are both taking more water than intended - I just raise it - It is wrong historically, you need to address this." Mr Knowles, "Yes, certainly the Ngararatunua situation."

Mr Martin (of Ngararatunua pocket) spoke saying "Clearly that is not what is happening at Te Mata. Everyone has been there and seen it - aerial photos have shown it - and other measuring. There is not a person in this room who believes Te Mata is taking the water that your report says it does." (These comments went unchallenged without comment.)

WATER OVER CONTROL BANKS: Mr Hindrup said "Regarding the report claiming this - it just never happens."

DETENTION DAM SAVINGS: The meeting briefly discussed whether the 2.5% would be of the total supply or 2.5% of the inflows but no clear consensus resulted.

CLOSING:

Councillor Broughton thanked people for coming. Mr Oldcorn asked "Where do we go from here, more talking with Mr Knowles?" Mr Broughton said to put together a maintenance budget. Mr Oldcorn asked, "How to get information out to the wider group." Mr Broughton said to Mr Oldcorn, "I want you to do that."

ERRORS: Mr Crawford asked "What is going to be done about the parts that are wrong (in the review report), some are thoroughly incorrect." The brief discussion resulting was inconclusive.

Mr Oldcorn said, "I am on a learning curve". The meeting closed shortly after 3 pm.

The foregoing notes include the significant points of discussion and were recorded by me during the meeting in my own handwriting. M. T. Rusk 23 February 1999.

Following this meeting Montgomery Watson Harza personnel were promptly banned from speaking to either myself or Mr Hindrup or replying to calls. Only the Liaison Committee continued their access to the consultants.

Premature Attempt by WDC to Begin Earthworks - March 1999

Even though the MWH Report was a shambles with the water slope far too steep the WDC's engineer Gary Oldcorn who only days earlier asked the meeting, "Where to go from here" and admitted he was 'on a learning curve', was suddenly persuaded by persons unidentified to act prematurely. Contract information was sent out from the WDC to earthmoving contractors saying that, "The Council wants it done immediately".⁴²⁵ Earthmoving quantities were listed, with rate and quote columns to be filled in, and drawings of the works to be carried out⁴²⁶ including nearly one third more inflow length for Otonga pocket and 85% less than design length for TeMata. Ray Hindrup phoned me in alarm⁴²⁷ having been given the pre-contract documents. WDC Engineer Gary Oldcorn also sent a letter advising Mr Hindrup of the first earthworks which were (surprise) to begin on his Otonga inflow crest.⁴²⁸ Hindrups discovered steel pegs with level ties had already been surveyed and driven into their Otonga control bank preparing to extend the inflow area length from 675 m to 900 m.

Perhaps the rapid action had been encouraged by lobbying from the Liaison committee therefore I phoned Edwin Smith as he had been Liaison Committee Chairman, to ask him about it being 'pushed through'.⁴²⁹ He certainly did know about it and seemed caught out by surprise and confused on what to say. At first Smith denied it was happening but then he agreed with me that it was premature, and was able to accurately quote some of the details which I found intriguing. Then he reversed tack and denied knowing anything again. He sounded confused and annoyed, but apparently few other members of the Liaison Committee knew of the plan.⁴³⁰ Ray

⁴²⁵ WDC Job number 88696. 27th April 1999. Contract document held by Mr. Ray Hindrup

⁴²⁶ See District Council Job number 88696 of 27th April 1999

⁴²⁷ Mr Hindrup phoned on 21st March 1999 at 12 noon to say the contract closed the next Thursday

⁴²⁸ Letter from engineer Mr Gary Oldcorn of WDC to Mr Ray Hindrup

⁴²⁹ My phone call to E Smith re upgrade under way logged and noted 21st March 1999

⁴³⁰ Other members were phoned by Mr Hindrup and they said they did not know of it.

Hindrup, who had recently and unexpectedly been elected ⁴³¹ over incumbent Smith as the Chairman of the Swamp Ratepayers, urgently wrote asking the Regional council if it was in order to begin earthworks when the review recommendations were so seriously flawed, not agreed upon, and the work had no resource consent. That was the letter that avoided a costly disaster for the swamp scheme and this was the text. ⁴³²

Attention: Mr R. Cathcart.

Dear Mr Cathcart,

"I am writing to lodge a complaint with your council over the way the Whangarei District Council is conducting the current review and effecting changes to the Hikurangi Swamp Flood Control Scheme. The District Council, as you will know, is responsible for administering this scheme on behalf of ratepayers. I am writing as Chairman of the Hikurangi Swamp Ratepayers Association and I am supported in this by a number of ratepayers who also object to what is being done, but feel helpless in doing anything about it. For many years after its construction this flood control scheme generally functioned reasonably well for the majority of property owners. It has not operated at all well during the decade since cyclones Bola and Delilah of the late 1980's. Dissatisfaction has led to a decision to have the operation of the scheme reviewed with a hydrological analysis and a report from professional consultants.

Like most others I welcomed this review expecting it to result in a restored scheme that would operate fairly to all landowners in the spirit that was originally agreed upon and set down in original design specifications. Unfortunately this is not the outcome that we are facing now.

For your information I list the following:

- It is my understanding that the Whangarei District Council has disallowed the usual practice followed by specialist consultants whereby they send experts to examine the site and collect information in the locality before the review gets under way. The only occasion when a senior qualified person visited the Hikurangi Swamp was well after the final report had been published, and that visit, arranged by myself, was unfortunately extremely brief. According to the consultants this is the only occasion they have not inspected and canvassed an area before commencing this kind of review.
- The Whangarei District Council appears to have frustrated the flow of requested information to the consultants. Information has been sent months late, or has not been supplied at all.
- The Council arranged a meeting of its representatives and the Swamp Liaison Committee of ratepayers to discuss the draft of the review. The meeting agreed to send a copy of a commercial aerial photographic survey of the flood Cyclone Fergus to the consultants to have a real event modeled and assist the consultants in calibrating their computer model. After agreeing to do so the Council did not send this aerial survey, which would have been critically important information in the hands of the consultants.
- The Whangarei District Council is refusing to acknowledge that parts of the scheme were illegally altered sometime around 1990 and that its performance was substantially altered at that time. The aerial photographic survey illustrates this.

⁴³¹ At Hikurangi Swamp Ratepayers Meeting Kauri Hall 21st September 1998

⁴³² Letter from Hindrup to NRC hand delivered to NRC office by M Rusk 24th March 1999

- The Whangarei District Council appears to be doing everything it can to avoid addressing those parts of the Major Scheme that were unlawfully altered about 1990, specifically the filling in of several inflow areas.
- The Council has now given a clear signal from its engineer in charge of the swamp review that the Whangarei District Council intends to proceed to alter the scheme from its design specifications without delay and without seeking consultation or agreement with ratepayers concerned.
- The Whangarei District Council appears to be refusing to restore the scheme to the design levels for which consents were given.
- It was actually a private ratepayer who searched for critical old records and surveys in the archives and elsewhere. Without these old drawings the consultants would not have been able to confirm some basic aspects of the original design. However, the District Council have been disparaging toward the efforts of ratepayers who seek to voluntarily assist the review process.
- The Whangarei District Council engineer in charge has personally informed me that the Council will proceed with alterations to the stopbanks without validating or calibrating the consultant's Report upon which the review is based. This is in spite of the consultants having stated in their Conclusions on page 79 of the Report as follows:
 - (8) *"The modeling process was affected by a lack of water level data for purposes of effective calibration."*
 - (13) *"The accuracy and reliability of the hydraulic model could be considerably improved if more water level data within the swamp were available. It is recommended that water level recorders be installed at Lewis and Jordan bridges, and at the Junction. These would span the reach within which the overflow crests are located, and thus make the design of the crests more reliable. It is recommended that such data be collected for at least one significant flood, and that the model calculations be checked against the new data, before detailed design of the upgrades is undertaken."*
- Checking the system with inflows set at original design levels is obviously the first priority. In my opinion it would be unfair to downstream property owners if checking is done with their inflow areas at design levels while the upstream inflows are still at the illegally raised levels. The consultants have also expressed the view that level recorders would need to be installed with all crests at design levels, otherwise the (illegally) raised banks will simply give a false picture that will become built in and the information would be misleading.
- The Council appears to be ignoring the inevitable repercussions of its actions. Those repercussions will certainly have adverse effects on quite a number of farmers and landowners. I am one of these and I object to what the District Council is now doing.
- The policy of the District Council according to its District Plan is: "To maintain control banks, pumping stations, and drains, to design specifications." The proposed alterations to design specifications would appear to involve a requirement for changes to the District Scheme, or at least a revision of the consent.
- The Whangarei District Council appears to be adopting an increasingly high-handed manner with resistance to any accountability and dialogue with ratepayers.

- As a result of these events I and many other ratepayers in the Hikurangi Swamp Drainage District are losing confidence in the administration of this Major Scheme Review by the Whangarei District Council.

I should point out that the actual effects of proposed works and alterations to the Flood Control Scheme (Major Scheme) are not at all clear or certain. The review report clearly indicates that the consultants themselves have taken a very cautious approach toward the need for any changes, if any prove to be required after data is gathered from level recorders. As yet no recorders have been installed and it seems that the District Council will proceed without them. Therefore scheme changes may be based solely upon un-calibrated computer modeling with no observed level recordings used to form a basis of the new scheme. (No flood level records from pump stations were used in the review.)

One section of the review (p.15) indicates that the peak discharge volume from the swamp will increase to reach levels 17% higher than gaugings since records began.

After consideration of the foregoing matters and the apparent haste of the District Council I have decided to write to the Northland Regional Council to seek intervention in this situation before it is too late and the work is underway. In terms of the Resource Management Act 1991 and any other regulations, what can be done? I would be very pleased to know what the Regional Council can do to ensure correct procedures are followed.

Yours faithfully,

Ray Hindrup

Chairman Hikurangi Swamp Ratepayers.

Attached:

Copy of surveys of banks from the review report.

Copy of proposed changes in levels of inflow areas from the review.

Copy of the aerial photographic survey of flooding January 1997. "

The Northland Regional Council acted promptly by writing to the WDC advising that, "Unless the scheme is maintained to its original as built specifications resource consents will be required for the modifications."⁴³³ As a result the WDC pulled the plug on the premature rebuild works and so Ray Hindrup's action averted massive extra costs because the earthworks would have had to be torn down and rebuilt a second time. In the smaller events the upstream pockets of TeMata and Junction would have received next to no inflows at all. Mr. Hindrup clearly did all ratepayers a valuable service in stopping that from happening, not to mention saving the downstream pockets from getting buried in flooding and suffering economic loss.

⁴³³ Letter NRC to WDC 7th April 1999

Conflict at a WDC Liaison Committee Meeting - May 1999.

THE MAIN POINTS OF THE DISCUSSION AS RECORDED DURING THE WHANGAREI DISTRICT COUNCIL SUB-COMMITTEE MEETING WITH THE HIKURANGI SWAMP LIAISON COMMITTEE HELD ON 25TH MAY 1999 AT FORUM NORTH AT 10 AM.

The meeting was chaired by Cr G. Broughton.

Apology for absence was received from Mr G. Crawford.

Present were: WDC Councilor Mr Broughton, the WDC secretary, WDC engineer Mr Oldcorn, WDC general manager (former engineer) Mark Simpson, Councillor Christie, and Councilor Halse, liaison committee members K. Alexander, E. Smith, N. Thorne, R. Finlayson, Ray Hindrup, Terry Story, L. Pickens, and WDC field officer B. Cutts.

The press was represented by Karen Repia, and several members of the public attended including M. Rusk who took these notes.

The chairman, Councilor Broughton, opened the meeting with a welcome saying "We need to get a feeling of where to go from here."

An agenda with listed items was provided for representatives.

1. Item 1 on the agenda was the Budget:

This was some \$300,000 and was discussed. Mr Oldcorn was asked to itemise sources of income. He handed out a list of 93-99 power costs.

The chairman commented "We are living within budgets and reserves."

Mr Hindrup raised the need for comparisons with other schemes to compare costs and benchmarks.

The meeting discussed data recording and telemetry, and back-flushing systems at pump stations. There was a need to have all staff gauges in metric MSL. The location of 4 level meters was discussed.

2. List of drain maintenance:

The need for maps for planning drain cleaning programs was discussed.

It was pointed out that some drains above SH1 were scheme drains.

The criteria was discussed being 40 acres catchment, but amalgamations have affected the criteria for drains.

3. The scheme review recommendations:

The chairman said he "Wanted to get a feeling."

The purpose today is to formally adopt the report which is on a fairly solid basis."

Councilor Halse said: "Two years ago this council decided to return the scheme to the original levels - the scheme has been 'dickied around' with."

Engineer Oldcorn: "Everybody knows."

Cr Halse: "We decided to return it to design levels - now we have hired consultants to change it."

Mr Simpson, General Manager: "I have been told some pockets are getting too high a percent of storage water, Te Mata."

Councilor Halse continued to bore in. Mr Simpson was seen to defend the charge.

Mr Hindrup: "The consultants quote "significantly improved results if scheme returned to design levels."

Mr Oldcorn replied: "That doesn't make sense to me."

Mr Hindrup said: "The consultants were denied information on the Fergus flood and the logs."

Mr Simpson said: "What?"

Mr Hindrup continued: "Montgomery Watson were constantly denied access to landowners. They were denied information which was withheld. Mr Simpson's office instructed the consultant's not to model the Fergus flood."

(Mr Simpson appeared concerned at this.)

Mr Simpson said: "Mr Knowles chose not to use the photos." "The consultants were told not to talk to the landowners because it was thought they would be "got at."

Mr Oldcorn, the engineer added: "It was a deliberate choice the way Mark kept it away from the landowners."

Councilor Halse: "It needs to be fair."

Mr Simpson said: "The liaison committee represents the landowners."

The chairman said: "We are not going to get anywhere if we go back and wrangle. I won't sit here if we go back. You've got one of the best schemes in the country."

Mr Storey stated the following:

"The (council) motion of 1997 to go back to 1971 design levels is still on the books,"

"Re the 1971 levels the Whakapara farmers need equity,"

"re the option to leave the high inflows: Before cyclone Bola no farm flooded on the Whakapara (SH1 to the Junction),"

"We have had 11 or 12 overflows since Bola,"

"The scheme works, isn't there a case for taking it back to 1971 design specifications?"

Chairman: "The reason?"

Mr Storey: "It worked."

Mr Hindrup said: "The 1971 scheme (as designed and constructed) is a solid base"

Mr Oldcorn the engineer: "Why?"

Mr Hindrup: "Because it worked."

Mr Pickens (Whakapara representative) said, "There is a proven back-up effect (caused by the scheme) where does that leave the council?"

Mr Hindrup said: "Regarding the backup effect, how much of Whakapara's problem is caused by that will be solved if the banks are taken back to the 1971 design."

Chairman: "I would find it difficult to go back."

Mr Oldcorn attempted to defuse the situation.

Councilor Christie (who had worked designing and building the scheme) said, "I support Mr Storey. I am surprised at what Mr Storey has described. All farmers have their marks showing where flood levels have reached and this has always been better than computers and so on. The farmers can provide good information."

Mr Edwin Smith said: "We have got to go forward - go ahead united - we can't do it in isolation, it has to be from the bottom to the top."

Mr Hindrup asked: "Two of the scheme's inflow crests have been raised for ten years - is that working together?"

The chairman: "We've been there, let's go forward."

Mr Hindrup: "Before the level recorders are installed the high inflow crests should be dropped."

Mr Oldcorn: "I faxed Mr Knowles the locations from a map Brian Cutts gave me."

Recommendation 1.

Moved Ray Hindrup and seconded by Terry Storey. Carried.

Recommendation 2. It was included that "The liaison committee members have a say on the location of level recorders."

3.

An amendment was moved by R Hindrup seconded T Storey: "That priority 3 should read that levels go back to 1971 and move from there after water level recordings are taken."

Mr Pickens (Junction) said "I don't think it's a good thing to take the bank levels back to 1971."

"I am talking about the whole of all of the banks."

K. Alexander (Te Mata) defended the present situation saying, "Never mind going back to the 1971 design."

The motion was put.

For the motion were: R. Finlayson (Ngararatunua), T. Storey (Whakapara), and R. Hindrup (Otonga). (3)

Against were, Edwin Smith (Tanekaha), K. Alexander (Te Mata), N. Thorne (Okarika), and L. Pickens (Above SH1 Whakapara). (4)

The motion was therefore lost. It was a landmark vote, swung by Mr Pickens.

Mr Hindrup stated that, "It is a very sad indictment that illegal actions can be approved by council and by this committee."

Cost benefit study:

There was some discussion on this idea.

An investigation was made into using the Otonga pocket as a storage pocket to take all storage of floodwaters for the whole scheme.

There was discussion on storage in larger flood events.

Mr Finlayson said, "Ngaraatunua has taken more than its fair share."

Councillor C. Christie said "We (the scheme designers at Northland Catchment Commission) always knew one day someone would start farming in the Otonga pocket. Previously we knew it was farmed by a cement company and it didn't really matter."

Regarding pumps Mr Christie said, "Tanekaha paid for half an extra pump."^{434 435}

Mr Storey raised "The huge matter of raising the banks and building banks up at Whakapara."

On inflows Mr Oldcorn the engineer said, "I don't see what we have agreed as being where we will be in a year's time."

Mr Pickens commented on the Whakapara flooding situation.

Mr Finlayson made the comment, "I suggest water has never remained for more than three days on land above SH1."

Mr Hindrup: "Instead of going back to the 1971 design and fixing the problem for \$4,000 we have decided to spend rates of \$40,000 to \$70,000 and borrow \$2,000,000."

Chairman: "That is an interesting point."

Mr. Oldcorn, to Mr Hindrup, "Why is it that we are seen to treat your pocket differently?"

Mr. Hindrup: "The work is not getting done on my pocket. It is not satisfactory."

"I pay the rates - I should have the work done."

The Chairman, to Mr Hindrup: "You should talk it over in Mr Oldcorn's office."

The chairman then closed the meeting.

Time 12.38 pm.

I took the above notes during the meeting in my own handwriting.

Mr. M. Rusk 25th May 1999.

The premature works didn't come off, the meeting was inconclusive. What next?

Back to the Old Plan - Use Otonga Pocket For Storage. 1999

Apparently it had long been the plan of some liaison committee members to use Otonga pocket for storage of floodwaters to relieve their own farms. A clever idea if you were not the owner of Otonga pocket! The concept had been floated before construction of the scheme and afterward when the Works Committee discussed using parts of Okarika pocket for storage⁴³⁶ but this would have impinged on land owned by persons who opposed it and that idea was dropped.

The idea of sacrificing a pocket for storage partly became fact in the cowboy era of the 1980's when, as previously discussed, a kilometer of Otonga stopbank was bulldozed down and remained down for about twelve years. Even the NCC knew Storage in Otonga Pocket had long been on the cards⁴³⁷ although they turned it down because it would lose them rating revenue. Then in its one year tenure the NRC had been lobbied to investigate it in 1989 and reported, 'That preliminary calculations by the NRC in 1989 indicated Otonga basin would make a substantial improvement'.⁴³⁸

⁴³⁴ Chairman Ross Finlayson's Report re claim of "not getting protection envisioned" 23/8/82

⁴³⁵ Mr J. Ilich paid 2/3 being \$15,000, and \$5,000 was paid by E. Smith or possibly by the NCC. (Ilich)

⁴³⁶ Special Report to NCC 26th Oct 1966 and Works Committee minutes of 24th July 1978

⁴³⁷ Stated by Councillor Christie to WDC Liaison Meeting 25th May 1999 see above

⁴³⁸ WDC Files Otonga file 88-7-12

Eleven years after that in 1999 a WDC engineering staff member Mr Oldcorn, was persuaded by persons unspecified to undertake a secret \$4,950 dollar⁴³⁹ investigation by MWH to model using Otonga pocket for flood storage to relieve the other pockets.⁴⁴⁰ This was never sanctioned by the councilors who did not even know about it.⁴⁴¹ The move would hardly have occurred without the Liaison committee at least sanctioning, if not initiating it. Then in an after-hours hush-hush move two WDC officers, then visited Hindrups to present a buy-out offer.⁴⁴² At a sacrifice 'forced sale price' of course.⁴⁴³ If the Liaison committee had thought they would get Otonga Station for what Hindrup had paid ten years earlier and after he did a lot of development work they were sadly mistaken. The WDC officers also approached fellow Otonga pocket farmer Paul Atkinson wanting to buy his farm also. They returned to the landowners and tried again two months later.⁴⁴⁴ Sadly, fair values were not offered.

These moves for an alternative really indicated either a lack of faith by the WDC's review consultants who were struggling to make their computer modeling work, or pressure from the Liaison committee, or both. If the buyout had been successful the whole of Otonga pocket would then have been used for storage to help free the other pockets of flooding. In the event the hopeful ones within the Liaison committee would have been better advised to suggest a more reasonable price than what Hindrups were offered under severe duress. Hindrup was a straight shooter and a tougher opponent than expected. He was quite willing to discuss a sale, but only at a fair price and if compensation was made to all other landowners who had lost large amounts of income through extra flooding caused by a few farmers filling in their inflow crests, and if the scheme crests were restored to design levels and lengths. So the second dream of a pressured bargain buyout of Otonga pocket evaporated like the morning mist over the swamp on a sunny day.

Hindrups Appeals to Ombudsman and Mayor

Mr. Hindrup had been told by WDC Councilor Halse that in his opinion, "The Council and the Hikurangi Swamp Liaison Committee are deliberately squeezing you off your property".⁴⁴⁵ Of course this would have enabled the Otonga pocket to be used again for detention storage of floodwaters in a new improved version as secretly modeled for the council by MWH.⁴⁴⁶ Perhaps the old Plan A was being pushed behind the scenes as faith was lost in the review?

Naturally the Hindrup family didn't want to be forced off their 900 ha dairy and beef farm and appealed to the Ombudsman,⁴⁴⁷ but it was all too complicated for the Ombudsman. Letters went back and forth but his office achieved nothing. Mr. Hindrup then tried using the Official Information Act in an effort to get much needed information from the WDC but without success.

In retrospect, had the Ombudsman responded realistically and had the WDC and the Liaison Committee of the time made a professional and fair offer in a bid to

⁴³⁹ WDC folder 419516 88/77/12 to Mr. Oldcorn for \$4,950. MWH Report of 26th Oct 1999

⁴⁴⁰ Confidential Investigation MWH for WDC to use Otonga for detention purposes 26 October 1999

⁴⁴¹ Statement by Councillor Halse

⁴⁴² Engineer Gary Oldcorn and Mr. Stead WDC property 29th November 1999

⁴⁴³ Mr. Ray Hindrup

⁴⁴⁴ Hindrup 8th February 2000

⁴⁴⁵ Letter 26th April 2000. Hindrup to Ombudsman

⁴⁴⁶ MWH letter to WDC 2/9/99 WDC folder 419516. ref 88/77/12 to Oldcorn for \$4950, 26/10/99

⁴⁴⁷ Letter 26th April 2000

improve operation of the scheme, then it would almost certainly have led to a successful solution to the scheme's failings at a sensible cost and a solution that would have largely been self funding.

In fact, such an offer, prepared by professionals, was made by the landowners of Otonga Pocket as described later in this book.

WHANGAREI CALL TO OMBUDSMEN

The NZ Herald reported:

The Ombudsmen's Office is being asked this week to inquire into why the Whangarei District Council is not releasing information concerning flooding near the city.⁴⁴⁸ Hikurangi swamp ratepayer's association chairman Mr Ray Hindrup told the *NZ Herald* today, "I am taking this step because the District Council is refusing to supply certain information about our flood protection scheme."

"For ten years the council has swept illegal activities under the mat and refused to answer questions. It's time these matters were addressed," he said.

"I want this flood protection scheme run openly, honestly and fairly for all. Some individual farmers have been severely disadvantaged through the Council administering the flood protection scheme in a way that benefits others," Mr Hindrup claims.

Criticism over a recent \$80,000 council review of the scheme boiled over into the public arena last year during a heated meeting in council chambers when a number of farmer representatives clashed with general manager Mark Simpson and several councillors who had gathered to discuss the review document with the farmers and a senior consultant from Montgomery Watson NZ Ltd. (Ends)

Mr. Hindrup wrote to Craig Brown the current WDC Mayor asking for a fair deal⁴⁴⁹ but Brown challenged Hindrup to demonstrate his community support. Hindrup promptly advised Brown he had ten farmers supporting his claims, every one of them prepared to turn up at Brown's office, but the Mayor just as quickly backed out on his promise refusing to see the farmers and did nothing.

By the time of the Scheme review the continued flooding was close to forcing the Hindrup family off their Otonga property which regularly required re-grassing of up to 700 of the 900 hectares. Hindrup's rating bill back at that time was \$47,000 annually which left a sour taste in his mouth because he received no benefit from it. "We've been abused," he said.⁴⁵⁰ Like the cement company before them who were forced off the land Hindrups were now put under pressure, financial, physical and mental pressure for the Hindrup family that lasted 18 long years.

Landowners Argue at Council Liaison Meeting - 23 May 2000.

Mr. Hindrup was still battling to get the unfair flooding properly investigated. With Peer Review of MWH's work done for Mr. Hindrup by Mr. Murray Menzies of NZ Water Resources Consulting Group a trickle of new factual data was arriving. But a majority of the Liaison Committee members were opposed and in no mood to consider new material, nor was the Councilor Graeme Broughton who acted as chairman and was councilor delegated to attend to swamp affairs. I took some notes in shorthand for posterity.

⁴⁴⁸ New Zealand Herald April 2000

⁴⁴⁹ Hindrup's letter to Mayor Brown of 7th September 1999 and also to WDC 30th November 1999

⁴⁵⁰ Reporter Jill Rolston in Rural News October 22nd 2001

RECORDED DISCUSSION OF THE WHANGAREI DISTRICT COUNCIL SUB-COMMITTEE MEETING WITH THE HIKURANGI SWAMP LIAISON COMMITTEE HELD ON 23rd MAY 2000 AT COUNCIL CHAMBERS AT 10 AM.

Present:

WDC Councilor G. Broughton, Councilor P. Halse, Chairman, WDC Engineer Gary Oldcorn, Scribe Mr. Francis, Mr. Duncan Thorpe WDC, former liaison members, E. Smith (Tanekaha), K. Alexander (Te Mata), R. Finlayson (Ngararatunua), N. Thorne (Okarika), T. Storey (Whakapara), R. Hindrup (Otonga), L. Pickens (above SH1 Whakapara), and ratepaying members of the public Mr and Mrs P. Atkinson, Mrs Hindrup, Mr. B. Shaw, and Mr. M. Rusk who took full notes because the council only records decisions.

Mr. Broughton was chairman and opened the meeting.

An apology was received from Mr. G. Crawford. (Above SH1 Hukerenui)

Agenda items were discussed from the prepared paper.

Item 1. Operating Review:

Moved E. Smith THAT THE INFORMATION BE RECEIVED.

Discussion: Mr. Hindrup asked why Mr. Thorpe had been sending drain cleanings by truck to the Hikurangi tip. (items were carried after discussion)

Item 2. Legislative changes: Mr. Oldcorn, "The Regional Council has had no contact except Mr. Cathcart, phone call."

3. Power costs: The chairman commented and Mr. Oldcorn elaborated.

4. Health matters:

Mr. Hindrup asked "if this would restrict access to any of the pump stations".

The answer from Mr. Oldcorn was, "No."

5. Bermland: Mr. Oldcorn elaborated on reviews to leases. Mr. Hindrup advised that he had placed the matter in the hands of his solicitor.

6. Wildlife area: Little discussion.

7. Miscellaneous: Mr. Hindrup raised the clearing of willows problem starting with the fact that the Consultant from Montgomery Watson had seen them and advised they were bad, there had been letters over the years, and after arranging mechanical clearing the council had apparently canceled the contractor.

Mr. Thorpe, "We intend to spray with the helicopter."

Mr. Hindrup, "My question was why was the job canceled?" "And what is the timeframe?" Mr. Oldcorn answered re the cancellation, "I don't know about what you are talking about." Chairman Broughton, "I can't recall the contract you're talking about."

Mr. Oldcorn said, "Maintenance has been lagging behind." "I suggest we give it a go like this then look at it after a year."

Mr. Finlayson said, "What's the story on oxygen weed?"

Mr. Thorpe explained the use of a "weighted" chemical to kill the weed. "A trial piece of 300 M will be done by hand, It can be used by helicopter but you have to get the conditions right."

It was moved seconded and carried that the operating review report be received.

2. Budget. The meeting discussed the items listed. Mr. Hindrup pointed out that income is ahead while expenses are lower, "So why was my bank crest not repaired under the contract when other banks (outlined) were repaired?" "My bank is still low according to the Montgomery Watson report, why can't we get our bank up to standard?" "Is the WDC going to fix the Otonga inflow - if so when?"

Engineer Mr. Oldcorn: "The Whangarei District Council is always relaxed about peer reviews." "What we have here is Murray Menzies saying the cost is not warranted." Mr. Hindrup, "The time-table is the end of this month, will Mr Oldcorn discuss these anomalies then?"

Mr. Oldcorn, "There is no conspiracy in the Whangarei District Council."

Mr. Hindrup: "I suggest this might not be the appropriate way to proceed, we need to wait for Montgomery Watson to report on the peer review."

"(Catchment Commission) Volume 3 said 20 years of recording would be needed - NCC had done this work - it had not been used - they, the NCC, were very close to taking action to adjust the scheme just before the NCC lost control of the scheme." (in 1989 local government reorganisation). "We now have the chance to use this information." Engineer Oldcorn, "Data on a full flood event on recorders is more valuable than logs." "I feel comfortable about the investment." "I recommend bringing in technology."

Chairman; "I want to get a balance." "We want to look at the future."

Mr Hindrup. "The records are available. The original scheme designers said to record for 20 years - now Montgomery Watson are trying to do it on 3 floods."

Oldcorn, "The tuning of the scheme on the Montgomery Watson model can be done."

Hindrup, "Could we not spend the money on using present information to make the scheme work?"

Mr. Storey, "The meters idea is just a delay, we have new information to show the scheme was OK at Bola. (1988).

Mr. Oldcorn, "We don't have that information."

(at this stage of the meeting Mr Oldcorn the engineer had led a one on one debate against Mr Hindrup for some 20 minutes.)

Mr. Hindrup, "Would it not be prudent to wait?" "We have 20 years of data that would be better."

The chairman turned to Mr Edwin Smith and asked him to say something.

Mr. Edwin Smith, "The recorders will be handy in the future - *we are not looking back - we are looking forward.*"

Mr. Pickens, "If the information is out there we need to use it."

Mr. Smith then questioned the matter being before the meeting saying, "Is this a tabled document?"

The Chairman, "Does this document have any relevance?"

Mr. Hindrup, "Yes - it does."

Mr. R Finlayson: "I fully agree with Mr Hindrup. I move the recommendations"

Mr. Hindrup, "It is not the records that are important."

The recommendation to accept and install the water meters was put and carried with Smith, Alexander, Thorne and Finlayson for, and Storey and Hindrup opposed.

Engineer's investigate using Otonga Pocket as an official Detention Basin:

Mr. Hindrup, "I raise the last sentence in the top paragraph of page 21 where it says the landowner was not prepared to continue discussions." "The sentence says, and I quote, 'The result of discussions was that the landowners indicated they are not prepared to consider the option further.'"

Mr. Hindrup then made four points:

1. "This statement is wrong," he said.
2. "The issue of compensation for all disadvantaged landowners would need to be addressed."
3. "Mr. Stead (WDC property) and Mr Oldcorn visited and were prepared to sit down and discuss compensation for the last 20 years. They were happy with

compensation for Otonga but not for other pockets. That is where it has remained until I got this agenda."

4. "Who authorised this expenditure of \$6,000?" "I thought it had to go before this committee." "This investigation (buying and using Otonga pocket for floodwater detention) is outside the Montgomery Watson Review and shows the Whangarei District Council has got no faith in the Montgomery Watson Review or the peer review." "The idea was outside the philosophy of the scheme."

Mr. Hindrup then said, "The fact that the matter was made public was(despicable)..."

And he concluded saying, "I heard the other day that I was offered 4.5 million dollars! We have never refused negotiations." "I want this sentence removed as it is totally untrue."

Chairman, "We looked at the Peach Orchard Road site (for a detention dam) and this was passed by the committee." "Nobody had any authority on price or anything. If the answer was 'no' - OK."

Mr. Hindrup, "The answer was not no !"

Councilor Halse asked, "What is this all about?"

Mr Oldcorn, the engineer explained what he did and then said, "I make no apology for investigating."

Councilor Halse: "We have never discussed anything - it has not been discussed by council." (referring to the spending of \$6,000)

The vote was taken to receive the information in the meeting report.

For were Smith, Alexander, Thorne, and Finlayson.

Against were Storey and Hindrup.

The Chairman: "*We have got one of the best schemes in the country.*"

The chairman declared the meeting closed at aprox 1. pm.

The notes above were written by me as I recorded the salient points of the discussion throughout the meeting in my own handwriting.

M. T. Rusk.

23rd May 2000.

MWH Report Two - September 2001

The 2001 report from MWH concluded that, "It is considered that this recalibration provides sufficient background to proceed with modification works." ⁴⁵¹

They recommended, "That the overtopping crests and lengths be adjusted according to the schedule in Table 5.1." ⁴⁵² Otonga Pocket would have been the big loser with its crest extended fifty percent. TeMata would be nearly restored to its original length.

These dimensions are shown overleaf.

⁴⁵¹ MWH Sept 2001 7. Conclusions page 8

⁴⁵² MWH 2001 8. Page 8 Recommendations

MWH crest recommendations 2001.⁴⁵³

Pocket	Upgrade		Existing (John Cook survey, March 2001)	
	Lowest crest Level	Width (m)	Lowest crest Level (m)	Width (m)
Junction	91.35	180	91.43	200
Te Mata	91.33	650	91.32	350
Otonga	91.20	990	91.23	675
Mountain	91.17	600	91.14	200
Tanekaha	91.17	145	91.08	250
Ngararatunua	91.08	500	91.10	1200
Okarika	91.03	940	91.02	940

Some half-baked humble pie, however, was offered by the consultants' discussion on calibration results in the 2001 report. After taking more than \$80,000 and five years they indirectly admitted I had been right all along. Way back in 1998 my comments on their Draft Report I had pointed out their water gradient was ridiculously steep.⁴⁵⁴ In 1999 MWH Project Manager Knowles had privately told me they had it wrong but it only became 'official' in the 2001 report. Now their 'Model Calibration' report conceded, "*...the water level gradient through the swamp is flatter than in the original modeling*".⁴⁵⁵ They went on to blame the Regional Council's rating curve for the Whakapara River which I thought was unfair blame-shifting. There was no excuse why MWH, a large multinational company, could not have got it right years ago by looking at river levels recorded in the logsheets. But that was not the end of their model using too steep a gradient through the scheme. The error, although smaller now, continued to dog MWH's efforts for another eight years and affected their recommendations on crest levels and dimensions. A different problem later arose in that the flatter the gradient modeled the more difficult it became to model.

Hugh MacMurray, who had been doing the model for MWH, told Mr. Hindrup in 2001, "I have resigned from working for MWH and I now work on contract." Then rather pointedly MacMurray added, "Everything that Merv Rusk has done is correct."⁴⁵⁶

The Failures of Electronic River Water Level Recorders

While ignoring the available records of the scheme the WDC proceeded to spend \$40,000 installing a small number of electronic data logging water level recorders to obtain water levels to assist MWH's computer modelling which was struggling to get anywhere near the real water gradient of the river. In doing so the valuable information collected for so long by a multitude of people was ignored. There were only six flimsy level recorders installed.⁴⁵⁷

⁴⁵³ MWH 2001 5. Table 5.1 page 5

⁴⁵⁴ See graph under 'Draft Report' above

⁴⁵⁵ MWH Calibration Report 2001

⁴⁵⁶ 23rd August 2001. Mr Hindrup went to court five days later.

⁴⁵⁷ After the Auckland meeting with MWH. Level Recorders installed between 12/11/01 and 14/3/02

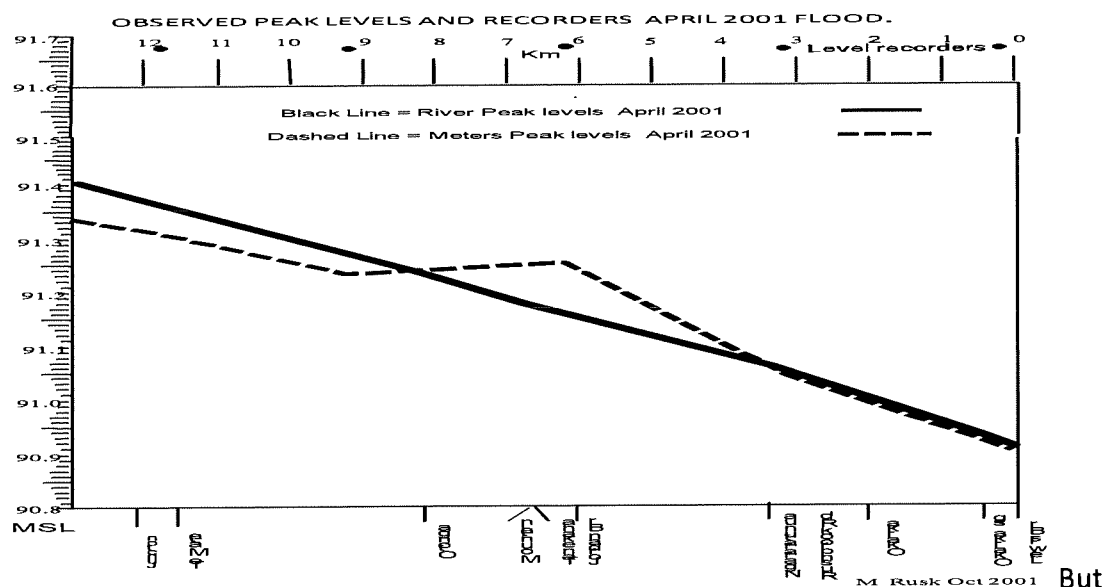
One was located just below Okarika pump station and another just above Okarika station for which 122 level records are already available. One was close to Ngararatunua pump station for which 129 level records are already available then it was removed. Another was in the centre stretch among the localised site records of Tanekaha, Mountain, and Otonga pump stations. These had 229 level records already. Another recorder was put upstream of Te Mata station for which 151 level records are available already. Four of these pump stations already had full records and those sites actually covered the length of the river. The sites of the existing logbook records were as numerous and covered the same locations in the swamp as the new level recorders.

There is the old saying that rubbish in means rubbish out and the WDC level recorders excelled at this. The cause of the trouble was that the people who mounted the sensors on the bermland were not given accurate surveyed heights by their surveyor so that the next floods suggested the river ran up to 135mm uphill in places. This produced errors in of the order of 66 and 69mm⁴⁵⁸ with a difference between gradient levels from TeMata and Jordan Bridge of 135 mm.⁴⁵⁹ Such an error is massive in the scheme of things where 10mm is regarded as "significant." MWH found, "In the modeling process an alteration of 10mm in the base level of an overflow crest had a significant effect on the discharge into that pocket."⁴⁶⁰

Then in almost every flood through the early years one or two of the meters would malfunction producing no results at all, hampering the work of MWH even further. Of course they could have done what I did and used the log sheet records but no they didn't.

Dr. Stephen Joynes' modeling showed, as did MWH's later modeling, that the pump station logsheets provided 'equally accurate information on peak flood levels as the electronic meters were achieving'.

After Mr. Hindrup paid for his surveyors to survey everything including mountings of the recorders, the errors on many of the level meters were identified and thus WDC was obliged to resurvey them. Until then the results often looked like the drawing below or even appeared with missing sections.



The example above was for recorder levels in the small April 2001 flood, used in modeling by MWH, and which only just made the inflow crests trickle briefly which

⁴⁵⁸ MWH Report December 2002 page 4 Table 2.1

⁴⁵⁹ MWH Report December 2002 page 4 Table 2.1

⁴⁶⁰ MWH 1999 Report on Overflow Crests 9.3 page 69

made peak levels very easy to check against Hindrup's Donaldson survey carried out only several weeks earlier. I was out monitoring the crests throughout this overspilling.

Mysteriously the Council's consultants MWH reported that their September 2001 Recalibration Report, "Provides sufficient background to proceed with modification works."⁴⁶¹ The trouble was that their overspill modeling was nowhere near what had been actually occurring and Mr. Hindrup decided he needed to take action. MWH reported, "The integrity of the latest water level data was held in doubt by certain parties, and the results of the studies were questioned."⁴⁶²

Upstream recorder levels were worst as shown in the table below.⁴⁶³ Remember that differences as small as 10 mm result in a "significant effect" on inflow volumes.⁴⁶⁴

Survey Results for the Pressure Transducers

	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
Original RL Zero	90.031	89.457	88.132	88.484	86.566	88.540
Survey 1	90.117	89.527	88.083	88.521		88.554
Survey 2	90.111	89.523	88.082	88.523		88.538
Survey 3	90.120	89.510	88.070	88.510		88.550
Average	90.095	89.504	88.092	88.510	86.566	88.546
Max	90.120	89.527	88.132	88.523	86.566	88.554
Min	90.031	89.457	88.070	88.484	86.566	88.538
Difference	0.089	0.070	0.062	0.039	0.000	0.016

The flimsy recorders were installed in a way that risked damage from grazing stock, floating logs and flood debris, and resulted in some recordings being no more reliable than at present or not being carried out at all. These water level meters measuring river levels could of course never measure the actual degree of flooding in the farmland pockets over on the other side of the stopbanks, and for a decade the modelling software could not satisfactorily estimate the inflows to resemble what was actually occurring.

The failure to make any use of the 646 water levels already recorded during the very type of overspill flood needed, together with no use made of the 73 NCC aerial photographs, set the review back a decade, greatly adding to costs.

Although forwarded to WDC the Arial survey of the Cyclone Fergus flood was not sent on to the consultants. The delays simply compounded to further disadvantage Ngararatunua and Otonga landowners and others, leaving the more influential people on the scheme to continue benefiting from their well practised lobbying skills.

⁴⁶¹ MWH 2001 Conclusions 7c. page 8

⁴⁶² MWH Hydraulic Performance Report March 2003 Introduction page 4 re Mr Hindrup's peer reviews

⁴⁶³ Table courtesy Tristan Jamieson Watershed Consultation

⁴⁶⁴ MWH 1999 Report on Overflow Crests 9.3 page 69

The Work of Dr Joynes and Murray Menzies

Mr Murray Menzies, a consultant of Auckland, was engaged by Mr Hindrup to review the modelling work by Montgomery Watson Harza (MWH) for the Whangarei District Council. Murray Menzies was engaged in November 1999 to review MWH's January 1999 report and also undertake independent analysis to establish the actual performance of the scheme in a selection of historical flood events.

Mr Menzies again inspected the scheme on 1st January 2000. In a 2000 report Mr Menzies concluded that there were serious flaws in the work of MWH, in particular the modeled water surface was dramatically steeper than actually occurs, which confirmed the work of the author several years earlier. Menzies' report also confirmed that the scheme was operating well outside its design overspill parameters.

Dr Stephen Joynes of Cambridge was initially engaged by Mr Hindrup in February 2000 to independently review MWH's January 1999 report and he also worked with Mr Menzies. Mr Hindrup embarked on this course of action in response to what he saw as seriously flawed results from MWH's original work.

During 2000 and 2001, a number of these problems were discussed with MWH, and the basis was set for collaborative work to resolve them. That work led directly to MWH undertaking a widespread review of its original assumptions and the release of a supplementary report in September 2001. Unfortunately several of the flaws that had been earlier identified were not properly addressed and the September 2001 report still contained widespread inaccuracies as a result.

The work by Menzies and Joynes demonstrated that the original MWH work was seriously flawed. Had this work not been done and the MWH January 1999 report recommendation on scheme modifications implemented, the effects on landowners in the scheme would have become dramatically more inequitable and expensive than the then existing situation was.

That would have required the expensive earthworks to be done a second time so Mr Hindrup's costs on engineering and modeling saved the other ratepayers a lot of money.

The MWH model remained fundamentally flawed for some years. Mr Menzies and Dr Joynes continued to assist for a period of ten years toward improvements to the model and the outcome.

A HIGH COURT CLAIM OF NEGLIGENCE

Legal Challenge: Hindrup Vs District Council - Aug 2001

Mr Hindrup had gone to court late in 2001 alleging negligence and poor management of the Hikurangi Swamp drainage scheme. The fact that MWH had been unable to accurately model the scheme resulted in recommended crest changes that would worsen the flooding and poor state of Otonga pocket. Mr. Hindrup began costly legal proceedings against the District Council, based around the costs to him through negligence of the Council, but it was not the first time Otonga pocket landowners had taken legal action against the scheme administration.

This was the second time an Otonga landowner had gone to court because of unfair flooding, being a repetition of an earlier action taken by Portland Cement Company,⁴⁶⁵ the previous owner of the same Otonga property when the scheme was operated by the NCC. Few people were aware that this was the second court case.

The local news paper ran a headlined article: **"WDC being sued for \$1 million-plus."** *"A Hikurangi farmer is suing the WDC for more than \$1 Million, alleging negligence and poor management of the Hikurangi Swamp drainage scheme. Ray Hindrup, who farms 900 ha on Mountian Rd, claims the council's actions resulted in larger than expected volumes of floodwater deluging his farm, causing huge losses. Mr. Hindrup has lodged a claim in the High Court saying the WDC carried out unlawful alterations to the scheme and had been negligent in its management of the scheme. Mr Hindrup's statement of claim said unlawful alterations reduced flooding in some areas while increasing it in others. Flooding had been particularly bad on his farm and WDC had been negligent by either carrying out the unlawful work or allowing others to do so. The scheme had not been adequately monitored and maintained. He claimed the recent review was seriously defective and the council had operated it outside its design specifications. The Advocate understands the council's insurance company has distanced itself from the claim."*⁴⁶⁶

A legal Memorandum described the claim this way: "The plaintiff's claim relates to the defendant's failure to properly operate the Hikurangi Swamp Scheme...The Council owns the scheme. The plaintiff maintains that the Scheme is not being operated in accordance with its design specification, with a result that the plaintiff's farm receives more flood waters than it should... This resulted in production losses and a reduction in the value of the plaintiff's farm... The Plaintiff considers that the reports (of MWH) and its recommendations are incorrect and if implemented would worsen the flooding problems presently experienced on the plaintiff's farm..."⁴⁶⁷

Areas where MWH were claimed to have been negligent

A number of points are of interest in the documentation, some of which is shown below.

From Letting of contract to MWH Jan 99 report:

WDC Contract Instructions to MWH. (Scope of Services Schedule A) Unsatisfactory at: 2.0 a, also at pg 18 para 2 *"the Consultant shall model a number of flood events and average the results to determine inflow lengths."* However, only "design" floods were

⁴⁶⁵ Legal case. Claim for damages. Portland Cement Co, Nicholson Gribben Co to NCC. Writ 29/6/81. Hunter Assessors Ltd 4/3/81. See also claim for damages. D. Smith Consultants to NCC 26/7/85

⁴⁶⁶ Northern Advocate August 28th 2001

⁴⁶⁷ Memorandum for Directions Conference. CP No. 4/01 Mr Savage. 25/1/2002

modelled not actual floods as instructed. The effect on inflow distribution of the high banks has not been provided in MWH revised modeling Dec 2002.

MWH Project Manager Mr Knowles has said, "This is the first time we have never been allowed to come into the area and talk to landowners when we started a review."⁴⁶⁸ MWH had been told by WDC Manager Simpson not to come onto the scheme prior to doing the modeling and reporting, (The Liaison committee had not wanted that to occur) however, MWH failed to exercise normal professional practice in such reviews and make proper engineering inspections. Nor did MW bother to inspect the protection scheme when in flood.

MWH listened to misleading information⁴⁶⁹ without corroboration, ie: without checking logsheets, referring to aerial survey for cross reference and other photos, and Catchment Commission monitoring that was in the possession of WDC.

Mr. Knowles admitted to Mr Hindrup, "The brief is so ambiguous I really did not know what was what."⁴⁷⁰ How professional is that? All information had to go through Mr. Simpson who controlled what went forward to the consultants.⁴⁷¹ Was it being vetted by somebody - or the under control of the Liaison Committee? The CEO Mr Simpson said, "The consultants did not come before now as the Liaison Committee had wanted no contact with local individuals."⁴⁷² This was typical of those in control of the swamp and resulted in the MWH modeling people hearing only the biased version and so they were unable to get the normal type of information in such reviews from landowners. It was unfair on MWH but unfortunately as consultants they failed to deal with the situation.

Before this meeting landowner's questions were to be sent in and put to MWH regarding their 1999 report and recommendations. The night before the meeting Knowles told Hindrup, "The farmer's questions printed up by the WDC were pathetic and of no use" but next morning Mr Knowles did not have the courage to reveal the true situation to the meeting, knowing full well MWH had got the \$80,000 report all wrong. He had admitted this to Mr Hindrup and also to Mr Rusk the evening before.

Given that the excessive inflow into Otonga Pocket is what instigated the review and that this was triggered by the Cyclone Fergus flooding which was professionally recorded by Hindrup's aerial survey with photographs, why were the following questions not addressed in the review?

- (a) That the additional inflow into Otonga pocket be modeled and reported on?⁴⁷³
- (b) Why did MWH not model the Fergus flood and the recent large 1995 flood ?
- (c) Why did Simpson stop MW from modeling the two most important recent flood events for which excellent recording was available? Note: B. Knowles MW project manager told Mr. Hindrup that MWH was instructed by the WDC 'not to model Fergus.' Later, (in their 9/00 written response to Menzies WRCG peer review) MWH stated "We were unaware of the Cyclone Fergus photos at the start of the study. While interesting and helpful in a general way they were of limited value for calibration of the model." (Mr. Hindrup failed to get the photos considered so he had written directly to the project manager offering the survey. The Cyclone Fergus photos were received by MWH from Mr. Ray Hindrup after the January 1999 Report came out.)

⁴⁶⁸ Phone Interview with Mr. Knowles 11th February 1999

⁴⁶⁹ Comments by WDC field officer Mr. B. Cutts

⁴⁷⁰ MWH Project Manager Knowles to Mr. Hindrup 11th February 1999

⁴⁷¹ Drainage engineer Gary Oldcorn to WDC Liaison Meeting 25th May 1999

⁴⁷² WDC CEO to combined Liaison meeting of 23rd February 1999 at Forum North

⁴⁷³ See letter from R. Hindrup to WDC M. Simpson

Question to MW: Would it not concern MWH that the two most recent and well documented flood events were excluded from the review? (Four years later these floods were eventually included into MWH 2002 calibration efforts.)

The WDC/Liaison meeting to discuss the first draft report June 1998. MWH were not represented, not even present. Why was no key figure from MW present at this important stage? Mr Simpson virtually admitted the aerial survey of Fergus flood had not been sent to MWH by saying he would compare MW's results with the aerial survey.

MWH knew the value of the pump station log sheets that recorded water levels both in the river and on the farmland in each pocket. When M. Rusk advised B. Knowles that he could no longer locate the boxes of scheme log records from 1977 to 1990 that had been stored in the Ngararatunua pump station, and that he (Rusk) had found the Ngararatunua log entry showing "*Station rubbish taken to dump*" on 6/5/97 shortly after the WDC agreed to the review, and that the WDC field officer Brian Cutts had told Rusk that "They were old and mouse eaten and no use" - when told of this Mr. Knowles was very upset and said "That's criminal."⁴⁷⁴ This also took place the night before Knowles presented his report to WDC.

The night before the presentation of the MW Report to the meeting on 23/2/99 Mr. Knowles was asked by Rusk "Whether the filled in spillway crests needed to be cut down to design level like the rest otherwise any level recorder readings will be false and misleading." Mr. Knowles agreed emphatically, "Yes - absolutely he said." At the meeting next day Mr. Hindrup asked, "Will recorders produce accurate readings with two high inflows above design or will readings be altered?" Knowles again replied, "Definitely, the setup has got to be one or the other - the spillways have to all be at design or review model levels, it has to be one or the other." Yet MWH has continued to use data from the recorders with the two crests still filled in.

There was an admission by MWH project engineer Knowles in phone conversations with Hindrup and Rusk the night before his presentation to the WDC meeting. Mr. Knowles' admission to Mr. Hindrup was, "We have got it way to steep." Knowles' admission to Merv Rusk was, "You're right, we have got it wrong."

Feb 99 to August 2001:

Next morning MW's engineer Brian Knowles addressed the combined WDC/Liaison meeting on the MW report giving no hint whatsoever that they had "got it wrong."

At this stage the report should have been withdrawn. Later reports by MWH on hydraulic performance show just how wrong this Feb 1999 report really was.

In his presentation report to WDC/liaison meeting 23 Feb 99 MW Knowles said, "We were very short of data." Mr. Ross Finlayson one of the 'fathers' of the scheme, asked Mr. Knowles the very sensible question, "Manual observations at the various pump stations at specific times would give you a complete picture of every flood as details are kept?" Mr. Knowles answered, "Yes." However MWH made no use of all the 7 pump station log records for another three and a half years!

MW became aware that there was further information available on the scheme's performance but failed to follow it up. (ie logsheets which they did not use, later said were unsuitable, then eventually did use them five years later in their Dec 2002 report saying "*there was very little difference between the logs and level recorders*" (at the higher levels where flooding is caused). This means they could have got on with it 5 years earlier. The records collated by Merv Rusk were eventually used extensively.

⁴⁷⁴ Criminal was obviously the wrong word but the destruction of records was seriously criticised

MWH then failed to take appropriate action once flaws in Jan 99 report/modeling were made known to them by the Court directed meeting of 12th November.

2001:

The second MWH report of Sept 2001 was flawed when the WDC failed to report the true benchmark levels of the water level recorders they installed. MWH appeared negligent in failing to notice and pursue correct data. The error between the top end of the channel and the middle by Jordan Bridge was 135mm. The river appeared to flow substantially uphill yet MWH still used the data for calibration.

The High Court directed that a meeting between experts from both sides must take place. This took place 12th November 2001 in MWH Auckland office. The Hindrup team had to point out that MWH was modeling water that apparently ran uphill.

MWH were very pleased to get the Hindrup team information. Heaney & Co had not made it available to MWH nor did MWH obtain it from Heaneys. This information, which MWH later regarded at the court directed meeting as very useful, had been in Heaney's hands via discovery and therefore available to MWH. Why didn't they get it?

After the Court directed meeting why did MWH fail to make a report to the High Court as directed? Heaney's claimed MWH were not part of their process - if that was so then what or who stopped MWH from reporting back to the High Court as they were instructed?

MWH report 2002:

This report clearly confirms the new WDC level recorders were not benchmarked in correctly. Therefore the MWH 2001 report based on those recorders was thus rendered invalid and so the Dec 2002 report appeared. However, MWH have used wrong crest surveys in their 2002 report, by basing their modeling on March 2001 crest dimensions when these were, in fact, very different from those prior to the very substantial re-building of some low crests done beforehand in 1998. This seems to invalidate this latest report. Worse still, MWH also used a most unusual local "weather bomb" type of storm of June 2002 the first of its kind. This had an unusually shaped hydrograph which was not the usual tropical cyclone, and then MWH actually used this storm to calibrate their model to the other normal type of tropical cyclones. Then by using this very non-typical storm along with the incorrect crest dimensions, MWH miraculously produced perfect looking matches for their data. Wow! In this report they also allowed for inflow crests to be constructed to a variation in height of up to 100mm. In a system where 25mm is of major significance this 100mm tolerance makes a mockery of the whole process.

Most importantly, MWH failed to model any actual flood events for their Dec 2002 modeling. They used theoretical storm types only. The Schedule A Scope and Services document for the review contract stated "*The consultant shall model a number of flood events ...*"⁴⁷⁵ This had been requested from day one of the review process. Modeling actual flood events is the primary fundamental of the scheme review. Therefore MWH have failed to provide requested data from actual historical flood events showing inflow volumes of water into the seven storage pockets for storage in the required proportions onto farmland according the agreed philosophy of the scheme design.

In the MWH response document Sept 2000 to the Hindrup peer review by Mr. Menzies MWH said: "We had difficulty in obtaining pump station records." "We also

⁴⁷⁵ Scope and Services Pg 18 para 2

had difficulty finding flood records for calibration purposes. Pump station log records were incomplete with some logs not supplied, lost or destroyed, or data not fully recorded on the logs." "Because of the poor quality of the water level records we considered they could not be considered for a calibration of the model."

However, in MWH 2002 report they say on pg 14 5.1 Calibration: "For the first three floods calibrated water readings (logs) made at the pump stations were available. (They had always been available). MWH then shows on pg 19, 5.5 *Verification of Swamp Model*, that in most cases there is very little difference between the flood levels recorded on the pump station log sheets and the levels recorded on the recently installed WDC level recorders. Thus they confirmed the accuracy and usefulness of the very same logged water level records which they had long rejected!

Logsheets Summary:

1. WDC had the logs. The logs existed and were satisfactory.⁴⁷⁶
2. Half of the logs were then destroyed by WDC staff member Mr. Cutts.
3. MWH failed to get the remaining logs from WDC.
4. Eventually MWH received the logs but said they were unreliable and unusable.
5. MWH then used the logs.
6. They find the logs are indeed accurate.

MWH found the WDC "Tardy and late in sending information."⁴⁷⁷ But surely, having been told it existed, it was the consultant's responsibility to press for the required information rather than proceed taking eight years to do what should have been done in one?

MWH Reports summary:

The WDC decided to have a review in February 1987.

MW spent 1998 producing a late report dated January 1999.

In September 2001 MW produced a second 're-calibration' report which invalidated its first report of January 1999.

In December 2002 MWH produced a third 're-calibration' report which invalidated its second report of September 2001.

This third Dec 2002 report was based on substantially incorrect crest profiles so this report is probably invalid and another should be done to replace it.

After three attempts and five years of trying MWH still do not have a report that is satisfactory. (Note: It would take another seven years).

Are MWH negligent for proceeding without the normal access to inspection and information, resulting in many years of delay, wasteful expenditure, and added cost to the complainant?

High Court Directive

In certain cases it is normal Court process to order the two sides to get together, clear the issues, and perhaps settle without clogging up the Justice system. Information had clearly been withheld from MWH by the District Council during the course of the review. Hindrup's team had researched and collated a lot of information but did not produce it in its entirety, but it was available. The council's consultants MWH were ordered by the High Court to meet with the Plaintiff's consultants where the Plaintiff's consultants were to provide and explain to the Defendant's consultants

⁴⁷⁶ Stored in Ng pump station. Later ones held in WDC archives

⁴⁷⁷ Mr. Knowles words to M. Rusk on phone February 11th 1999

the information in their possession and that the Defendants consultants were to consider same in the light of the report produced by them dated September 2001.⁴⁷⁸ A Report to the Court from each party was then required within ten weeks plus a further meeting was ordered.

Summary of the Meeting Directed by the High Court

In spite of the opposition from the swamp and legal interests the meeting duly took place at MWH in Auckland.⁴⁷⁹ Present: Ray. Hindrup, Murray Menzies & Merv Rusk (Hindrup Team). Hugh MacMurray & Brian Kouvelis (MWH team) (Previously known as Brian Knowles) and Gary Oldcorn (WDC Observer).

(1) Introduction:

The meeting began with introductions and generally followed the Agenda and the papers pre-circulated by Mr. Menzies. The format of the meeting generally took the form of presentation of information that was then questioned and discussed by the parties in wide ranging or in-depth discussion. During the opening comments for the Hindrup team Mr. Hindrup stressed, from his circulated notes, that he and his team have absolutely no doubt that Montgomery Watson are able to produce an accurate report if they are given and assimilate all available information and are able to talk to everybody they want to.

(2) Background to the Scheme

Mr M. Rusk led the discussion through the pre-circulated report covering paragraphs:

- 2a: Design basis,
- 2b: Changes to the Scheme since construction
- 2c: Operational Observations and Records.

He included an outline to the MW team of graphic evidence showing the changes in flooded areas over the years compared to 1966 flooded area before scheme construction.

(3) Comment on MW Modeling

Mr M. Menzies introduced the agenda item and facilitated an in-depth discussion as the meeting proceeded through pre-circulated report items, viz:

- 3a: Issues with MW's 1999 modeling,
- 3b: Comments on MW's mid-2001 modeling

Mr. Menzies made the point that MW's 20001 modeling, whilst an improvement on the 1998/9 work, remained unsatisfactory due to the poor calibrations developed using the Nov 2000 flood (poor data quality and not a representative storm event) and the April 2001 flood (too small). Further, there were issues with the datums applied to the recorders and/or the staff gauges (see 5 below). He pointed out that, in practice, much more reliable calibrations could be developed using staff gauge data, air photos, observations, etc, as compiled in various reports by M Rusk (see 5 below). Numerous other technical points were raised and discussed in respect to modeling assumptions, calibrations, etc. Also, problems with the validity of the base hydrology of the scheme were discussed including the "too much water" problem, overspill of the Whakapara stopbanks, etc.

(4) Presentation of Findings from WRCG's March 2001 Report

⁴⁷⁸ Memorandum for Directions Conference. CP No. 4/01 Savage. 25/1/2002

⁴⁷⁹ Conference Room Montgomery Watson Harza 585 Gt. Sth Rd, Auckland, 12/11/01 10 am to 1:00

Mr. Menzies presented the findings of the March 2001 Independent Report of Water Resources Consulting Group, as pre-circulated. These findings were discussed by the two parties. Modeling methods used and data sources were examined. MW's simulation of overtopping fractions for the scheme existing at Cyclone Fergus did not match the independent modeling very well. Likewise it was found that overspill fractions for the 2001 simulation of a 5 year ARI flood did not match the Nov 1998 flood well.

(5) Proposed Approach to Reaching a Consensus

There was a wide-ranging discussion of various details and those present had every opportunity to contribute. During the meeting the information as shown on the pre-circulated list from the Hindrup was given to the MWH Team. Sets of the ten papers researched by M. Rusk were provided to Mr. Kouvelis and Mr. McMurray. Mr. Rusk drew attention to his work on historical changes to inflow crests, their performances compared, and the method probably used by design engineers for calculating the different lengths of inflow crests to achieve fair distribution of water.

During the meeting it became clear discrepancies existed between water levels as observed and those recorded by level recorder meters. There was a consensus that in order to obtain the best possible data that an independent ground survey should promptly check, from the DOSLI system, elevations of all staff gauges at pumping stations and bridges on the scheme, all water level meters, and all Northland Catchment Commission construction Benchmarks near pumping stations. Also, it was noted that all staff gauges should then be correctly mounted for proper monitoring of water levels in the river and on the farmland. The time-frame for completion for this could be several weeks. By that time MWH would have had time to scrutinize the river profiles presented by M Rusk and select those suitable for calibration purposes.

It was agreed that MWH would go back to the Hindrup Team to discuss profiles they have selected for application in the re-modeling calibrations and checks.

The quality of overflow crest surfaces for survey work and for upgrading purposes was discussed and it was considered that tolerances were too wide and with today's technology improved levels would be better once crest dimensions are tried and proven. Mr. MacMurray agreed that variation in crest dimensions as shown in the Cook survey would have an effect on modeling.

Some time was spent viewing the river profiles of peak flood events supplied from observations by the Hindrup Team. In some instances the event levels provided could be supported by overspill elevations (as in the crest trickles of the April 2001 event) and by aerial surveys relating to water level data.

The characteristics of different types of flood were discussed and suitable floods looked at for future modeling. In each case MWH needed to ensure that they applied the then applicable crest configurations (these as documented in M Rusk's work).

The Hindrup Team offered MWH any other material they wished to have free of charge to benefit the improvement of the present scheme.

Mr Hindrup specifically requested MWH to meet, or offer to meet, with all or any other affected landowners to give them an opportunity to have their say on the scheme.

The information from the Hindrup Team appeared to be received by the MWH review team with keen interest.

The meeting consensus was that further meetings and discussion between the two groups would be necessary and beneficial.

In examining air photos from historical floods, the issue of converting pocket flooded areas to volumes (and/or and levels, and vice versa) arose. Mr. Kouvelis noted

that MWH may not have used the 1980 NCC contour surveys of the seven pockets used by the Hindrup Team. He thought that MWH may have relied upon older drawings; this would need to be checked out as the early maps were inferior.

Mr. Menzies said that his team would want to know to what extent MWH intends to make use of the information provided. If it was not to be made good use of to establish accurate and robust calibrations, then the Hindrup team could commission independent modeling.

Mr. Kouvelis, the Project Manager, mentioned that if modeling proved too difficult with unsatisfactory calibration, the scheme should revert to design. Mr Hindrup expressed agreement saying he had made the same comment in his written notes. He also said he believed all the work done to date would be valuable in making forward progress if the scheme was restored to design.

Because of time limitations the MWH team was unable to view some of the photographs of flood events made available by the Hindrup team. Photographs of obstructions by tree growth in the lower river and on the Okarika bermland were examined.

The meeting ended on a positive note with both parties envisioning the problems being solved and a satisfactory outcome. To this end, MWH would discuss with WDC and their legal advisers a supplementary brief to cover the re-calibration/modeling and related work. The Hindrup Team advised that they would wish to have the opportunity to comment on this brief before substantive work commences.

R. Hindrup. M. Menzies WRCGNZ. M. Rusk. 13th November 2001.

WDC FAILS DIRECTION FROM HIGH COURT IN NOV 2001

After we departed from the promising court directed meeting with MWH in Auckland Mr. Hindrup and I were walking out to his car when something strange occurred. "Look at that," said. Ray. We both looked up into the huge glass fronted foyer of the MWH building and there was Mr. Gary Oldcorn of the WDC returning to the building and disappearing into an upstairs office to talk again to the consultants. From that day on there was no further contact between MWH and Mr. Hindrup's team of experts. It was just banged shut. In spite of a direction from the High Court of New Zealand the Whangarei District Council just closed up shop so that was the end of consensus and the end of progress for seven years.

MWH's contracted modeler begged me by email⁴⁸⁰ and phone⁴⁸¹ to continue to help and to provide him with some water level data and assistance but under the circumstances of the legal case I believed I had to decline which I did, although I was very disappointed in declining I did not want to be the meat in the sandwich.

The WDC had deliberately failed to comply with a direction by the High Court of New Zealand and nothing was ever said about it. What was going on here? Cold feet? Liaison Committee interference? Or most likely the WDC's Insurance agents were simply shutting up shop to protect their funds and freeze Hindrup out? How could they just thumb their nose at the High Court and get away with it? Not contempt?

Counsel for the Plaintiffs, J.M. Savage, wrote a Memorandum to the court⁴⁸² stating that the ten weeks had elapsed and "To the best knowledge of the Plaintiff the defendant (WDC) has not yet carried out or even commenced the work agreed

⁴⁸⁰ MWH computer modeler Hugh MacMurray emailed request to M Rusk 3rd Sept 2002

⁴⁸¹ 10th Sept 2002

⁴⁸² CP No.4/01 25th January 2002

between the experts as necessary.” The court was asked to make further directions in an effort to get the WDC to fulfill the earlier High Court Direction. Nothing was done. The WDC just sat tight doing zilch. Its insurance cover regarding its negligence had been removed by the insurance company but was later re-instated,⁴⁸³ so then the council simply sat tight abusing the system, knowing the insurance cover paid for by ratepayers would cover its negligence.

It would be another eight years of flooding for the Hindrups in Otonga pocket and Ngararatunua pocket farmers before the WDC, at another joint meeting of experts,⁴⁸⁴ would re-engage on this cooperative approach that was obviously blocked by some unseen hand, some person or persons who did not want a cooperative and fair result.

Hindrups is Forced to do Private Modeling

Mr. Hindrup had gone the extra miles to help all he could and his assistance was bluntly terminated by the WDC, its lawyers, or its insurers. Somebody managed to block the High Court of the land. Ongoing isolation while unfair flooding continued forced the Hindrups to contract a private modeling expert in a desperate effort to financially survive. Hopefully it could also keep the review process honest with a just and fair outcome for all and to his credit and considerable cost, this was eventually the result. He contracted the man with one of the best names in hydraulic modeling in the country, the tall English immigrant Dr. Stephen Joynes of Hydraulic Modeling Services based in the Waikato who had originally quoted for the Review. This man was a top NZ expert and very professional. Currently he has had 26 years experience in developing, utilizing and managing water modeling projects. He started Hydraulic Modelling Services Ltd in 1992 and this company has now serviced over 20 local and regional councils in New Zealand and numerous civil engineering and survey companies. Dr Joynes had earlier visited Mr Hindrup on the Hikurangi Scheme⁴⁸⁵ and a process for independent modeling was agreed on the 2nd February 2002. Emphasis would be on achieving robust calibration and the need for accurate information for computer modeling would require an extensive survey of the scheme which did not exist.

Hindrups's Decision to do The Private Donaldson Scheme Survey

The WDC had not carried out a full up to date survey of the entire scheme so Mr. Hindrup engaged out of town firm Donaldson Surveyors of Kerikeri.⁴⁸⁶ He said, “I refused to use local Whangarei surveyors because of the funny business that has gone on with swamp surveys in the past.” On 14th March 2002 Donaldson Surveyors started at Lewis Bridge to go up the Okarika stopbank. WDC Field Officer Brian Cutts promptly shut the gate refusing to allow anyone to enter. A quick phone call to his boss soon sorted that out. Mr. Hindrup could not be present and had asked if I could assist the surveyors so I was busy as a general dogs-body, opening gates, finding locations on the swamp, keeping stock away from equipment, ferrying men around on Ray's quad bike and bringing the surveyor's ute along behind. Up at the Junction end I provided a boat and ferried men and equipment across the river. The oars kept hitting large obstructions which may be huge mounds of shingle that need cleaning out.

⁴⁸³ Insurance cover for WDC negligence reinstated on or about 2nd November 2001

⁴⁸⁴ 4th November 2008

⁴⁸⁵ Met and visited the scheme 10th February 2000. Murray Menzies had visited 1st January 2000

⁴⁸⁶ Hindrup considered there was too much funny business occurring with local surveyors

These surveyors had a very good reputation and were very efficient and businesslike. Their very modern sophisticated equipment was mysterious but accurate within 5mm going from one end of the scheme to the other. The inflow crest profiles were surveyed, the staff gauges, station benchmarks, old NCC scheme benchmarks were checked, as well as the WDC river-level recorders. They also surveyed right down to the rapids and falls which had not been done to such a high standard before. It all took ten days and I believe the cost to the Hindrups for this survey would have left no change out of \$40,000.

Without Mr. Hindrup's survey by Donaldson Surveyors the Review could only have ground to a stuttering stop and neither the WDC nor its consultants would have had sufficient information nor the grounds to obtain a Resource Consent. That could have seen the gravity gates removed and the pumps turned off and the scheme come to a sad end.⁴⁸⁷

MWH Report Three December 2002

This report was labeled 'Hydraulic Performance of the Hikurangi Swamp System.' The crest recommendations were set out in the usual format. Otonga was still almost fifty percent too long but the rest were improving. TeMata was still raised by 50mm but Ngararatunua was shortened to 400m.

MWH Crest Recommendations December 2002.⁴⁸⁸

Pocket	Upgrade 2002		Proposed 2001		As Built 1970's	
	Lowest crest Level m	Width (m)	Lowest crest Level m	Width (m)	Base Level (m)	Width (m)
Junction	91.35	180	91.35	180	91.32	180
Te Mata	91.35	700	91.33	650	91.30	670
Otonga	91.20	950	91.20	990	91.22	675
Mountain	91.17	620	91.17	600	91.20	200
Tanekaha	91.17	250	91.17	145	91.20	200
Ngararatunua	91.07	400	91.08	500	91.11	1180
Okarika	91.03	900	91.03	940	91.08	940

The report did acknowledge the problems with level recording. It reported that following the installation of the water level recorders the WDC had decided to retain MWH to reconsider the calibration.⁴⁸⁹ As explained already, "The integrity of the latest water level data was held in doubt by certain of the parties, and the results of MWH's studies were questioned,"⁴⁹⁰ and "It was concluded that insufficient data was available to model the performance of the swamp system to produce an acceptable degree of confidence in the results."⁴⁹¹ As a result of Mr. Hindrup's survey by Donaldsons and my graphs of the WDC river recorder outputs which suggested the

⁴⁸⁷ This very real likelihood was explained to me by NRC's Bob Catchcart

⁴⁸⁸ MWH Report December 2002 section 6 Table 6.2

⁴⁸⁹ MWH 2002 Page 1

⁴⁹⁰ MWH report December 2002 Page 1

⁴⁹¹ MWH Dec 2002 Report. Page 5

river could run uphill the meter bases were surveyed again and a number of large errors were found, up to 69mm, which is huge in terms of crest overspill. Faulty level meters are fatal. At least some things were now being acknowledged and fixed.

In addition MWH acknowledged the sixty photographs from my downriver boat trip with Ray Hindrup⁴⁹² and as a result the friction allowance through the 4.5 km stretch below Lewis Bridge was increased because of the willows MWH had never even seen.

MWH reported that they were using the 1994 Works survey and a 2001 survey (By Cook) and stated that, "No other adjustments were made to the overflow crests between 1995 and 2001."⁴⁹³ This was seriously flawed as there had been three different contracts over the period that altered the scheme radically.⁴⁹⁴ This meant MWH were using the wrong surveys until June 2007.⁴⁹⁵ Furthermore, they were still modeling only theoretical floods not real ones as they had been contracted to do.

During the June 2002 'weather bomb' flood I spent 5 hours at Whakapara measuring and recording the event. This was not a normal cyclone but the first local low to be dubbed a 'weather bomb'. Right at full tide I experienced extreme local heavy rainfall for three hours and this played havoc at the Junction end of the scheme where I was monitoring.

Miraculously MWH used this oddball event to calibrate their model and then, using the wrong surveys of crest profiles, "Satisfactorily reproduced the recorded water levels for the floods of November 2000, July 1997, December 1996 and March 1995,"⁴⁹⁶ all of them normal tropical three day cyclones! I could not believe it! It must be a strange feeling to model flooding when you have never ever been there to see it.

At least MWH's 2001 report had agreed the gradient was flat and now their 2002 report also accepted that the grade in the channel was flat⁴⁹⁷ and referring to the model instability said, "Small changes in water level are associated with significant changes in discharges into the pockets."⁴⁹⁸ So the basic problem with fine tuning the scheme using computer models was acknowledged - but the flatness problem was about to get more attention from an unexpected visitor. A blunt Australian.

THE AUSSIE BOSS FROM DHI INSPECTS

It had been apparent to me from the time of the MWH Draft Report of 1998 that the flatness of the water gradient in the main swamp channel was going to cause a problem to computer modeling.

Now, seven years into the review, things were no better so Mr. Hindrup contacted the people who design and market the software. The Danish Hydrological Institute (DHI) being one of the world's leaders, if not the world leader, in this type of software. When Mr. Hindrup contacted DHI their representative⁴⁹⁹ who happened to be visiting NZ at the time undertook to fit in a visit to see the scheme.⁵⁰⁰

⁴⁹² Page 18 MWH Report December 2002

⁴⁹³ MWH Dec 2002 Report Hydraulic Performance 5.33 page 17

⁴⁹⁴ The 1995 Donovan Contract, the 1997 Springs Flat contractors repair of a kilometre of Otonga, and the 1998 Gwynn contract

⁴⁹⁵ See WRCNZ Menzies' (Joint work) 25th June 2007

⁴⁹⁶ MWH Report Dec 2002 8, page 22

⁴⁹⁷ MWH Report Dec 2002 Page 1

⁴⁹⁸ MWH 2002 Report 3.2 page 5

⁴⁹⁹ Dr Robert Carr, Managing Director, Suite 204 781 Pacific Highway, Chatswood NSW Australia
0061 2 8440 5700 www.dhiaust.com

⁵⁰⁰ Dr Carr visited the swamp with Mr Ray Hindrup and M Rusk on the 2nd September 2004

The rep was none other than the Managing Director of DHI Dr. Robert Carr BE, MSSc, PhD, MIEAust, CPEng, a top man indeed. With letters after his name too! I hoped he might be like that other Australian, *'The man from Snowy River- who came down to lend a hand,'* but he wasn't and he didn't. Mr. Hindrup drove the Australian up the scheme stopbanks in his 4WD with me as gate opener. We had not got very far when out of the blue, in true blunt Oz style, Dr. Carr said, "OK, take me home and we'll have a cuppa. I've seen enough!"

Feeling uneasy and disappointed we drove several kilometers back to Hindrup's house in dead silence, Mr. Hindrup and I both silently wondering what had offended this very knowledgeable man.

We waited and by and by, when the tea was poured and the biscuits were going down, Mr. Hindrup broached the subject with the simple question, "Well?" There was a long pause... The Australian sipped his brew again then stated quite matter of factly. "It's too flat," "This scheme is too flat for our software to model the over-spilling accurately." Although not entirely surprised, we took some time to let the implications of this statement sink in. As Mr. Carr departed to keep his schedule an arrangement was made that he would send a short report for Mr. Hindrup. That report never eventuated, probably because it's not smart to admit in writing that your software has some difficulty with solving a problem.

That visit had a sequel four years later after I mentioned the incident at a meeting of experts arranged by the WDC to progress the modeling. One of the experts checked back with Dr. Carr in Australia and guess what – Dr. Carr "Could not remember visiting the Hikurangi Swamp", adding, "It was such a long time ago, it is irrelevant." So I got my knuckles rapped by my engineering mentor for embarrassing a professional engineer. Such is life! Talk about under-arm bowling! Well, the fact is the man did visit the swamp because I still have his business card to prove it.

The fact of the matter remains the most pertinent fact. The swamp overspill level is too flat for computer models to handle well. At the very least the software is operating at its extreme limits. That helps to explain why it took ten years to get nowhere. The poor early results were the very reason I had decided to get out there and do the recording and observations I did. Just as well.

I believed there needed to be on some on the ground observations to help the computer model and engineers who were obviously struggling to cope. This is the reason I believe that continued visual recording of water levels will continue to be critical information in the future and should be continued.

Relying on computer modeling alone with no backup without using any observations is simply not reliable enough. In my view any fine-tuning of this scheme by computer modeling will always be dependent on good quality information and plentiful observations including aerial photographs of peak flooding, peak internal pocket depth measurements and crest overspill meters.

MWH Report Four - March 2003

Report four was another Hydraulic Performance report that differed little from the one three months earlier. Use of water level observations were now introduced but the same basic flaws were still there, with the model resting on the same theoretical storm type foundations only, and the estimated overtopping proportions of historical events were, if anything, even worse than before.

The following table shows where it was at in March 2003.

Pocket	2003 Upgrade		2001 Upgrade		1970's as built		Existing	
	Lowest crest Level (m)	Width (m)	Lowest crest level (m)	Width (m)	Lowest crest Level (m)	Width (m)	Lowest crest level (m)	Width (m)
Junction	91.35	180	91.35	180	91.32	180	91.43	200
Te Mata	91.35	700	91.33	650	91.30	670	91.32	350
Otonga	91.20	950	91.20	990	91.22	675	91.23	675
Mountain	91.17	620	91.17	600	91.20	200	91.14	200
Tanekaha	91.17	150	91.17	145	91.20	200	91.08	250
Ng-tunua	91.07	400	91.08	500	91.11	1180	91.10	1200
Okarika	91.03	900	91.03	940	91.08	940	91.02	940

The NRC began pressurizing the WDC and Mr Cathcart said if there was no RMA consent application by the end of June 2003 he would send an abatement notice to return to as built 1970 specifications.⁵⁰²

Mr Hindrup calls his court action off.

In Late April 2003 Hindrup's court action against the WDC was called off on the advice of his Law firm. The legal advice in Mr Hindrup's words was that, "There was no further point in continuing because the Northland Regional Council had sent a letter to the Whangarei District Council complimenting it on how well the WDC was running the scheme." That effectively pulled the rug from under his feet. What Judge would listen to a ratepayer complaint when the overseeing authority was praising the District Council?

In more sinister news a contributing factor occurred at about the same time when the Wild West returned from the past in the form of cattle rustling, better known nowadays as stealing. "Three hundred and seven bulls disappeared from our property on the Hikurangi swamp over a period of some months. Valued at \$1000 a head this was a loss of more than three hundred thousand dollars right when we were battling big losses from the flooding as well as the costs of trying to get justice in the High Court claim," Mr Hindrup said.

The only usable gateway was on the stopbank near the Otonga pump station, secured by a very long heavy padlocked chain with the Hindrup's holding one key and the WDC field Officer the other key for access. Mr Hindrup said, "Afterward I found that key under a piece of wood near the strainer post. After the stock theft I locked the gate and never gave the council their other key back. They never questioned this – why not?" "To me the silence spoke volumes, and yes, I believe it was scheme related," he added. The thefts seriously knocked Hindrup's financial situation at a bad time and the matter remained in police hands.

The Hindrup family, like others before them, suffered from the way the scheme has been operated, but because the Hindrup family dared to battle and have it fixed, their cost has been far greater. "The flooding crippled my farming enterprise," he said. "From the first three major floods (after purchasing in 1990) my enterprise went into a

⁵⁰¹ MWH report March 2003 6. Table 6.2 page 25

⁵⁰² R Cathcart 24 June 2003 4.20 pm

downward spiral that has probably cost me eight million dollars plus half a million for modelling and legal costs." "It has been like a life sentence for me and my family." ⁵⁰³

Dr Joynes' Hydraulic Modeling Services Report. Dec 2003

Mr. Ray Hindrup engaged Dr. S. A. Joynes of Hydraulic Modeling Srvices Ltd Cambridge to model the scheme ⁵⁰⁴ using the latest software of Danish Hydrology Institute, which is among the world's best. The WDC consultants used much the same software. Dr. Joynes' report was done at considerable cost to the Hindrup family who had lost faith in the modeling by MWH, and they were concerned at the adverse economic effects on themselves and some others.

Dr Joynes, regarded as being in the top two in NZ, was the only modelling expert to get onto the scheme during flooding and inspect what was actually happening. I worked closely with Dr Joynes and was able to supply NCC data and drawings, flooding records from NRC and WDC, and find much of the information Dr. Joynes required. Contrary to what was happening for ten years between the council and their consultants Dr. Joynes was well supplied with information, in fact he insisted it was one of the best documented modeling jobs he had ever done.

The HMS modeling covered various levels and combinations of inflow crests including the design levels, which MWH did not. Even though the HMS model was at an early stage it did produce far more realistic results than the MWH model. In half the time Dr. Joynes was already about six years ahead of MWH. Work continued on both models to improve them over the next six years and neither of the modeling teams would have claimed their model was perfect. However, Dr Joynes' HMS Report of 2003 confirmed to Mr. Hindrup that the MWH modeling did have serious flaws while in contrast Dr. Joynes' model was able to reproduce a fair replica real world model of the flooding of January 1st 1997 in the same proportions as indicated by the aerial survey on that day.

Consensus Approach Agreed To Again - March 2005

The Council's failure, or was it refusal to cooperate under court direction for whatever reason, had put a stop to consensus in January 2002. There was little real progress apart from several modeling reports from both sides and a sort of stalemate situation continued through 2004 while nothing happened. It would be another five years before the WDC's consent application would admit, "It has also become clear that the original findings of the hydraulic review omitted some significant calibration data and as a result was challenged by individual parties and their specialist consultants." ⁵⁰⁵

Meanwhile the ratepayers' organisation was pretty much still run by those who planned to run the scheme. At the AGM ⁵⁰⁶ only 14 A & B class ratepayers out of the many ratepayers in total were allowed to attend and the 7 who intended to run the scheme were elected. By 2004 more than 47 letters of complaint had been written to the WDC by landowners, the majority from Otonga and Ngararatunua pockets.

I thought the time had arrived to try a second attempt at consensus, therefore, I called on WDC's CEO Mark Simpson to put the idea to him for pre-consent joint

⁵⁰³ The above section was recorded in an interview with Mr Hindrup January 10th 2012

⁵⁰⁴ 10th February 2000

⁵⁰⁵ WDC Ammended Application. Restatement of the Hydraulic Performance. August 2009

⁵⁰⁶ Ratepayers Meeting Kauri Hall 5th June 2004

deliberations to get progress.⁵⁰⁷ This is permitted under RMA protocol and Simpson was open to it. Next day I met with Mr. Hindrup to outline the proposal even though I expected he would be very reluctant. Later, after speaking to Menzies and Joynes, I was back to the CEO to discuss agenda and timeframes⁵⁰⁸ hoping to get a fair discussion and a fair deal and Mr. Simpson's secretary arranged a meeting between the CEO, Dr. Joynes, Murray Menzies and myself.

On cue as usual it took only days for the Liaison committee to go into damage control mode. Who scared the horses? Was it Mr Oldcorn? The very idea of Mr. Hindrup's experts working constructively with MWH and the WDC was always opposed by the committee on the swamp who believed they must control all things at all times. WDC engineer in charge, Mr. Oldcorn, phoned me to say, "The Liaison committee had met with MWH and as a result he wanted to lodge a resource consent application (right) now."⁵⁰⁹ It was becoming obvious that the Liaison Committee was against an outcome through consensus and information sharing and again tried to pre-empt that from happening. Engineer Oldcorn emailed me to say he had told Simpson who had politely replied, "I will think about it." Simpson already knew we were about to meet with Hindrup's experts as set out under the RMA protocol and remained supportive of this happening. At that time I had misgivings about how the Council's engineer Mr Oldcorn cooperated with the Liaison committee but said nothing.

The four of us met in a Council office in May 2005,⁵¹⁰ Simpson, Menzies, Joynes and myself. Uninvited, Mr. Oldcorn was also waiting in the room but seeing my discomfort he thoughtfully offered to leave. The four of us talked at length and agreed in principle to constructively contribute in a consensus approach together to solve the difficulties of modeling, the impasse, and the real need to obtain the resource consent to keep the scheme going. Two days later I called on Mr. Hindrup who at first was understandably very reluctant, but was persuaded to agree to the joint approach, and agreed to share some intellectual property, if a suitable agreement was made to provide reimbursement for a significant part of his survey and modeling expenses which were very considerable, probably well in excess of \$100,000. As it happened the WDC wrote six draft offers but he declined to sign any of them. He was right to be skeptical, as the scheme did not have any money to pay him with anyhow.

It looked like progress again then nothing happened for three months. I emailed the parties asking to ask, "Why no progress in three months".⁵¹¹ They didn't know so I called on CEO Mark Simpson and suggested, 'That he get on with it himself as there has been no progress by Oldcorn within the WDC'.⁵¹² Oldcorn was stonewalling or being stonewalled by others while progress on all fronts seemed to languish while the illegal crests and unfair flooding continued. I understood that certain people never ceased their lobbying efforts so I decided the time had come to do a bit of that myself.

WDC Staff 'Sanitising' Logbook Flood Records - 2005

Hindrup's farm had been flooded badly as one pump had been left out of Otonga pump station for over a year. It was time to show a few home truths so I assembled some photographs and log entries with a few notes and headed off to meet with the CEO Mark Simpson, Deputy Mayor Halse, and Simon Weston, who was head of Works

⁵⁰⁷ Visit of 9th March 05

⁵⁰⁸ I met with Mark Simpson on the 18th March 2005

⁵⁰⁹ Oldcorn phoned me on 5th May 2005

⁵¹⁰ Meeting of 16th May 2005 in WDC offices

⁵¹¹ Emails 9th September 2005

⁵¹² Meeting with CEO 27th September 2005

and Services for the Council.⁵¹³ I presented a brief history of unacceptable practices by staff, including the sanitizing and rewriting of logbook records. They also saw photos of Tanekaha farmers placing haybales on their inflow crest to keep water out. I'd taken these from Hindrup's ute as we drove around the crests during a flood. Chairman of the Liaison Committee Mr. Edwin Smith, one of the farmers, was in the photo along with the Council's own field officer Brian Cutts who did nothing to stop it. In fact when another local farmer protested later, Mr. Cutts replied saying that it was perfectly alright for the Tanekaha farmers to block their inflow with bales to keep the water out.⁵¹⁴ My visit to Council quickly provoked an angry reaction from the Liaison Committee chairman.⁵¹⁵ Later, after fifteen years as field officer on the scheme, Mr Cutts accepted promotion from the swamp job up to a new position at the Council sorting the city's effluent ponds and working at the city's treatment station. With his considerable skills and experience from working on the Hikurangi swamp scheme he would have done well in his new position.

For another four months the WDC signed nothing off with Mr. Hindrup as agreed regarding intellectual property⁵¹⁶ then in February 2006 the engineer Mr. Oldcorn was also moved away from directly managing the swamp scheme and a new English immigrant Mr. James Blackburn was put in the job.

Meanwhile dissatisfaction on the East Bank increased and eight swamp ratepayers sent a joint letter asking the Regional Council to take the scheme over.⁵¹⁷

There was an unremarkable flood in May 2006 but Ngararatunua and Otonga were flooded with some pockets having no flooding all the way through. Hindrup's had 900 acres under and with the only large pump still out of the station after five months their farm suffered badly. When Hindrup's asked the new English engineer, Mr Blackburn, he refused to take a look saying, "No I won't come and see, it's not warranted." Hindrup's land took ten days to clear.⁵¹⁸ Mr Hindrup said, "I am back to where I was ten years ago."

Soon after that I was asked by the Council Works and Services Manager if I'd discuss the scheme with James.⁵¹⁹ Mr Blackburn asked me to help familiarize him with the scheme soon afterward and we had an informative meeting over boxes of drawings and papers and his knowledge of how the scheme operated obviously benefitted somewhat.⁵²⁰ He was soon conversant with the scheme.

Also at about this time several west bank famers began a campaign for new modern pumps.⁵²¹ At a group meeting they agreed not to go for the consent for the scheme nor to do any crests – "Just get their pumping right."⁵²² Translated that meant better pumping for themselves while keeping the "ad-hoc" filled in crests for as long as possible.

Engulfed in their obsession to equip themselves with modern pumps they took their eyes off the ball, which was the looming resource consent application, and they

⁵¹³ Meeting of 18th October 2005 in CEO's Office

⁵¹⁴ Statement faxed to the author immediately after the comment was made

⁵¹⁵ E. Smith at Matarau School calf club day towards the local WDC Councilor 21st October 2005

⁵¹⁶ Reply to author's query to Hindrup's legal firm, emailed to author on 23 February 2006

⁵¹⁷ Eight ratepayers letter to the NRC 12th October 2006

⁵¹⁸ The photos show a very dark mess in Otonga contrasted to green pastures in other pockets.

⁵¹⁹ Meeting held at WDC offices 24th August 2006 chaired by Mr Weston

⁵²⁰ Held at Walton Plaza 6th September 2006

⁵²¹ WDC 5th October 2006 WDC sponsored bus trip to Franklin District inspecting pumps.

⁵²² Liaison group meeting 16th October 2006

became obsessed instead with pushing for newer and bigger pumps. Later they would blame the WDC for not keeping them informed on the consent application.

WDC Works Sub-Committee discusses new Pumps. Sept 2006

It is odd that there was a push for bigger pumps. Some of the same people on the Liaison committee had been involved 16 years earlier in 1990⁵²³ when a considerable investigation with computer modeling was done to evaluate doubling pumping capacity of the scheme, complete with a water right application. That investigation found that doubling pumping would remove flooding up to only one single day earlier⁵²⁴ so the idea was therefore uneconomic and it was dropped. However, the replacement of aging pumps is a different matter and that matter was critical.

RECORDED DISCUSSION OF THE WDC WORKS SUB-COMMITTEE MEETING ON THE HSMS HELD AT FORMUM NORTH 20TH SEPTEMBER 2006 at 10:30 am.

PRESENT: Councilor J. Williamson, Chairman, James Blackburn (WDC engineer), G. Oldcorn, (engineer), Deputy Mayor P. Halse, Councilors G. Martin and C. Christie, N. Thorne (Okarika Pocket), P. McHardy (TeMata pocket), C. Lammers (Mountain pocket), E. Smith (Tanekaha pocket), R. Finlayson (Ngararatunua pocket), S. Donnelly (Junction pocket), Mrs J. Atkinson (Otonga pocket), B. Cutts (WDC field officer), S. Bean, (Wastewater) Also the press and A. Smith, M. Rusk who took these notes.

Agenda item 1. Financial Report. As circulated.

E. Smith moved the financial report be received and this was discussed.

G. Oldcorn pointed out that the rates take had been the same over a long period although the bermland rental had gone up. "\$300,000 does not work anymore", he said. "This is a picture of where we are at in 2006." "Before the next WDC planning round consider long term finance." This year ended in deficit."

Mrs Atkinson asked, "Why is there less income from bermland rental when the rates for this went up?" After discussion Mr Oldcorn said he would look into it.

Mr Atkinson "Little power has been used these last three winters, so why is this increased so markedly?" Mr Oldcorn explained previous years were extraordinarily low - actuals as low as \$19,000. Mrs Atkinson asked what the miscellaneous items were for considering their size.

Chairman: "Essentially the big difference in the budget is for power."

Mr Oldcorn: "The budget total is for \$356,000" and he explained parts of this.

Councilor Martin asked a question.

Chairman: "There are some anomalies, look at the whole position - the overall picture appears to be a deficit."

Depreciation was discussed and that it had not been allowed for since the early 1990's.

Mr Oldcorn: "Depreciation was not allowed for so no funds were set aside for pumps."

Mr Oldcorn: "Even with an income of \$300,000 another \$100,000 will be needed for pumps."

Mr Blackburn: "We would need to apply depreciation to the new pumps."

⁵²³ Minutes of the Liaison Committee held 12th March 1990 at 10 am

⁵²⁴ Application 4637 NRC File 4637 JZ Letter to Lovell Land Ltd 27th August 1990 and MAF Report

Mr Finlayson: "I argued very strongly against the depreciation funds - the funds could be better spent... when the time comes - and it now has - we would borrow and pay interest."

Mr Oldcorn: "I raised the need to be fair to different ratepayers who come and go and some maybe don't pay."

Question from the public: "Have you considered capitalising assets?"

This was discussed.

Chairman: "Any more questions?"

It was moved and carried that the financial report be received.

2. Operating Report:

It was moved and seconded that the report be received. Mr Oldcorn said there is now opportunity for comment. Mr Finlayson asked about the water from Wilson's quarry. The silting of Otonga receiving drains was discussed inconclusively

Allan Smith asked about the performance of Otonga pumps. Councillor Martin said: "The reason Otonga pumps have worn out is because they are used more - they pump too much inflow water." The recommendation to receive the information was passed.

3. Pump Station Strategy Report.

Mr Oldcorn discussed the options, for and against.

1. New pumps expensive at \$260,000.
2. Refurbished at \$90,000 to \$100,000.
3. Flygt Pumps plus civil work about the same as the Pleugers.
4. Archimedes Screw pumps as in other regions \$400,000.

Mr Thorpe said they had looked around down south and they were not doing anything better.

Mr Finlayson: "The maximum head quoted for Pleugers here is way out." (far too high at 6M instead of 4M). (Mr Finlayson's 4m comment here was correct – Author).

Mr Oldcorn: "By doing change over time costs could be halved by having parts on hand - less with spare pumps."

E. Smith: "Why aren't the screw pumps included in the options?"

Mr. Blackburn: "The choice is on the pumps that fit in the sheds."

E Smith: "Screw pumps should be considered because of weed problems. You would get away from the high maintenance."

Mr Blackburn: "There would be a single screw pump to replace all the pumps in the shed." Several pocket representatives said they did not know that was the case.

S. Donnelly: "Has any work been done to show the effect on rates of each choice?"
Mr Oldcorn: "No".

Both Mr Oldcorn and Mr Blackburn then supported the initial use of the vertical Flygt pumps. Mr Blackburn suggested "Pick a station and do one pump - either repair a Pleuger or install a new Flygt pump. Then use the refurbished Pleuger for other stations.

Mr Smith: "What happens if both a Flygt and Pleuger both go down?"

Mr Oldcorn : "We have one small Pleuger on hand."

Mr Finlayson: "I've seen a lot of money wasted - the water always runs down after a few days - buy one spare Pleuger then."

E. Smith: "Buy one Screw pump and then have five spare!" "It needs more work done on it." "Talk about an 18 year replacement period - no way."

Chairman: "Let's accept the recommendation and get under way."

Mr Oldcorn: "This meeting is about how you want it to go."

Mr Finlayson: "It does need expediting."

Councilor Christie: (an Ex Catchment commission worker) "Pleugers will always run at only 60% because of weeds."

There was some discussion on the issue of protection levels.

Chairman: "Your land is worth fifteen times as much as when the scheme was built."

Mr Oldcorn: "This discussion is not about protection levels."

E. Smith: "Would you order (a pump) right away?" Chairman: "In about a week."

Councilor Martin suggested the matter lie on the table and everybody can talk about it and when they come back decide what they want.

E. Smith: "We need more information."

Mr Blackburn gave approximate delivery times for pumps as two to four months.

The chairman: "You can discuss the two main options - \$400,000 or \$200,000, or \$90,000 , and the effects on rates."

Mr Oldcorn: "We are hearing that you want a: A programme of refurbishment and b: the effects on rates established. That more information be received and the matter brought back in a month's time." Mr Finlayson: 'I cannot see anything wrong with your recommendation - it gets things going."

Motion:

It was moved and seconded "That the information be received and the matter be brought back to a meeting in a month's time on 18th October 2006 at 1 pm." Carried.

4. Resource Consent Progress.

Mr Oldcorn said that the NRC had come back with questions from their Peer Review and these had gone to MWH and back to the NRC. The process would be worked through then the consent advertised. Councilor Christie: "This scheme is 30 years old and it needs a peer review?" "I can't believe it!" This is bureaucracy gone mad! Why are we falling all over them?"

Mr Oldcorn: "We are trying to get a consent without having to go back again."

There were several comments made.

Mr Finlayson: "What's the NRC asking?"

Mr Oldcorn: "Volumes and quality of water." "We argue the scheme is natural - it's been there so long.!"

The chairman then asked for somebody to move the recommendation that the report be received then moved it himself. It was carried.

Councilor Halse: "There are some serious things that have been left out ie: power. Floods should be monitored to see how long they stay on farms."

"The scheme was set up to be fair to everybody and the people who are not getting flooded are very happy with the scheme while the ones that are getting flooded are not happy." "Any decision made by a sub-committee has to come through the Works And Services Committee and I'm the Chairman of that and I'll have the photos copied and available to all councilors."

The chairman then closed the meeting at 12:16 pm.

These notes were taken in my own handwriting during the meeting and have been typed up today. Signed M. Rusk. 20th September 2006.

One hundred days later⁵²⁵ some 400m stopbank of Mountain pocket was being substantially raised by contractor Des Low under a WDC contract increasing protection to farmlands belonging to the Smiths and Lammers. This tended to make that pocket almost waterproof. The NRC wrote to ask why the work was being done as there had been no consent.⁵²⁶ In a WDC meeting, in reply to a query about how it was going, the new councilor with responsibility for the swamp scheme, Councillor Williamson said, "Everything is going well, the farmers are happy and the consent is progressing." Of course the advantaged farmers having less flooding were happy indeed. Then WDC councilors and engineering staff went out and inspected the ad hoc filling done at Mountain pocket.⁵²⁷ They were not happy.

Joint Liaison Committee Submission Replaced. Feb 2007.

Paul Atkinson was the other farmer in Otonga pocket and became Liaison Committee rep after Mr Hindrup was told he could not be on any committee during his legal action against the WDC. Paul Atkinson was not invited to the February meeting at Edwin Smith's house in 2007⁵²⁸ but he went along anyway. Interestingly, because the committee had officially been made a sub-committee of the Council, the holding of private house meetings as in the past was actually out of order. Atkinson said that at the meeting he and Mr Donnelly were put under pressure to co-sign a joint submission to the NRC. It said "We want to be assured that the proposed spillway crest modifications are going to deliver the original concept of the scheme as outlined in the Final Report May 04 Table 6-4 by MWH Page 26".⁵²⁹ Atkinson told me Chairman Smith had subsequently "played around" with the wording of the Liaison Committee's submission⁵³⁰ before sending it in to the NRC. In fact a different submission was substituted by Chairman E. Smith with only his signature on it. He re-wrote the first part then added, "Wish to record that WDC and the Swamp Liaison committee have worked with the assistance of independent advisors to review the scheme operations and provide an up to date comprehensive model of the scheme on which the application is based." How do you describe the substitution of a document that has been jointly signed after it has been written and specifically signed in good faith by a group of other people?⁵³¹ The news leaked out and Atkinson phoned to tell me some other committee members were shocked. Paul Atkinson claimed Smith had warned him, "Everything must go through me." Paul was getting uncomfortable with all this as he was a fair, reasonable, and honest Christian man. Atkinson said Smith had threatened, "If anyone talks to the WDC I'll know all about it within twenty four hours."⁵³² Angry at people finding out he had altered the submission, Smith rang a Regional Council official.⁵³³ It was about this time that Paul Atkinson informed me that he was considering selling up and leaving because he did not like what was going on. Mr Atkinson did sell his farm and he did leave, pleased to move away from the swamp.

⁵²⁵ December 5th 2006

⁵²⁶ Letter NRC to WDC 6th December 2006

⁵²⁷ Inspection by councilors of ad hoc work to Mountain pocket on 18th January 2007

⁵²⁸ House meeting 20th February 2007

⁵²⁹ Submission signed by A. Finlayson, N Thorne, P Atkinson, P. McHardy, E Smith, and S Donnelly

⁵³⁰ Interview with Atkinson 8th March 2007 who had received a fax to that effect

⁵³¹ See the committee's submission and the submission sent in to NRC by chairman Smith

⁵³² Interview Atkinson 8th March 2007

⁵³³ 15th March 2007

REGIONAL COUNCIL RESPONSES.

After the upstream inflow crests were found to be filled in ⁵³⁴ the NRC had sat firmly on its hands. At the change in administration of the scheme from Regional to District Council Mr. Notter, a landowner in Okarika Pocket ⁵³⁵ had met a prominent neighbour heading off down the stopbank with his grader blade and when questioned the prominent swamp personality replied, *"It's every man for himself now."* The NRC continued sitting on its hands, and concerning Otonga it did nothing when it took over the scheme from the NCC, knowing full well that Otonga pocket stopbank had been bulldozed down for a kilometer. The NRC even held a copy of the check survey Plan. ⁵³⁶ The NRC was and is the regulating local body but seemed tardy in getting the scheme fixed. As early as 1999 the NRC had told the WDC that a Resource Consent was required before doing any work on the inflow spillways ⁵³⁷ but in a perverse way this prevented the WDC from going in and repairing the altered crests there and then. Mr Dave Roke, then administrator of NRC consents, wrote advising WDC in 2001 that the scheme consent had expired. ⁵³⁸

Mr. Hindrup and I went in to see Bob Catchcart when we were at the NRC looking for swamp records and files. ⁵³⁹ Most were dumped when the NRC ceased administration of the scheme. As we were being shown out the door the NRC Land Operations Manager quietly mentioned he had been told to keep his nose out of the swamp scheme. It was not clear why the experienced NCC and NRC official was given such a warning.

Later I accompanied Mr. Hindrup to meet with NRC Chairman Mark Farnsworth and CEO Mr. McLennan but their response to Hindrup's situation was unhelpful. The NRC then received a joint letter from 8 swamp farmers asking for the NRC to take over management of the scheme ⁵⁴⁰ The NRC runs the other schemes in Northland but always declined to take the HSMS over unless it was repaired first. Of course they had long known it was a can of worms. The Regional Council had kept a low profile throughout the entire review process until I met with Bob Cathcart to discuss the need for the NRC to take over the scheme and fix it fast. ⁵⁴¹

Nine days later Mr. Cathcart addressed the WDC Works and Services Committee with some facts and the urgent need for obtaining a Resource Consent and apparently many District councilors were stunned. ⁵⁴² The scheme had operated nine years in an illegal state without any resource consent from 2001 to 2010 and it must be asked who else would have been allowed to get away with that?

Two days later I phoned Cathcart asking if he would give the WDC an ultimatum ⁵⁴³ to cut down the filled in crests 'this summer'. ⁵⁴⁴ I phoned him again asking for the NRC to ask the WDC for a decision by the end of November. ⁵⁴⁵ Two days later the WDC CEO received a letter from NRC asking WDC to agree within 14 days to cut the filled in

⁵³⁴ Works Consultancy survey 1994

⁵³⁵ Mr. Reudi Notter was prepared to return to NZ to act as a witness of this

⁵³⁶ NCC Plan 2153. Survey of Otonga crest and stopbank. July 1997

⁵³⁷ NRC letter to WDC 7th April 1999

⁵³⁸ Advised in July 2001. Phone call D Roke to M Rusk 22 August 2003 11:30 am

⁵³⁹ 24th April 2003

⁵⁴⁰ This letter of Petition from 12 swamp ratepayers 12th October 2006, proved a catalyst for action

⁵⁴¹ Met at NRC 17th October 2006

⁵⁴² At WDC Meeting 25th October 2006

⁵⁴³ Under terms of the RMA

⁵⁴⁴ Phone call of 27th Oct 2006.

⁵⁴⁵ 14th November 2006

crests or enforcement under the RMA would be 'likely'.⁵⁴⁶ The letter has a number of aspects and is produced here for interest. Note also that Mr Cathcart describes in paragraph three that the scheme was not working properly and that staff had observed this firsthand.

The Regional council letter clearly implies that the overflow crests could and should have been restored immediately thus saving flood damage over the following five years although as it happened, the downside would have been the looming March 2007 '150 year' Northland deluge flood that would have wrecked any new works.

⁵⁴⁶ Letter from NRC Land Operations Manager R W Cathcart to WDC 15th November 2006

**COPY FOR YOUR
INFORMATION**

**NORTHLAND
REGIONAL
COUNCIL**



Please quote File: 830.1, 466 765
Action No: 1033
BC:NS

Te Kaunihera a Rohe o Te Tai Tokerau

Private Bag 9021
36 Water Street
WHANGAREI 0140
New Zealand

15 November 2006

The Chief Executive Officer
Whangarei District Council
Private Bag 9023
Whangarei

Phone: (09) 438 4639
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Environmental Hotline:
0800 504 639
Fax: (09) 438 0012
Email: mailroom@nrc.govt.nz

Dear Sir

www.nrc.govt.nz

HIKURANGI SWAMP MAJOR SCHEME

The Northland Regional Council has received a letter signed by eight landholders in the Junction, Whakapara, Otonga and Ngararatunua arms of the Hikurangi Swamp asking the Regional Council to take over the management of the Hikurangi Swamp Major Scheme (HSMS) without further delay. A representative of these landholders advises that the request is made out of frustration by the landholders in delays by the Whangarei District Council in restoring unauthorised changes to the scheme.

It is claimed that the controlled overflow sections of the stopbanks have been altered so that some pockets of the Hikurangi Swamp do not receive overflows when the flood flow between the control banks exceeds the capacity of the floodway while other pockets receive more frequent overflows. The petitioners claim that while they have previously raised these concerns with the Whangarei District Council and while the District Council now accepts that there is a problem, it has not yet remedied the situation, causing some land to not receive the relief expected under the scheme and placing detrimentally affected landholders in financial difficulty.

These same concerns have been raised a number of times over the last few years and support the observations of Regional Council staff. A quick survey by the Land Operations Manager in a flood in August 2006 suggested that while there were silt-contaminated overflows in the Ngararatunua pocket and the area between McLennan Road and the Whakapara River at Whakapara, there was no flooding or very minor flooding by locally generated "clean water" only in Tanekaha, Mountain and Te Mata pockets. This distribution of floodwaters is apparent in aerial photographs shown to Regional Council staff and covering several flood events. It would appear to be inconsistent with the design and as-built performance standards of the Hikurangi Swamp Major Scheme and tends to support claims that the overflow sections in some banks have been altered.

There are also claims that a stopbank has been constructed or spoil heaps have been joined up to create a stopbank on one side of the Okarika Stream/Riponui Drain. This bank prevents any overflow from this stream on its left bank and instead spills all excess flow on its right bank. Also, it is claimed that a hillwater canal/drain is being constructed in the Te Mata pocket of the Swamp. Hillwater canals to collect and dispose of local

water before floodwaters arrive from the upper catchment, were identified as Stage 2 improvement options but were certainly not part of the approved scheme.

The Hikurangi Swamp Major Scheme is currently operating outside of the Resource Management Act 1991 and the Operative Regional Water and Soil Plan for Northland. The Scheme was registered by the Northland Catchment Commission as a "lawfully existing use" under Section 20 of the Water and Soil Conservation Act 1967, that is an activity that lawfully existed prior to the Water and Soil Conservation Act becoming operative and recorded as such prior to the required date. Under the transitional provisions of the Resource Management Act the existing use notices were deemed resource consents which expired 10 years after the passing of the RMA, that is in October 2001.

River management and drainage schemes are controlled activities under the operative Regional Water and Soil Plan for Northland. The stopbanks, floodgates, canals and flood pumps involve activities that require resource consents issued within the context of management plans.

The Northland Regional Council advised the Whangarei District Council of the impending expiry of the existing use notice/deemed resource consent over twelve months prior to its expiry and has reminded the Council each year since by way of submissions to the District Council's Draft Annual Plan/LTCCP.

It is understood that the Council now plans to proceed with an application for consent for the Scheme. While the Regional Council encourages and will assist the District Council to seek resource consents for the scheme, it requests that rather than wait until the consents for the whole scheme have been issued before dealing with the unauthorised changes, the Council urgently restores the overflow sections of the stopbanks and restores equity within the scheme. This work should be completed as soon as possible so that the threat of any additional flooding of the affected pockets this summer and autumn is reduced.

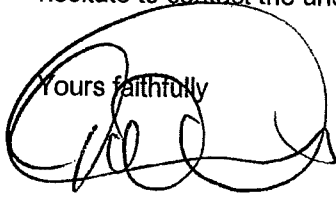
As well as its powers under the Resource Management Act, the Regional Council as the catchment board for Northland has a power of general supervision and may issue general or specific instructions to the District Council in respect of river management and drainage matters under Section 143 of the Soil Conservation and Rivers Control Act 1941 (SC&RC Act). This request to urgently restore the overflow sections is made in terms of Section 143(2) of the SC&RC Act. If the Regional Council does not receive an assurance in writing from the Whangarei District Council before Friday 1 December 2006 that the overflow sections will be restored this construction season, consideration will be given to enforcement action under the Resource Management Act 1991.

If it would help to resolve the apparent conflict between the District Council and some of its ratepayers, the Regional Council offers its services in an arbitration forum. The Northland River Management Policy includes provisions under which the Regional Council may call in the parties to river management and drainage disputes and arbitrate between the parties. If this process would assist, please contact the undersigned.

Rather than using the enforcement provisions of the SC&RC Act or the Resource Management Act, the Regional Council would prefer to see the District Council resolve this dispute and immediately restore the overflow sections. This work should proceed

while resource consents are sought for the scheme as a whole. In the meantime, the question of future management of the scheme should be put to one side.

Should any of the matters raised in this letter require any clarification, please do not hesitate to contact the undersigned.

Yours faithfully


Bob Cathcart
 Land Operations Manager

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The WDC CEO Mr. Simpson replied, similar to what he had written to me,⁵⁴⁷ claiming both the WDC contracts, 1995 and 1998, had excluded cutting down the inflows. This was demonstrably not the case. We had the surveyed plans with the cuts all marked, these same drawings were even produced in the back of the Council's 1999 MWH Report One showing the cross hatching cuts as plain as can be. We also had copies of the contracts WDC handed out to contractors and the correspondence. Mr Simpson's own engineering report before the second contract clearly stated, "All inflow areas to be cut down to design grade level." What could be clearer? I wrote again to Mr. Simpson requesting details regarding his excuse about the two failed contracts from WDC so he could prove his point,⁵⁴⁸ but there was no reply.

Mr Cathcart checked that Simpson knew of the December 1st deadline. The District Council went Ouch! "Why are you giving us this notice?" All councilors were given a copy before a decision was made to write to the NRC pleading to allow the work to be left until the following year.⁵⁴⁹ Another letter from the confused WDC engineer Gary Oldcorn claimed the NRC had required a consent first which conflicted with the latest order.⁵⁵⁰ Cathcart then phoned me to say, "We are going ahead now with the abatement notice."⁵⁵¹ Cathcart told me that if the filled in crests were not cut down under the abatement notice the NRC could order all the flap gates removed to disable the scheme. Obviously the WDC threatened to appeal any abatement notice because the NRC promptly backed off changing tack by advertising the Consent Application.⁵⁵² Bob Cathcart rang me shortly afterward to say a consent application might fail causing worse delays to everybody so he was going to, "Call the parties in," which is a process of joint negotiation used under the RMA toward facilitating resource consent applications.

Events then dribbled around getting nowhere for three months. The NRC demand for the crests to be repaired immediately was ignored by the WDC. As the local authority with responsibility for administration of the Resource Management Act and its predecessors the Northland Regional Council filled a role but hardly excelled at its duties.

⁵⁴⁷ CEO Letter to M. Rusk denying that the contracts had included cutting down the high inflow crests

⁵⁴⁸ Letter to CEO Simpson 29th November 2006

⁵⁴⁹ WDC meeting 6th December 2006

⁵⁵⁰ Oldcorn for WDC, letter of reply 06/712230 1st December 2006 to to NRC's of 15th November

⁵⁵¹ Call on 6th December

⁵⁵² Public notice 12 Dec 2006 by D Roke for NRC notifying the WDC application dated 12 Dec 2006

Second Meeting Agrees on Consensus. 22nd March 2007

A week after the altered Liaison Committee submission to the NRC mentioned above and nearly two years after the WDC agreed to talk, the WDC eventually hosted a meeting to progress the consensus approach. Attendees were: Deputy Mayor Halse, CEO Simpson, Manager Works and Services Simon Weston, Engineer Blackburn, NRC Land Operation Manager Cathcart, Councilor Martin, Ray Hindrup, and myself.⁵⁵³ This breakthrough meeting was effectively a mediation meeting as can take place under the RMA.⁵⁵⁴ It turned out to be a victory for common sense. The discussion was wide ranging on how the scheme was to be modeled to give the best chance of a valid robust result in order to obtain the required resource consent.

Finally the CEO Mark Simpson, previously the engineer for the swamp scheme, suggested returning to the as built design crest levels of 1970 (his February 1997 report had said this ten years before and it had been adopted by the Liaison meeting) then jointly modeling to establish the correct lengths.

The meeting unanimously agreed to this.⁵⁵⁵ The procedure was also exactly what original NCC engineers had set down. Engineer Blackburn was instructed to get the modeling people to make the change back to design crest levels.

Then seven days later the Scheme was submerged in its biggest ever flood and everyone got totally distracted and diverted for several months.

Deluge 2007 on 29th March.

Northland was brought to a standstill by flooding from a non- cyclonic storm, later said to be a once in 150 year rainfall event, based on 24 hour rainfall. However, I've noticed from the rainfall records that these large events tend to occur every 19.5 years. (Note: I predict the next really big one to arrive about the autumn of 2026.)

A state of emergency was almost declared. Road damage topped \$20 million, 8,000 Northland homes lost power, 264 people were stranded, 80 fire callouts were made, 62 people sheltered in emergency overnight quarters, but thankfully not one single life was lost.

A north to north-easterly flow had brought heavy rain, up to 100mm to 175mm by midnight Wednesday. Midnight Thursday saw another 330mm at Puhipuhi making 430mm in 48 hours. Some small areas recorded over 500mm. Rivers on the eastern side of Northland ran at their highest levels in 30 to 50 years of data. The effect on Hikurangi swamp was worse than cyclone Bola of March 1988⁵⁵⁶ with floodwater storage in the 7 pockets settling at about a metre higher.

The clean-up and repairs occupied local bodies for months and progress on the scheme review took back seat. Unfortunately a second large flood followed in July which forced swamp farmers to re-grass twice in one year. However, in spite of it all, by August some minds were again focused on the scheme review and the WDC planned another meeting with farmers.

⁵⁵³ From Notes taken by M. Rusk on the day

⁵⁵⁴ Comment made by Mr Cathcart to meeting of 22nd March 2007

⁵⁵⁵ Notes by M. Rusk on the day

⁵⁵⁶ Northland's Devastating Deluge published by Westmount School, Kerikeri

“Everything to be handled by the Liaison Committee.” August 2007

A Liaison Committee meeting was held on 13th August 2007 to pre-organise what should and should not be said at the WDC/Liaison meeting in two days time. It was described by Mr Atkinson as just another ‘jack-up’ meeting.

Paul Atkinson, who was present, reported to me straight after the meeting quoting a certain farmer of TeMata pocket as saying, “We don’t need to worry about the inflows, just get the pumping right.” That apparently was the attitude. Paul Atkinson reported that the chairman Mr. E. Smith had admonished both Simon Donnelly and himself saying, “Everything must be handled by the Liaison Committee only.” Mr Atkinson reported that, “There was a view among the committee that no move should be made toward getting any resource consent for the scheme.”

Slow progress

Progress was slow after the meeting at WDC in March 2007 when it was agreed to undertake joint modeling. The meeting although not easy had been very useful and quite clear in what it agreed to, probably unanimous, certainly without any major dissent. True, the big deluge flood disaster that followed had messed Northland up and the WDC was having trouble running to schedule but by April 2007 Mr. Hindrup was concerned that the WDC had done six different versions of its letter of agreement with him regarding the mediation process and his intellectual property rights. Because none of WDC’s six proposed agreements included the decision to model the scheme’s crests at the 1970’s elevations as was agreed at the March meeting, Mr. Hindrup refused to sign any of them.

Works and Services head engineer Simon Weston then visited the Hindrup’s taking Mr. Blackburn with him. When shown the survey drawings of the filled in crests they were both taken aback and honestly admitted they had never seen them before.⁵⁵⁷ So who, amid so much controversy, had not been showing their boss the drawings? In the meantime the West Bank landowners were working with Blackburn pushing ahead determinedly for new pumps in their stations, with Mr Edwin Smith campaigning to have Archimedes screw pumps at Okarika.⁵⁵⁸

In May Mr Hindrup addressed the WDC Annual District Plan hearings⁵⁵⁹ in a straight from the shoulder address that put the blame for his flooding squarely where he believed it belonged. The next day I spoke before the councillors about what was happening on the scheme and asking for its repair to be programmed into the Annual Plan. Councillors were shocked when I told them that two previous WDC contracts to fix the swamp scheme had been broken and the contracts were never completed.⁵⁶⁰ My written and oral submission regarding the swamp was as follows:

“The Hikurangi Swamp Scheme is administered by a sub committee of this Council. For some years it has been run as a cartel of A and B class ratepayers often for the benefit of a handful of farmers. The rest of us, classes C to F are often excluded from attending meetings. In effect, the scheme’s power bill is paid for by the upstream ratepayers. We pay some \$60,000 every year, receive no benefit, and are usually denied voting and representation.”

⁵⁵⁷ During their visit to Hindrup’s house Circa March 2007

⁵⁵⁸ Liaison meeting at Lindsay’s 17th August 2007, Paul Atkinson visit 31st July 2007

⁵⁵⁹ 29th May 2007 at Council Chambers

⁵⁶⁰ 1995 WDC Job 9/1036/20, 1998 WDC Contract # 90766 Job 4269

"Upstream ratepayers get hammered with storms, erosion and flooding damage, yet we are forced to prop up a small wealthy cartel downstream. In today's money we have paid two million dollars in rates to subsidise those people for no benefit to us."

"Yesterday you heard the Liaison Committee Chairman purporting to represent all of us. He does no such thing. Ever since, and no surprise to him, when somebody bulldozed down a Kilometre of Otonga pocket stopbank twenty years ago to put more water into that pocket the scheme has gone from bad to worse, until most inflows and stopbanks are now illegal. The only stopbank now in legal design condition today is Mr Hindrup's."

"The cartel does not want your council to *"look back"* because of the skeletons that will fall out of the cupboard. That is why your Engineers Mr. Weston and Mr. Blackburn, along with Mr. Hindrup, are having trouble getting the scheme fixed. There is no point planning for bigger pumps for the privileged and protected few, unless the scheme is first restored and made fair to all." To its credit the council responded positively by promptly putting the restoration of the swamp scheme into the Annual Plan. For once the restoration of the scheme was locked in to a process.

The Professional Modeling Teams get together. 2007

At last Menzies and Joynes met with the new MWH contracted modeler Tristan Jamieson.⁵⁶¹ From Murray Menzies we heard that MWH discovered they had been using wrong crest survey for the last four years⁵⁶² so the WDC instructed them to use the same crest surveys as used by Dr. Joynes'. Nothing much happened.

In September I received a phone call from Ray Hindrup reporting that his expert modeler Dr. Joynes had asked MWH where they were at and they replied that they had modeled a no-change result on previous modeling. Joynes inquired which crest levels they used and it was the old ones. He phoned WDC engineer Blackburn and told him MWH have done nothing and refuse to model the proper crest levels as the WDC recently instructed.⁵⁶³ I asked councilor Halse, Works and Services chairman, for a report on the modeling progress but drew a blank. At that point Stan Semmenoff was re-elected Mayor⁵⁶⁴ after previously serving for nine years up to the start of the review, and some changes were made.

Four weeks after his re-election I heard that James Blackburn was no longer working for the WDC and had become a consultant with Hawthorn Geddes Ltd. The tenth anniversary since the start of the review 9th Jan 2008, arrived and Dr. Joynes and MWH's new modeler Tristan Jamieson sat down to discuss how they would model the scheme.⁵⁶⁵ It would all be done on MWH's computer though. The report sent out by MWH a month later was rejected by Dr. Joynes who did not agree with it. He complained MWH's reports did not actually reflect what was discussed or agreed at meetings between the two groups.⁵⁶⁶ Meanwhile, back on the swamp the Liaison Committee was dispensed with, being told it was no longer recognized by the WDC.⁵⁶⁷

⁵⁶¹ Meetings of 18th and 28th June 2007

⁵⁶² Email from Mr. Menzies of 25th June 2007

⁵⁶³ Email from Dr. Joynes 25th September 2007

⁵⁶⁴ WDC elections 15th October 2007

⁵⁶⁵ Met on 25th January 2008

⁵⁶⁶ Dr Joynes reported this in a email of 8th February 2008

⁵⁶⁷ By Engineer Oldcorn some time in February 2008

By March 2nd modeling of hydrology had not even begun⁵⁶⁸ and there was nothing near agreement yet. I faxed this evidence and it went straight to Mayor Semmenoff who said, "It will have to be dealt with."⁵⁶⁹ Pressure was put on the modelers when Blackburn wanted the joint Report delivered in its uncompleted state.⁵⁷⁰ Senior staff were somewhat disbelieving that Dr. Joynes considered that after a year only 15% of the work was achieved. They had been told progress was 'significant'. Within three months a modeler's coordination meeting was held with the independent arbitrator present, some robust debate took place and things started to get done.⁵⁷¹

The new MWH modeler Mr Tristan Jamieson emailed the professional teams involved in the joint modeling, the first such renewed communication for ten years.⁵⁷² Advice came through that consultant Blackburn and MWH have decided to leave pumping out of the computer model.

By the end of September all contact had dried up again and Dr. Joynes again wondered what was going on. He was forced to just wait it out. At WDC the staff came under constant pressure from swamp farmers agitating for more new pumps to be installed. A delegation of farmers including Messrs Thorne and Olsen from Okarika and McHardy from TeMata pocket lobbied WDC for more pumps.⁵⁷³ Notably they were not very interested in fixing the inflow crest situation or the disadvantaged farmers' plight. Mayor Semmenoff responded by calling a meeting of staff plus a few councilors to get the modeling moving.⁵⁷⁴

Engineer Murray Menzies emailed to complain the Hindrup team was not getting any communication from MWH and he and Joynes had discussed the situation and what might be done about it. Mr Hindrup called to say MWH were still using the wrong crest dimensions and not changing their results⁵⁷⁵ so I wrote a letter to the WDC pointing out the agreed crest levels were still not being used and due process was not being followed.⁵⁷⁶ Dr Joynes called WDC's engineer Blackburn and told him MWH had done nothing and in six months had still not modelled the proper crest levels⁵⁷⁷ and their water gradient was still too steep. Blackburn agreed it would have to be done properly and he would instruct MWH.

Then in October I learned a meeting would soon take place in Whangarei between the parties and experts and WDC but I'm advised by works and Services Manager Simon Weston that I am no longer on the attendee list.⁵⁷⁸ Who did that I wondered? Feeling sick and tired of it all I stacked all my cartons of research away and decided I'd had enough of being mucked around. That was the finish for me. Why bother helping swamp people who don't want to be helped? I felt pretty down about it.

I went to spend an hour visiting Tony Spiers, an older Okarika farmer who had been treated most unfairly from when the scheme was first built. Now on his deathbed, frail and weak, he pleaded with me asking, "*Merv have you got it fixed yet..... are they going to do..... anything...*"? Reluctantly I had to tell him, "No Tony not yet.... but OK I will keep trying." With effort he mumbled "*Don't let them destroy you too,... don't let*

⁵⁶⁸ Email 2nd March 2008 from Dr Joynes

⁵⁶⁹ 3rd March 2008

⁵⁷⁰ Email from Dr Joynes 6th April 2008

⁵⁷¹ Experts Meeting of 4th June 2008

⁵⁷² Email from MWH modeler Tristan Jamieson 4th July 2008

⁵⁷³ Delegation to WDC from Okarika and TeMata 28th August 2008

⁵⁷⁴ Meeting of 12th September 2008

⁵⁷⁵ Call of 25th September 2007

⁵⁷⁶ Letter Rusk to WDC 26th September 2008

⁵⁷⁷ Dr Joynes email of 25th September 2008

⁵⁷⁸ Letter dated 29th September from Works and Services Mgr Weston

them destroy you too...,". The swamp scheme had destroyed Tony over the decades. Still a very sad man, he died not long after I spoke with him. But not before he gifted me all of his useful boxes of swamp scheme records and some of that information I put to very good use immediately.

Would you believe it, only five days later an emailed agenda arrived to say I was back on the list to attend the joint meeting at Walton Plaza with the 'experts' and I was told to "share all the information I can."⁵⁷⁹ Good news. Then six days later the bad news. The very afternoon before the critical meeting Dr. Steve Joynes phoned to tell me he was ordered to attend an Environment Court hearing in Auckland and could not come next day. There goes the main player I thought. After a ten year marathon we fall over just before reaching the tape! In spite of my efforts the WDC declined to postpone the meeting but Hindrup's engineer, Murray Menzies, was keen and confident that I should step into the breach myself suggesting I prepare some overheads and a talk. That took nearly all night and so with only two hours sleep I was pretty tired for the meeting in the morning. It was years since I'd done a presentation. At 66 I felt too old and with little sleep I really didn't feel up to it.

Consensus Resumes after Seven Years. November 2008

So the first real consensus meeting since the High Court directed consensus meeting of 2001 was now held.⁵⁸⁰ Counting the Court directed meeting seven years before, this was really the second consensus meeting. Why were seven years wasted? Much of my research had been given to MWH seven years earlier but was effectively buried. The Scheme Review had now dragged on for eleven years until in desperation the WDC had finally agreed to this joint meeting of experts that had in fact been agreed to 20 months earlier. Since the WDC or its insurance company had broken off relations exactly seven years earlier there had been very little progress. The Liaison Committee dreaded 'looking back' but at last it was going to happen, virtually by accident.

This is what hydrological record keeping is all about. With cartons stacked high on my trolley off I went to Walton Plaza. The lift was out and the meeting was upstairs but a passing friend kindly helped get my heavy trolley of boxes up to the first floor. Engineer, James Blackburn, made a friendly dig at the sight of me pushing an overloaded trolley of cartons, but then he never had any inkling of what was coming. I was determined this was not going to be just another academic talk-fest of lettered university trained professionals expanding their heads and incomes. It was described as a 'very high powered' meeting.⁵⁸¹ The discussion leader was consulting engineer James Blackburn. Around the table sat: Wejun Zhang from Christchurch, an expert who was also still acting as the appointed Independent Mediator and Assessor for Hindrup's proposed reimbursement,⁵⁸² Murray Menzies, engineer from NZ Water Resources Consulting Group Auckland, Tristan Jamieson of Watershed Consulting Auckland the new guy doing the computer modeling for MWH, Anthony van Schalkwyk, Project Manager for MWH, and WDC Councilors Halse, Christie, Martin, and money-man Syers. After a while when the meeting was obviously heading nowhere somebody, (engineer Menzies I think), suggested, "Merv should be asked to say something," and they all agreed to allow me ten minutes. Blackburn loaded my overhead show and I went straight into it using the machine-gun approach.

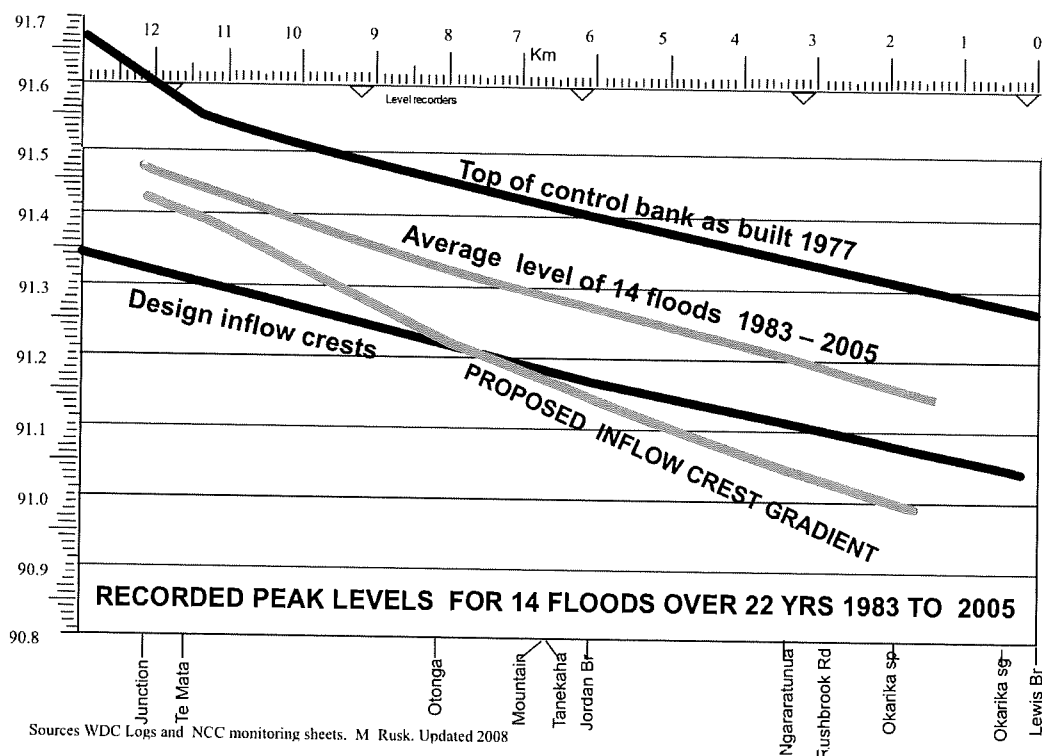
⁵⁷⁹ Email WDC to M Rusk 29th October 2008

⁵⁸⁰ Meeting at WDC Walton Plaza 4th November 2008

⁵⁸¹ Comment by a councilor present

⁵⁸² No payment or reimbursement to Mr. Hindrup ever eventuated nor was there any money for it

I started exactly where I had started with the Draft Report meeting ten years earlier by putting up the historical peak river level gradients against the latest MWH model gradient appropriately shown in red. This time my graph was two dimensional!



Predictably the MWH Project Manager Anthony Van Schalkwyk quickly fired the first question at me, "Where did you get that data from Merv?" "From your own files yesterday," I replied. That stunned the MWH team and raised eyebrows around the room. I now had their full attention and went on to show debris lines, the filled crests and water levels, level recorder anomalies, the hours of inflows for floods they modeled, a number of overspill photographs and my calculated inflow volumes compared to their model volumes. It was all graphic solid stuff in quick succession and I didn't pull any punches. There were some stunned silences then afterward the questions came thick and fast, tough hard questions from hydrologists and engineers who knew what to ask. Instead of just a ten minute stint I was still on my feet an hour and a half later. The first thing that came out was that MWH had not modeled using the 'as built 1970 crests' as they had been instructed nearly two years before. Council faces then swiveled around toward their consultant James Blackburn who had been told to instruct MWH, but with childlike innocence he muttered something like, "Now, I wonder who was supposed to make that happen...." And he made a bad job of trying to be straight faced.

So the first instruction was to model crests at design levels. Of course this was what had been agreed to a year and a half earlier⁵⁸³ but Engineer Blackburn had simply not got MWH to do it - or perhaps there were other influences at work. That failure had wasted nearly a couple more years. After lunch the MWH people were digesting my maps and drawings seeing such revelations as the Mangawhero diversion and other reasons why their model may not be working well. At the end of the day all concerned regarded the meeting as a very good exercise and it all ended on a very positive note. Subsequently, at a function, one senior non-farming WDC councilor was overheard

⁵⁸³ Mediation Meeting of 22nd March 2007 at WDC details above in "Second Meeting Agreement"

describing somewhat gleefully, “how Merv Rusk blew the sh.t out of them”.⁵⁸⁴ Actually I was nice about it all and felt that the use of historical data and observations were at last getting the value they should have been given in the first place. If he had been present I’m sure that skeptical stalwart Ross Finlayson might even have managed a smile at seeing the scheme records being used at last!

Ten days after the meeting Tristan Jamieson conceded to Murray Menzies that including the Mangawhero flow into Mangaharuru, “Threw the model out of calibration” and the model was still not satisfactory.⁵⁸⁵ Menzies contacted James Blackburn again suggesting Tristan meet with Merv Rusk to look at any relevant historical data that could help improve the model. WDC permission was given via Blackburn for the visit⁵⁸⁶ and Tristan wrote that he was, “Really pleased that he can catch up with Merv.”⁵⁸⁷

The Visit from the MWH Computer Modeler. Nov 2008

Seven days later Tristan Jamieson drove up from Auckland to visit me at our farm at Marua.⁵⁸⁸ He was like a young boy in a toy-shop. He stayed in my office, with drawings strewn everywhere, for seven hours but he said the day was, “Far too short for him.” He said he was really pleased after ten years to have access to the sort of historical information that he needed and wanted to see, including a lot of NCC stuff. It was a very busy day but a really excellent working meeting. Areas of revelation included the true levels of staff gauges (from Mr. Hindrup’s private survey by Donaldsons) and more accurate water gradient profiles from the recorders and recorded levels. With the exception of Mr. Hindrup’s intellectual property I gave him anything he wanted to take, including lending a copy of my model that I use to calculate overspill volumes in the seven pockets by the rise in water levels. He was glad to accept my offer of any further assistance. He phoned back two day later to say that he had checked out my level and timing data and it was “very good.” Tristan and Anthony, the MWH Project Manager, then checked all my stuff and they agreed it was “significant” and that I “should be involved in the calibration work.”⁵⁸⁹ So that was the all clear from the horse’s mouth. Later, Tristan’s report on the meeting included this general summary:

“Merv has a significant amount of information regarding the operation (both present and historically) of the swamp. He has made every effort to observe and document the majority of events, and consequently has an invaluable amount of information which should be included into the calibration process. While some of this can be classified as anecdotal, much of it is quantative and can be used in direct comparison to the model. Examples of this information include:

- Duration of spilling at crests (recorded as start and stop times during flooding events)
- Length of crest activated during flooding. This has been observed while spilling takes place, and also from debris line after spilling has ceased. This length can be superimposed onto the surveyed crests to determine a level.

⁵⁸⁴ Name withheld, a city councillor who was not connected with the Hikurangi Swamp

⁵⁸⁵ Email of 17th Nov 2008 Menzies advised Blackburn the model was still getting steep gradients and “crazy crest lengths”

⁵⁸⁶ Permission to work together was given by email on 18th Nov 2008

⁵⁸⁷ Tristan’s email to Menzies 19th Nov 2008

⁵⁸⁸ Visit of 27th Nov 2008

⁵⁸⁹ Emails of 2nd Dec 2008. It took ten years for sensible observations to be accepted

- Pocket water levels before spilling has started and after spilling has stopped. This can be used to estimate the volume spilt – assumptions are necessary, but generally justified.
- Debris levels on control banks showing peak water levels. These can be transferred to the surveyed long sections of the control banks to determine peak water levels.
- Photographic evidence of the operation of the swamp, categorised into individual events, these can be very beneficial for verifying the model.
- Documentation about when crests were not activated. This is very important as the model must replicate this to be robust.” Unquote.

Dr Joynes heard about the progress and telephoned me ⁵⁹⁰ to say, “It’s like a new beginning Merv”. Of course it was what Mr Hindrup’s team was always doing.” ⁵⁹¹ But yes, it proved to be a new beginning.

THE RESOURCE CONSENT

Preparing to Obtain the Resource Consent 2009 - 2010

From 15th January 2009 MWH’s contract modeler Tristan Jamieson was in regular contact with me, quickly piling up a heap of requests for information and I worked nearly full time collating and supplying it. There was a lot of number crunching and finding of information, surveys etc, and sorting photographs of the flood events. It was obvious that the modeling had suffered for many years from a lack of information to check the computer model against.

By February 2009 the modeling had advanced considerably and output was looking more like the real thing, but I was still denied knowing what the inflow shares were or what the model recommended in the way of inflow crest dimensions however I accepted this was the way it should be and simply kept answering requests from the modelers and supplying whatever I was asked for.

But the joint modeling process itself was not going smoothly. Dr. Steve Joynes emailed James Blackburn asking for the proper process as agreed to be adhered to as formerly agreed ⁵⁹² but received a such a negative reply that he, “considered himself fired.” ⁵⁹³ That was the end of Dr. Joynes’ modeling contribution leading up to the consent process and it was a real pity, costing both council and ratepayers money. Dr. Joynes felt he was effectively fired from the process when he had been a legitimate part of the Hindrup team in the consensus meetings. Also he had always stated his intention to follow through and see that the modeling and consent process procedures were done correctly.

The council’s Consultant James Blackburn of Hawthorn Geddes then began to put pressure on us to send the work in just as it was. He seemed to be under pressure too. Out of the blue he emailed everyone with his view that, “We are going backwards now and we should send it in as it is.” ⁵⁹⁴ This was frustrating because we had achieved more in ten weeks than the previous ten years and we knew the standard of work

⁵⁹⁰ On 9th December 2008

⁵⁹¹ Dr Joynes had been using most of the data for years

⁵⁹² Joynes to Blackburn email 16th March 2009

⁵⁹³ Blackburn to Joynes email 16th March 2009

⁵⁹⁴ Blackburn’s email to all team members of 7th April 2009

needed to be as high as possible for the consent application. Blackburn's agitation was understandable but not helpful. I phoned Murray Menzies on the need for a face to face meeting to sort the final bits and get it in.

Murray arranged a meeting between himself, Tristan Jamieson and me at Albany to go over it together in person. James Blackburn approved, I took Maureen along and the two teams got together to iron out any discrepancies and do any fine tuning.⁵⁹⁵ There were some compromises from both modeling sides with an agreement that it was now as good as it was ever going to get. I should point out that I personally and successfully put in strong arguments toward substantially reducing the proposed lengths of both the TeMata inflow crest and Mountain inflow crest, something that in retrospect might surprise some people within those pockets at the time. Tristan checked first with MWH then sent the final data on crest dimensions to WDC via James Blackburn.⁵⁹⁶ And so, after ten years of waiting, as soon as MWH had access to my records and data of observed flooding, it took only ninety days to get the model done. It was a great effort by all concerned and the rapid solving of many problems confirmed what we had always suspected.

The previous control and manipulation behind the scenes that had resulted in the Council's consultants saying they had been starved for information⁵⁹⁷ had successfully delayed repairs for a decade but the facts could not be hidden forever but because the scheme had been so distorted for so long the modeling had been far more difficult and costly.

For some time I had suggested the idea that a two stage repair program starting with what became known as 'First Step' repairs would get the scheme into a fit enough state to monitor then fine tune to a higher standard if that was required. This process would also be fair to everyone with less risk and avoid a 'do or die' confrontation mentality that could result in a huge million dollar Environment Court battle, make lawyers smile, and cause years of delay to solve nothing.⁵⁹⁸

Originally, when submissions had first been called for, my submission opposed the WDC resource consent application, but after seeing improvements to the model that were based on actual flooding evidence, I changed my submission to one of support.⁵⁹⁹ I was surprised at how close the modeling had got to my own inflow percentages and volume calculations and had to accept that computer modeling might just possibly work after all.⁶⁰⁰ It was certainly good enough to consider making step one repairs and I could no longer argue against it.

By this time the work of the WDC consultants MWH and their modeler Tristan Jamieson and the work of Dr Steve Joynes at Hydraulic Modeling Services and my own findings were all producing very similar results. As an example the similar results of the three modelling sources for the flood of 31st December 1996 are shown over the page and these can be verified against the aerial survey for that flood. For added interest I have shown the inflow shares at the elevations of the seven pockets on the swamp.

⁵⁹⁵ Meeting at Albany 13th April 2009

⁵⁹⁶ Final crest data for step one sent 14th April 2009

⁵⁹⁷ Phone call MWH 11/2/99 2:18 pm Brian Knowles Project Manager, also to Liaison meeting 13/2/99

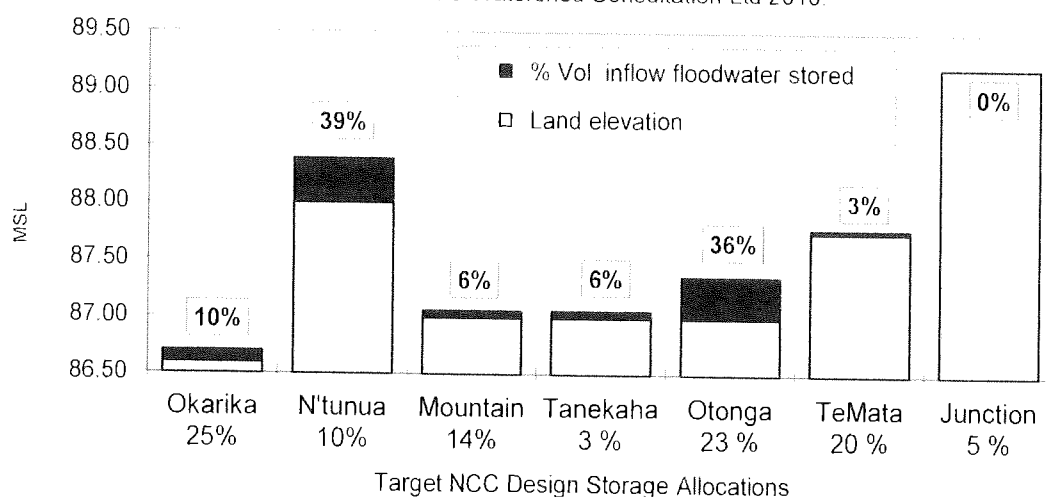
⁵⁹⁸ A two stage process was adopted and formed part of the resource consent

⁵⁹⁹ My email to Mr. Jonkees NRC 11th November 2009

⁶⁰⁰ See Chapter on Consent Submission from M Rusk Table 1

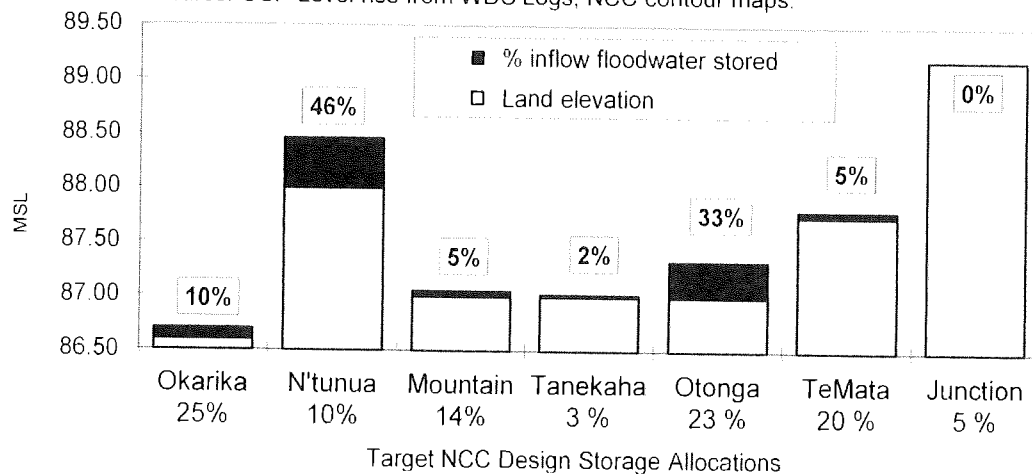
Consultant's MWH Modelled Overspill volumes for 31/12/96.

Source: MWH 2010 and Watershed Consultation Ltd 2010.



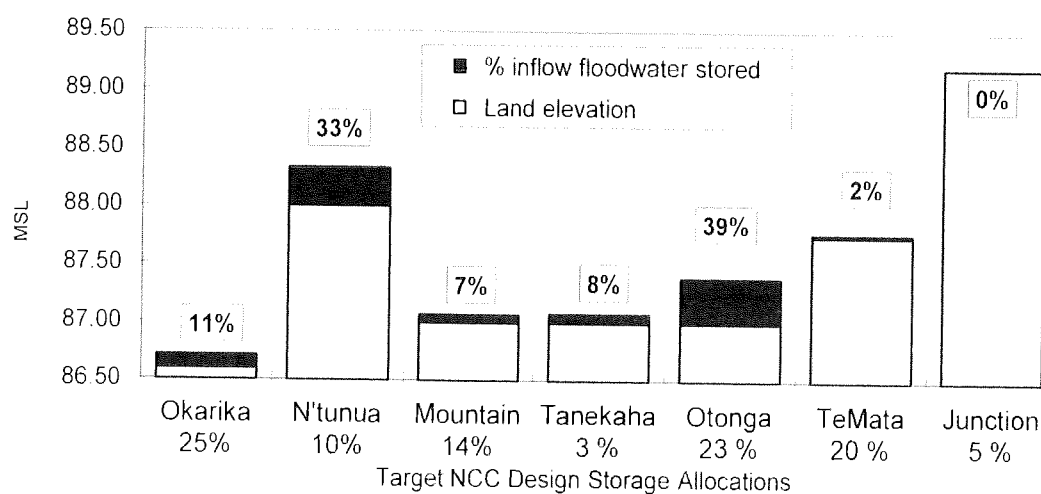
Merv Rusk's Overspill volume percentages for 31/12/96

Source: OSP Level rise from WDC Logs, NCC contour maps.



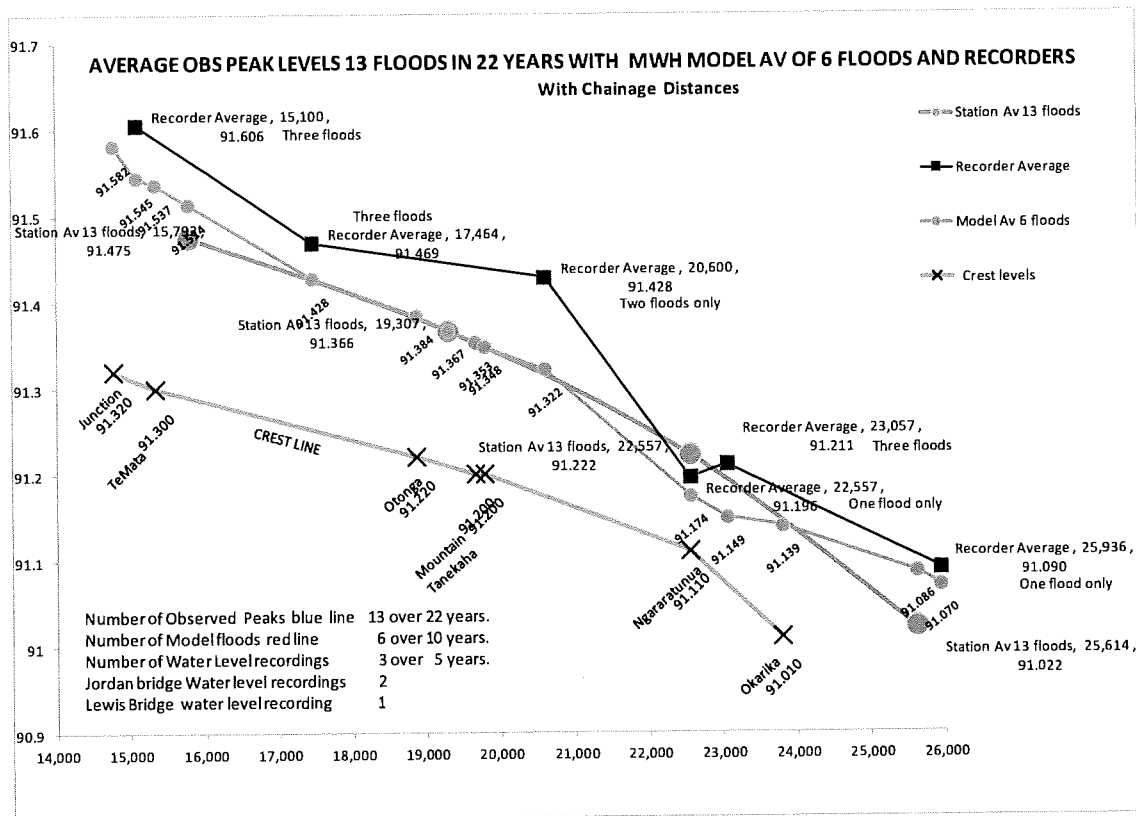
Hydraulic Modelling Services Model 1/1/97 Cyclone Fergus.

Source: D. Stevens Aerial Survey, Dr. Steve Joynes, NCC contour maps.



NB: The computer Model of Dr Joynes was substantially improved after the data immediately above was produced.

Getting accurate water levels in such scheme reviews is notoriously difficult and data from all available sources is usually compared during the process. Below is the final drawing produced by the author that was considered in the lead up to the Resource Consent application. It compares the Observed water levels from pumpshed log sheets against the WDC river level recorders and the consultant's computer model. This gives some idea of how difficult the challenges were in such a 'flat' scheme.



Compare the above drawing with the author's first drawing of the peak levels under the section "Draft Report."

After fourteen years of review work the table below was sent in by WDC consultants MWH showing the proposed inflow crest lengths and elevations. It looked like a pitifully small result after so much time and work but as the controversy clearly indicates, these dimensions are a very critical part of the scheme fairness between landowners.

	Original Scheme (as constructed in the 1970's)		Proposed Lengths (Step One)	
	Level	Length	Level	Length
Junction	91.32	180	91.32	155
TeMata	91.30	670	91.30	575
Otonga	91.22	675	91.22	670
Mountain	91.20	200	91.20	490
Tanekaha	91.20	200	91.20	180
Ngararatunua	91.11	1180	91.11	350
Okarika	91.08	940	91.01	940

Strange Mistakes ?

Strange events occurred once the recommended crest dimensions were sent in to the WDC. My generous view would be that they were mistakes. A different view could include suggestions of lobbying and interference. I make no judgment on the matter whatsoever but here is what took place.

A month after the joint teams had sent the recommended crest dimensions to the WDC, Mr Murray Menzies (wise man) suggested I check to see that the agreed crests were going forward without being altered by anyone.⁶⁰¹ I then emailed the consultant, "Can you confirm that the crest dimensions we all agreed upon have been put forward for the consent process and have they been altered in any way?"⁶⁰² Consultant Blackburn twice confirmed to me by email that, "*The revised consent document has been lodged based upon the crest lengths and levels agreed between Tristan Jamieson, Murray and yourself at the meeting of Easter Monday 2009.*"⁶⁰³

Several weeks later when I called at Hawthorne Geddes to drop off some photographs that Mr Blackburn had asked me for he casually tossed me a copy of the scheme consent application that had been sent to the NRC. Later at home I was stunned when I read that the resource consent application had been made using the same old existing altered unfair ad-hoc crest lengths used for the last 19 years!⁶⁰⁴ The document had been printed two months before, yet twice I had been assured that the correct dimensions were being used. There were other curiosities that included the swapping of inflow share percentages of Ngararatunua and Okarika pockets,⁶⁰⁵ effectively doubling the former and halving the latter and making the old scheme performance look OK. Text errors reinforced the data errors. What had been going on? I thought there was too much detail for it to have been one inadvertent error, so had Mr Blackburn tossed me that copy knowing full well I was the sort of person to notice and put a stop to it? I phoned the WDC and reportedly both the Mayor and CEO were shocked. Later in the day Simon Weston, head of works and services, remained convinced the correct data 'certainly would have been used' but he was challenged on the spot to telephone me. Councilor bystanders said Weston was 'visibly upset' as I read him the true numbers. Weston commented, "One day I'll get to the bottom of all this!"

Weston immediately instructed Blackburn to pull the consent application and redo it with the correct details.⁶⁰⁶ I emailed Weston pointing out the switching of inflow percentages for Ngararatunua and Okarika and asked that the next draft be checked before sending filing with the NRC. Weston confirmed the checking before sending it on to Gary Oldcorn and James Blackburn (who was away) but accidentally left my email attached and next morning Councilor Halse met Edwin Smith emerging from the council building.⁶⁰⁷ The revised application also had errors and Gary Oldcorn rang to ask me to attend a meeting to sort it out which I did.⁶⁰⁸ Blackburn apologized and I accepted that. The corrected consent application was filed months later and WDC

⁶⁰¹ Menzies email to M. Rusk 15th May 2009 asking to check crest data was not altered

⁶⁰² Confirmation request emailed by M. Rusk to James Blackburn 22nd July 2009

⁶⁰³ Email J. Blackburn to M. Rusk 23rd July 2009 saying the agreed crests were lodged

⁶⁰⁴ WDC Restatement of Hydraulic Performance Hawthorne Geddes amended. May 09 5.3 page 17

⁶⁰⁵ Page 15 Table 4.3 b. Restatement of Hydraulic Performance

⁶⁰⁶ Instruction given on 5th August 2009 to re-do application for consent

⁶⁰⁷ Councilor Halse reported on that day that they met mid morning 7th August 2009

⁶⁰⁸ Meeting at Walton Plaza 2pm 18th August 2009 to go over second consent application data

announced details of the crests at a public meeting.⁶⁰⁹ Simon Weston told the meeting the inflow crests were going to be fixed before any new pumps were put in.

Peer Review of the Model by NRC Consultants

A peer reviewer Mr. Phillip Wallace, had previously been appointed by the NRC to examine the studies and modeling by MWH. This had caused a delay of about a year in obtaining the resource consent.⁶¹⁰ At least one district councilor was aghast. "I can't believe it! This is bureaucracy gone mad!"⁶¹¹ It did not seem a valuable document and had all the hallmarks of another wasteful years delay.

However, the Wallace Review of a number of earlier reviews confirmed what Mr Hindrup and I had known for years, that computer modeling had severe limitations when fine tuning such a flat scheme as the HSMS, previously confirmed by the Aussie representative Dr Robert Carr from the software company DHI.

The Wallace Peer Review agreed saying "With very flat flood profiles, the Scheme is a finely balanced system for spilling during flood events, and a model is unlikely to be able to always accurately predict the spilling distribution. Thus one should not rely too closely on its results. Nonetheless, the model has been used in setting the proposed spillway dimensions and it will remain a valuable tool in managing the Scheme."⁶¹² His words were to be echoed later in the submission of modeler Mr Tristan Jamieson.

SUBMISSIONS TO THE HEARING

The Hearing finally arrives March 2010

While walking into the Spire Pavilion at the cricket ground on Port Road that first day I was reminded of the movie, 'Shootout at OK Corral,' but surprisingly, things went very smoothly under the expert chairmanship of Commissioner Mr. Allan Watson.⁶¹³ As the second day ended it all turned pretty much into a mundane affair.

The NRC Hearings Committee comprised independent Hearings Commissioners Mr. Alan Watson and Dr. Jeff Jones, a man who obviously had wide experience in such flood control schemes. For the Applicant, WDC, were Graham Mathias, Legal Counsel, James Blackburn, Consultant Civil Engineer, Tristan Jamieson, Consultant Natural Resources Engineer (contracted to MWH), Mark Poynter, Consultant Ecologist, and Conal Summers, Stormwater Asset Engineer for the Applicant.

After introductions, the opening statement by the WDC legal counsel was heard. Then the consulting engineer and modeler were heard.

⁶⁰⁹ Public meeting at Fonterra Dairy 25th August 2009

⁶¹⁰ Mr. Olcorn. Liaison Meeting 20th September 2006

⁶¹¹ WDC Councillor Crichton Christie who had worked for the NCC during and after construction

⁶¹² River Edge Consulting. Hikurangi Swamp Scheme Hydraulic Model Review. 20th October 2009

⁶¹³ The hearings were held on the 16th, 17th and 18th March 2010

Statement of Evidence from J. Blackburn, Consultant for WDC.

Mr. Blackburn's 46 page statement for the WDC presented a lengthy overview, outlined its history and principles of operation, and introduced the technical modeling. He also explained why the first step needed to be taken saying, *"It is necessary to undertake the initial changes to existing spillways to move the scheme performance closer to the design basis. It is difficult to verify performance when the present condition is so significantly in departure from the design intent. The importance of further data collection once the scheme is moved this step closer to design intent cannot be understated, since this will provide data allowing a substantially more comprehensive model to be maintained."*⁶¹⁴

On costs he said, *"Expenditure over the last 10 years has exceeded \$600,000 on modeling and data collection which amounts to approximately 18% of total scheme income over that time."*⁶¹⁵ And *"There is unlikely to be any further benefit from collection of further data in its present state since it will not result in any improvement to calibration."*⁶¹⁶ *"The proposed monitoring and model re-evaluation after initial adjustments, will ensure average spill distributions remain equitable in the long term and accommodate any changes in upstream catchments or rainfall."*⁶¹⁷

Evidence of T. Jamieson for WDC, modeling Consultant to MWH.

In his 23 pages of evidence Mr. Jamieson outlined his modeling experience and work on the scheme since starting in 2001. The early model was based on limited flood level information and the results were held in doubt. Mr. Jamieson went on to explain the development of the model and improvements as level recorders and more information regarding flooding was made available.

The combined model approach began in 2008 and "through open discussion and healthy debates" a report was produced supporting the most robust model possible. The collaborative approach was to give all parties confidence in the conclusions. Mr. Jamieson's submission included ten tables and graphs of data. In his concluding paragraph he said, *"It is my opinion that the process of hydraulic analysis has produced a very robust model, which is based on a significant amount of data and information from a wide range of sources. It is also my opinion that in a scheme, such as the Hikurangi Swamp, where distribution of flows is so significantly impacted upon by changes in water levels, modeling and monitoring alone will not provide an unequivocal solution, and that some level of moderation should be applied."*

Table 10.2

Comparisons of original as built crest lengths with those proposed:

Spillway	Original as built 1977		2009 Model		Proposed 2010	
	Level (m)	Length (m)	Level (m)	Length (m)	Level (m)	Length (m)
Junction	91.32	180	91.32	80	91.32	155
TeMata	91.30	670	91.30	290	91.30	575
Otonga	91.22	675	91.22	675	91.22	675
Mountain	91.20	200	91.20	900	91.20	490
Tanekaha	91.20	200	91.20	180	91.20	180
Ngararatunua	91.11	1180	91.11	400	91.11	350
Okarika	91.08	940	90.01	940	90.01	940

⁶¹⁴ 2010 consent hearing. Statement by James Blackburn for WDC item 16.14 page 41.

⁶¹⁵ 2010 consent hearing. Statement by James Blackburn for WDC item 16.25 and 17.2.

⁶¹⁶ Page 46.

⁶¹⁷ Page 46.

Submission from Mr. Ray Hindrup

Next on the agenda were landowner submissions. The first farmer up before the Commissioners was Mr. Ray Hindrup who wrote and read his own submission as follows:

Introduction:

There are three important things to understand about the Hikurangi Flood Control Scheme (the Scheme).

The first is that the Scheme is, and always has been, a flood control/management scheme, not a flood protection scheme. The seven pockets in the scheme are designed to flood in a controlled fashion in a range of expected conditions. The way the Scheme is intended to work in flood conditions is that each pocket takes in water in a quantum proportionate to land area, such that the benefits of the Scheme are shared equally and equitably among the landowners who pay for it.

Flood waters are divided equitably via careful control over the height and length of the spillway on the stopbank in each pocket. It needs to be understood that raising the height of the spillway, or reducing its length (or both) in one pocket means that floodwaters intended for that pocket will spill into the other pockets.

The original design represented a careful and measured approach to striking the optimum balance between the pockets, modeling a design storm on reasonable hydraulic and hydrological assumptions, which in turn were based on best available monitoring data that existed at that time. Subsequent peer review by the top experts in the country, decades later, have shown the original design to be strikingly accurate and consistent with the best modern modeling techniques available today, which is testament to the expertise and professionalism of the original Scheme designers.

The second thing is: while the Scheme was built to the designer's specifications, it didn't stay that way for long. Floods, even small ones, hurt farmers. Not only do larger floods kill large areas of pasture outright, even smaller floods saturate soils and damage pasture and make farming of flooded areas impossible for extended periods of time. Because of this, farmers cheat.

Everyone in this room, including the experts, the Council, and every landowner, knows that the Scheme has been substantially, and unlawfully modified since before it was even completed. Surveys have proved it. Expert opinion is united. The levels have been grossly altered by landowners, and have been left that way by the Council for reasons that a rational man finds hard to fathom. I am yet to see a single expert report that provides a grain of support for the Council's approach of "do nothing, leave it to the landowners", which has characterised its management of the Scheme for the entire lifetime of the Scheme.

The other thing that is irrefutable, and accepted by every expert worth their salt, is that Otonga pocket, my pocket, has been the main one to suffer as a consequence of those unlawful modifications.

Photographic evidence taken in the immediate aftermath of floods, has shown my block as being fully underwater, while large areas of the rest of the Scheme remain untouched. My block has acted as a "sacrificial pocket" in just about every major flood that has occurred since the Scheme was created.

I have been working to get the Scheme run fairly and equitably, starting with returning it to its original design, for 13 years, with little or no success. Even here it

seems. The Whangarei District Council (WDC) agreed with me outright to seek consent on the basis of a return to the original levels, and adopt “adaptive management” from there. Now I see Nigel Browns’ staff report, days before the hearing, and understand that it is reneging on that agreement and is now seeking consent on the basis of waiting for a further three inflow floods.

The third thing that needs to be understood is that it wouldn’t be that hard to operate the Scheme as a flood protection scheme. All it needs is a sacrificial pocket. Even in Cyclone Fergus, perhaps the biggest design flood to hit the Scheme, flooding Otonga protected the great majority of other landowners, a fact that is demonstrated irrefutably by the post flood photographic evidence. Otonga acted as a sacrificial pocket for many years, and it is only since 1997 when the extended inflow was filled in that this has even started to change. But the fact remains even today: of all the pockets, only Otonga retains its original design crest levels and lengths.

I have offered to formalise Otonga’s function – to have my land acquired to fulfil the public work function that it clearly has already been performing these many years. The Scheme could then be very simply amended to operate as a full flood protection scheme. However, because my land has already, in practice, been fulfilling this function, leaving the other pocket owners dry, protected and happy without actually costing them a cent, there has never been any motive or reason for the Council to “formalise the deal”. All it has had to do is stonewall any reversion of the Scheme to its original design and wait for the flood that finally wipes me out.

Even while the scheme was being built farmers tried to adjust control bank heights and lengths. If we had allowed the scheme to obtain a resource consent with the ad hoc alterations in place it would have always operated inequitably.

Of the seven pockets, Otonga has the only ‘as built’ control crest.

History

After construction all banks were surveyed annually, and any subsidence or other deterioration was fixed. This was stopped in 1983 because by this time the only subsidence still occurring was where the stop banks had been built over river loops and over deep undrained peat as in one end of the Ngararatunua control bank.

The control crests are the most critical part of the scheme in determining equal benefit.

By 1987 the Otonga control bank had been extended by 1000 metres. From 675 metres to 1675 metres. This control bank is built over clay and this was not a result of it sinking.

The Northland Catchment Commission surveyed this bank in 1987, they put in all the level pegs, they got contractors on the job and farmers from the Liaison Committee came and physically chased the contractors and the Northland Catchment personnel off the bank, then pulled out all of the level pegs and consequently the bank was never fixed. **(See attached “A” document to this submission).**

In 1994 Works Consultancy surveyed all banks for WDC showing the Otonga bank to still have 1000 metres of extra inflow, and five other control crests had been raised and shortened.

The WDC let two contracts to have all of the banks brought up or down to design level, neither of these contracts were ever completed. **(See attached “B” documents.)** These ad hoc alterations are still there today.

The Tanekaha pocket has approximately 60% extra pumping capacity. There is no technical justification for this at all. If this remains and becomes a consented legitimate additional pumping capacity, this would immediately set a precedent and this will have every other pocket asking why they can't have a 60% increase in their maximum pumping capacity.⁶¹⁸

This ad hoc alteration is still there today. The scheme has not operated within its specifications or original intentions since 1987. If we miss this opportunity to return the scheme to its original specifications it will never be equitable.

While it is an uneven playing field the difference factions will never be able to advance the scheme to the next level as intended by the engineers who built it. This was meant to happen from the year 2000 onwards.

The above has happened through weak management and greedy selfish farmers. In dollar terms this is approximately what this means:

The farmers sheltering behind the illegal control crests have received less flooding, therefore less costs in re-grassing and lost production amounting approximately to \$24,000,000.00 over 16 inflow floods between 1993 and 2003. On the other hand, we have had extra flooding because of our extended control crest and the high banks of other pockets pushing water onto our pocket and have lost approximately \$6,000,000.00 as a result.

When you have seven pockets and six pockets have a definite advantage through ad hoc alterations you will certainly get a majority of submitters trying to maintain the status quo. This has been aggravated by the submitters of the Te Mata pocket who have put in individual submissions from both the husband, the wife and sometimes a trust as well. We could have done the same but considered that this would be just muddying the water. With the dollars to be gained and lost in this exercise it is not surprising that pockets with substantial ad hoc alterations and consequent benefits are putting in a large number of submissions for the status quo to remain. This is also helped a great deal by close and cordial connections with Council politicians and officers who seem to see no problem with the status quo whatsoever.

I would like to draw your attention to **attached "C" document** from NCC Volume 3, and then draw your attention at **attached "D" document** being the Te Mata Crest Control diagram which is only one of the ad hoc alterations. The control crest has been raised by 390mm or 15 ½ inches for 400m in length. The centre section has been raised by 130mm or 5 ¼ inches for 150m in length. I would then like to draw your attention to **attached "E" documents** being the aerial survey of Cyclone Fergus. Cyclone Fergus was what was considered the most perfect design flood, exactly what the scheme was designed for. The aerial survey was conducted by Mr Danny Stevens who was a qualified professional aerial surveyor.

I would like you to look at the three principal pockets, Te Mata Otonga and Okarika. These pockets respectively are meant to take 20%, 23% and 25% of the inflow water. In layman's terms, these three puddles should be identical. These three major pockets should account for 68% of the inflow water.

I would then like you to look at the Ngaratunua and Mountain pockets. Mountain is meant to take 15% of the inflow and Ngaratunua is meant to take 10%. In reality Ngaratunua did receive probably 18% of this inflow water because its control bank had sunk where it is built over deep peat and an adjacent farmer had wintered his herd of cows on the control bank and reduced the level considerably. At this point the Fergus

⁶¹⁸ Mr Hindrup was correct regarding fairness. The NCC condoned it and J Ilich paid them \$15,000

inflow was probably close to one metre deep on the crest. The length of inflow on the Ngaratunua crest was 520m.

It is possible to differentiate between inflow water which is an orange silt coloured water and the black rain water which has fallen in the pocket.

Having shown the scheme in full inflow flood to two pre-eminent hydrology experts, Mr Murray Menzies and Dr Steven Joynes we were astounded at their comments. That although they had viewed the scheme when it was not in flood, they had not realised how flat the river gradient was at full inflow flood. Both agreed that visual data of river levels, pocket levels, inflow duration would always be the most accurate data available. Their computer modeling could replicate a flood using visual data but little else. Because the river is so flat at inflow flood level it makes modeling so sensitive that it becomes unreliable. **(See attached "F" document)**

Not only is the Scheme simply not operating anything like it was designed to, but the modifications to the Scheme substantially alter the actual river gradient, because the gradient is incredibly flat. As soon as the Junction and Te Mata pocket inflow crests were raised and the 25% of the flood water did not disperse into these pockets, the river level rose. Because of this, all the data that has been collected since, other than visual data, has not been accurately representing the actual flooding that has occurred. This is the fundamental problem with trying to collect accurate data while ad hoc alterations are in place. In other words, the ad hoc alterations distort the true river gradient, and distort every conclusion based on the data which follows.

The engineers working for WDC or for us have agreed that to get accurate and uniform data all inflow crests need to be at design height and length. I see from the Mr Browns' staff report that this view has changed, without any discussion with me, or warning which could have allowed me to brief my experts and have them here to assist.

The monitoring of inflow:

The suggestion of one automatic flow depth time recorder at each pocket control crest shows a total lack of understanding of the Wairua river in full inflow flood. One piece of drift wood lodged in front of the device, and it would show no flow. One clump of weed lodged in front of the device, and it would show no flow. **(See attached "G" document)** This will happen continuously, particularly if the wind is blowing debris to one side of the river, as it tends to do. It even gives the opportunity of deliberate interference with the measuring device.

The only accurate way to measure the amount of water that comes in to a pocket during an inflow event is to:

- Record pocket level
- Time start of inflow
- Note stop time of inflow
- Note pocket level

The increase in pocket level from start to finish of inflow minus 100mm is the inflow water. This, calculated together with the contour map levels gives a very accurate measure. To make this even more accurate, all peat areas of the scheme should be contour surveyed again. The peat has sunk as drainage and consolidation has occurred. We can demonstrate 900mm subsidence in the 19 years we have been here. **(See attached "H" document)** To suggest we wait for another three floods to get more data is rubbish. The scheme needs to be returned to its original specifications and then monitored using every method available.

In May 2009 WDC reached a consensus with us using the combined experts and information, this agreement meant that we would support the resource application. This was the agreement:

"Inflow crests would be returned to as built levels with some minor adjustments to lengths, as set out in table 5.3 SPILLWAY CREST DETAILS (PROPOSED INITIAL AMENDMENT) dated 25/05/2009. And this was to be done immediately the resource consent was issued." The reason for this was that future flood inflow data would be as equal and accurate as physically possible. All pockets would be standing on a level playing field.

Refinements and corollaries to our original submission

Our original submission set out, in a broad way, our expectation that the Scheme should be returned to its original design and function. On the basis of the information that has come to light since our submission was filed, the following sets out a convenient way of describing our currently sought relief, referencing the original submission numbering:

2. 'The specific parts of the application that the submission relates to are the proposed modifications to the stop bank spillway crest lengths and levels as set out in clause 5 of the application.' As a corollary to this, my concerns also relate to pump refurbishment, replacement and operation set out in clause 2 of the application, as well as the general management of the scheme.

3. (b) We agree with WDC assessment of control bank crest height and lengths set out in table 5.3 SPILLWAY CREST DETAILS (PROPOSED INITIAL AMENDMENT).

(c) [i] Modifications to control bank crest levels and lengths are carried out immediately the resource consent is granted.

[ii] That there is no other work done on any other aspect of the scheme such as pumps and stop banks until the control bank crests are completed.

[iii] The finished control bank crests be properly surveyed and marked upon completion in a manner that discourages any further tampering.

[iv] Regular, transparent monitoring is undertaken (and made subject to independent audit as highlighted further below) to ensure that the modified crest levels and lengths remain as consented.

[v] Where monitoring indicates that unconsented modifications have been made immediate remedial works are undertaken by WDC.

[vi] Regular checks are made of level recorders and other data collection points within the Scheme to ensure that they are accurate and that the information being provided is robust.

[vii] Robust information collection mechanisms are implemented to make future reviews of Scheme performance more accurate and effective; and these are to include physical and visual data recorded in pump station log sheets, including the following: river levels, pocket levels, inflow start times, inflow stop times.

[viii] Immediately after each flooding event, WDC undertakes a survey of the area of flooded land within each compartment of the Scheme, to ensure that the Scheme has operated according to design during that flooding event.

4. R & M Hindrup Ltd seeks that the consents be granted, subject to conditions that:

Authorise the setting of crest levels and lengths within the scheme in the following manner as in table 5.3.

POCKET	CREST LEVEL	CREST LENGTH
Junction	91.32	155
Te Mata	91.30	575
Otonga	91.22	675
Mountain	91.20	490
Tenekaha	91.20	180
Ngararatunua	91.11	350
Okarika	91.01	940

All peat areas to be contour surveyed as soon as possible.

5. Excess Pumping Capacity – Remove from Tanekaha pocket the additional 0.70 cubic metres/second McEwan Pump.

6. Access – Reinstate the private farm access from the Otonga Pump station north that was destroyed in the formation of the scheme.

7. Liaison Committee – we are totally opposed to the reinstatement of this committee. Majority rule does not work in this Scheme by definition, because it relies on everyone accepting their fair share.

8. Spillways – A minimum of 3000m of control bank crests needs to be maintained at all times.

9. Monitoring – Alongside of the Technical monitoring, visual and manual monitoring must take place, including aerial photography. In particular there needs to be visual monitoring during floods of river levels at pump stations, pocket levels at the start and end of inflows, the duration of the inflow. Staff gauges also need to be repositioned accurately and pump station log sheets need to be reinstated.

11. Future modification – At least five inflows of flood events that the scheme was designed to contain, before the first round of further adjustments are undertaken.

Remove requirement to replace pumps and time limit entirely. Pumping alternatives have not been fully investigated and a decision would be premature.

Management:

This scheme is a very effective flood control scheme. It was built by engineers who had extensive local knowledge but very little technical assistance. They had their feet in the water and relied almost entirely on visual, physical data. They monitored floods after completion and this data proved that they had it almost right.

From this point on, the scheme has been interfered with, ad hoc alterations. This only happened through weak management. If the management cannot be fool proofed, it will happen again. We ask for the following conditions to be applied to the management of the Hikurangi Swamp Scheme:

Management at local level to be overseen by an independent engineer from outside of the upper North Island chosen every five years by the President of the New Zealand Institute of Engineers ("the Scheme Engineer").

The same reporting to the Scheme Engineer as to the Regional Council's monitoring manager and he is to have the final sign off of any alterations or modifications to the scheme prior to them been done. He should also be required to do an audit of all available monitoring information after each flood, and an annual audit to check compliance with conditions.

Accounting – The scheme management must adopt a transparent itemised accounting system. Every contract must specify the cost to each pocket and be available to all ratepayers.

Where there has been deliberate alteration or damage to a stop or control bank, all cost of remedial action by the consent holder shall be paid for by the adjacent pocket ratepayers. **(See attached "I" document)**

Ratepayer Representation – all meetings and associated proposals and costs to be met by the ratepayers allowed to attend i.e. A & B class ratepayers. Management needs consensus before rushing into proposals that are initiated by a pocket, but cost all ratepayers.

Consultants who have not witnessed an inflow flood as it is happening should be restricted in their rights to comment on the schemes performance.

Answers to some of the questions asked by the Commissioners of the Council experts on the opening day of this hearing:

Pumping during overspill:-

This happens frequently and to date it has been condoned by the Council field officer.

Settlement:-

As stated in my submission NCC did annual surveys and repaired any settlement until all but the river loops or very deep peat areas had ceased. Apart from a short section of the Ngaratunua control bank, the stop-banks of the scheme are built over clay country.

Wind:-

The usual cyclonic storm comes from the North and East and can bring strong winds, but normally by the time an inflow starts, the storm has past and the wind has reverted to the South West and is much more moderate than the storm event.

Reduction from Five Year Protection:-

This was a mistake in the original estimates of the expected protection level.

Tenekaha Pump:-

This sets a precedent for every other pocket to apply for a 60% increase in pumping capacity with no technical backup whatsoever.

Te Mata Extra Flood Gates:-

Te Mata had an additional hill water canal and flood gates fitted into the Waioitu River at the same time as the Otonga pocket had extended inflow that could not be remedied.

Pumps:-

The most effective pumping is achieved as the river level rises i.e. we discharge huge volumes of rain water through the pumps while the river is only 1 to 1½ metres above. We do this on the rising flood and we also do this on the falling flood. When these pumping curves are taken into account, the existing pumps can out pump the new pumps and at a lower cost rate.

Inflow in the Centre of the Scheme:-

We have never been able to determine the difference in inflow start times between Otonga, Mountain and Tanekaha pockets. It is our view these pockets all start within five minutes of each other.

Ngaratunua Inflow:-

Stated as 1180m has only ever run 520m the real reduction in length is from 520m to 350m.

Eels:-

Eel populations in the main river and certainly in the Otonga pocket after 30 years of existing conditions are plentiful. This being so, why is there a need to alter the situation.

Signed RM Hindrup

16 March 2010

Submission from Merv Rusk.

1. My name is Merv Rusk and I am a farmer. I have a witness to speak, Mr. Crichton Christie, who was a Catchment Commission surveyor and maintained the scheme in its early years from construction. I have had considerable involvement with the scheme, eaten, breathed, and lived with this thing for the thirteen years of review. My experience is my only qualification, but I note that seven consultants have consulted me for help.

Allow me to briefly outline my experience, then make appropriate comments.

2. I've lived and farmed in the upper catchments all my life with family from Tapuhi in Waiotu catchment, to Towai and Paiaka in the northern catchments overlooking the swamp. I worked on farms on the Hikurangi Swamp, even helped rescue cattle in the second flood of the scheme in 1979 then I farmed forty years at Marua in Whakapara catchment. I am familiar with the scheme catchments, rainfall, and flooding.

3. My wife previously worked for the Ministry of Works, working on gauging river flows and providing engineers with rainfall, discharge and flow information, for the scheme design. I also had help from other hydrologists and engineers. My part in this began 13 years ago as voluntary worker to help to any who asked. I am totally independent, paid by nobody. My job record to date has 890 entries covering three thousand two hundred and seventy hours.

4. That includes going out in all floods from 1996 to 2004, a total of seventeen flood events, walking inflow crests, taking length and depth measurements and photographs up to 36 hours at a stretch. Overspills are often at night. Apart from Mr Hindrup of Otonga, I never met any other landowners or consultants out doing what I did. I wrote a computer model of the original design calculations including the pumps. Using rainfall I was able to predict river levels a day in advance within inches, so I could be in the right place at the right time measuring overspills. Written notes were augmented with photographs. I also have Northland Catchment Commission aerial photo surveys of the first floods, plus still photographs, and have closely examined those and more recent aerial surveys of flooding. I have over one thousand photographs.

5. I went through the design calculations checking through for any discrepancies. This included channel flows and storage. I was able to follow and recalculate the design calculations for both inflow share percentages and lengths of inflow crests. I have Catchment Commission records of areas and levels of early flooding, river and pocket levels, plus Commission minutes and monitoring reports which have given a good understanding of how the scheme was designed, built, and operates. I have the drawings of the extent of the 1966 design flood and the drawings of NCC checks and aerial photo surveys and performance after the scheme's construction.

6. For several years I was mentored by Murray Menzies, an engineer from Auckland and Dr Steve Joynes of Hydraulic Modeling Services Hamilton. I also consulted people who helped build the scheme including Mr. P.Q. Palmer ex Chief Rivers and Drainage Control officer, of Northland Catchment Commission, scheme surveyors for NCC, Gary Rusk and Mr. Christie, original staff member Colin Anderson, who did many of the early drawings and monitored the first floods, long term landowners, and others. In addition to attending some meetings of the liaison committee with council I have received over 1000 emails and sent as many. The swamp scheme takes up 222 megabytes on my computer.

7. I processed 300 Pump Station Log sheets containing 2,500 signed off entries showing river and pocket water levels and pumping details. For each of the 7 pockets I processed 91 logged flood events, 14 being major floods since construction. I have fully examined the nine MWH Report volumes.

8. Initially MWH used theoretical flood events but were short of factual information so the model produced unrealistic results. The worst was an overly steep water gradient which greatly distorted recommendations on inflow crest levels and lengths. Please see diagram appendix 1 of this submission.

The Report of January 1999 became of little value, and any submission matters based on that first report will not be relevant. The use of MWH 1999 report quotations by Resource Management and Assessment Limited representing TeMata pocket landowners is therefore inappropriate.

9. Records of water levels are valuable but they were very confusing because staff gauges were mounted incorrectly. We would not be here today if Mr Ray Hindrup of Otonga pocket had not engaged professional surveyors Donaldsons of Kerikeri to survey the entire scheme at considerable cost to himself. As a result the electronic level recorders were resurveyed by WDC, having had serious errors in their elevations. More importantly I was able to calibrate gauge levels at pump stations and immediately a wealth of information in the log books became useful. That survey also confirmed the original construction benchmarks were accurate. It provided an accurate survey of inflow crest profiles, staff gauges and peak water levels, particularly for the June 2002 flood just eleven weeks later. None of the historical flooding work and river level data that supports the computer modeling would have been possible without Mr Hindrup's survey. The process would have been starved for measuring information and model results would have been compromised.

10. In March 2007 I was invited to the joint group working through the difficulties toward obtaining the resource consent. The applicant's model had been running theoretical storm events whereas the independent team modeled actual flood events. The MWH computer model was then changed to model actual flood events.

11. In November 08, after a joint meeting of modelers with the WDC and engineers, instructions were given that the computer modeler should inspect my flood records, observations and photographs, and make use of these. In three months, after ten years of trying, the computer modeling improved, but I do not believe any model can succeed without on site observations. From the first report I have been skeptical that accurate computer modeling of this scheme was achievable. That's why I did the recording.

Table 1. below shows the observed flooding distributions compared to the computer model results and the design inflow share percentages.

Table 1. Averaged Distribution Table for six calibration events.*

	Observed	2009 Model	Original Design
Junction	1%	1%	5%
TeMata	6%	6%	20%
Otonga	33%	30%	23%
Mountain	5%	5%	14%
Tanekaha	10%	7%	3%
Ngararatunua	37%	38%	10%
Okarika	12%	10%	25%

This table is taken from the one in the applicant's documentation.

*Averaging distributions was an original design criteria. (NCC Vol 2 pg 21)

12. I find the correlation r^2 between the two sets of averages is 0.986 which I understand is a very high predictive value out of 1. The model agrees well with observations. The method I used of using the rise in recorded pocket water levels between ceasing of rainfall and end of overspill is simple and robust and I provided the method to the applicant's modelers. Also, with Mr. Murray Menzies of WRCG, I modeled all pockets for one event using three different methods, of which level rise was one. The results of the three methods reflect inflows, log records and pumping hours.

13. Very large rainfall events are outside the scope of the scheme but attract media attention and colour perceptions, whereas the important one to twenty year events behave as they always have.

There are many more trees in the upper catchments than before the scheme, not fewer. The use of hydraulic diggers means drains have been cleaner than in the 1960's speeding concentration but this is being reversed by the current move toward fencing off drains and streams and planting trees on the banks, with less cleaning of waterways, so silt and mud may cause catchment concentration times to increase.

14. I published a study that compared the 1960's Design rainfall % that was used from Puhipuhi station, against the 32 significant tropical storms between 1964 and 1997. The result was consistent using two different methods, Thiessen and Isohyetal. Both methods confirmed the figures used by the scheme's design engineers are still valid.

The cumulative rainfall in the upper catchments 1905-1985 was also shown by Montgomery Watson as being consistent with no change. (MW 1999 report pages 6 & 9)

15. The 2007 150 year flood was the only flood that ever really produced a "flood wave." Level recorders show the main channel OSP's in the middle above Jordan

Bridge, then the upper end, then the lower end. Stopping of OSP is in the reverse order with the centre last. March 2007 was an interesting event but is totally irrelevant to the design and consent of the scheme, because the scheme was never designed to cope with that kind of flood and the design documents make that quite clear, so it would be inappropriate to consider the March 2007 flood. A 150 year flood is far outside the design and intentions of the scheme. It will never cope with them.

The scheme was designed to control floods up to the 5 year return period and reducing protection up to a fifty year event. In the very large flood events the **control** banks are overcome and even the **stop** banks, as in March 2007, are overtopped all across the scheme. The large events kill pastures regardless so the extra weeks beyond four days under water is rather academic. The 2007 flood has no bearing on the work needed to restore operation of the scheme. The scheme is designed for controlling small to medium floods up to a 5 year return period. These are the important floods, sometimes even four a year that damage pastures and destroy crops. This category of flood is where the scheme has been particularly unfair and unreasonable for decades and this situation will be addressed by consenting this application.

16. The typical flooding in the three to five year event.

We have an aerial photographic survey of one of these chosen by MWH as typical with a standard hydrograph and this was modeled. This is the survey flown for Mr. Hindrup on 1st January 1997. The time was 10 - 12am just after pumping started and the photos demonstrate the typical 1 -5 year distribution. (Note there is a 0.91 r^2 correlation between area and volume). A drawing by a consultant shows the flooded area in red for each of the seven storage pockets.

17. In terms of volumes, *computer modeling* of this flood indicated 45% of floodwater was diverted onto other properties. The *observed* volumes calculated indicate 47% of floodwater was diverted . This is shown in Table 2 below.

Table 2.

Diverted Floodwater volume shares 1 st January 1997							
Pocket	Model				Observed		
	Volume%	Design	Diverted		Volume %	Design	Diverted
Junction	0%	5%	5%		0%	5%	5%
Temata	3%	20%	17%		5%	20%	15%
Otonga	36%	23%			33%	23%	
Mountain	6%	14%	8%		2%	14%	12%
Tanekaha	6%	3%			5%	3%	
Ngaratunua	39%	10%			46%	10%	
Okarika	10%	25%	15%		10%	25%	15%
	100	100	45%		101%	100	47%

Model Source: From MWH Calibration Event spill Distribution May 2009.

18. In thirteen years of calculating both areas flooded and volumes of distribution I have found the diversion rate consistently ranged between 40% - 50% of floodwater diverted from the same pockets shown above.

19. **Going back to the 1977 "as built"** was supported by some TeMata submitters in early submissions even though it would give them a longer and lower inflow crest than the proposed first step. NCC meeting reports record that the first inflows after construction had even depths and similar durations. However, the applicant proposes relative crest proportions that are very close the original proportions. Given new information since construction regarding the Mangaharuru canal, as it affects Ngararatunua inflow crest, the proposed option seems the more appropriate way to go.

20. Mr. Brian Knowles Project Manager MWH in 1999 told a WDC meeting that it is difficult to model a flat scheme, when one end is tipped up (filled in). I liken it to holding a spirit level on a steep angle and the bubble is at one end. It is necessary to get it more on the level before the job can be done accurately. This is what the first step is all about.

21. Is the TeMata pocket inflow crest a special case ?

There have been ongoing claims that TeMata pocket is a special case and had official sanction for farmers blocking their inflow. However, there is no official documentation for this, in fact the opposite is true. Minutes of Northland Catchment Commission stated after the first floods that "inflows were very even." The 1978 and 1979 NCC aerial photos and NCC monitoring 1983 to 1988 confirm fair distribution. The evidence is - Northland Catchment Commission was quite satisfied with the performance of that inflow crest. Therefore, it would be inappropriate to accept claims that official justification existed for TeMata inflow crest to be raised.

22. Some examples of inequalities that crept into the scheme:

Extra Gravity gates:

The scheme was built with one gravity outlet gate per pocket, all matched to catchment size and rainfall. Mountain pocket was immediately given an extra gravity outlet and TeMata one at the upper end.

23. Of note is that TeMata pocket ratepayers now have four gravity gates while Otonga pocket with exactly the same catchment size plus higher easterly rainfall has only one gravity gate. TeMata ratepayers are the only ones on the scheme to have benefitted to this degree from extra gravity gates. In this regard the scheme is hydrologically unbalanced and contrary to the design criteria of fairness.

24. Hillwater diversion canals and stopbanks:

These were an original concept of the scheme but not provided. However, internal stopbanks have been installed. There are three pockets that for many years have benefitted to some degree from other ratepayers funding internal stopbanking to divert rainwater into the main canal and or increase pumping flows.

25. Mountain pocket had its upper catchment flow diverted across into the Mangaharuru canal just upstream of the Ngararatunua inflow crest. This was done in the first year 1978.

Okarika pocket has benefitted from internal banks constructed after years of ad hoc construction using drain cleanings and maintenance budgets. One result is that the pumping head at that station is reduced by some 1.5 metres allowing up to a 20% increase in existing pump outputs.

26. TeMata ratepayers are the other major beneficiaries who have benefitted from a hillwater diversion canal as well as extra gravity gates. It would be appropriate to apply these same benefits equally to maintain fairness of the scheme in other pockets.

27. Pumping:

Tanekaha pocket has installed an extra pump making its station capacity **99%** above design requirements. See MWH Report 1999 pg 32 and pg33 for those details. This is a contentious inequality in the scheme.

28. Inflow crests:

The first as built drawing of these was done by NCC surveyor Gary Rusk in July 1978 plan 1379 and appears in the appendix of MWH 1999 report. The inflow areas are 150 mm lower than the banks. That report shows cross hatching of cut and fill required in contracts to repair the scheme in 1995 and 1998. Neither contract resulted in the cutting down of the filled in crests.

29. The Junction filling was done by a pocket landowner who used metal to fill the Junction crest. The TeMata filling totally blocked half the inflow crest and raised the rest to the level of 5 year flood events. In the 1 to 5 year events the Junction and TeMata inflows have had their design inflow rates reduced by some 90%.

The Mountain crest was raised and partly filled by a pocket landowner using drain cleanings. The only bank that is original is Otonga bank. This situation must surely be contrary to the fair play provisions of the Resource Management Act. It is appropriate that the filled in crests be cut down to the first step dimensions proposed in the application.

30. Durations of Inflows to Pockets.

The original design was for inflow crests to run for equal times and volume adjustments were made by altering the lengths. Logbook entries and observations for 1994 - 1999 show a distortion in times of up to 3 to 1. Some crests overflowed for twenty hours and some for sixty. The distortion of overspill hours matches the alterations to crests and the volumes of inflows calculated from both observations and the computer model.

31. Durations of flooding on pastures:

I took the signed off log book records for six overspill floods and this was a good range of floods over a four year period. Flooding remained on pastures for the following days:

Junction	4 days
TeMata	22 days
Otonga	37 days
Mountain	15 days
Tanekaha	12 days
Ngararatunua	28 days
Okarika.	18 days

There is a wide variance in what was designed to be the fundamental common feature of fairness.

32. Things in common:

Four pockets, namely Junction, TeMata, Mountain and Okarika have much in common. They tend to have filled inflow crests, low inflow volumes, more gravity gates, more hillwater canals, had most control in the influential Liaison Committee before it was dispensed with, had shorter flood durations, and not surprisingly they are the same four pockets that divert 46% of the scheme's storage water. (see table 2. above) Not surprising that they have the most swamp submissions to this hearing.

33. Two 1968 design assumptions were not accurate:

First the effect of arrival times of peak flows at Junction, and secondly the estimated flows in the Mangaharuru canal. A design assumption was that the Waioitu would concentrate well before the Whakapara peaking at the Junction, followed later by the Whakapara. This however, was not how it turned out. Present day computer modeling now takes care of timing resulting in more a appropriate design of inflow crests.

34. The Mangaharuru canal and inflow crest length design.

The Mangaharuru canal to the outlet by the Ngararatunua pump station is a deviation cut in the 1930's taking the water out of Mountain pocket. The 1968 design assumptions were that *"high flows would be gone a day before the main scheme peak arrived and high levels could only occur if the Mangaharuru catchment had a second storm a day later than the main scheme"*. What happens is that south easterly storms can deliver a late peak and in many storms the Mangaharuru stream is still delivering high volumes to the Ngararatunua inflow from one direction while the main river is flowing in under Rushbrook bridge delivering large flows from the other direction. Observations have been made with the inflow crest spilling over strongly when water is flowing out under Rushbrook bridge into the main river. Clearly at times this crest can be overspilling yet taking no water from the main river. This demonstrates the unique and complex problem of an inflow crest with flows coming at it from two

directions. Mr B. Knowles, MWH Project Manager 1999, said it was a problem and it would have to be looked at.

35. Mangaharuru river peaks around 80 to 108 cumecs. (90 above SH1 in 1934 and my wife gauged it in the 1960's.) The situation was made even worse in 1978, after the scheme's construction, when the Mangawhero flood flow from 14 sq km surrounding Hikurangi in Mountain pocket was stopbanked and redirected across into Mangaharuru canal as well. That extra flow causes greater flows into the Mangaharuru canal than design engineers estimated. In addition the original flow calculation from Mangaharuru catchment is indicated to be 44% too low (see calculations penned in the hand of Mr. P. Q. Palmer Chief Rivers Control and Drainage Officer on NCC Vol 3 pg 29, see Appendix 10.) then with the diverted water from an extra 14 sq km the effect on Ngararatunua inflow has been considerable. Consequently the review recommendation for Ngararatunua crest length was shortened to 500m in Sept 01. In measured OSP lengths in floods I monitored the overspill at Ngararatunua never ever exceeded some 550 metres, (but would be vulnerable to more in a fifty year event). Then it was shortened to 400m in March 03 as the flatness of the river was confirmed, and as the model found a problem at this point, shortened by 50m to 350m in April 2009. NCC records show this crest took 20% of the flow right from construction so reducing the normal overspill length 36% from 550m to 350m should move this inflow toward its 10% design share. The proposed length is also in appropriate linear proportion to the other crests.

36. Submissions:

As I see it there will be three categories of submitters:

Upstream ones, swamp farmers, and downstream ones.

37. Upstream issues:

While many upstream landowners support the scheme some of them have concerns over benefits to them compared to their rates. I note that long term the ratepayers in the upper catchments effectively pay the value of all the electricity used in the pump stations. Landowners above SH1 have concerns about the scheme making flooding worse but I have photos of the 1930's when peak flood levels lapped the steel railway tracks through Whakapara.

38. Whakapara flooding examined:

During 1999 I examined the flooding at Whakapara, flow records, peak levels, the level records for lowest ground, and determined the duration of flooding on farmland above SH1. I examined the level recorder data for every flood above lowest ground in 39 years, from pre scheme 1960 to 1998. There were 83 records before construction and 21 after.

Before the scheme there was an average of 8 floods per year on pastures but after the scheme an average of one flood per year. Most importantly the duration of flooding on pastures there was reduced sixty percent. Average peak depth of flooding fell marginally. Outflows doubled at low river levels, rose to plus 114% at mid range and were 14% greater at high river levels. After the downstream inflow crests were filled the peak depth of flooding above SH1 increased while duration went back up 7%, however, the main benefits above SH1 have remained.

39. My conclusion is peak flood levels in this area did appear to rise immediately after inflow crests were filled at TeMata and Junction but clearly the area upstream of SH1 still benefits from much faster clearance of water than existed before the scheme and there is no need for re-grassing.

40. **Swamp support:** Ninety one percent - 21 out of 23 submitters on the swamp, appear to actually support the application as a positive way forward, however a number among them are protesting about putting their inflow crest closer to design. I have no doubt most of those are people from TeMata who benefit from the status quo and want this whole process to spin out for more years yet. People have benefitted by tens of millions of dollars from twenty years of delay, therefore it would inappropriate to allow that to continue.

At the initial meeting of 13th February 1997 the TeMata representative did not speak against returning their crest to design. Currently TeMata landowners have supported a return to 'as built' which, oddly, is longer and lower for TeMata than the applicant's proposal! The stark reality is that this scheme has been unfair for decades and it would be inappropriate to allow further delay. The MWH Project Manager of 1999 Mr. Brian Knowles stated to a WDC meeting that cutting the high inflow crests would be needed before accurate fine tuning of water levels could be made. Ongoing monitoring and adjustment was always a written criterion in the Northland Catchment Commission's design documents. Confidence in the scheme's effectiveness is shown by swamp farmers who, knowing the situation, have recently purchased tracts of dairy farmland, such as Mr. Lammers in TeMata pocket.

41. **The NRC Staff report by Nigel Mark Brown**

This is a report on another report that reported on the first report, which was the fifth report by the original consultants. It is inappropriate to suggest setting aside *thirteen years of productive costly and painstaking work*. The Catchment Commission said it takes twenty years monitoring to cover a sufficient range of floods before modifying the scheme's crests. We have taken thirteen years, so how can it be appropriate to attempt this in only five years or even three as suggested by Mr. Nigel Mark Brown? With all due respect, had Mr. Brown been a party to all the work that has gone on these thirteen years, he would have agreed that we have enough confidence in our work, and that more analysis would be a waste of time and money. Perhaps his views are understandable for someone who has only been involved for several months. The fact is – more years of delay, just to replace a big number of

records with a small number, will spell the end for disadvantaged farmers and their families. It would be inappropriate to embark on another delay mission in the hope of improving modeling.

42. **Downstream issues:**

There are concerns over higher flood levels downstream caused by repairing inflow crests. I emphasise to downstream submitters that the scheme's stopbanks are not being raised, nor will any of the inflow crests be raised. The intention is for distribution of the existing overflows to be rebalanced within the swamp proper to resemble the proportions that return pre-scheme fairness to landowners within the scheme. Four of the seven inflow crests will actually be lowered from what they have been for two decades. Resetting the inflow crests is unlikely to have the slightest effect downstream. The three filled in crests will be cleaned out and the total inflow length of the scheme will actually be 99.20% the same as it has effectively been for the last ten years.

I believe it inappropriate to delay initial adjustments to appease negligible downstream concerns, when around 40% of storage floodwater is diverted unfairly onto other landowners within the swamp.

43. **Pumping.** I doubt that anyone can look at level records at Purua Bridge and define when the scheme's pumps switched on or off. The probable reason is five kilometers of river to Purua Bridge followed by four kilometers with about five sections of very narrow rock cuts that limit flows before the narrow rapids cut the and falls nine km downstream. Long time farmer at Purua Bridge Robert Alison said *"I've never ever seen water against the beams on the bridge. I have only seen it come just to the top of the pylons and a bit onto the sloping part that braces the deck."* Those points, surveyed in 2002 at 89.290 m, indicate a maximum flow of about 325 cumecs. This bathtub has a natural fixed plughole size.

44. **Efficiency is not output.** Certainly modern pumps will have a higher efficiency than the old pumps, but efficiency is not output. If pumps are delivery rated to pump a certain amount at max head they cannot exceed that. How can the scheme deliver river levels higher than the last inflow crest or bank? Pumping during overflows merely pumps water around in circles, it does not raise the level of the river. Actually, the scheme's restricted plughole and storage ability provides the best flood insurance the downstream landowners can get. It takes off the peaks of the floods. Without the scheme Dargaville could have been slathered in March 2007.

45. **Eels:** We had masses of eels on our upstream farm. Maori came out all the time to fish. Suddenly they stopped coming about the mid 1980's. I saw two reasons. Too many commercial eel fishers on our farm and we had to put in effluent ponds. Before that there were organic worms in our drains. When they went the eels went. I have not seen a Maori out eel fishing in Marua valley for 20 years. Nothing to do with

the scheme. And when heavy rain causes dirty water the eels don't go downstream, they immediately swim upstream into the clean rainwater in the pockets until it's over. They go up onto the paddocks, flap tails and eat worms from under cowpats. I never saw a dead eel in all the floods I was out through.

46. Maintenance issues:

Cleaning of river channels. Surprisingly little concern that the critical watercourses of the scheme have never been cleaned in 33 years since construction. Years ago there was a ripple below Jordan Bridge where the main river flow accelerated, but now that is down below the bend at Okarika. Is it cheaper to keep it clean or regularly redesign it?

47. None of the staff gauges are set at the proper level, one is in error by 2.2 metres, many are broken and two missing. These should be renewed and level recording of internal and external water at pump stations should continue to facilitate monitoring.

48. Electronic level recorders.

Electronic river level recorders have failed totally numerous times in the monitoring over about six years, read incorrectly, or been damaged. Without backup any monitoring will often be only partial. Without independent taking of levels at pump stations and recording this review and application would not have proceeded for a lack of sound information. The important part is to continue recording the internal water level. Flow recorders on inflow crests will perform badly in the face of debris, logs lying across crests against the meter and huge masses of weed and trash that comes across at a metre per second. It will build up. I've been there and seen it. Electronic recording alone has not been reliable enough to model this scheme.

49. Conditions of consent:

1. *As a condition of consent I ask that there be an independent annual audit of monitoring and this report to be made public to provide assurance and confidence, especially after initial restoration of the inflow crests and during any fine tuning that may be needed.*
2. *I ask that the consent include directions that the applicant complete the initial first step adjustments listed on Table 5. Spillway Crest Details numbered page 86 on the Agenda, and that the applicant be given a maximum period to have these initial adjustments completed by, being no later than December 31st 2010.*
3. *I ask that the applicant be directed to complete the first step adjustments before embarking on a planned pump replacement programme that is beyond normal maintenance and repairs. The inflow crests are the crunch issue.*

4. I ask that the applicant be required to renew all staff gauges at all pump stations and that reading river and internal pocket levels continue to be recorded in detail as in the past.

50. I would like to see the human stress of disadvantaged humans and their families given as much time and attention as is presently given to the concerns about eels and vegetation. You have no idea what the human cost is. Some half dozen have been forced off their land through financial pressure or ill health caused by long term stress and several have died.

51. **In conclusion**, the proposed crest dimensions will correct several anomalies that occurred before and after construction of the scheme and the initial proposed dimensions will go a long way toward correcting the unfair inflow distributions of flood water. A return to the 1977 as built crests dimensions would be far better than the present situation. However, there is sufficient evidence to move toward correcting the problem on the Ngararatunua inflow crest on the Mangaharuru, at the same time per the application.

52. It is a good flood control scheme for its investment, the main problem is that it has been fiddled with. *No submitter opposed to the application has put forward professional modeling estimates quantifying flooding or financial loss that they feel could occur.*

53. I am confident that whatever can be done has been done. To set aside nearly a million dollars worth of work and monitoring over thirteen years seems most inappropriate. If you further postpone consent for restoration of the scheme then the work everybody has done this last thirteen years will become out of date and will be wasted, more floods would have to be modeled, and it could all go on in a never ending circle. Delay would further prolong the twenty year disadvantage to the affected landowners. I believe the RMA's purpose is to prevent people from being disadvantaged, rather than prolong it. The process has got to begin or it will never end.

I ask for the application to be approved, and that step one be delayed no further.

M. T. Rusk.

Submitter #30.

Disappointing Submissions

If certain landowners on the swamp had really been opposing the idea of getting a resource consent as incidents had suggested then they failed to fire. In fact the tenor of most submissions was an attitude of support.

The joint TeMata submission prepared by consultants Resource Management Assessments Ltd seemed to be fixated on the old, 11 year out of date MWH 1999 Report and largely failed to address the latest up to date figures.⁶¹⁹ The TeMata submission summarized “the strong benefits” for them of the scheme as it then was and suggested some kind of consent decision that would allow continued operation made lawful, while “an appropriate management framework is developed.”⁶²⁰ This looked to all intents and purposes like another delay to keep their filled-in crest.

Overall, and to my surprise, it seemed like a poor showing by landowners from Okarika pocket, Tanekaha pocket, and TeMata pocket.

I was also surprised and disappointed by the submission given by Mr. Edwin Smith. I had expected a greater contribution from such a senior member of a long standing farming family on the swamp. Furthermore, I thought a better, more constructive and knowledgeable contribution, would have been made from a person who had served in leadership and was from a long standing swamp farming family.

A protest leader of that era Mr. Martin Smith did not even attend the hearings but simply got Mr Evan Smeath to read out his submission instead. Perhaps he was too embarrassed because the NRC had just driven the two Commissioners up the Okarika crest and stopbanks where those two gentlemen had noticed freshly regressed filling recently put on Okarika pocket’s inflow crest and control bank.⁶²¹

I have included several of these submissions to provide some fair balance of viewpoints and also a bit of interesting scheme history. The views from Martin Smith were typewritten in large type and are scanned over the page for your interest.

⁶¹⁹ Submission on behalf of P. McHardy, DE and S Lindsay, AE and CJ Lindsay, FF and JA Imeson Family Trust, CH and D Lammers, and E & S Smeath

⁶²⁰ Page 7 item 33. TeMata Submission on behalf P McHardy, D E and S Lindsay, AE and CJ Lindsay, GG and JA Imeson Family Trust, CH and D Lammers, E and S Smeath

⁶²¹ Commissioner Dr. Jeff Jones’ comment see Report and Decision 8.3 pg 25

Submission of Martin Smith of Okarika Pocket as provided to the Hearing and read out for him by Evan Smeath of TeMata Pocket:

All studies done on the cost benefit of the scheme show a huge return and the facts are all out there to prove this.

Why are we going through this procedure when the scheme was put in under a Government act? Why waste our time and resources on this vast when only 25% of the scheme needs a water right. Come on someone please take a stand and stop wasting our resources.

The WDC has only baby sat the scheme and could have done a lot more in running the scheme, with their stand it has put pocket against pocket, farmer against farmer which has caused all these problems. Reinstate the works committee with independent chairman so at least we know where our rates are been spent and question some of their decisions, Hikurangi Swamp rate payers pay all the accounts for the scheme; it stands on its own.

By having two hydrology studies done and marrying them together is a joke, granted you can make any result you like. In reality with Mother Nature you cannot predict anything with great actuaries over such a large area. Every flood is different, as with every over topping of the banks. Out there is a heap of knowledge on the scheme since its inception, why not use it.

The scheme has been tinkered with from day one fine tuning it, spill ways shifted, lengthened and raised. This has been done to improve the scheme, not to benefit one more than the other. If there was a blanket dump of rain over the entire scheme all would be equal, but that does not happen, the variations between rain fall figures is staggering, consequently differing in flows into each pocket. The only gauge that should be used is when each pocket is free of flooding, not over spill water. Why try and return the scheme to original and loose all the fine tuning for the last forty years.

Since inception of the scheme thousands of hectares have been cleared from all the inflow areas of the scheme which is changing the flows constantly. For example house numbers, concrete areas etc which have 100% run off meaning the water is coming down in hours compared to days.

Fixing the overflow heights of the spillways is not the answer because of the ever changing inflows to the scheme. If any changes are to be made at least have solid practical information to work to.

Purua Bridge is the outlet for the scheme, what cannot flow under that bridge spills over the control banks, like a funnel only so much can go out no matter what gets poured in.

I fully support the consent, don't be negative, the scheme has huge benefits to the whole country, don't try and be heroes, lets all work as a team, benefits will come to all. Don't kill progress, help it, you will all reap the benefits.

The following handwritten submission was from Edwin Smith who for a period was the Chairman of the Liaison Committee. Unfortunately the writing tended to be difficult to decipher so it is typed out here verbatim to enhance readability. (The spelling is left as Mr Smith wrote it).

Resource consent Swamp Scheme March 16th 2010.

"Thanks to the committee for the opportunity to speak in support of application.

Seems quite strange to be here today at a hearing for a Resource Consent for a Flood Scheme that has been in operation for 35 yrs and relies on pumps that are even older!

The scheme has been plagued with controversy over its entire life. Critizied by some of the disasterous effects it has caused and of the accuations of "our property being adversely effected and worse off since the schemes completion and even acuations that water flows uphill!!

Before the scheme waterflo through the swamp was very restricted and could take up to 3 weeks to flo through Roads and access would be closed for long periods and life in the swamp area was totally different than it is today. The roads mostly affected were Russell Road Otonga road Marua Road Tapuhi and Waiotu Roads and Swamp Road and Jordon Valley. Unfortunately there are people who don't understand these facts or simply formed their own opinion that this didn't happen pre scheme. It is one thing to make an acuation but it is another to provide facts. One thing living memory is.

Over the last few years a lot of ratepayer's money has been wasted on negative naval gazing, and consequently some areas of important maintaince on sheme banks has not been able to be done thousands of \$s spent on legal fees, consultants producing endless reports just to satisfy a few wanaby egos.

I would suggest in some pockets during an ovetopping there is as much water inflowing oer the banks as the overflow sections – this problem must a major priority to fix imeadially.

My name is Edwin smith I have spent my whole life on the swamp. The last 30 years actively farming in own right. And I am today prepared to tell you of and share with you actual experiences and living memories of people who lived on the swamp and the surrounding areas. Actually it didn't cost a bean For me to talk to these people who volunteered their experiences to me. They didn't wear pin strip suits and have an expectant (unreadable) but at the end of the day their views are true not assumptions by people expecting to be paid for their views. These are people who experienced the real thing and know the truth.

George McConnell told me of his experiences on his farm at Otonga. Pre scheme he milked 80 cows and after its completion up to 200 cows milked.⁶²² He can remember the railway line from Whakapara thru to Hukerenui being virticually flooded over pre scheme. Children unable to attend school because buses were unable to negotiate flooded roads. Cream trucks and lately milk tankers suffered the same fate. George has photos to prove this.

June Latimer told us of the farms she did when it was raining and the children were attending Hikurangi school tht they might not be able to get home safely because of flooding, to their farm at Kaikanui.

Talk to Ab Rouse farmer Waiotu and school bus driver for many years from the Hukerenui School and he tells of the bad flooding on the Tapuhi and Waiotu Roads and his experiences negotiating children home during flood times.

Thirty Nine years ago children from the Jordan Valley loop changed their schools from Hukerenui to Hikurangi because of the protection of access he scheme provided.

Sure we are not fully protected from all flooding but the protection the scheme gives us is surely a spring board to work from upon the granting of this consent which I really support. The scheme is certainly beneficial to the productive value of the farmlands protected, the landowners and the wider community.

Of the 5,600 ha of land involved I would suggest that 70% would be farmed as dairy farms. Since the scheme the production from the area has greatly increased. I know of one farm producing 12,000 kgs⁶²³ in 1972 and last year the same area produced 160,000 kgs Sure I will agre with you technology has improved also but without the surety the scheme has provided over this time it has been a sound base to spring off. These figures prove the immense importance the protection of the scheme provides for the landowners community. Northland' av production per ha is 600/ha.

Taking these production figures on a per ha base @ 120 kgs /ha 1972 to 1600/ha 2009 x 70% of 5,600 ha makes a substantial production increase x \$6/kg and you get 1480kg x 3920 ha x \$6 = \$34.8 Million.⁶²⁴

The location of a large flat very fertile productive area close to all amenities has huge benefits to Whg and surrounding districts – so please Mr Chairman I urge you and

⁶²² McConnells farm was privately stopbanked and pumped long before the NCC Scheme was built

⁶²³ The submitter does not say whether this earlier 1972 figure was Kgs of butterfat or the bigger milk solids

⁶²⁴ Not all farms may have increased by the amount of the farm quoted. Ed

your committee to see your way to grant this consent so as the momentum forward can be enjoyed by generations to come.

Thank you. Edwin Smith.

Consent Granted and not one appeal against it.

It must be said that anybody can make a submission at a resource consent hearing and it is carefully heard in silence with utmost respect. On the day the NRC staff handled the day expertly and the Commissioners were considerate and ensured the process was expertly carried out and recorded. Everybody had the chance to send written submissions, to participate, to be heard and to make any case they wished to make. Occasionally a commissioner would ask a question to clarify a point to ensure they understood what the submitter was intending to convey.

A clear majority of the landowners on the swamp scheme actually supported the application. And so they should have because it cost them over \$600,000 for modeling and data plus \$169,000 to get the consent making a total of three quarters of a million dollars.

Not one single submitter attempted to get the step one crest dimensions altered from the WDC's application and nobody critical of the application had done any research to support their views or to prove possible economic losses resulting from the consent.

The NRC had recently had a report done by its Consultant and Reporting officer Mr. Nigel Mark-Brown. In that report he had recommended that 'step one' be delayed for up to another five years, however he walked over to me just before he spoke to the hearing and told me, "I learned a lot from reading your submission Merv." When he rose to speak the first thing he did was ask for his request for further modeling to be deleted then added, "My opinion on when the spillway adjustments should be made has changed. I consider it appropriate to modify the spillways as soon as possible."

All of the submitters set down for the third and final day of the hearings pulled out and did not appear, so unexpectedly the hearing ended a whole day early. Most submitters on the swamp had officially supported the application.

Several supported the council's application but opposed any changes to spillways which was contradictory. A few did not make it clear whether they supported or opposed the application. Perhaps the one-liner critics had met their match as the spotlight of truth focused on relevant facts. Nobody had known what would be in the two submissions of Ray Hindrup and Merv Rusk. We had also done them fully independently of each other. They were both described by consultant engineer James Blackburn as, "Absolutely excellent."⁶²⁵

Submitters were advised the consent was for a period of 35 years and that any appeal could be made under Section 121 of the RMA within 15 working days.⁶²⁶ Considering the complaining that emerged years afterward it was notable that nobody bothered to appeal within the prescribed period. This is what an appeal period is for. Ratepayers had all been fully informed by the WDC of the main points in the consent application including an intended program of pump replacement⁶²⁷ so there was no excuse to be silent and object later. All submitters were advised of the terms of the appeal period but not even one appeal was lodged. This was not surprising given that the consent was based upon an "adaptive" management approach that allowed for

⁶²⁵ Comment by Blackburn to Merv Rusk after the two submissions concerned had been presented

⁶²⁶ By letter from the Regional Council dated 30th April 2010 with the notice of decision

⁶²⁷ WDC Newsletter to Swamp Ratepayers September 2010

official monitoring of the scheme for a period sufficient to ensure that restoration works were operating fairly. If they were not there was provision to fine tune the scheme further. Who could appeal against built in safeguards as fair as that?

The 2010 RMA Consented crest dimensions.⁶²⁸

Scheme Pocket	Average Apportionment of Total Scheme Overspill (%)	Proposed spillway Level m above mean sea level	Proposed Spillway First Step Crest Lengths m
Junction	5	91.32	155
Te Mata	20	91.30	575
Otonga	23	91.22	670
Mountain	14	91.20	490
Tanekaha	3	91.20	180
Ngararatunua	10	91.11	350
Okarika	25	91.01	940

A SCHEME "OUT OF CONTROL"

Selfish Perpetrators had a Free for All.

At the end of the hearings WDC lawyer Graham Mathias was coping with the challenges of summing up for the council's application when Commissioner Dr. Jeff A. Jones interjected with a perceptive observation, "***What you have here is a flood scheme that is out of control!***" Exactly Dr. Jones! This qualified gentleman was personally very experienced in managing flood control schemes and had a very sharp mind and quickly perceived what had been going on in the Hikurangi Scheme. Mr. Hindrup and I were both pleased that at last somebody was listening and on to it. Overall, the hearing sessions themselves and the Report and Decision of the hearing committee were an indictment on certain landowners, the "perpetrators" it reported, who for years had interfered at every step with the Scheme for their own benefit at other peoples' expense. The consent document⁶²⁹ runs to 48 pages. I include here section 8.3 that summarises both the past and the future. This is reproduced word for word in full as follows. (My emphasis by underlining is added.) The implications of this statement are quite clear, and in the event were quite prophetic.

The Current Non-consented Situation

"Over the years, on the basis of what we have heard and read, it would appear that the scheme has departed significantly from its original concept largely as a result of unauthorized and unchecked modifications undertaken at a good number if not all of the "controlled" overflows or designed low areas of the flood control banks. The control banks were intended to prevent river flooding of adjacent lands up to the then assessed 5 year ARI flood, but allow waters in excess of that to flow into the various pockets or sub-catchments that had been delineated naturally before the Scheme existed. Such overflows were designed to occur progressively downstream on the rising limb of the flood hydrograph above the 5 year flood level as it moved downstream. Each pocket

⁶²⁸ Northland Regional Council Report and Decision Document No 164920 30th April 2010 page 43

⁶²⁹ NRC Doc No 164920

would receive flood waters in proportion to that which would have been received by that pocket had the control banks not been there at all.

We were advised by submitters that unauthorized filling of these overflow spillways, in an effort to ensure that the perpetrator's land received less floodwater, has been going on for some time. Indeed when we undertook our site inspection, we saw, firsthand, where very recent filling of an overflow spillway had occurred.⁶³⁰

It was acknowledged that unintentional departures from the original scheme concept also existed as a result of settlement where the banks were built over old river channels or swamp areas and also as a result of stock damage eroding the levels of the bank.

The proposal is to restore the Scheme to comply with the original design concept where that is necessary. This will be achieved by repairing low areas of the stopbank and re-establishment of the controlled overflow "spillways" by fixing their levels permanently and initially setting the length of each overflow to achieve the original Scheme concept detailed above. We were told by the applicant that this initial length has been established using more sophisticated modeling techniques than that which was available when the original Scheme design was done and with the benefit of some 33 more years of hydrological and hydraulic data which has been collected since the scheme has been in operation.

After the initial re-establishment, it is proposed that following further targeted data collection and refinement of the model that adjustments on the length of the respective overflow spillways will be made as necessary with the intention of achieving the original Scheme concept in reality.

It is our observation that unless some clear control over unauthorized interference with the control banks is achieved then all this will be in vain and the situation will quickly revert to the current situation which appears to be a "free for all" with landowners protecting themselves ultimately at the expense of the less selfish Scheme partners.

The stopbanks are on land owned by the applicant (albeit under some form of lease or license to occupy). The applicant therefore has absolute control over its flood control structures and should exercise that control in the future.

In any case, as a Local Authority, it can clearly control such unauthorized interference by using powers vested in it under Section 232 of the Local government Act 2002. The applicant may well need to fully exercise such power, at least as an example to others, to ensure that the proposed works authorized by these consents can result in improvements to the equity of the scheme and not be simply overridden by locals who disagree with them."

This was a blunt description of what inconsiderate farmers had done to the scheme and their neighbours. It was also a clear instruction to the District Council that it needed to exercise its authority and powers to keep the scheme fair. A WDC Newsletter sent out after the consent process said, "The consent report had some sternly worded statements about informal alterations to the scheme structures over the years. Now the consent is in place, any works undertaken must be managed through the WDC and if any situation arises where this is not the case then legal action may ensue and all costs will be recovered."⁶³¹

This was all a pointed peg in the ground and must have blunted some plans and aspirations, causing an immediate reaction within three weeks. When the Consent Document and report were circulated on the west side of the swamp the sections

⁶³⁰ The commissioner was referring here to the filling on Okarika by Martin Smith

⁶³¹ WDC Hikurangi Swamp Drainage Newsletter September 2010 page 1

containing the comments and warnings above were carefully removed first. Wouldn't we all love to know why that was done?

A CAMPAIGN TO REGAIN CONTROL- OCTOBER 2010.

In October Mr Martin Smith sent the WDC Mayor an email - when Mayor Cutforth was trying to recover from a recent stroke.

Morris Cutforth

From: Martyn and Anne Smith [M_A_Smith@xtra.co.nz]
Sent: Wednesday, 13 October 2010 10:56 a.m.
To: Morris Cutforth
Subject: Hikurangi Swamp Scheme

Congratulations on your success on becoming Mayor Sorry to hit you with issues so early in your term but we have problems that need attention. We had a liaison committee operating for the swamp scheme for many years, through many issues the committee lost direction and disjointed. What's happening now is everyone is running to council with their issues and a lot of time and money is being wasted. The scheme is fully funded by rates paid by the scheme farmers, the council just run the scheme for us. At present we have no input in the running or expenditure on the scheme. We get no summary of how money is spent and where. At present they are in the process of altering spill crest lengths and levels back to original design. Forty years on spill crest have been altered to stop scouring with large volumes of water over short length's, fine tuning over time. No farmer input has been called on. Council has no one with any great knowledge of the scheme with new staff all the time I would like to see the liaison committee reinstated as previous With an strong independent chairperson from council with representative from each pocket from the scheme. All matters to go through the liaison committee stopping everyone running to council all the time. The liaison committee will know what's going on with maintenance and future expenditure, they in turn would report back to their individual pocket farmers keeping everyone informed and nobody not knowing what's going on.

Martyn Smith

0274388793

Thirteen days later Mr Martyn Smith of Okarika pocket chaired a Meeting of a proposed "Hikurangi Swamp Ratepayers Association". The meeting was apparently called to re introduce a form of the Liaison committee, a 'working committee'.⁶³² A booking had been already made to lobby the Mayor.

In a rather inappropriate move Chairman Martyn Smith called for a motion of no confidence in local WDC councilor Mr. Greg Martin, however, nobody would move such a motion so he moved one himself. Cara Lindsay recorded her own account of this meeting as follows:

Meeting of the proposed Hikurangi Swamp Rate Payers Association

Held on 26th October 2010 at 10.00 am at Fonterra Dairy. Jordan Valley.

Present: Judy Imeson, Neville Thorne, Martyn Smith, Ben Smith, Edwin Smith, Cara Lindsay, Greg Martin, Dianne Martin, Phil Hindrup, Ross Finlayson, Graham & Bruce Shaw, Bruce Cutforth, Clim Lammers, Gus Lindsay, Alan Moscrip, Mark Benton, Ian Leeuwenburg, Ken and Ross Finlayson, Simon Donnelly (late arrival), Wayne Sampson (late arrival) Jack Illich (late arrival).

Apologies: Donald Gillett, Pedro McHardy, Kevin Alexander, Luke & Lyna Beehre, Barry Thorne, Robert Olsen.

General Business:

Neville Thorne: Welcomed everyone & said that today's meeting was not about individual issues on swamp, more to get support for a rate payer committee to be

⁶³² Cara Lindsay Report at meeting

formed to get better communication between the Whangarei District Council and rate payers on the Hikurangi Swamp scheme.

Cara Lindsay: read a report thus:

Hi I am Cara Lindsay

My husband Gus and I have farmed on the swamp for the past 15years both in the Te Mata and Junction Pocket.

The reason for calling the meeting today is to get the feeling of farmers on the Hikurangi swamp scheme if we are able to form a working committee to have a voice about the way our scheme is run.

It is a new era in the scheme with a new consent in place and a new council as well as the regional council overseeing the consent

For us as farmers we need to have input into the management and decision making process of the swamp. We are the people that know this land the best and if we don't have our say the council will continue on as they have done in the past with no or very little communication , no accountability for finance records, no asking for our input. We have to have a voice that will be heard and taken seriously.

The Liaison committee that has been running in the past has been disbanded by the council.

Therefore we have to get ourselves organized and working together for the good of the whole swamp. We need to move forward and be proactive.

My suggestion for a working committee to be formed with an independent chair person and a representative from each pocket.

1 The committee will hold monthly meetings and will report our request back to the council through our local councilors and the Mayor. I have booked a meeting with the mayor to make sure this happens and a group from the committee are invited to attend this meeting to ensure we start the lines of communication from the start.

2 We will have a maintenance report from each pocket and identify urgent maintenance that needs to be done as well as ongoing maintenance.

3 A formal request will be made to the mayor that we have monthly financial records of the swamp to be tabled at our monthly meetings.

4 We will discuss the annual management plan from the council and review it that it is within the guidelines of the consent itself.

5 That we can submit in writing to the council our ideas towards the annual management plan

6 All records will be kept and minutes will be recorded in a professional manner.

7 Any other topic that the committee sees fit to discuss.

There is a lot of history to the scheme and there has been a lot said and done.

We need to move forward, we need to be organized and professional.

I can see our committee being very successful if people get on board and work for the betterment of all included.

The following were discussions held:⁶³³

*Edwin Smith: Definitely need a voice;*⁶³⁴ *Work has been carried out ad hock; Time to rattle some cages & get some stuff done.*

Neville Thorne: Everyone united on this; Communication through pocket representative.

⁶³³ These are the interpretations and descriptions as written up by Cara Lindsay

⁶³⁴ Mr Smith had been Liaison Committee chairman and had plenty of influence over many years

Martyn Smith: Through committee, getting things done collectively; No bones to pick – one; Need to be chaired by strongly independent Chairperson.

Bruce Cutforth: Personally was not in favour of replicating what we have had in past; Better way to communicate with Management Team; Clear separation/Governance/Management; Council; show schedule of meetings; Liaison committee incredibly polarised; Need to pull together and optimise scheme; Council need to take role; ill advised to reform.

Gus Lindsay: Last meeting with council was a shambles; Just a shit fight.

Cara Lindsay: Hearing the same page; 40-70 people don't get your voice heard; Bigger representation of swamp scheme; Communication is good.

Bruce Cutforth: Personal views have been formed over last 20 years; Deliver long term, wide sector funding greater swamp scheme. A swamp liaison committee in the past has been only focused on individuals' vested interest. No work has ever been carried out above SH1 and I am paying B class rates.

Neville Thorne: If farmers don't have interest in scheme what do we want from things.

Judy Imeson: Right person as chairperson – Kim Robinson – must be an independent.

Edwin Smith: Fine having everybody involved – how do you decide what drain to spray? Scheme has been offered back to A & B rate payers in the past and at the time was rejected; If we don't take ownership we won't go forward.

Greg Martin: From his point of view would be good to have a group informing council; stop witch trails; Pumps etc has been discussed at last public meeting and from that council took that a 33% rates increase was approved; Council has planned for a meeting on 16th November 2010 will now be 21st November 2010 as important council staff are away. New council have bigger issues in town with wastewater so swamp may get put on the backburner.

Cara Lindsay: Council have responsibility to produce a Management Plan by 30th November 2010. To date, no ratepayer at the meeting had even seen a draft copy to comment on it. Really questioned council's willingness to communicate.

Greg Martin: This is how council works and all will be revealed on the 26th of November.

Neville Thorne: Big issue in town; got to keep onto it.

Greg Martin: Thinks money is being spent wisely. Comment made that there is no more money to spend on scheme once it has run out and jobs get lowered down the list and will not get done if there is no budget left. That is how council works.

Comment was made that no work had been done on the downstream part of the scheme for 30 years. Council were currently tendering to get this work completed as it is seen as a major impediment to water flow from the current scheme.

Neville: Disagreed with Greg. Had personally completed work in the last 10 years to clear waterway.

Are we in agreement to form committee in A & B class rates?

Phillip Hindrup: Who in last 12 months has not had drain cleaned or maintained?

Gus: Took 18 months to get the bank repaired in Junction pocket after repeated requests to Dave Martin to fix. We have no direct voice!

Martyn Smith: Engineer change creates longer time to change. Took 6 months to get approval to lift ban on Okarika pocket. Even then was accused of changing banks and had to remove earth.

Clim Lammers: Everyone has ways to improve the scheme. Am sure that some common sense approach to getting to job done could save some money and get a workable scheme.

Neville Thorne: Talked about how he was on the last liaison committee and went on there to clear the bottom of the scheme. Physical removal of trees at the time was decided not to be cost effective and Neville was involved in going down the river in a boat and injecting willows to remove them from the main river.

Clim Lammers:

Greg Martin: cleaning of downstream, exactly what needs to happen.

Neville Thorne: Described how they cleared willows.

Greg Martin: 30 years of growth; rates were increased to cover cost of 30 years.

***Martyn Smith:* Called for vote of no confidence in Councillor Greg Martin**

Moved: Martin Smith Seconded: Cara Lindsay

Motion not carried as not voted on.

Graham Shaw: Everyone has an opinion and to target one councillor was unfair.

Ross Finlayson: Most unfair to target Greg.

Gus Lindsay: Want work; want to be rich; everyone wants the scheme to work.

Greg Martin: Can't win.

Martyn Smith:

Motion:- We will form a working committee to represent the farmers on the Hikurangi Swamp & the committee will decide on the guidelines of the committee & these will be brought back to the ratepayers.

Moved: Cara Lindsay Seconded: Judy Imeson. Motion carried 13 to 5

Neville Thorne: 7 pockets; No decision on representative for people above State Highway 1; Waitou pocket want to discuss representative.

Committee members:

Simon Donnelly: Not a lot has happened; possible problem.

Mark Benton: Like to see all concerns heard through committee.

Phillip Hindrup: Council has been too shit scared to do anything for last 20 years as the swamp has gone backwards. Time to remove the old wood and get on with the job.

Cara Lindsay: Work together; Must stop bickering about the past and get on with the future.

Simon Donnelly: Acknowledgement that things have not been done correctly; District representative.

Neville Thorne: Old committee members to contact each rate payer in their pocket and get a representative for each pocket.

Next Meeting: Friday 5th November 2010 at 10.00 am – Fonterra (Jordan Valley Road)

Agenda: To include the election of officers.

Meeting Closed: 11.03 am

The elderly "Father of the scheme" who had given much of his lifetime working for the scheme felt such meeting behaviour was disgusting and said he would no longer be part of that committee. Mr. Ross Finlayson believed it was very unfair of Mr. Smith to attack Councillor Greg Martin.

"Minutes" were sent out by Ben Smith of JV Farms two days later but the following email from Councillor Greg Martin ⁶³⁵ was promptly sent to Smith:

"Hi Ben, would you please record that I do not believe the minutes of the meeting at the Jordan Valley Farm on Tuesday 26th October 2010 to be a true and correct record of

⁶³⁵ Email of 3rd November 2010 at 8.23 pm

statements made by me. Comments made by other people, while I was speaking, have been attributed to me.

Thank you.

Greg."

Second Meeting of Ratepayers Group 5th November 2010.

Martin Smith chaired a second meeting of the same group ten days later, but not surprisingly only a handful of people turned up, as support had rapidly declined. The personal attack on councilor Greg Martin had not been well received and the motion was still on the table. Martyn Smith then withdrew his motion of no confidence in WDC Councilor Martin.

The meeting ended and certain Committee members went home and got busy lobbying landowners to turn up the next WDC Public Swamp Forum to try and use that forum to force a Liaison Committee back into being. In the meantime they would lobby the Mayor who was still trying to recover from his recent stroke.

The Mayor is lobbied.

In a further effort to reassert control Martin Smith and others met with and lobbied the WDC Mayor.⁶³⁶ He took along Neville Thorne and Cara Lindsay. This meeting was also attended by Deputy Mayor Phil Halse, and the two Hikurangi Ward councilors including Clr Martin. Mr. Smith told the Mayor that, "Everything is harmonious and well supported." This was just after moving a motion of no-confidence.

The group wanted to have two farmers representing each pocket, *"because it had worked so well in the past."*

They talked further about drains, trees and pumps. They claimed that 'everyone' had voted to replace all the scheme's pumps. Also they told the Mayor that, "The whole swamp is in dairy farming and that's where the money is." That claim was patently incorrect. Thousands of hectares are in bull beef raising and other beef industry farming. Even Martin Smith's own brother had pointed that out.⁶³⁷

Then I started to receive numerous phone calls from concerned farmers worried that control of the swamp scheme might revert back to the kind of committee that had manipulated management and unfair flood distribution in the past. The words of the two consent hearing commissioners' echoed again, *"....It will all be in vain unless the council exercises control..."*

Public Forum at Fonterra Dairy. 29 Nov 2010

The previous year the WDC had decided to hold regular open meetings with landowners to allow two way open two way communication and planning to work together between all parties involved in the swamp scheme.

The first meeting was held on 29th November 2010 at the Fonterra Dairy conference room Jordan Valley Road.

The WDC staff minutes read as follows overleaf:

⁶³⁶ 8th Nov 2010 Forum North

⁶³⁷ Edwin Smith's submission to the Hearings Committee March 2010 said 70% dairying not 100%

WDC staff Minutes: Public Forum – Hikurangi Swamp Scheme

Facilitator Simon Weston

Purpose Open forum between the Whangarei District Council and Hikurangi ratepayers to discuss the Hikurangi Swamp Scheme

Present Simon Weston (facilitator), Andrew Carvell, Conal Summers, Shirley Turner (minute recorder), James Blackburn, Cr Phil Halse, Cr Greg Martin and 20 members of the public

Apologies

Simon Weston opened meeting with introduction of staff and representatives from Whangarei District Council, and a powerpoint presentation. Items discussed as follows; a copy of the presentation is attached.

Item	Description/Action	Who
Resource Consent Update	<ul style="list-style-type: none"> Prior to the meeting a copy of the draft initial scheme management plan was distributed to ratepayer group (11.11.2010) available for comment. Simon Weston advised that only a few comments had been returned. <i>Note: A few present had not received a copy but were advised that it was available on the WDC website.</i> ISMP submitted to NRC for comment (8.11.2010) NRC indicated (24/11/2010) that apart from one minor change the ISMP is satisfactory. <p>Next consent deadlines;</p> <ul style="list-style-type: none"> May 2011 – Floodway Riparian Management Plan – in conjunction with Northland Regional Council. May 2012 – complete Scheme Management Plan Oxbow/cut-off Management Plan – in conjunction with Fish & Game Council. Fisheries Management Plan – in conjunction with Niwa. 	All

Initial Adjustments	Spillway	<ul style="list-style-type: none"> • Tenders were invited from 5 companies after determining that they could meet the accuracy required. • 3 tenders were received ranging \$240k - \$318k • Contract awarded to McKenzie Earthmoving Ltd • Works to commence next week (Monday 6.12.2010) in Ngaratanua pocket • Cost estimates received for stopbank adjustments – slumping in almost every area. • Estimated value \$365k (includes fencing) • Costs can be covered from the capital (\$828k). WDC allowed for pump replacements in this years annual plan. 	All
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Simon Weston opened the floor for discussion.

Ben Smith	Will the spillways be done before the bank top-ups?
James Blackburn	Looking at bank top-ups being done in conjunction with spillways
Ray Hindrup	Why is work starting as Ngaratanua? Wouldn't it be better to start cutting banks down at the top of the scheme downwards?
James Blackburn	Ngaratunua was prioritised due to the bulk of earthworks, then work up to the top of scheme – but a programme from the contractors will be provided.
Simon Weston	Pump replacement likely to be deferred to do earthworks this financial year. Funding to come from capital borrowing.
Phil Halse	Council was not prepared to borrow more money to fund pumps this year. Council debt currently \$144 million. Hikurangi Scheme is in debt and this shows as a WDC general debt.
Diane Martin	Cleaning out rivers needed? Was there a programme when this would be done?
Conal Summers	Arial spraying in the next two weeks – Ben Smith advised that the spraying was done on the weekend (Saturday 27.11.2010)
Bruce Cutforth	What are the spraying plans? Spraying north of SH1 needed to be done urgently.
Conal Summers	SH1 area had not been done traditionally. Conal to look into.
Simon Donnelly	There is extensive willow growth approximately ½ k/m north of the Waiotu Bridge. Spraying alone allowed the roots to remain. Suggested possibility of using ringbarking and poison but supported spraying due to financial limitations.
Evan Smeath	The willows needed to be removed urgently below/above state highway and that WDC needed to take a look as a priority.

Item	Description/Action	Who
Scheme Finances/Operations	<ul style="list-style-type: none"> • Support to spray only due to financial limitations and cost of physically removing trees. • Scheme has moved into the red over last 5 years, largely due to pump failures. • Resource consent costs totalled \$169k (NRC costs \$82k of this figure) • Cost for EOL (Dave) on scheme \$40-50k per annum. • As of 1 December the scheme maintenance is undertaken as part of the WDC Stormwater & Wastewater Maintenance Contract – awarded to Transpacific Industries. • Financial Information is available on request. • Rate increases to cover scheme costs 	All

Questions from the floor

Bruce Hayes	Rate system needed a review as the benefit is not be felt by all. Believes that those who would benefit should pay – possibly look at wider Whangarei district to contribute
Simon Weston	Councils resisted doing a review. Rate system set up in 1972. Could take this back to council (Phil Halse).
James Blackburn	The rating scheme is set through parliamentary review and would be an extensive exercise to amend.
Evan Smeath	WDC needed to go back to how the original rating was set and what the scheme was like.
Simon Weston	Provide background of where income comes from as part of financial details. Need to take in original basis for rating charges.
Bruce Cutforth	The key tension is the inequity of benefits/costs. Clear dialogue was needed to facilitate the programme. Historically it has been too difficult to deal with. Now needed to look at the challenges of cost/benefit and move forward.
Cara Lindsay	Confirmation of actual costs for EOL (Dave) was appreciated. Asked with the new contractor who would now be on their properties
Andrew Carvell	New contractor is looking at bringing EOL staff across. Employment negotiations underway. WDC is looking at contingencies for experienced operator to be available.
Cara Lindsay	Explained that there was a call previously for a liaison committee as they wanted the accurate information on paper and to get the dialogue going with council this was confirmed by Gus Lindsay.

Simon Donnelly	Read out a personal statement – the liaison committee was a representation of themselves and that a 6 monthly open meeting with WDC was all that was needed. Farmers needed to stop touching the bank and that overgrazing and pugging should be monitored and cost charged back to the farmer.
Ray Hindrup	Believed the committee was a vehicle to distort the scheme and couldn't think of any positive outcome from it – believes that an open forum would be more beneficial and that everyone needed to support council to address the resource consent requirements and move forward.
Simon Weston	WDC looking at fencing off spillways and monitoring spillways and stopbanks during the year. Lease conditions to assess the management of the banks
Conal Summers	The new contractor to be more pro-active in monitoring the stop bank condition.
Ben Smith	Association to help bring forward farmers issues to be raised.
Ray Hindrup	Reporting/meeting/communication should be in management plan.

Item	Description/Action	Who
Queries on the Scheme	<ul style="list-style-type: none"> The resource consent requires WDC to record and responds to all enquires and complaints. WDC currently has a CRM (Customer Response Management) system which logs all calls and requires acknowledgement of the issue within the system in 2 days and resolutions (or a reason for a longer resolutions) within 17 days. Categories for the scheme have been specifically setup. Email or written queries would be preferred. It was advised to the forum to use the CRM system to ensure action/logging of their concerns 	All

Item	Description/Action	Who
Other Business	<ul style="list-style-type: none"> It was agreed that the 6 monthly meetings would be setup for a open forum to discuss the Hikurangi Swamp Scheme – meetings in-between if a contentious issue is raised and that all members are invited. 	All
	<ul style="list-style-type: none"> Copy of minutes to be provided to attendees along with detailed background of the financials 	Conal Summers
	<ul style="list-style-type: none"> Phil Halse – Hikurangi Swamp Liaison Contact 	Phil Halse

	<ul style="list-style-type: none"> Discussion took place regarding the better options of aerial or level sensors, and regarding staff gauges. 	All
	<ul style="list-style-type: none"> Next meeting discussion on how to get scheme to its potential 	All

Meeting closed at 12.00pm

Next meeting – To Be Advised

List of Attendees: Public Forum – Hikurangi Swamp Scheme

Name	Address	Phone Number
Ray Hindrup	Mountain View Rd, PO Box 37, Hikurangi	09 433 8041
Steve Philp	Fonterra, 80 London St, Hamilton	021 809 212
Mike Collins	Hukerenui Road	021 986 063
Earl & Sally Lindsay	143 One Tree Point Rd, One Tree Point, Ruakaka	09 432 7480
Peter Keatley	Hukerenui Road	09 433 9862
Graham Shaw	216 Rushbrook Rd, RD1, Kamo, Whangarei	09 433 5632
Merv Rusk	Marua Rd, RD1, Hikurangi	09 433 8182
Evan Smeath	White Rd, RD2, Hikurangi	09 433 9723
Martyn Smith	98 Heaton Rd, RD2, Hikurangi	09 433 8326
Bruce Cutforth	17 Whananaki North Rd, RD1, Hikurangi	09 433 8767
Alan Moscrip	339 Waiotu Block Road, RD2, Hikurangi	09 433 9912
Simon Donelley	RD4, Hikurangi	09 433 9973
Glen Martin	Rushbrook Rd	09 433 5753
Ben Smith	RD2, Hikurangi	09 433 8371
Judy Imeson	RD2, Hikurangi	09 433 8986
Ken & Ross Finlayson	RD6, Whangarei	09 437 0441

The WDC records items for staff action and does not necessarily record comments. Not knowing if the meeting would be taken down I took along a notepad and recorded the meeting comments for good measure.

Author's Notes taken at the Public Forum

AT FONTERRA JORDAN VALLEY DAIRY AT 10:30 AM 29TH NOVEMBER 2010 TAKEN DURING THE MEETING BY MERV RUSK.

The Chairman, WDC works and Services engineer Simon Weston welcomed people and introduced staff members. The meeting was part of the regular series to have dialogue and keep ratepayers informed.

PRESENT: Deputy Mayor Phil Halse, Andrew Carvel WDC, Conal Summers WDC, consultant James Blackburn and 29 or more ratepayers including:

Ray Hindrup, Phil Hindrup, Mike Collins, Steve Philp, Earl Lindsay, Sally Lindsay, Peter Keatley, Graham Shaw, , Evan Smeath, Martyn Smith, Bruce Cutforth, Alan Moscrip, Simon Donelley, Glen Martin, Ben Smith, Judy Imeson, Ken Finlayson, Ross Finlayson, Jack Ilich, Cara Lindsay, Gus Lindsay, Merv Rusk, Bruce Hayes, Greg Martin, Diane Martin, Robin Olsen, Robert Olsen, Mark Benton, Wayne Sampson. (A number of people did not sign the attendance list at the door.)

AGENDA:

Chairman Simon Weston outlined the agenda: The consent process. Spillway reconstruction. Finances. Pump replacement program. Queries. Any other matters. Agenda items were detailed on overhead projection through the meeting.

MANAGEMENT REPORT:

Mr Weston outlined the report adding that "Almost no comment has come in." He outlined consent deadlines being May 2010 for the floodway and May 2011 for the complete plan.

SPILLWAY CONSTRUCTION:

"Five firms were invited to tender and three did so. McKenzies were the successful contractors. They start I one week from today." James Blackburn reported that Ngararatunua crest would be done first. Mr Weston said that the cost of \$350,000 for reinstatements of crests will come out of the pump replacement budget and that the crests will be done before pump replacements.

Mr Ben Smith (Tanekaha) asked, "Before the pumps? Everyone wants the banks topped up but we want the pumps done."

Ray Hindrup (Otonga), "You need to start at the top end, it is common sense and will immediately improve the scheme. Doing Ngararatuna first will just back water up into other pockets. Ngararatunua only overflows 400-500 metres so you don't have to fix very much."

James Blackburn: "Yes 400-500 m is right. We will then work from the top down. The reason is that Ngararatunua is the largest fill job and needs to settle as soon as possible."

Martin Smith (Okarika) asked again concerning pumps. Mr Weston replied that the scheme is in deficit.

Martin Smith (Okarika) then asked, "When will the pump replacements start?"

Deputy Mayor Halse: "The first priority is to fix the inflows. Pumps are next on borrowed money. Debt is capped for WDC at 144 million dollars. We cannot say today in year 1, 2 or 3 we will do this or that."

Chairman Weston commented: "There will be WDC borrowing."

Di Martin (Ngararatunua): "What's the story with river clearing?"

Conal Summers: "We are spraying willows now."

Ben Smith (Tanekaha): "A cattle crossing has been put across the river below Purua bridge. You need a committee with local representatives to let you know these things."

The meeting dwelt for some minutes on willow clearing.

Bruce Cutforth (Upstream Whakapara): "Spraying willows needs to be done above state highway one.

Simon Donelley (Otonga): "There are also quite a lot of willows below Waiotu SH1.

Evan Smeath (TeMata): "The willow trees need removing on the Waiotu with a digger."

Ben Smith (Tanekaha) : "We've got a committee all ready."

FINANCES: These were shown in detail on an overhead and also a handout .

Chairman: "Over the last five years the scheme has gone into the red. \$169,000 for the consent, and \$82,000 because of pump failures. The field officer Dave has cost \$50,000 pa.

From 1 Dec maintenance is a part of WDC Stormwater management."

The chairman explained that "The scheme is \$850,000 in the red."

PUMP UPGRADES:

Cara Lindsay (Te Mata): "Who will be on the swamp?"

Chairman: "Probably Dave (the present field officer)".

Gus Lindsay (Te Mata): "We should be doing the pumps first."

James Blackburn: "For the last ten years it's been about fixing the scheme and getting it to work as it was designed to do, then we will move on to the pumps."

Chairman: "The pump upgrade strategy is in place but on hold. There's a need to pay off existing debt. There is \$820,000 in the WDC 2010-2011 annual plan. The short story is rate increases."

Bruce Hayes (upstream Tapuhi): "There is no benefit for those further afield. There needs to be a rate review."

James Blackburn replied: "Down south in other areas when the rating was challenged the charging of upstream ratepayers was upheld in court."

Bruce Cutforth (upstream Whakapara): "We don't want a slanging match and tension. Proper dialogue would go a long way if we are brave enough to build a solid basis."

Ben Smith (Tanekaha): "A lot of people don't understand it is information that we need."

Evan Smeath (TeMata) : "We need to go back to the prior scheme."

QUERIES ON THE SCHEME:

The chairman Simon Weston explained that the council is required to record and respond to all complaints and he outlined to the meeting the timeframes and how the process works.

OTHER BUSINESS: RE HAVING A LIAISON COMMITTEE AGAIN.

The chairman explained "There has been comment about having a liaison committee and having meetings like this one. The council wants your thoughts on this."

Cara Lindsay (TeMata) "We held a meeting to see if there was a need (for a liaison committee). "We don't want the bits and pieces heard, we want to get dialogue so you hear us."

Simon Donnelley (Whakapara/Otonga) read a written statement as follows:

"Now council has a mandate to work to as far as spillway crests are concerned farmers need to keep their noses out until this process has been undertaken."

"The scheme would not be in the mess it is today if farmers had not fiddled with the stopbank crests. Even in recent years there has still been fiddling with the stopbanks going on. I believe the newly formed self elected group, calling themselves the liaison committee, is a group representing themselves. Because of this I think they should not be called the liaison committee. In the past this group has always worked for their own interests. I have been on this committee before and seen how it operates. I don't see why we can't meet with council like we are today, twice yearly, and have an open meeting to discuss current issues. Grazing licenses: Council needs to take a hard line on farmers damaging stopbanks through over grazing (pugging) in wet weather or in any other way. An independent contractor should be employed to repair the damage and the cost charged to that farmer."

The Chairman Simon Weston replied, "Our intention is to fence crests from stock damage. We were asking what you thought of a liaison committee."

Ray Hindrup (Otonga): "The Liaison Committee has been the vehicle to wreck the scheme. Here they are today shrinking because of the debt they have caused. We have to work together to move forward together."

Gus Lindsay (TeMata) : "The past hasn't worked in the Liaison committee, we just need information."

Ben Smith (Tanekaha): "I agree with Ray. There are gaps in the blades of the Junction pump. I want to open issues."

The Chairman commented: "Please contact Conal if you have issues."

Ben Smith (Tanekaha) : "He was away for three weeks. We are broke."

Simon Donelley (Whakapara/Otonga) : " With this kind of meeting today do we need a liaison committee?"

Cara Lindsay (TeMata) "I agree with (Simon Donnelly) . If the council is going to have meetings like this today we don't need to have a liaison committee."

Simon Donelley (Whakapara/Otonga) "The stuff about Dave's (the field officer's) salary is just an example of liaison committee misinformation."

Conal Summers WDC staff offered , "People are always welcome to look at information."

Cara Lindsay (TeMata) : "I want information."

Conal Summers: "You have never asked."

Bruce Cutforth (Whakapara) : "I came to look forward not to look back. I would not want any group other than this one. I don't want any other group involved."

Ray Hindrup (Otonga): "This needs to be part of the management plan."

Chairman Weston: "I take it we will have two meetings a year and no liaison committee."

Martin Smith (Okarika): "If a contentious issue comes up there should be more meetings. As far as this kind of meeting goes I am all for it."

Deputy Mayor Phil Halse spoke regarding funding. He outlined the need for the recent rate increases and that a large part of the cost on the consent was for legal costs. Then there have been increased power charges for pumping. He added, "The biggest damage you can do is send lobby groups to the Mayor." Mr Halse outlined legislation regarding rating. Then he said "We all need to cooperate." (Referring to a recent attempt to pass a vote of no confidence in the local councilor) the deputy Mayor mentioned representation saying, "Regarding councilor Greg Martin he is the right man for you in the right place at the right time. Don't bite the hand that feeds you."

Martin Smith (Okarika) "Do we have to maintain the river and what is the NRC's responsibility?"

Conal Summers: "The NRC may have some responsibility below Purua Bridge."

The Chairman asked if there were any other matters.

Councillor Greg Martin: "Level recorders have failed in the past, helicopters with photos work better."

Ray Hindrup (Otonga): "I want to make two points. People have commented that I've been negative. I am letting you know that we have turned our attention to what is required to bring the scheme up to the next level. "How high should the banks need to

be to get the five year floods like cyclone Fergus under control?" The second issue is obviously that the scheme is broke. It's going to be hard. If we want to push the scheme ahead we need to do this, how do we get the scheme up to where we want it?" "Hopefully we can talk about this next time we meet."

Mr. Halse Deputy Mayor spoke about "change per se in general" adding, "We the WDC need to get together with farmers and highlight farmers' contribution to the local economy."

Chairman Simon Weston then asked the meeting for a response to his question, "In a perfect world who would put new pumps in (right) now?" Affirmative by a hand vote were Martin Smith, Ben Smith, plus eight others including several of the wives. The total represented about a quarter of those ratepayers present.

Chairman: "Will we close now?"

Bruce Cutforth: "I'm looking forward to some (progress) and working together."

Bruce Hayes: (Tapuhi): "Can we all have meeting notices sent out please?"

Mr. Weston closed the meeting at approximately 12 noon.

Another Campaign to Delay - Dec 2010

Again the Commissioners' warnings about interference had been timely. Yet again some west bank landowners promptly tried the old ploy of causing confusion and criticism of anyone who wanted the scheme returned to what it was meant to be. Criticism, sometimes personal, was the order of the day.

WDC staff became exasperated in having to deal with a time wasting deluge of email that contributed nothing but cost swamp ratepayers tens of thousands of dollars in processing demands and replies. The council simply had no option but to fulfill the requirements of the resource consent that stated the work was to be completed by the first day in May 2011.

As the Resource Consent had stipulated, the Repairs to the Scheme were to be done in two or more stages. Step One was to return the inflow crests to as close as possible to original design to get the correct distribution shares. After sufficient flood events and monitoring any fine tuning required would be carried out.

The two stage process offered a fair result to all parties and pockets with the opportunity to have the scheme adjusted pending any further need. But ignoring this, as crunch time loomed to start work on the inflow crests, a collusion of opponents gathered together and it all got messy.

The restoration work was delayed and there were arguments and counter arguments and much confusion generated. James Blackburn rang Ray Hindrup to say he had been 'fired' by WDC as their supervising engineer,⁶³⁸ however, he continued working for the same consultancy firm. James probably knew his work better than anybody else and while he may possibly have been targeted by those lobbying to keep the inflows how they had been and suffered for it, his loss was unfortunate. Probably he continued doing all the backroom work anyway and later told the author he was relieved to be out of dealing with the 'west side' landowners.

⁶³⁸ On or about the 9th December 2010

RESTORATION WORKS BEGIN JANUARY 2011

Nine months after the consent was given earthworks began on fixing the inflow crests in early January 2011. The contract had been signed with McKenzie Contractors on 19th October 2010 for \$275,865 including fencing. The job was contracted on an hourly rate and price per cubic meter which ensured the contractor would not be sent bankrupt by any obstructive tactics as in the past. As explained to the landowners⁶³⁹ the consulting engineers instructed McKenzie Contractors to start on Ngararatunua bank first as it had the most filling that needed to consolidate before winter.

Unfortunately in January work was interrupted by a large rapidly concentrated flood on the swamp from only nine hours of very steady rainfall totaling 255mm.⁶⁴⁰ At the Whakapara Cableway site Maureen and I watched heavy overspilling bury the stopbanks and adjacent farmland in less than an hour. In Ngararatunua pocket the peak level reached slightly higher than the legendary Cyclone Bola of March 1988. At the request landowners and in a move that generated controversy the District Council CEO and staff authorised some four pockets to be cut open to let water escape sooner, hopefully in time to save grass and maize crops etc. The costs of the stopbank cuts were much less than the electricity saved. Power savings were quoted at \$4600 per day⁶⁴¹ theoretically paying for the cuts but the flood delayed reconstruction work for weeks.

Mr Bleakly of Ngararatunua pocket estimated 90% of his maize was saved and other crops were rescued but strangely the criticism and email campaign criticizing the council increased. Contractor Darren McKenzie was repeatedly needled, insulted and was made the target of sarcastic remarks as he worked on the crests.⁶⁴² A long established farmer from TeMata pocket drove a large tractor over to councilor Martin's house⁶⁴³ where he criticised the Martins adding, "You won't be cutting my f.....g bank down." Mr Martin said he was even blamed for causing the rain.

A well known swamp identity phoned Councilor Martin's wife Diane to make unfavourable verbal comment about her husband.⁶⁴⁴ The flood plus the hassling and confusion added to delays on the restoration work which was now running so late it risked not being done before winter and the deadline.

Threats of Death, Violence and Sabotage

Reformers are targeted the world over. Considering that some tens of millions of dollars had been effectively transferred since the scheme was built and altered it was not surprising that some people would react toward anyone who stepped up to make the scheme work fairly. For many years anybody who tried to speak up and fix the scheme had been ridiculed and sometimes vilified. Although I had permission I had once been accosted outside the Tanekaha pump station when measuring water levels. On that occasion⁶⁴⁵ I had come close to having my lights punched out by an angry person who came up close in a threatening manner with white knuckles and an arm cocked making verbal threats about me being on Council land. The staff gauge had long fallen down so I had been measuring water levels from a submerged NCC

⁶³⁹ At the meeting of 29th November

⁶⁴⁰ The end of Cyclone Wilma 29th January 2011 a large flood from unusually concentrated rainfall

⁶⁴¹ Works and Services Chief engineer Simon Weston to Swamp Forum 30th March 2011

⁶⁴² Interview with author 3rd May 2011

⁶⁴³ 2nd February 2011 the time of the large January flood

⁶⁴⁴ Phone call (identity logged) to Dianne Martin 9.30 pm 4th February 2011

⁶⁴⁵ June 2002 flood event at Tanekaha station Sunday 23rd June 4.43 pm

benchmark pin. Mr Ray Hindrup stood un-noticed under a tree watching the spectacle. The man walked away when an electrician's vehicle approached.

One day on his stopbank Mr. Ray Hindrup met a neighbour who was grazing land next door. When the man got off his bike and came forward with a hammer Mr Hindrup disarmed the man and heaved the hammer into the Otonga canal. Mr Hindrup called the local Police and Constable Gavin Benny attended.⁶⁴⁶

At a dairy company function at Fonterra Dairy Jordan Valley, violence was averted when Councilor Martin heard a cry and looking behind saw a landowner coming at him with a weapon so he placed a chair between them and talked the man into calming down. A death threat was made toward the councilor but although the police visited the man Mr. Martin chose to let the matter pass by rather than press charges.

The Mayor Mr Morris Cutforth was at his first function since a stroke and was confronted by man who made a death threat concerning Councilor Martin. Police were later involved at the request of the Mayor.⁶⁴⁷ Criticism of councilors continued as did numerous harassing emails to staff. A pointed threat was made to a contractor by a farmer, "If you bring your gear onto my bank I'll sabotage it."⁶⁴⁸

The illogical thing about some of the above incidents was that they were made by people who wanted a Liaison Committee back so they would be able to communicate in an more effective and friendly way, but some of the tactics demonstrated the exact opposite of good liaison.

Then things went to a new level.

PROTEST AND BLOCKADE

The Farmer Protest 11th March 2011

An attempt to halt the review of the scheme and its restoration using a protest and blockade was organized by Mr. Ben Smith of Tanekaha pocket.⁶⁴⁹ He was supported by individuals of the would-be committee that wanted to re-assert control of the scheme.

⁶⁵⁰ Mr Neville Thorne parked his tractor and effluent spreader across the Ngararatunua pump station deck to block earthmoving contractors from working. This was reported with a photo of Mr. N. Thorne in the NZ Farmers Weekly 12th March 2011. Local newspaper, the Northern Advocate, wrote the following story under a black headline.⁶⁵¹

Farmers in Spillway Standoff

"Protesting farmers forced WDC contractors off a repair job on the Hikurangi Swamp Scheme. Farmers are angry at how the WDC has managed the complex (scheme) and over runs in costs of maintenance. More than 20 farmers⁶⁵² gathered at (Ngararatunua) pump station yesterday morning parking a tractor and effluent spreader on the (pump station deck bridge) to stop contractors working. The farmers are calling for the council to reassess how it is spending rates collected for flood

⁶⁴⁶ Interview with Mr Hindrup

⁶⁴⁷ Mayor's letter to Paul Dimery Chief of Police

⁶⁴⁸ At the 11th March 2011 protest

⁶⁴⁹ NZ Farmers Weekly 21st March 2011

⁶⁵⁰ See pages Forum meeting of 30th March 2011 and A Campaign to Regain Control

⁶⁵¹ FARMERS IN SPILLWAY STANDOFF The Northern Advocate 12th March 2011

⁶⁵² Quite a number of the farmers present supported the council and the scheme's restoration

control. They are concerned money is spent raising some stopbanks and not others. Others concerns related to the allocations (inflow shares) of overspill.”

The CEO Mark Simpson, Deputy Mayor Phil Halse, and consultant engineer Peter Geddes agreed the repair was \$130,000 over budget saying the scope of the job had been extended. Mr. Geddes said the council is doing the job properly because there have been too many patch-ups all through this system.

At a protest earlier in the day a petition was circulated asking that all capital works be stopped on the scheme for a week and a full review made. They claimed every time they had requested “full financials” over the past two years they had been ‘stonewalled.’

Records show in 2005 the HSMS was \$220,000 in the black but now was \$908,000 in the red. “It is driving us broke,” Mr. Thorne said. “We are trying to do this to budget but the council is just spending our funding”.

Mr. Thorne said a (Liaison Committee) of local farmers was disbanded in 2005 and council took full control.⁶⁵³ Some of the farmers present wanted some control back. Ben Smith said over-runs could see a rate rise of more than 70% to fund the shortfall. He said since 2009 rates had increased 25% with no significant physical management changes in the scheme.”⁶⁵⁴ However, quite a number of farmers present quietly supported the council in repairing the scheme and did not support the protest. Nobody had complained about the Council’s successful \$1.3 million maintenance program spanning the seven years from 1994 to 2001.⁶⁵⁵

In the *New Zealand Farmer’s Weekly* journalist Hugh Stringleman reported as follows on the fiasco.⁶⁵⁶

Opposed to Swamp Plan.

“Farmers have risen up in arms from Northland’s Hikurangi swamp to dispute WDC’s management of the 5,000 ha flood protection and drainage system. They believe they are trapped by huge scheme maintenance needs and rising targeted rates, plus large regrassing costs following the late January 200mm downpour when lingering floodwaters killed 2800 ha of pastures. Big farm tractors were parked across the narrow access to prevent earthmoving contractors completing what farmers allege is a botched remedial job with huge over-run.” It was 1978 all over again.

The police were called and attended and Whangarei’s acting Mayor, Phil Halse, and chief executive, Mark Simpson, addressed angry farmers on the facts of life under the Resource Management Act, special purpose rating and the age and condition of the drainage infrastructure.

Engineering consultant to the WDC Mr Peter Geddes put a sensible case for planned maintenance works instead of “patch-ups “as in the past. “There is no point in doing a half-pie job and chasing ourselves around the swamp in future,” he said.

He defended cost over-runs, saying the bank profile and compaction necessitated more soil than first estimated.⁶⁵⁷

Halse and Simpson said that the RMA now meant that people outside the swamp and downstream on the Wairoa River as far as Dargaville, had submission rights also.

⁶⁵³ This is a rare admission that their Liaison Committee did in fact control things

⁶⁵⁴ He ignored the pump repairs, new pumps, and earthworks to restore the scheme

⁶⁵⁵ HSMS Liaison Committee minutes 18th April 1994 pg 2

⁶⁵⁶ NZ Farmer’s Weekly 21st March 2011

⁶⁵⁷ Government legislation now requires higher specifications for stopbanks in NZ

"The resource consent gives the scheme a licence to operate, which you must have these days."

The protestors claimed that Fish and Game type submitters wanted to see the whole swamp revert to protected natural areas and Northland would lose the \$40 million annual milk production.

The Management Plan, included in the recent resource consent, says stopbanks and spillways have to be brought back to original design levels of 40 years ago. Farmers think this resulted in the limited rates income being spent on elaborate projects while more pressing holes and defects pose a continued flood threat to their farms.

But protest organizer Ben Smith said that the bottom line was \$400,000 in targeted rates was way short of scheme needs. "Our rates have risen 60% in the last four years and the WDC annual plan says they will go up 18% more next year," he said. The A class rate is headed to \$100 per ha or more which he called unsustainable. "Under this management plan we will surely compromise what the scheme was originally design for," he said.

Under pressure Deputy Mayor Halse and CEO Simpson agreed to reinstate the farmer-liaison committee and challenged farmers to come to the March 30th WDC Public Forum Meeting with their priorities for scheme works. They added that the WDC was managing the scheme on behalf of Hikurangi swamp land-owners, not because it was legislatively obliged to do so." (Unquote).

The protest forced the contractor to call in transporters and remove his machinery from the restoration job. The cost of this went to six thousand dollars and of course this was added to the cost of the job the protestors were complaining about in the first place. In addition a week's work was lost and the whole job was delayed for a year.

Three points stand out. Firstly, the Farmer's Weekly got it right when it headlined these particular farmers were "**Opposed to the swamp plan.**" That certainly appeared to be their agenda. They were opposed to the scheme being fixed. Secondly there was their objection to the inflow shares being restored to original fair design shares. Thirdly, after the thirteen year review recently completed they wanted, "all work stopped and a full review made", which would have taken many more years and bogged the restoration process down with lawyer's arguments over protecting the illegally protected pockets. Then of course they mentioned wanting control of the scheme. Well, they had been there and done that and it was said to have wrecked the scheme ⁶⁵⁸ driving it back into unnecessary debt which they now complained about.

The blockade cost ratepayers many thousands of dollars and two weeks of fine weather for earthworks was lost. The push to regain control had been met with an agreement by the Deputy Mayor and CEO that the group could have their Liaison committee back but it would be with no delegated authority as in the past.

After this some of the protesters danced about and celebrated as though they had won a football match. The argument for control was to show up again at the WDC Public Forum meeting on the scheme nineteen days later.

The leaders of the militant group canvassed thirty signatures and took a bunch of poorly informed supporters to the next Public Forum intending to return to having a committee with 'teeth'.

The extensive deliberations are included here at some length to demonstrate clearly that the council did consult and that there was ample opportunity for discussion.

⁶⁵⁸ Hindrup to WDC forum 29th November 2010

Minutes of Public Forum - March 2011

WDC Minutes transcribed from the audio CD of the meeting held at Jordan Valley Fonterra Farm on Wednesday 30 March 2011 at 11.00 am.

Facilitator Simon Weston

Purpose Open forum between the Whangarei District Council and Hikurangi ratepayers to discuss the Hikurangi Swamp Scheme.

Present Simon Weston (facilitator), Andrew Carvell, Conal Summers, Bernadette Chastain (scribe),

Mark Simpson, Cr Phil Halse, Cr Greg Martin, Mrs Martin, Bruce Howse NRC, and members of the public as follows:

Greg Palmer, Roger Milina, Luke Beehre, Murray Cutforth, Bruce Cutforth, Richard Bleakley, Gavin Donnelly, Peter Geddes, Martyn Smith, Mike Collins, Bruce Howse, Stephen Arthur, Barry Thorn, Simon Donelley, Edwin Smith, Ben Smith, Pedro McHardy, Ray Hindrup, Neville Thorn, Noel Rockell, Louise Rockell, Pia Rockell, Philip Rockell, Cara Lindsay, Evan Smeath, Jack Ilich, Katarina Ilich, Ken Finlayson, Brian Hoult, Judy Imeson, Eric Edwards, Roger Milina, Eric Edwards, Todd Imeson, Merv Rusk, Mike Barrington & Mike Cunningham (Press)

Apologies Evan Dugmore

Simon Weston opened meeting welcoming members with introduction of staff and representatives from Whangarei District Council, Greg Palmer from TransPacific Industries, Bruce Howse from Northland Regional Council, Peter Geddes from Hawthorne Geddes and Greg Palmer from TPI.

Simon advised all attending that the meeting would be recorded as well as minuted.

Simon Weston

Minutes of 29 November 2011 moved as a true and accurate record by Bruce Cutforth

and seconded by Merv Rusk. **Carried**

Matters Arising Simon Weston advised meeting of Agenda items for discussion as per below:

Agenda _ Resource consent requirements

_ Spillway adjustments

_ Level Monitoring

_ Management Plans

_ Scheme finances

_ Current situation

_ Rating scenarios with and without pump upgrades Three models.

_ Operations feedback

_ January Storms feedback.

_ Farmers access to pump stations

_ Queries on the Scheme- summary

_ Any other business

Resource Consent Requirements

Simon

The Resource requirements relevant to the current proposed works are the spillway adjustments, to level and length and thence as per RC as issued by NRC. Monitoring of spill events to provide data for ongoing adjustment and work on the scheme. Required to monitor at least the next 5 events and to then look at the impact

of those events and make sure that the model we are using and the height and width of spillways are correct and to make sure that the model sits comfortably with what is happening in practice.

In terms of the spillway stop bank adjustments Mackenzie Contracting have been on site for most part of the summer (since Christmas time) Ngararatunua has about 3 weeks left weather permitting. Large volume of earthworks in order to get spillways into reasonable order. The resource consent requires the spillways be put back to original specifications. Original design required quite a footprint for those spillways and those of you that are aware of the Ngararatunua works has narrowed up the footprint and am sure you are aware of this and the dialogue in that regard. Junction Works complete and remainder of spillway works to be completed within 4 week period. Weather permitting from about now so by end of April we are hoping that all spillway works will be completed this season. Stopbank improvements will be undertaken next construction season.

Simon Weston Are there any questions?

Martin Smith When are the monitors going in?

Simon Weston Covered in upcoming slide.

Stop banks will be done next season and they are a result of the additional works this year on the spillways themselves. We have a choice either:

1. to existing contract.
2. go out and re tender stopbank works as separate package .

When we tendered spillway works Mackenzie Contracting were 24% cheaper so we could go with existing. Its debatable whether we would get better prices. Peter Geddes stated that per metre rate for stopbanks lower due to decreased accuracy required.

Barry Thorn What model are you using for all of these spills when you have this in place? In my experience most events are different. Different rainfalls in different areas. Will we be continuing altering spillways after 5 year period? What is the model?

Simon Percentage allocation as per original scheme. The model has taken into account different events we have had and over the next five we will take info to ensure Scheme has divided the right sort of sharing originally envisaged. Could be okay or need further adjustments. Won't know until we have gone through those further events and every event is different so won't know until we do model.

Barry Every pocket is a different size?

Simon It's on a percentage basis. Do you want to comment on that Mark?

Mark When the original scheme was set up, I think it was in volume 3 of those documents, it said a percentage should be taken by each pocket. I forget the percentages but Merv you would remember wouldn't you?

Merv Rusk The 1966 area of flooding was mapped and the percentage of water in each area was worked out: Junction was 5%, Te Mata was 20% Otonga was 23%, Tanekaha 3%, Mountain 14% Ngararatunua 10% Okarika 27% reduced to 25%. These were set out in the original design document. I thought you would all know those off by heart!

Mark In terms of the Resource Consent we are bringing back modelling to those figures that were identified, I think it was in volume 3 but can't remember, the percentage (distribution) of flooding before and after the scheme was put in was identical.

Pedro McHardy How did you come to those figures? Was it a certain farmer in Marua?

Mark This is all the work of modelling and reviewing of storms over last few years. I think what you have to recognise here that this has gone through a very thorough process with the Regional Council. We have had Council and others work on this on your behalf and the position is agreed by all parties as fair. If you are unhappy with that process you should speak with Regional Council because they moderated that process.

Peter G Now that you have monitoring it goes away from modelling to straight out measuring, so you are simply measuring flows out of distance, so becomes much simpler. Once modelled, becomes a measure and model. Direct measurement.

Simon As stated at beginning the model is a live model always will be, so as you go over the next few decades it will be measured and remodelled to make sure the scheme is measured and compared.

Kim Ellis I just want to say one thing. We should have been monitoring before – I find this irresponsible of certain people to say things are right and have changed again.

Simon There has been information related to what has been going on over the past few decades that has been taken into the model itself, it remains to be seen how it will change.

Mark We have been monitoring. Clarified that it is a live document and what we have done and set it back at the old levels and that the only thing we are going to vary is the length. In the last 8-10 years what we have been trying to do is calibrate the model and that's what we have been doing with the various floods

Scheme Management Plan

- Simon

The SMP has been altered to reflect the completion date of spill ways and also work on stop banks – gone to NRC and they have approved plan. Plan on website

Cara Lindsay Can you alter the management plan again for us as it was a document that we knew what is happening at certain dates but now you are altering it. So can it be altered again next year?

Simon It can be altered again but if so needs approval by NRC.

Levels and Sensors Simon Discussed level sensors as per slide Last meeting discussed all methods which will be used.

Bruce Cutforth Will there be any monitoring of water levels up stream?

Bruce NRC My understanding is that there are already a number of level sensors installed up stream.

Roger Those sensors – I think there is one on the bridge at Whakapara and some manual ones put in and they haven't been maintained, monitored or surveyed for 3-5 years so as far as I am concerned there is no real monitoring going on. No one comes and measures them so they are not being monitored.

Simon As that has been recorded we will pick that up and deal with this with NRC. Make sure equipment such as that is functional. (It is an automatic radio monitor – Ed).

Simon Any other questions

Ray Hindrup Updated meeting on work being undertaken by Dr Steve Joynes including his recommendations for gauging sites and methods, need water level gauges on the Mangahuru and Waiariki Streams and at the Lewis Bridge. The need for more rainfall gauges, further 5 in catchment. Ray Hindrup also mentioned concerns over impact of debris on future level sensors, Steve Joynes recommended electronic monitoring of staff gauges at pump stations. Mr Hindrup commented that Steve Joynes had done a model of the 2010 flood and the reading from the gauges ran up hill from Junction to Lewis Bridge, therefore presently our staff gauges are not accurate

enough to presently use for recording. Steve Joynes would put in the Mangahuru Stream gauge as top priority, the Lewis Bridge would be second, then Wairiki gauge. He says we need 5 more rain gauges. We should put in electronic level recordings at the pump stations, both inside and outside, would be a lot more accurate and reliable. Electronic inflow crest recorders are absolutely impracticable on account of debris and breakdowns.

Simon Discussion has been ongoing about how we monitor and problems associated and best management. Always get back to the multipronged attack of getting best info we can. Requested Steve Joynes info to look at and also review with NRC.

Peter The one thing Ray did say that is obvious and needs to be sorted through is that if these areas have logs and dead cows there is incorrect reading and has to be sorted out.

Simon Absolutely, needs to be clear and able to function.

Conal Staff gauges - had a survey done last month to see where they are sitting and there are some discrepancies which we will go through and make adjustments on them.

Ray Hindrup Asked for price comparison for sensors compared to monitoring at stations.

Simon We will have a look at that.

Conal Monitoring at the pump stations isn't necessarily going to give us a time and flow over crests so there needs to be a relationship established between those two measuring points.

Ray Dr Joynes is not interested in measuring flow over the crests but wants to measure the height of river at the crest. Which is perhaps two different things.

Simon Is there anything else needs to be raised on this particular slide?

Cara Lindsay It is a requirement of the RC to have monitors within the spillway but it wouldn't be just a cost of staff gauges but it would be cost of going back and changing the RC which would end up costing us more than those monitors in a spillway.

Simon You maybe right that could be a reality of it but we will do those checks just to do a comparison. Thank you.

Resource Consent Costs.

Discussed as per slide, indicated \$500,000 in draft annual plan but probably only \$200,000-300,000 required.

Management Plan

Simon Discussed as per slide.

Conal Floodway Riparian plan looking at riparian management from a low flow channel

from the Scheme, aligns with the Oxbow Cut-off Management Plan although due a year out there is some benefit in addressing both from the same plan.

Have discussed with Fish and Game and Doc as to the best practice for the

Oxbow Cut-off Restoration. The complete scheme management plan (you have seen copy of initial management plan) basically fine tuning as we go forward and have clearer idea of direction for the scheme in the future. Fisheries Management Plan working in with NIWA who have govt funding and also local IWI and building up programme on eel fishery and doing modifications to the pump intakes and allowing transfer of juvenile eels upstream and migrating eels downstream during flood events.

Scheme Finances Simon Discussion of financial scenarios as per slide. Clarification that all scenarios return scheme to zero balance and of timelines.

Simon all need to work together on opportunity of cost reduction in operations looking for good ideas, continual feedback from people in the swamp as to how operationally we can get the scheme to work well and meet your needs and also reduce spending. Doesn't mean we will always agree with it but we appreciate it and take some of it onboard.

Edwin Smith Raised concerns over new pumps going in under maintenance costs and queried depreciation.

Simon Weston Basically the scheme carries on as it has in the past basic maintenance in terms of repairing things when they pack up. Pumps replaced as capital items. Scheme has never charged depreciation and doing so from now forward would add costs. No pump upgrades in Scenario 1. In accordance with the RC we need to do work on stopbanks. The pump replacement programme we put up before and spoke on in detail and a lot of information has been assimilated on what you want to do with the scheme in relation to the pump replacement programme.

Edwin Smith If you have a policy you can replace that pump when pump goes down, if you have no policy you will spend money on something that is inferior. You see what I am getting at, we have to have a policy to cover these scenarios. Same with a stopbank blow out. We don't have to replace every pump.

Simon And that is detailed in the reports that we have proposing a pump replacement programme. And that's why one of these options, this one goes out to 2023 in other words the replacement of pumps won't be completed until 2034. It's a long programme. All of this is on the website.

Ben Smith How many pumps have been replaced in the last 5 years?

Conal We put in the two new flygts and reconditioned 5 Pleugers.

Ben Smith So we have done just about 50% of pump upgrade?

Conal That's why the pump upgrade strategy we presented last time was based on a risk profile on what pumps have been serviced. So looking back at the service history we took an estimate of which pumps were most likely to fall over going forward and prioritise that for the replacement programme. Those 4 rounds or the 7 rounds for 2034 round are based on the risk of failure.

Simon Rates Rise scenarios (slides 12, 13 & 14)

This will be on the web so have a look say what's going to happen in 2018 and we have these different options being modelled and this is one option. Simon discussed the PP and outlined the various options. Simon asked if that answered Neville's question.

Neville Yes I was just about right in my workings.

Simon So we have option 1 and we have the options as well. So have a bit of a play around with these and we are looking for your feedback as to whether you think which one will work.

Luke Beehre Just one question, when we look at the cashflow tabled I can see we go from 20010-2023 X 4 it doesn't look like X 4 from your starting point up on the PP. All I want is total income.

Conal Clarified that Scenario presented first was inadvertently labelled Scenario 3 on the spreadsheet

Luke Beehre Those figures don't add up.

Conal If we look that is sitting at about \$70 hectare at the moment and going up to about \$250 so that's about a 3½ increase.

Luke Beehre 4½ increase. Discussion ensued

Ray Hindrup We can't afford upgrades, we just carry on as required.

Simon What this probably does do is not only make us decide as to whether we want to go ahead with a proactive pump replacement programme, but there are also issues that a number of you have been raising – how can we improve the scheme. It's those issues we need to be talking about at this forum so that we are doing our level best for you guys.

January Storms Simon

Overview of storms and response, cutting of banks, need for policy/procedure for this. Estimated power savings from cuts \$4600/day. Conal to provide 4-6 weeks. Note: Costs for cutting/ reinstatements for 4 locations were \$28K.

Ray Hindrup Raised possibility of turning pumps off in such an event due to pasture losses being inevitable, and queried whether cut costs should be scheme or pocket.

Simon Has to be done in a controlled manner. There needs to be a policy on this. Let me ask the floor. In terms of the costs associated with cutting your stopbanks has to be approved by WDC are you comfortable with those being pocket costs or scheme costs?

General discussion

Meeting Agreed Pocket Costs

Evan Smeath Raised issues regarding number, size, location of flood gates.

Peter Geddes Issue of flood gates being efficient is the setting mid flow to low flow. Our view is that you have more to be gained in ensuring that the mid to low flow is actually working so that you are actually going over the bottom of swamp and therefore your flood gates become more efficient. What happened in last storm is that the Mangahuru actually had the water at the same level for days, so in Neville's case it wouldn't matter how long the cut was there the river was higher than his place. So there needs to be an investigation to half way to low flow and then stopbanks make it more efficient and that is probably more money to be gained there.

Conal There is a requirement in the consent that we explore the options of putting further gravity drainage within the scheme. So there is something in the Scheme Management Plan we will be working on.

Simon This particular issue we will bring back to the floor but there are other issues of the RC we need to deal with at the moment.

Bruce Cutforth Simon I think this is a really good discussion because it's starting to bring real focus in terms of economics and I am pleased to hear there is an acceptance that if banks are cut they pick up the cost. To have a major ratepayer say that he didn't want his pumps on so should he get a discount on his rates. If others want pumps working for 2-3 days they should start asking some searching questions because it will be a big economic advantage for Pedro to pump that water off but not an advantage to Ray, then surely Ray would be entitled to get some economic advantage.

Simon That is a good point to raise. Obviously the scheme is not set up to run the way you are suggesting. But what you're suggesting is probably fair and should be considered and discussed.

Roger Milina Suggested two rates, a collective rate and an individual rate. Having costs spread evenly over the scheme when only a few people benefit from a significant expense doesn't bother the one's benefitting.

Neville Thorn I just understood at this last cutting of the banks it was ok by WDC Surely that is a Management Plan, so you decide if the pumps get switched off or land gets cut, or whatever you want to do. That's a management plan to me. Not talking

about rates, we're talking about a management plan because overall we are going to be 2.6 million in arrears.

Simon Weston The discussion has digressed a little but the points raised need to be considered so we will think on those points that have been raised.

Ray Hindrup. We really need a cost of cutting banks and from the farmers what we actually gain individually and then we will have some facts to make decision you were talking about.

Simon Yes and I guess you can test the economics. This will change year by year so is particularly important for you deal with it. That may change from time to time.

Cara Lindsay Can I just say I was involved with discussions with the Council about getting banks cut (Te Mata & Junction) and with James Blackburn at the time and his calculations for just Te Mata alone - it was going to take 10 days of pumping to get the internal water out and another 12 days of the water flown over so we are talking 22 days of pumping to get that off. There is the benefit of getting it off earlier with the cut. I am not saying the cut is right and thought it was a Council procedure after following March and now I see the other side and have spoken with Conal about putting procedures in place on the cut banks. But if it's 22 days just to pump out our water at the cost of nearly \$5000 a day we have saved the Council money.

Simon Depends on circumstances within each pocket as to whether it's economic. We need to provide more information help in calculating that.

Question from floor

Simon D I want to know for those that cut their banks what effect does that have for those who don't cut their banks?

Simon W I will ask Peter to answer that one. Simon reiterated the question and also asked does it have any impact on level of river and the emptying of other pockets down stream?

Peter Geddes Not a huge amount because basically the one's I saw there wasn't a lot of difference between pocket level and river level. So lifting the rivers not significant and looking at cross section of rivers and cross section of cuts they were tiny by comparison 2-3% across each area of the river. But the river was seriously stopped.

Simon Thanks Peter.

Merv Rusk Measured level change at Otonga before and after Te Mata had their cuts running. The river level was 400 mm, that's the difference it made.

Peter Geddes To be fair I didn't see any of that but what happened in this storm was quite unlike any other.

Simon Donelley Questioned frequency of 80 year flood events

Mark Gave brief overview of hydrological statistics Hikurangi Swamp Scheme.

Simon Weston On the operations maintenance side to comply with the OSH requirements the WDC needs to provide training to those of you who want to go and operate a pump station. Will arrange this over the next couple of months.

Maintenance Programme:

Simon As per slides. Discussed previous coding errors picked up in financial review.

Neville Thorne Raised issue with incorrect charge for Whau Valley pump

Simon Weston Charge will be rebated

Any other business:

Suggestion of having meeting on 6 monthly basis and reading the emails going back and forth that perhaps too wide a spread. Perhaps a quarterly basis? Your scheme what would you prefer. Quarterly. General consensus was quarterly.

Ray Hindrup Updated on model progress, if downstream modification shown to be beneficial than need to engage with NRC and downstream landowners immediately

Agreed to present info to next meeting. Spent \$13,500 on this particular project, \$60,000 on it previously to get it to where it was.

Simon Any more questions?

Evan Smeath Read out and moved the resolution that he had brought along with a group of supporters: "THAT THE FARMER LIAISON COMMITTEE BE SET UP TO APPROVE ALL FINANCIAL AND MANAGEMENT DECISIONS ON MANAGEMENT OF HIKURANGI SWAMP SCHEME AND THE HIKURANGI SWAMP DRAINAGE SCHEME IN LIAISON WITH COUNCIL MANAGEMENT."

Ben Smith I will second that.

Simon Queried whether a ballot was more appropriate

Merv Rusk Pointed out that if passed today then this is clearly disenfranchising absent ratepayers and in breach of local government rules.

Mark Simpson We agreed at Ngararatunua Pump Station meeting with Cr Halse that it will be a liaison committee with no delegated authority in the past, its come under Works and Services which is now Infrastructure Services Group (I&S) and once I&S approve the minutes then they are ratified for action.

Edwin Smith Wanted ability for selected delegates to overview scheme finances to ensure coding errors don't recur.

Simon Weston Will put procedures in place so that won't happen again.

Bruce Cutforth Two issues in terms of this.

1. I would certainly support a survey going out to A & B ratepayers.
2. Other issue I have real concern with is Terms of Reference (TOR) on that and am of the opinion that there needs to be some really reflective thinking about the TOR. To me it is a management team that you are asking us to support and I do not support a management team at any level. Too much parochialism and division in the past we don't want that anymore.

Simon OK. If we put forward a proposed Terms of Reference for that committee and then sent that out for people to say yes they want the committee and we want that as TOR would that answer the question?

Ray Hindrup For the last 25-30 years a majority of people or ratepayers tipped the scheme in their favour. Council that used a majority vote to leave it like it was, and because of the very nature of our scheme we can never allow it to go back to where any committee can make a majority vote to change our Scheme to what they want. That is where the scheme went wrong.

Comment from floor We want a liaison committee to have input and to be up to speed with what is happening but we don't want to run things.

Comment from floor The issue that brought this to a head is Ngararatunua, we have \$130,000 in job overrun because the job wasn't looked at properly. Extra fill being carted in. And docs say it was \$21 mtr for the extra stuff carted in that is the sort of thing that has brought this about and I think if we had a liaison committee to review some of these things before it goes to approval. Council will still have final say.

(some comments left out here by WDC staff see below)

Ben Smith 2005 in the financials one pump station used \$43,000 worth of power 50% of the power. The least power used that year was \$3,000 by one pump station. We haven't even got the ability at the moment to monitor which pump station is using how much power. Mr Hindrup talks about turning pumps off and the cost he saved for the Scheme but it's all an estimate we don't know what is a happening. Cut the banks and say power has been saved but we have no quantitative measures of what is happening. I think it is about time that some of these facts come to light of actual facts – not hidden behind pieces of paper with 14% increase all the way through. For our

monitoring scheme we had 50,000 offered from the government for a Science and Innovation Scheme. Council were not interested in applying for it. Those are things that need to be put on the table we are broke. I would like that recorded too please that we are broke.

Roger Milina From upstream State Highway 1.

My Rates got changed from B class to C class but no one was able to tell me. The issue is I pay \$4,000 in C class rates but on your model there I am looking at paying \$17,000 in 10/11 years time in rates and I don't have any pump, stopbank, and I don't get 1c of benefit from the electricity that is used on the Scheme nor do I get any benefit from any of the pump maintenance. I paid for all the Civil Works and am sure I speak for almost everyone above State Highway 1 that we are paying a disproportionate amount and I am not saying we don't get a benefit from this scheme because we do, but just as Ben said some people are having a lot of money spent on land that may not be that viable going into the future with the way the costs are going up. Would like some consideration be given to how this whole rates review –there was some talk about it at last meeting and I would support that but to have a rates review we need more correct data in terms of who is paying what and why? I wasn't aware that one pump station spent \$43,000 on electricity and that is not fair that people get all that benefit and don't pay anymore than someone else who doesn't get any benefit.

Mark Simpson We have talked about this at the meeting a couple of weeks ago at Ngararatunua Pump Station. The Hikurangi Swamp has an enabling act a separate act of parliament and at the time it was set up all the wise people of the time who did a rating scheme for it and people could object to that rating scheme and some did and had the various classes of A, B, C and D changed around that is actually locked in statute and we don't have the authority to change that. That will be an act of change of the local act. So what we have done is have straight ratios A-F and whether we agree with that or not we can't change it.

Roger Milina Can you answer then, as to why my rates were changed from B class to C class a matter of 2-3 years ago.

Mark No – will need to have a look at that. The only person upset about that going from B to C would be you and the only thing I can think of is it has been miscalculation but we can go back and look at you specifically.

Ben I have given information to Simon he has a spreadsheet. You have been varying the rates from A-F at different rates for the last 5 years. The F ratepayers only got an increase of 27% in the last 2 years. The A and B's got it 4 years previous to that. That information is there so it's incorrect.

Conal Looking over the last 5 years rates within a couple of decimal places have moved in the same percentage across the board and the movement per year there is maybe half a percent difference but I can provide that spreadsheet through to you.

Ben Question to the Council. What percentage of ratepayers from A B ratepayers and what percentage from A, B and C ratepayers? **Conal** Can't answer off the top of my head but can get back to you. I think it is around the order of 70% from A, B and C.

Ray Hindrup Raised possibility of farmers running scheme themselves.

Simon Weston Reiterated WDC running scheme on behalf and feedback form scheme ratepayers essential. Suggested Terms of Reference be put together by mover/secondor of motion and sent to A B and C ratepayers.

Evan Smeath Suggested form a committee and then the Council and committee work out the terms of reference.

Comment Lets have a proper process and have appropriate areas represented and appropriate responsibilities in the TOR and in terms of the voting lets have it pro-rata to the rates paid. Then in terms of that appointment whether we will have a liaison group or not. But I am comfortable about a liaison group so lets put the foundations into this thing so we have some direction and capability to be constructive.

Simon Weston Thank you for your comments this has added value to discussion I certainly think from my perspective I want everyone in the room and in the swamp to support the idea of having a Liaison Committee and to support decisions that they make. What I don't want to have is infighting against each other. Everyone in this room wants the same thing and everyone could be working together. Now what we could do is ask for some volunteers from the floor to help us put together TOR and for that go out to be voted on and to move forward from there.

Evan What say we have a group put together today to meet with Council and look at the TOR and come back next meeting where it will be ratified and then go to vote?

Simon Weston

What's been moved at the moment is a selection of people from this floor will put something together to help form the terms of reference, those terms of reference gets provided at the next meeting where it is voted on then, it goes to a vote with everyone in this room (or the swamp) then it comes back to next meeting.

Phil Halse I was Chairman for Works & services committee for 12 years. The liaison committee was part of that committee, didn't react to anything, they didn't get a resource consent they would have paid about treble the amount as they didn't do it at the right time because they wouldn't address it - WDC had to do it by default after 7 years. 1. First their liaison committee needed to get everything set in place, legal obligations and you have to set in place and have a scheme. 2. Failed to do anything about rates so went for several years without addressing rates thus more financial problems. This is what a liaison committee did, not a council. Issue of farming methods being a factor. Need to consider TOR carefully. Responsibility will be the WDC and Councillors will be the ones who vote on it whatever you do. At the moment we are showing a 2.5 million debt and the rest of the community (ratepayers) can ask the Council why they should carry a 2.5 million debt for the Hikurangi Flood Scheme? They have every right to say no, only give them half a million. Concerns over parochialism and factions in previous liaison committees. CEO who has kept Council on side with the original debt of \$800,000 to \$2.6 million to help you out so don't attack Council as we are trying to be your allies here. No trust in our management to do it so you need to sit here and decide what you want to do and how you can reduce the debt flow by a million dollars. As Ray said perhaps turn the pumps off - you may have to do this - you may have to go 3 years to get this under control. You have to face the debt you have because Council is not prepared to keep adding to it. You have a CEO who has kept Council on side with the original debt of \$800,000 to \$2.6 million to help you out so don't attack Council as we are trying to be your allies here. You have no trust in our management to do it so you need to sit here and decide what you want to do and how you can reduce the debt flow by a million dollars. This is what you should be focussing on not about who is going to do it. You have to take responsibility just as Council does but just remember the Liaison Committee won't solve your problems. Thanks very much.

Phil Halse What we are trying to do is get you to focus on the problem because if you think forming a liaison committee is going to solve your problems you are wrong. There are a number of things you can do to cut costs. You can put in your TOR we will not have a pump replacement for 3 years. We used to operate on the process of

everything went into a public agenda resolutions were made by voting and following Council procedure, if there was not a resolution to put the rates up they didn't go up and the rates didn't go up and went on for a period of years without any increase.

Edward. And that is absolutely 100% correct.

Ray We will only go forward with WDC support and I have to work with Council like I have to work with the rest of you and for goodness sake if we are going anywhere we are going together.

Mark Called a halt to the meeting, urged all to consider the best option, perhaps independent overseer a possibility. Scheme ratepayers have to take some responsibility for the scheme.

Thanked all for attending.

Simon Thanked all for attending

Meeting Closed at 1.00 pm.

The foregoing was the WDC write up of the meeting but some parts were poorly set down and some digitally recorded parts were excluded so I will fill in some gaps.

The meeting had kicked off in a tense sulky silence, with a reluctance to even confirm the minutes of the previous meeting, an indication of the defiant spirit of non-cooperation toward the Council.

Tension had been running high in recent months as efforts were made to halt or delay the restoration works. In spite of the fact that an innocent group of ratepayers were asked along to support the motion for another push for Liaison Committee control, this was a promising meeting where at last people had a place to stand up and say what they wanted to have heard. Such meetings never ever took place under the old tight-fisted Liaison Committee regime.

An attitude surfaced briefly when CEO Mark Simpson rose to comment on the inflow shares and he needed to ask me if I could tell the meeting what they were. When I rattled them all off there was some consternation at seeing the CEO asking me to help him out. A TeMata farmer, Pedro McHardy, who apparently thought I was even responsible for the figures, sarcastically asked, "Regarding a certain farmer in Marua – what's his qualification?" The CEO quite correctly replied, "The consultation process has been going on for years with a number of consultants collecting information from many sources and it was agreed by all parties as being fair, and if anybody has any issue with that then take it up with the Regional Council who is in charge of the resource consent process".

There was a belated realisation that the scheme was "broke" but the complainers never realised the role they themselves played in causing it.

The flood of 29th January 2011 was discussed, an 80 year return period it was said. CEO Mark Simpson, (who was previously the engineer), advised people not to take too much notice of "flood return periods."

It was plainly stated that the Liaison committee had done a great deal of harm in the past. When the meeting was discussing terms of reference for the motion on a proposed reintroduction of the liaison committee Mr Bruce Cutforth commented, "One thing the Liaison committee has done in the past was create incredible parochialism. We cannot go back to a small section with a narrow parochial view."

Mr Hindrup then said, "What has been proposed (to reform a liaison committee) is going to happen in the future. We have got to learn from what has happened on the scheme for the last twenty five or thirty years, where a majority of people or ratepayers (on the committee) tipped the scheme in their favour and council used that majority vote to leave it like it was. And because of the very nature of our scheme we

can never allow it to go back to where any committee can make a majority vote to change our scheme to what they want. That is where the scheme went wrong and there was no way of changing it."

Mr Pedro McHardy began interjecting and asked for an example and Hindrup said, "There's seven spillways on the scheme Pedro and my one is the only legal one."

"So you say," replied McHardy.

"No," said Mr Hindrup, "That is what the resource consent Commissioners said, it's as simple as that".

Mr McHardy protested, "You can say what you want to say but at the moment the scheme is just running ad hoc and just out of hand, this last year or so, the scheme was altered in the last three years."

"Make that twenty years Pedro," interjected M. Rusk.

McHardy denied it saying, "No!"

"Yes", replied Mr Rusk, "the banks were filled around 1990. Your (TeMata) inflow was filled in first."

"The Council did it," McHardy said.

Clearly this comment by TeMata dairy farmer Pedro McHardy, that "The scheme was altered in the last three years," conflicted totally with the letter signed off by himself and other landowners from TeMata pocket, saying their crest was altered "Around 1978".⁶⁵⁹ And as described earlier that filled crest had been surveyed as altered in 1994, not 'in the last three years.'

Given the history of the scheme and official 1994 surveys of TeMata inflow crest and evidence of reduced flooding I found it ironic that a long time TeMata landowner could now blame-shift and complain of recent ad-hoc alterations. (For reference, astute readers can read about this matter as detailed previously in the sections "TeMata Inflow Crest Filled," and "The Misleading Letter from TeMata Pocket April 1997.")

Mr Ray Hindrup continued: "We should be working together to run our scheme. There will come a day - or it will come to an end,"

Chairman Weston had asked the mover of the motion for terms to be included concerning the Liaison committee. P. McHardy had commented, "It's no good setting it up if it has no TEETH!" (An admission that the committee wanted to have real controlling power like it used to have. This comment was later repeated at the next meeting.)

CEO Mark Simpson, "Why don't you take control then? You all run farms, how come you can't run this scheme"?

Martyn Smith commented, "Can't we reform the Liaison Committee then work out the rules"? (some knowing smiles around the room at this).

Merv Rusk pointed out that nowhere does a body get put in power with the operating rules being left until later. There was some discussion of how the rules and setup should be in place first.

Chairman Simon Weston asked for a mover.

M. Rusk offered, "If he (the original mover Mr Smeath) will move it with the changes then I will second it."

The chairman Mr Weston asked Mr Rusk if he was moving it. Mr Rusk repeated his offer of seconding it but only if the wording was changed. But the original mover and supporters declined by remaining silent, and thus allowed their motion to lapse. So that motion to have a Liaison Committee was never voted on, however, as the CEO

⁶⁵⁹ Group Letter submitted to the WDC by TeMata Pocket farmers 8th April 1997

had made clear, the WDC had already agreed to reform a Liaison Committee when at the blockade meeting three weeks earlier, except this time it would be only for liaison. The matter was already decided. Decision making would remain in Council hands as per the Resource Consent advice.

Deputy Mayor Phil Halse spoke more regarding the Liaison Committee. He went on to say, "The biggest change on the swamp is growing maize crops on flat flood prone land." (referring obviously to the cuts in the stopbanks to save maize crops.) He expanded at some length saying he is a farmer and knows the problems. He concluded saying, "History shows that a Liaison Committee running it would result in parochialism and failure." "You guys should sit down here for the next hour and work it out."

Pedro McHardy commented. "All we achieved today you just swept away!"

Evan Smeath, "The Liaison Committee has nothing to do with the rates."

Deputy Mayor, "The Liaison Committee never recommended any rate increases so the council did not do it."

Mark Simpson CEO, "We clearly need your feedback. You should be able to do it." "You have to take responsibility." "We have to go, send us an email Ben!" he quipped as they walked out. And so the meeting ended.

Little was achieved at this meeting except the realization that rates would go up substantially and there was communication. It is obvious that if farmers tried to run the scheme there would not be the critical mass of administration skills and resources to make it work. Is any flood control scheme run by farmers in NZ? Who would police fair play or would it all degenerate again into another free for all or worse?

Remember the clear warning of the resource consent Commissioners: *"It is our observation that unless some clear control over unauthorized interference with the control banks is achieved then all this will be in vain and the situation will quickly revert to the current situation which appears to be a "free for all" with landowners protecting themselves ultimately at the expense of the less selfish Scheme partners."* *"The applicant therefore has absolute control over its flood control structures and should exercise that control in the future."* *"The applicant (WDC) may well need to fully exercise such power, at least as an example to others, to ensure that the proposed works authorized by these consents can result in improvements to the equity of the scheme and not be simply overridden by locals who disagree with them."* ⁶⁶⁰

The rest of the meeting sensed this was no time to revert to a small parochial cartel 'with teeth' ⁶⁶¹ in order to control those who cannot defend themselves. That was really a last ditch stand trying to gain enough foothold to stop the reconstruction work on the stopbanks and inflow crests that could lead to the scheme being made fair again. However, not content with that the action group then went the whole hog.

A Legal Injunction on WDC Is Threatened - May 2011.

Mr. Hindrup had expected the TeMata farmers to file a legal delaying tactic when push came to shove and so it proved. The protected landowners could easily afford legal fees out of their better incomes, some of which could easily be spent on keeping their protected position. However, not having any good factual argument they had failed to

⁶⁶⁰ NRC Report and Decision on App No. CON 2031137501 Part 8.3 Current Situation

⁶⁶¹ Pedro McHardy to Public Forum 30th March 2011

appeal during the 30 day appeal period after the resource consent announcement in 2010.

But according to farmer Graham Shaw, February 2011 saw Ben Smith, canvassing a selected group of landowners known to be sympathetic or easily persuaded, showing them a letter he would take to a firm of lawyers in Wellington.⁶⁶² At the time this letter did not show signatures or the person's name. The content was a lengthy criticism opposing what the WDC was doing but the kernel of the whole thing was to halt the works and achieve yet another review process that, with luck, could delay crest corrections for as long as possible. After all these methods had preserved the filled in crests for some 21 years to date. The subsequent lawyer's letter sent to the WDC said that despite protests the WDC was continuing with works and a long list contained the threat of an injunction, a request to voluntarily halt all work, and set out demands that conflicted with the Council's obligation to do what the Resource consent required. The lawyer claimed to act for Ben and Sharon Smith, Clim and Diana Lammers, Neville and Anne Thorne, Mike and Michelle Konings, Evan and Shirleen Smeath, Pedro McHardy, Wayne and Karlene Sampson, Martyn and Anne Smith, Robert Olsen, Gus and Cara Lindsay, Jack Ilich, Judy Imeson, Noel Rockell and Graham Shaw.⁶⁶³ Neither Ilich nor Shaw, and possibly others, knew that their names were included on a legal action and they had never agreed to that, and by the same token all people on the list could not necessarily be regarded as "perpetrators" as mentioned by the Hearing Commissioners a year earlier. Graham Shaw in Ngararatunua was the only East-Bank farmer. Thornes still owned a run-off in Ngararatunua pocket. The rest farmed or had farmed on the West Bank side of the river where the protected crests were and opposed the restoration works. All of the disadvantaged resident East-Bank farmers and upstream farmers firmly supported the restoration work.

Another lawyer's letter was sent to the NRC Monitoring Manager for consents. This said, "We act for Ben Smith, Clim Lammers, Neville Thorne, *and a number of other landowners within the Hikurangi Swamp Scheme*".⁶⁶⁴ That letter opposed the NRC allowing the WDC an extra 30 days to finish the works. TeMata inflow crest was still not cut down nor cut out to the proper length and here was another attempt to delay or prevent it.

On the morning of the 3rd May 2011 the WDC ordered the contractor to cease work but after the legal beagles at WDC studied the situation the contractor was sent out to get on with it. Ben Smith then appeared before the WDC's Draft Annual Plan hearings to submit that the pump programme should be dropped and another scheme review should take place.⁶⁶⁵ Although not actually put into words the possibility of forcing another resource consent application may not have been far from the minds of some TeMata farmers, and after all, they got another fourteen years benefit out of the review just ended. Now the Ngararatunua crest was nearly completed and 20 days remained to do TeMata. The race was going to the wire. Finally it got down to seven working days of fine weather left.

⁶⁶² NZ Federated Farmers lawyers DLA Phillips Fox 28th April 2011 ref 0510003

⁶⁶³ Letter to NZ Federated Farmers lawyers DLA Phillips Fox 28th April 2011. Letter 0510003

⁶⁶⁴ DLA Phillips Fox 28th April 2007 ref 0510003

⁶⁶⁵ Hearing at WDC 9th May 2011

Step One Crest Adjustments Completed with Only Days to Spare.

Like a game of rugby the true colours of players showed up during extra time allowed for play. It seemed a case of, 'do anything to finish the game without TeMata crest being tackled'. Wet weather also played havoc with the reconstruction of the inflow crests. Mr. Darren McKenzie, referred to as 'Macca' after his business name McKenzie Contractors, pressed on in spite of the difficulties and harassment from opponents to the scheme who continued to fight against restoration of the scheme to its fair allocation of floodwaters to all landowners.

The crests at Junction, Otonga, and Mountain pocket were done. Following those the crest at Okarika done then Ngararatunua was done except for about 100 metres.

Threats of sabotage to machines had been made and farmers refused to allow borrow pits on private land to obtain clay filling. For the third time in seventeen years it looked like TeMata inflow crest might not be repaired and restored to a legally compliant state.

The District Council sent the contractor to do TeMata, the last inflow crest, on the morning of May 13th 2011 but Mr. McKenzie was still finishing topping Ngararatunua crest up with topsoil. It proved too wet so Ngararatunua crest was not fully completed with its inflow crest left until the next earthworks season with a length of 450 metres instead of 350 metres.

Just a few days left and it was showdown time. With Police backup, contractor McKenzie advanced onto the TeMata crest where he wasted no time and had the crest surveyed and leveled off in several days. And so, at 11 am on 19th May 2011, two big yellow machines looking like tired dinosaurs, were seen waddling south, back down the stopbank, their job done at last. In at the WDC one councilor commented, "It's history making, it's the first time we have had to get a police escort to do a normal council job." It had taken twenty one years and nearly a million dollars to get the diggers there, but only two days to repair the TeMata inflow crest. It was done.

CHANGES TO INFLOW CRESTS

Tables of Proposed and Historical Crests

The consultants Montgomery Watson Harza made a number of reports and about six different recommendations for repairing the crests to deliver the designed overspill proportions set down in the 1970's.

The first table shown below gives each pocket's proposed crest length in metres together with its percentage of scheme inflow length. This percentage can be compared to the design inflow percentage. This is a guide according to the original design and is a rule of thumb still used today.⁶⁶⁶ The second table shows the Actual crest dimensions from 1966 to 2011. The page after that shows a diagram of the proposed changes in vertical elevations of crests.

⁶⁶⁶ Mr M. Menzies engineer for Water Resources Consulting Group New Zealand

PROPOSED CREST LENGTHS IN 1999 - 2010 REVIEW REPORTS SHOWS THE VARIOUS CREST LENGTHS PROPOSED BY DIFFERENT MWH REPORTS FROM 1998 TO 2009 The lengths shown in the last column at right were proposed and consented on 30th April 2010. Reconstruction will be completed in 2011.								
POCKET Design share Inflow vol % share allocated based on pre scheme flooding in 1960's. See dwgs C. Anderson NCC.	MWH REPORT 1 WDC Review Jan 99 MWH Proposed Upgrade	MWH REPORT 2 WDC Review Sept 01 MWH Proposed Upgrade	MWH REPORT 3 WDC Review Dec 02 MWH Proposed Upgrade	MWH REPORT 4 WDC Review Sept 03 MWH Proposed Upgrade	MWH 24 Feb 09 Modelling WDC Review MWH model Proposed Upgrade	MWH 2 April 09 MWH model Proposed Upgrade Lengths	MWH Modeller & Hindrup team Meeting 13 Ap 0 Model close to observations. Reported on 13 April 09. 6 pm	Post meeting after further discussion on underprediction. Crest lengths were finalised & sent to J. Blackburn for WDC 14 April 09. 2.43pm
Junction 5%	90 2.2%	180 4.6%	180 4.6%	180 4.6%	80 2.3%	130 3.8%	155 4.6%	155 4.6%
Te Mata 20%	180 4%	650 16%	700 18%	700 18%	290 8%	480 14%	575 17%	575 17%
Otonga 23%	900 22%	990 25%	950 24%	950 24%	675 20%	675 20%	675 20%	675 20%
Mountain 14%	600 16%	600 16%	620 16%	600 16%	900 26%	550 16%	490 14%	490 15%
Tanekaha 4%	200 4.9%	145 3.6%	150 3.8%	150 3.9%	180 5.3%	190 5.6%	180 5.3%	180 5.3%
Ngaratunua 10%	1180 29%	500 12%	400 10%	400 10%	400 12%	790 23%	400 12%	350 10%
Okarika 25%	940 23%	940 23%	900 23%	900 23%	940 28%	940 28%	940 28%	940 28%
100%	4,090 100%	4,005 100%	3,900 100%	3,880 100%	3,465 100%	3,755 100%	3,415 100%	3,365 100%

Researched, collated & printed by M. Rusk.
This printing 8th November 2011.

CHANGES TO LINEAR SHARES OF TOTAL SCHEME INFLOW LENGTH 1966-2011

Shows length in Metres of each crest with its percentage of the total scheme inflow length.

ACTUAL EXISTING CREST LENGTHS SHOWS LENGTHS FROM 1966 DESIGN, THROUGH ALTERATIONS DURING SEVEN YEARS OF CONSTRUCTION, THEN CRESTS EXISTING THROUGH ILLEGAL ALTERATIONS UP TO 2011 REPAIRS.							
POCKET Design share Inflow vol % share allocated based on pre scheme flooding in 1960's. See dwgs C. Anderson NCC.	DESIGN 1966 NCC Technical Report & Calcs 1966 Pg 13 F. NCC Vol 2 pg 20. NCC Drawings Series 412, 1-7	HALVED 1969-70 NCC Design before construction was started	AS BUILT Changes made as crests built. (no plans exist) Surveyed 1978 NCC. G. Rusk staff Surveyor NCC drwg 1379	1983 - 1987 Existing crest As altered (Unauthorised cutting down of Otonga stopbank) NCC Survey plan #2153 1/2/87)	1988-1997 Existing crest As altered (Unauthorised filling in of Junction crest, TeMata and Mountain)	1997 - 09 Existing crest Otonga restored but filled crests left, Tanekaha shortened 02 (no consent)	2011 Consented 30/04/2010 First Step Restoration to design.
Junction 5%	400 4.7%	200 4.7%	180 4.4%	200 4.1%	100 2.3%	100 2.9%	155 5%
Te Mata 20%	1248 15%	624 15%	670 17%	670 14%	200 5%	200 6%	575 17%
Otonga 23%	2014 23%	1007 23%	675 17%	1500 31%	1500 35%	675 20%	675 20%
Mountain 14%	1200 14%	600 14%	200 5%	200 4%	150 4%	150 4%	490 15%
Tanekaha 4%	575 6.7%	287.5 6.7%	200 4.9%	200 4.1%	200 4.7%	150 4.4%	180 5%
Ngaratunua 10%	650 10%	425 10%	1180 29%	1180 24%	1180 28%	1180 35%	350 10%
Okarika 25%	2,267 27%	1,144 27%	940 23%	940 19%	940 22%	940 28%	940 28%
100%	8,574 100%	4,287 100%	4,045 100%	4,890 100%	4,270 100%	3,395 100%	3365 100%

2011 Consented Adjustments Per Scheme Management Plan

Pocket	Original Construction		Present Situation		First Step as Built	
	Level	Length	Level	Length	Level	Length
Junction	91.32	180	91.43	200	91.32	155
TeMata	91.30	670	91.32	350	91.30	575
Otonga	91.22	675	91.23	675	91.22	670
Mountain	91.20	200	91.14	200	91.20	490
Tanekaha	91.20	200	91.08	250	91.20	180
Ngararatunua	91.11	1180	91.10	1200	91.11	350
Okarika	91.08	940	91.02	940	91.01	940

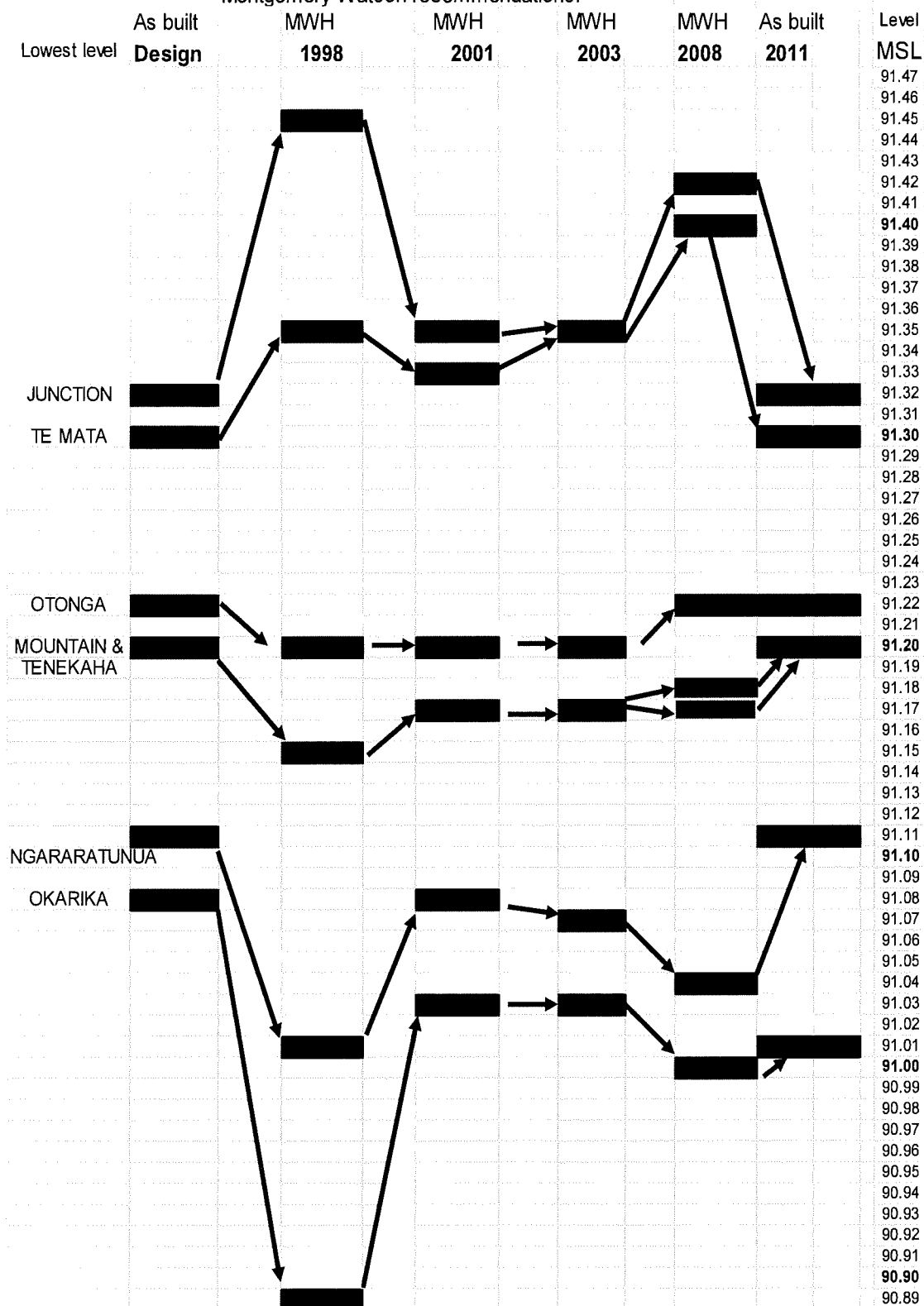
The aim is to achieve equitable average volumes per the Resource Consent condition 11. The Scheme Management Plan includes monitoring overspilling by depth time recorders and or by aerial photography. Results will be collected from at least five consecutive overflow events for which apportionments can be measured to within plus or minus fifteen percent. The computer model may also be re-run as new data becomes available. Future adjustments will be made to spillway lengths as data becomes available on the distribution over the spillway crests.⁶⁶⁷

Of course elevations of crests are another factor and a Diagram of changes proposed to elevations of the inflow crests during the 1998-2011 review is shown below.

⁶⁶⁷ Table and text from the WDC Scheme Management Plan

Vertical Diagram of Proposed Changes in Levels of Inflow Crests.

Montgomery Watson recommendations.



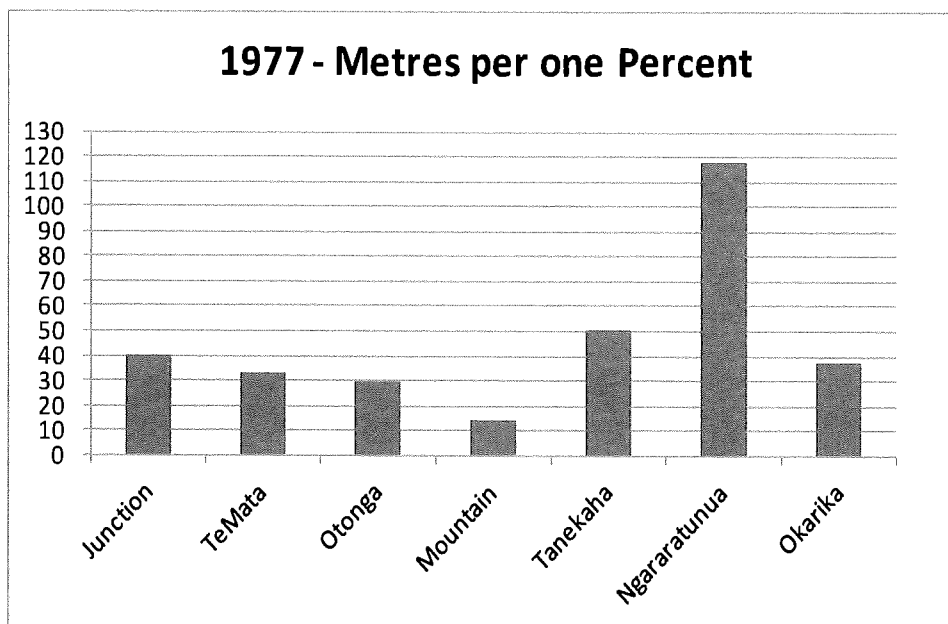
M Rusk 1999, updated 2001, 2003, 2008, 2011. Excel.

The effect of the over steep gradient proposed in the first MWH Report 1998 is clearly seen in the diagram on the previous page.

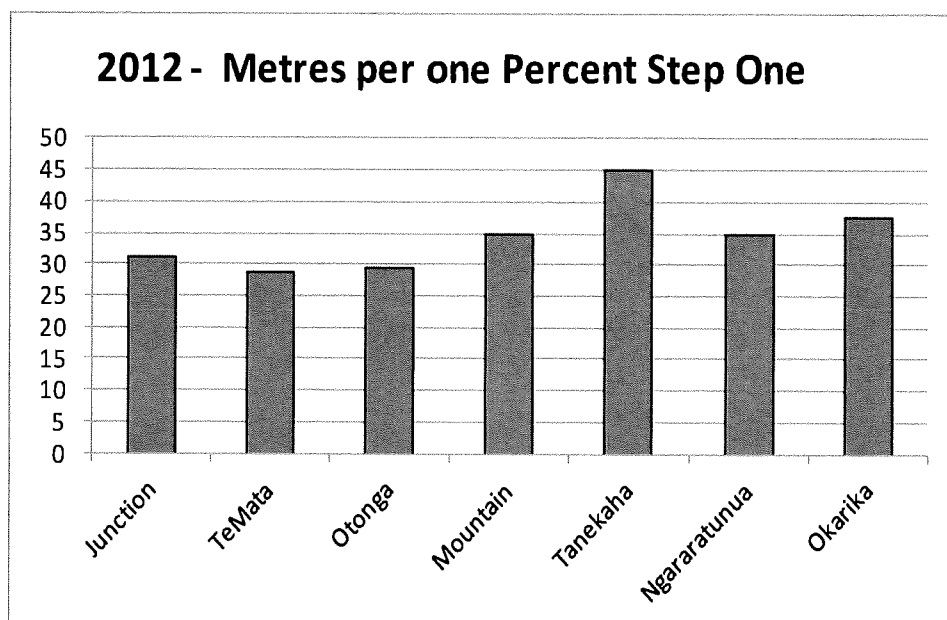
The following graph shows the length of inflow crest for each one percent of distribution share that was set in the 1960's – 70's design phase. Below this graph are

the new lengths as built during the Step One modifications in 1012 under the resource consent. These ratios have been a rule of thumb guide in the past but other factors are of course involved.

The new Step One crests appear to have more evenly matched ratios than the crests that were actually constructed in the 1970's. As discussed earlier the crests that were built in the 1970's were not necessarily the ones that were designed by the Catchment Commission.



The original scheme had ratios ranging from 14 to 118.



The ratios now range in a much closer band from 29 to 45.

THE POWER STRUGGLE CONTINUES

Even with the WDC adjusting the inflow crests in accordance with the Resource Management Act requirements the direct opposition and criticism continued. Like two other pockets Tanekaha pocket had also suffered from diverted overspilling, yet oddly enough, Ben Smith never seemed to realize how ten years of work by other people would actually benefit his Tanekaha inflow and the improvement to scheme performance would improve the Smith farm for both him and his family. Sadly, for the kindness he received, he returned only criticism.

And there was irony aplenty. Historically the NRC always had a policy against farmers pugging the tops of stopbanks and inflow crests by putting stock there in wet weather. It has caused high maintenance costs to other ratepayers. At one meeting Ben Smith's opposition became embarrassing when the council put up an overhead slide showing stock damage to the recently repaired banks at Okarika and the lessee was none other than his Uncle Martin Smith. Stock damage causing erosion to a number of crests and control banks have cost the scheme dearly.

Pressure To Regain Control

In July 2011 Ben Smith and his associates were still canvassing people to take part in a legal challenge. Through 2011 to Christmas week WDC staff found themselves on the receiving end of a campaign of emails and criticism, a campaign with no apparent reason or stated objective.

Ben Smith persuaded the Rural Advocate to run with his story headlined, "Farmers Call for Swamp Inquiry" citing "financial mis-management by the council" and an annual deficit of \$250,000. Other rural media printed his complaints of, "Colossal ineptitude by the WDC and a deficit for no good reason."⁶⁶⁸ It was largely about the cost of worn out pumps, an odd approach after his own influential father Edwin Smith had campaigned for expensive new screw pumps, and said farmers were happy to put rates up by \$200,000 a year to buy them.⁶⁶⁹

Protester Ben Smith led close supporters Neville and Barry Thorne along with Clim Lammers and his two sons into the Council chamber during a regular Wednesday WDC meeting to hold up large protest placards. They called themselves the *Hikurangi Swamp Scheme United Farmers Action Group*. While their little group might have been united they did not represent farmer opinion on the swamp. The press⁶⁷⁰ reported their placards, "Mismanagement Back door Deals = Broke," and "Wake Up Councilors 3x cannot run this place." Afterward councilors agreed the group failed to make sense and was counter-productive to making progress. Smith claimed afterward that, "Farmers faced large rate increases as a result of the council's flawed administration of the scheme." He omitted to say that the old liaison committee with all its powers had failed to do anything in thirty years to keep the scheme rates up with inflation and that was why there was a financial problem. In addition there was the considerable time and engineering costs of hassling council staff.

The year 2012 began with another meeting on Ngararatunua stopbank with Neville Thorne and Martin Smith leading more accusations and complaints about costs against the WDC with staff and the contractor present. Thorne again claimed, "It's sending us

⁶⁶⁸ Hugh Stringleman NZ Dairy Exporter December 2011 pg 42, Northern Advocate Dec 19th.

⁶⁶⁹ WDC Liaison Committee minutes 20th September 2006 and affordable on 15th August 2007

⁶⁷⁰ Northern advocate 22nd December 2011

broke,” but only ten minutes later he flip-flopped saying the group was going to employ its own modeling expert, adding “I don’t care what it costs me.”

Back in 1978, after only two floods, the then Ratepayers group had employed solicitors to produce a report and accusations of miss-spent money and miss-management were made. The ratepayers back then had asked the MP to set up an inquiry into the scheme and a letter of Mr Elliott MP to Minister of Works Bill Young requesting this ⁶⁷¹ making it clear that relationships had steadily deteriorated over time and the parties had failed to get together. The arguments then were financial rather than engineering and were broadly a criticism against the local authority. Perhaps there is a feeling of *Déjà vu*?

Late in 2011 Ben Smith’s efforts had negatively affected relationships to the point where other farmers were considering forming an alternative ratepayers group to work constructively with the District Council. Sadly, after 33 years, some swamp farmers were seemingly still not relating and working constructively together in cooperation with the WDC’s swamp scheme administration.

People were wondering if their plan was to cause as much criticism and havoc as possible so the pressure will cause the targets to weaken and eventually give in to the point where the group “representing” the landowners could again allowed to reassert its own version of authority to benefit the few core members at the heart of the influential group.

Protest leader Ben Smith let the cat out of the bag when he said as much in a news release that read, *“Mr Smith said his group was applying pressure on Whangarei District Council to resolve the matter (of mis-management) and return the running of the scheme to the original farmer-controlled Liaison committee.”*

So there it was in print plain for all to see. ⁶⁷² The pressure and protesting was aimed at getting a former type of Liaison Committee back in power then running the scheme their way. Wasn’t this exactly what the two resource consent Commissioners had warned the Council about when they reported their findings?

“It is our observation that unless some clear control over unauthorized interference with the control banks is achieved then all this will be in vain and the situation will quickly revert to the current situation which appears to be a “free for all” with landowners protecting themselves ultimately at the expense of the less selfish Scheme partners.” “The stopbanks are on land owned by the applicant (albeit under some form of lease or license to occupy). The applicant therefore has absolute control over its flood control structures and should exercise that control in the future.” “In any case, as a Local Authority, it can clearly control such unauthorized interference by using powers vested in it under Section 232 of the Local government Act 2002. The applicant may well need to fully exercise such power, at least as an example to others, to ensure that the proposed works authorized by these consents can result in improvements to the equity of the scheme and not be simply overridden by locals who disagree with them.” “We do observe there is a strong need for the applicant to “regain control” over this Scheme and its operation.” ⁶⁷³

⁶⁷¹ Letter John Elliott MP to Minister of Works Bill Young 11th August 1978

⁶⁷² News release by Sorensen Communications 16/12/2011 on behalf of Smith’s farmer group (emphasis by the author)

⁶⁷³ NRC Report and Decision 2010 Main Findings sections 8.3 and 8.8

The Issue of Rates

In 1969 there were 110 A, B and C class swamp landowners. 400 landowners were in Hikurangi Township and 440 landowners in the upstream catchments.⁶⁷⁴ Thirty lowland ratepayers pay two thirds of the rates.⁶⁷⁵ In all the A B and C ratepayers having 12% of the land receive about 100% of the flood relief but pay 83% of the rate bill while the F class ratepayers on the hill country, who have 80% of the land,⁶⁷⁶ subsidise 12% of the total rate which is very nice of them considering they get no benefit from the scheme at all, plus they suffer from soil and infrastructure damage during heavy rainfalls. Nevertheless, the swamp farmers generally hold disparaging views of their benefactors. Over the life of the scheme upstream ratepayers have generally been restricted from the democratic process with no voting rights, such rights being preserved for the A and B Class beneficiaries.

Classification of land for rating has been an issue. As regards the classification of different land for scheme rating, the Soil Conservation and Rivers Control Act passed in 1941 provides that:

"..Lands shall be classified according to the degree of direct and indirect benefit received or likely to be received from works carried out or likely to be carried out by the Board or for the maintenance of which the Board is responsible and there shall be not less than two nor more than six classes named A, B, C, D, E, and F respectively, and where in the opinion of the Board any land cannot be reasonably classified as receiving or being likely to receive any benefit directly or indirectly from the works, that land shall be placed in another class named G."⁶⁷⁷ Generally speaking classes A, B, and C are on the swamp flatland or not far above it, while class F is given to the hill country and valleys in the upper catchment areas. Those classes as categories are set down in legislation and cover all of New Zealand.

While classification relates to benefit it is held today that upstream hill country land, while it does not benefit, should contribute on account of its runoff to the swamp, nicknamed a 'rainfall tax'. On that basis the scheme catchment rates for land in Hikurangi Township and the Northland District Council area should again be collected. These two districts have not had their rate collected for many years and although only four percent of the total⁶⁷⁸ it equals one year's entire rates over the last 25 years.

Several individuals have lately proposed a flat fee across all landowners which is not only unfair but against statute law. Rating cannot be a levy or a tax because a rate is a charge for a 'rate of benefit' and that is perhaps why they are referred to as rates. Statute law says the rates must provide equity according to benefit received.⁶⁷⁹

Having set the Rate Classes A to G the NCC then set the diminishing rating proportions based on A class for each of the classified areas. They were: A class 1.00, B class 0.90, C class 0.70, D class 0.10, E class 0.05, F class 0.02, and G class 0.00.⁶⁸⁰ For example A class paid one dollar per ha, B class ratepayers would pay 90 cents and C class landowners would pay 70 cents per rateable hectare and so on.

⁶⁷⁴ NCC Submissions on financing B (3) (10) March 1975

⁶⁷⁵ NCC Loan renegotiation documents March 1975

⁶⁷⁶ HSMS Submissions on Financing Local Share of Costs March 1975 page 10 (3)

⁶⁷⁷ Page 8 Decision of W M Willis In the Matter of Rating Appeals March 1970

⁶⁷⁸ See itemized table NCC Hikurangi Swamp Works committee minutes 23rd January 1978 page 10

⁶⁷⁹ NZ Soil Conservation and Rivers Control Act 1941 section 102 (1&2)

⁶⁸⁰ From Secretary NCC letter W K P Graafhuys to G Spiers 12th September 1969

Applying the formula for the 1979-80 year actual rates were set as follows: A class \$17 ha. B class \$15.30, C class \$11.90, D class \$1.70, E class 85 cents and F class 34 cents.⁶⁸¹ The zero rated G class included things like roads, public land and reserves etc.

Contrary to current thinking, landowners could in fact apply for a change the rating Class for their land that in their opinion was not protected according to its rated class. As already mentioned there were six floods in the first five months of the scheme and this caused multiple applications for rating reviews ie: downward adjustment of rates for land that flooded. This alteration to rating is within the powers of the governing body. In fact the NCC said, "It would appear that the long term solution to assist ratepayers unable at present to gain full benefit from the scheme will be re-classification."⁶⁸²

At the time of the NCC 1978 Scheme Review Areas of the classes were: A class 3,033 ha, B class 1,376 ha, C class 1,389 ha, D class 1,931 ha, E class 1,565 ha, F class 36,176.⁶⁸³

After the very first floods the NCC decided⁶⁸⁴ the Commission's classifier Mr E Garton should review the classification of the HSMS in two pockets, Junction and Okarika. Early applicants for reclassification adjustments included Messrs R. M. Pickens, J.A Corse-Scott, Ben Smith Senior, C.H. & E. M. Metcalf, and G.A. & R. V. Spiers. Some 15 listed re-classifications were recommended for adoption. A Whakapara applicant Mrs J.M. Reid also applied⁶⁸⁵ under Section 105 of the Soil Conservation and Rivers Control Act 1941 and the Commission also authorised a re-classification.

There is a difference between setting the Classes themselves and setting which Class an area of land should be in. The Classes are set in Statute but at least in the early years, classification of a piece of land was not. As seen above, the local authority was free to move some individual classifications between classes when flooding benefit required. The comment by the then District Council CEO M. Simpson on this issue may be incorrect.⁶⁸⁶

The scheme quickly got into trouble with costs being higher than expected and rates being kept too low. Farmers have a natural resentment toward paying unfair rates and Hikurangi swamp farmers more than most. Over the ensuing thirty years the Liaison Committee made no move whatsoever to keep up with inflation and by 2009 the scheme was in financial trouble when maintenance costs and pump replacements came along. Oddly enough, at a Liaison meeting⁶⁸⁷ chairman and longtime Councilor Graeme Broughton, who was close to the Liaison Committee leaders, commented, "We don't need a rates increase, the scheme is going very well. It's the best in NZ." Broughton obviously reflected the thinking of the influential farmer Liaison Committee who he was close to, however, the complacency led to a basic failure of not keeping up with inflation,⁶⁸⁸ in other words poor financial planning. This took place over a period of forty years.

During the scheme's design in 1968 the Rate was expected to be \$3.50 per acre or \$8.40 ha.⁶⁸⁹ That \$8.40 value had become \$26.52 value by completion date but only

⁶⁸¹ Northland Catchment Commission documents

⁶⁸² NCC Report – Review of Hikurangi Swamp Major Scheme 13th September 1978 page 11

⁶⁸³ NCC Report – Review of Hikurangi Swamp Major Scheme Sept 1978 page 12 and other pages

⁶⁸⁴ NCC Review of Classification of Okarika and Junction Pockets November meeting 1978

⁶⁸⁵ HSMS Works Committee minutes 27th November 1978 page 3

⁶⁸⁶ Mark Simpson on Statute to Public Forum March 2011 re comment by Roger Milina

⁶⁸⁷ Liaison meeting at forum North 23rd May 2000

⁶⁸⁸ Inflation calculations used are from the Reserve Bank of New Zealand

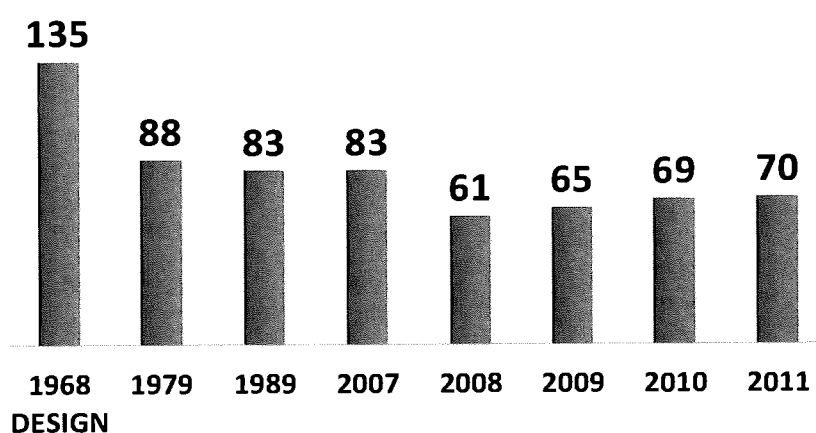
⁶⁸⁹ NCC Scheme Report Volume 2 February 1968 page 36

\$15 ha was charged owing to dissatisfaction and ugly meetings and complaints about the scheme as described earlier. So upon the scheme's completion the real value of rate collection was effectively 43% less than predicted and needed.

While bearing in mind that in 2011 the class A rate was \$70/ha we can see that the inflation adjusted value of the rate⁶⁹⁰ then continued to decline over a period of thirty years. There were no rate increases at all for nineteen years from 1989 to 2008. Whereas in 1979 just after completion the inflation adjusted value of A class rates was \$88 per ha it had declined to only \$61 per ha thirty years later in 2008. At that point in time the A class rate was thirty percent lower in real terms than when the scheme was just completed.

Value of Past Rate/Ha for A Class

■ In 2011 Dollars



With rising expenditure on repairs and costly replacements to pumps the WDC began lifting the rates in 2009 through to 2011 but nobody had yet worked out that the real rate was still twenty percent lower than in 1978.

The situation was not helped by the campaign led by Ben Smith and others like Neville Thorne who repeatedly protested that 'the rates were unaffordable' and 'the WDC was sending ratepayers broke.' Ben Smith asked, "I would like it recorded that we are broke."⁶⁹¹ but was illogical when he said, "The bottom line is that \$400,000 in targeted rates was way short of scheme needs," and in the next sentence was quoted as saying, "The A class rate is headed to \$100/ha or more which is unsustainable."⁶⁹² It was like saying "We need the rates higher - but we cannot pay for them." And all the time he and his protest group were acting in ways that could only drive up the costs of administering the scheme. But the rate was only nine dollars above its all time low so the protest group had no grounds for complaint on that score. Even Ben Smith's own father considered pumps affordable with extra rate payments of \$200,000 per year.⁶⁹³

⁶⁹⁰ While only A class is mentioned here the same changes applied to all classes and rates charged

⁶⁹¹ Public Forum March 2011

⁶⁹² Protestor Ben Smith reported in the Farmers Weekly 21st March 2011 page 21

⁶⁹³ Chair Liaison Cttee meeting 15th August 2007

Going Broke

It was now true the scheme was no longer debt free as it had been for some years and the debt had grown to \$145,000 in 1997⁶⁹⁴ then to some \$1.9 million. This however, was caused by the costs of reinstating scheme crests that had been filled in plus expected pump replacements and the costs of modeling the scheme and getting the new resource consent for 35 years.⁶⁹⁵

However, a spread sheet supplied by this author showed that the scheme could have been better served over the years through 2011 and all that had been required was an annual rates increase of only 2.4% from 1995. This was not even as much as inflation. Farmers are business people as the council's CEO reminded them, and they should know the effects of inflation. That long term failure led to today's problem.

While they welcomed the effects on product prices and land values the swamp farmers failed to look after their scheme income and costs. The bill for reinstating the scheme to near its original intentions was about \$1,044,865 made up of modelling \$600,000,⁶⁹⁶ consent cost \$169,000, works on crests, \$275,865.⁶⁹⁷ But when all else fails blame-shifting is a common human result.

Protestor Smith and his group then called for a Government Inquiry into what they claimed was District Council financial mismanagement of the swamp drainage scheme.⁶⁹⁸ Smith thought "Alarm bells should be ringing in the Auditor General's office," and the WDC was colossally inept and 'in dreamland.'⁶⁹⁹

The reality was how to make up the shortfall in real income that was allowed to accrue for three decades and get back on a sound footing, which inevitably meant a substantial rate increase for a period to get back on track after such a long period.

The costs of interfering with the scheme had come home to roost with a vengeance and at a very bad time. In fact in 2014 the three floods resembled the year 1978, the first year of the scheme, when there were also three large floods. The outcry in 2014 resembled the similar outcry back then and was understandable.

In an ironic and perhaps incredible move, a submission was made to the 2014 WDC District Council Draft Annual Plan process actually asking for interest to be charged. Subsequently the council introduced interest payment on any debit balances of the scheme which from then on cost ratepayers on the ring fenced scheme considerable amounts of money. For years when the scheme had been in credit no interest was received but now it must be paid.

I wrote to the council asking for details on how and why the introduction of interest charges came about and who was involved, but the council declined to comment or provide any answers.

This further raises the subject of how well bureaucracy functions and how well people working in councils actually understand rates and business matters such as farming.

⁶⁹⁴ Liaison Committee minutes 7th August 1997

⁶⁹⁵ Debt in scheme accounts. The cost of re-instating the crests was \$275,865, WDC 19/10/10

⁶⁹⁶ James Blackburn for WDC in his consent submission

⁶⁹⁷ Accounts 19th October 2010

⁶⁹⁸ Rural Advocate 16th December 2011

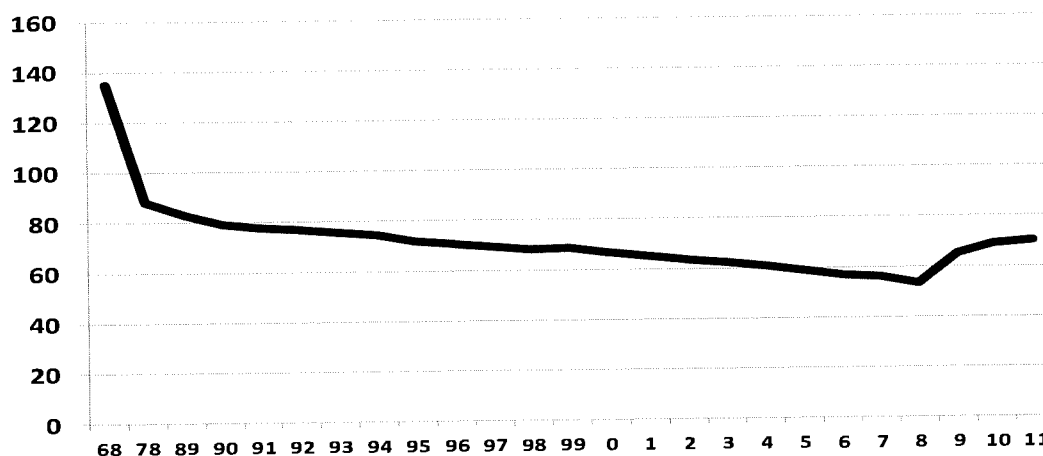
⁶⁹⁹ Letter to the Editor Northern Advocate 13th January 2012

THE DETERIORATION IN RATES SET 1978-2011

(The \$135 figure at left for 1968 was the expected level of rates in the planning and decision stages)

M Rusk 20/1/11

Expressed in 2011 Dollars per Ha Class A



The data above shows that the gradual decline in real rating levels left the scheme in a poor position when replacements were inevitably required for pumps.

As can be seen the District Council then took action to correct the situation but were rewarded with ongoing criticism from some farmers. Of course the rates should already have been somewhere above the \$120/ha level. When the Scheme was designed in 1968 the proposed A class rate was \$135 Ha in 2011 dollars but forty three years later spokesman Smith was saying even \$100/ha was "unsustainable."⁷⁰⁰ The Liaison Committee had opposed investing or depreciation and that, together with a failure to keep their contributions up with inflation and allowing the scheme to divert nearly half of its floodwaters onto the wrong properties, caused their downfall.

Protester Smith ran a campaign to "pressure the District Council" including his 'Rating Bombshell' press releases.⁷⁰¹ Smith made a story about how the whole accumulated debt being added to just one year's rates would be an unaffordable bombshell that would send landowners broke. Of course no council would ever force full payment into one single rating year but it made a great yarn supporting his real agenda which was to get the scheme run and controlled again by a powerful committee just as it used to be.⁷⁰²

The then WDC waste and drainage engineer noted, "That if the 14 farms run by Smith's group earned \$34 million in dairy production per year, based on Mr Smith's own figures, they would make a contribution out of that toward running the scheme of less than \$250,000."⁷⁰³

Dairy production did increase after construction of the scheme. A report by Farm Production Officer Graeme Ferrier showed the production of milksolids in the old Hikurangi Dairy Company supply area rose by 874,000 kg or 16% to 1990 and he attributed this increase to the Hikurangi Swamp Scheme.⁷⁰⁴ This was an increase of 236 kg/MS/ha for the land that had previously flooded.⁷⁰⁵ The increase alone, just to 1990, was worth about \$1,650 on today's milk payout and nearly three quarters of a

⁷⁰⁰ Protestor Ben Smith reported in the Farmers Weekly 21st March 2011 page 21

⁷⁰¹ Press releases December 16th 2011

⁷⁰² Smith admitted this in his press release of 16/12/11 ref 464355 & at Whakapara 16th Feb 2012

⁷⁰³ Mr Andrew Carvell reported by Carly Tawhiao in Straight Furrow magazine

⁷⁰⁴ Structure of The Dairy Industry in Ward 1 of Northland Dairy Company 28th February 1990 pg 1

⁷⁰⁵ From NCC' 1966 pre-scheme area survey and total area for the February 1966 flood of 3700 ha.

million dollars extra income for a 400 ha dairy farm. On such figures the negative media protesting by some risked attracting public distain and fears about going broke could possibly have more to do with their own farm management and land purchase policies than the cost of rating for vital flood protection.

After consultation the Council then came up with three options for getting out of the financial woods. These increases were no doubt compounding⁷⁰⁶ and were set out thus:

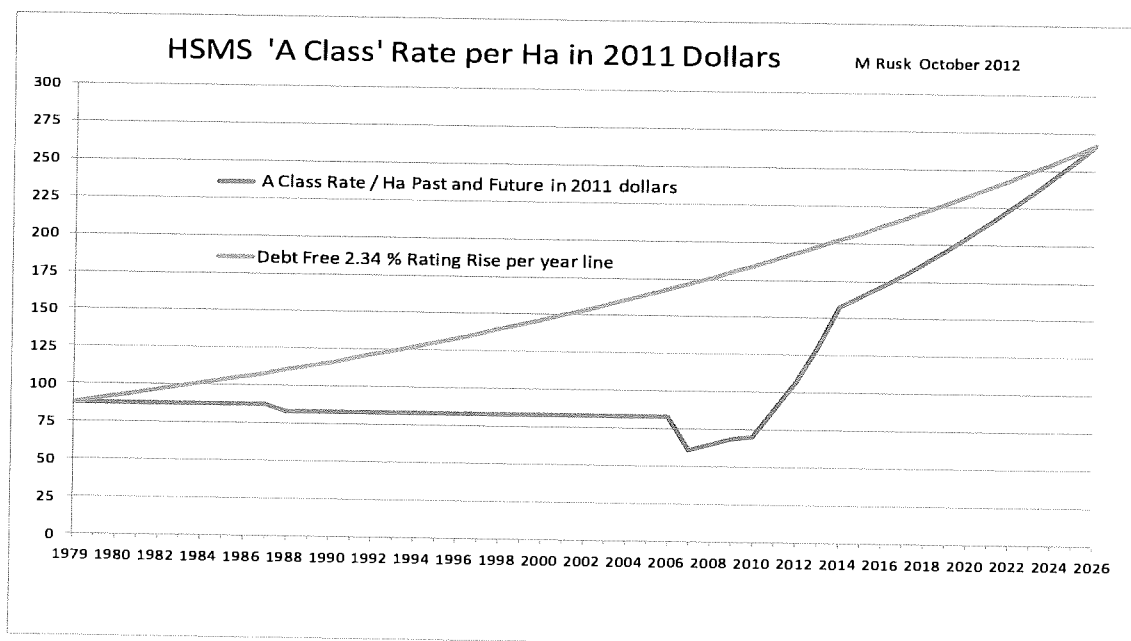
Option one. An 80% increase in Rates followed by increases of 6.8%.

Option two. An increase of 40%, another of 40%, followed by rises of 6.5%.

Option three. Three annual increases of 25%, followed with increases of 8%.

In the event the third option was taken with the break-even year for the scheme expected in 2027. As explained already the inaction over the last thirty years by the then Liaison Committee had left the scheme financially run down and unprepared for the inevitable pump replacements. On top of that the million-dollar cost of repairing the illegally altered inflow crests, an expense that was entirely avoidable, exacerbated the situation. By the year 2012 the road ahead looked much steeper for the ratepayers, so much so that a group of Swampies went in to the District Council public offices where they told staff members of the group were now refusing to pay their swamp rates.⁷⁰⁷ Some eight members of that group then carried out their action and by March 2014 owed a considerable amount of unpaid rates, some of them up to the value of \$160,000. While they were not paying their rates they were endeavouring to run the scheme their way and get their drains cleaned in preference to other landowners who were faithfully paying their dues.⁷⁰⁸

The following graph by the author illustrates the challenges ahead by comparing a policy of steady annual rate increases over the life of the scheme of just over two percent against the she'll be right then panic approach that has been followed.



⁷⁰⁶ They also allowed for local government inflation of 3.52% pa

⁷⁰⁷ On 21st November 2012

⁷⁰⁸ Whangarei District Council

Swampies Resort To Stand Over Tactics.

A crisis occurred on the evening of February 16th 2012 at the little Whakapara District Hall near the top end of the scheme. The idea of council regaining firm control of the scheme was hotly contested.

By February 2012 many landowners had sickened of petty obstructive tactics of a group that included protestors and members of the Farmers Action Group led by Ben Smith. Some 25 people who were concerned about the way things were going and who wanted an open, positive and constructive style of representation, arranged a private meeting between themselves⁷⁰⁹ to form a new group to work cooperatively and openly with the WDC for the benefit of the scheme and all landowners. They exercised their freedom of assembly at a private function by invitation only. This group represented about seventy percent of the Hikurangi Swamp.

However, Smith's United Farmers Group⁷¹⁰ that opposed any other representation but their own⁷¹¹ got wind of it and demonstrated their determination to stamp this new group out. They gate crashed, refused to leave and proceeded to disrupt the lawful gathering. Some of them were highly vocal, used abusive, threatening and accusing language, clenched fists and generally stood around indulging in childish bully-boy behaviour while doing their best to demolish the meeting. Ben Smith announced that he, "Wanted to have the scheme run by the Liaison Committee as it used to be."

The stand-over tactics were not acceptable to the gathered people and at times a very tense atmosphere was at tipping point. I was also abused and threatened and held my thumb on my cellphone button as I considered how far to let things go before calling local police, who had been called before on occasions because of threats of violence and worse.

The convening chairman, Mr Hindrup, had previously spoken to members on the phone and as the convenor/leader he spoke plainly and calmly showing considerable restraint and patience. He outlined the proposed constructive principles the new group would operate by. These were, (1) to work positively with the Council to repair the scheme, (2) to see the scheme returned to fairness in its distribution of floodwaters, and (3) to represent all ratepayers equally where they could all have their voices heard and be treated fairly.

Mr Hindrup then closed the rowdy meeting early because the continuing interruptions from the protestors made further progress impossible. I walked out disgusted with their behavior and because my heart went into a bad rhythm. (I'd just recently had a critical heart attack). Other folk remained and continued to rebut the stream of accusations from the unruly intruders for an hour or more. If the intruders had hoped to gain publicity and block the formation of the new organisation by provoking the new group to violence then they failed in that too. Smith claimed he had taken an illegally secret tape recording of the 'set-up' and wrote, "I will provide a full 16 minute 25 seconds transcript within the next 72 hours."⁷¹² but Smith never produced it. Perhaps after listening to it he realized his group's behaviour was too embarrassing.

⁷⁰⁹ Whakapara Hall 7 pm 16th February 2012

⁷¹⁰ United Farmers Action Group was led by Smith although ratepayers were anything but united

⁷¹¹ "The newly formed self elected group, calling themselves the Liaison Committee, is a group representing themselves. Because of this I think they should not be called the liaison committee. In the past this group has always worked for their own interests." Statement of S Donnelly to Ratepayers Meeting 29 Nov 2010

⁷¹² Ben Smith's email sent to 40 addresses dated 10:51 pm 16/2/12 right after the meeting

Four days after that incident a letter was delivered to the WDC to say that over 25 landowners had strengthened their resolve to relate to the council through the new group and cooperate toward progress to make the scheme fair, peaceful and just. The young farming men in this group were looking like capable young level headed men who could develop into the calibre of leadership that the scheme sorely needed for it to progress into the future. It was now clear to the District Council that the assertive cartel of vociferous ones did not represent the many ratepayers who did not agree with them.

How to Fail as a Liaison Person

Six days later Smith upset another meeting. I went along to the regular Wednesday WDC council Meeting and heard protest group leader Ben Smith speak 'on rating matters' for the three minutes that was allowed within a 'public forum' situation once a month.⁷¹³ After handing out copies of his speech Smith then wasted his whole three minutes by talking about himself, however, the councilors very kindly voted to extend his speaking time.

Smith rewarded them with a long tirade of accusations of corruption and bad management that sadly formed one of the most insulting, derogatory, shameful, and disrespectful addresses I have ever witnessed in a public meeting. Smith blatantly insulted the Mayor saying, "You do not have the spine to confront the issues of gross financial mismanagement and conflict of interest shown by councilors and the CEO." and accused council members and staff of impropriety and corruption.⁷¹⁴ Dr Stephen Joynes, Mr Ray Hindrup and myself were included in the tirade along with the Mayor, staff and councilors. I promptly walked out. Council members were outraged by Mr Smith's comments,⁷¹⁵ saying it was unfair to use the forum to launch personal attacks, because those spoken against had no opportunity to respond. Smith's accusations were published for over four years on a website.⁷¹⁶ The local newspaper editorial opinion said, "There is a difference between being criticized and being libeled and lambasted." "He (Smith) made some defamatory statements and said more than a few things that this newspaper opted not to print."⁷¹⁷ "Arguably he abused the opportunity to have his say". The paper reported Mayor Cutforth's intentions that, "Mr Smith would not be welcome to speak at the forum again." Mayor Cutforth phoned me next day and profusely apologised for what happened. If there had still been a grain of public sympathy left for the Hikurangi Swamp Liaison Committee and the Smith swampie squad before that time, then it was destroyed by Smith himself.

The Swamp Public Forum 23rd February 2012

The Liaison Committee soon found itself on the back foot. Smith's behavior was stressful, even to some among his own "United Farmers" activists. Next day at the public forum they undertook damage control by putting on a good face and strenuously denied taking legal action against the council. But this meeting only a day after Smith's premeditated tirade in council Chambers quickly degenerated as it went on. However, it was not as ugly and threatening as the meeting at Whakapara the previous Thursday night. The group first tried a 'goody-goody-two-shoes' appearance

⁷¹³ WDC Public Forum in chambers 22nd February 2012 at 10. am

⁷¹⁴ Northern Advocate story "Public Forum Rethink" page A3 24th February 2012

⁷¹⁵ Advocate story as mentioned

⁷¹⁶ www.warrenslater.co.nz/docs/BSmith22Feb2012.pdf The article was still there on 15/5/15)

⁷¹⁷ Editor Craig Cooper in the Northern Advocate page A6 February 25th 2012

and denied they were taking any legal action. There were various accusations followed by a short tirade from Ben Smith and several of the West Bank farmers.

Mr B. Smith accused me of getting my data only 50% right, which was just another cheap shot quoting one isolated number from a very small scheme pocket result.

After fifteen years of helping me my wife Maureen was making her first and only attendance at a swamp meeting, to check if my descriptions of human behavior were accurate. She quickly admitted she had not believed adult behavior could be that bad and got both an eyeful and an earful. She was so disgusted and annoyed that in spite of her natural shyness she surprised me by rising to her feet and after quoting a bit of history from her years in hydrology, she gave the noisy rabble a few home truths.

After one snide attack on me the consultant engineer Mr. James Blackburn commented, "*Without Merv Rusk there would not even be any resource consent.*" That was probably fair comment from an engineer in a good position to judge. None of the swampies had ever worked out what the future of the scheme might have been without any resource consent, with all flap gates removed and pumps de-wired.

In reply to the stream of ill informed and baseless accusations by some members of the Liaison committee and a few followers, Deputy Mayor Councilor Phil Halse finally fired the last two-shot salvo at closing. Ben Smith's verbal attack on council the morning before had been the last straw and the Deputy Mayor made that very plain by repeating that the Liaison Committee would certainly not be recognized.

As he departed the Deputy Mayor pulled a copy of Smith's legal paper from his pocket and waving it aloft announced, "Here is the evidence that the Liaison/United Farmer Group are in fact taking legal action. The council will not be relating to that group under those circumstances".

The meeting closed in dead silence as the grip of the Liaison Committee cartel was for once visibly shaken.

CAMPAIGN TO REVERSE THE RESOURCE CONSENT DECISION

Following the threats of death and violence already mentioned, a legal threat of an injunction, the blockade, the protests, placard waving before the Council, and gate crashing meetings, the group put out legal advice that they would appeal the Resource Consent Decision.⁷¹⁸ The Liaison Committee met and voted that the works to restore the scheme should be stopped.⁷¹⁹ Of interest here is the fact that the Chairman's copy of the Regional Council's Resource Consent Decision had the first 37 pages removed from it⁷²⁰ including the Commissioner's comments about 'perpetrators' in 'The Current Non-Consented Situation' and clear warnings to, "*Prevent the consents being over-ridden by those who disagree with them.*" Why were those pages removed and by whom? Had many protest group members never seen these warnings that flew in the face of their campaign?

A motion was also moved that Ben Smith be employed and paid out of ratepayer's funds but that was soundly rejected at two meetings. Ben Smith stood himself down from leading the Hikurangi Swamp United Farmers Group⁷²¹ but stepped back up three months later.

⁷¹⁸ February 2nd 2012

⁷¹⁹ Farmer Liaison Committee meeting of 2nd February 2012 chaired by Mr Mortimer

⁷²⁰ This document is now held in official files

⁷²¹ Meeting of 3rd February 2012

The "Independent" chairman of the would-be Liaison Committee, Mr Mortimer, did stand down. He was part of the consultancy firm Resource Management and Assessment Ltd that had earlier represented the farmers of the TeMata pocket during the 2010 scheme consent hearings and was admitted to have been a friend of some landowners in that pocket, so his independence should have been called into question even before he was engaged. Mr Mortimer was being paid four hundred and twelve dollars for chairing a Liaison Committee meeting and four hundred and fifty dollars for attending a Ratepayer forum meeting.⁷²² Not bad. He did the right thing and went,⁷²³ complete with payment of his account, half paid for by the Smith faction and half by other reluctant swamp ratepayers.

One more public forum was held⁷²⁴ but this was a repeat of the previous meeting with criticism and threatening behavior by supporters of the Smith faction and old Liaison Committee. Twice the policeman present⁷²⁵ had to rise to his feet when farmers from that group made angry comments and advanced toward the front and the District Council's discussion leader Mr Simon Weston. One farming attendee sagely commented afterward, "*I was here in the 1960's and this meeting was exactly the same as then.*"⁷²⁶ That was the last public open forum meeting held.

Some people were unimpressed with Smith's leadership and the behaviour of some supporters, behaviour which fortunately was controlled by the presence of the police. As a result Mr Ray Hindrup wrote to the District Council as follows:

A Personal Statement From Phillip, Margaret & Ray Hindrup

Whangarei District Council ("WDC") wants us to be part of the Liaison Committee. Will WDC provide a police presence at the Liaison Committee meetings. A police presence is required at Swamp Public meetings. The people that are initiating this requirement are mostly Liaison Committee members.

It is no surprise that I am public enemy number 1 and have been threatened and WDC still expects me to ignore this and be part of the Liaison Committee. The Liaison Committee is continuing a campaign of intimidation bullying threatening and corruption that has characterised this Committee since construction of the Scheme in the 70's.

I would remind WDC that it was members of the Liaison Committee who physically chased the Northland Catchment Commission ("NCC") off the Otonga inflow bank while they were attempting to bring it back to its design length in 1987, ripping out the height pegs as they went. Staff of the NCC were so intimidated they never returned! The inflow bank had a design length of 675m it had been extended to 1750m and remained like that until 1997.

The WDC has in the last 12 months had to involve the police in the operation of the Scheme at Ngararatunua, at Te Mata and at public meetings. The Mayor has had death threats, WDC Councilors have had death threats. I have been threatened. The inaugural meeting of the Concerned Ratepayers was sabotaged by the Liaison Committee and Action Committee members with verbal and physical confrontation to the point that it was abandoned. All subsequent meetings have been held on private property with a police backup. WDC Policy Statement of the Ultimate Living

⁷²² Invoice 00051613 date of issue 9th March 2012 \$4,449.93 total professional services provided

⁷²³ Meeting 3rd April 2012

⁷²⁴ Public Forum 11th April 2012 at Friendship House Hikurangi Hall

⁷²⁵ Senior constable Russell Rawiri of Hikurangi police

⁷²⁶ Mr Eric Edwards, long time Junction pocket farmer, to a councilor

Environment, where we need a police presence to hold a public ratepayers meeting, one has to ask is this Northland, New Zealand or Botswana, Africa.

The Hikurangi Swamp Scheme needs strong leadership and management. I draw your attention to the Scheme Consent 8.3 page 25 – the last three paragraphs, also 8.8 page 29 & 30, the commissioners could see the present situation developing with absolute certainty. In particular, Section 6.2 page 20, the people who built the illegal banks are the very same people who are fighting for control of the Scheme today. It is our view that WDC should cease all contact with this faction immediately.

If the WDC requires us to be part of the Liaison Committee, will they guarantee to provide us with police protection at all meetings? The WDC is not providing strong leadership as required by our Resource Consent. The situation at present is bordering on warranting a complaint to the Northland Regional Council.

*We send this letter to WDC knowing that our problems are WDC problems too, we trust that you will take the points we have raised into serious consideration as we move forward. We remain firmly in support of the WDC as it carries out the conditions of the NRC. This is a personal statement from Phil, Margaret and Ray Hindrup.*⁷²⁷

Yours faithfully

Ray Hindrup

Reinstatement of a Liaison Committee. March 2012

By early March 2012 some of the former Liaison Committee members and others who had influenced the direction of the scheme met again to regroup.⁷²⁸ Ben Smith wanted to be remunerated for his efforts but was declined. Several weeks later the first flood arrived and the protest group became noisier. By mid April a new structure for a WDC Swamp consultation committee and names were suggested.⁷²⁹ Ben Smith and Neville Thorne were not accepted by the WDC on account of their court case. Nor was Mr Ray Hindrup in spite of the fact that he had suffered heavily financially, withdrawn his legal proceedings nine years earlier and had done so much to assist progress and contributed engineering work to cooperate constructively with the Council.

Because of the poor behaviour at swamp meetings previously a code of conduct was drawn up and signed by each representative. This focus group or “Working Group” was to work with the WDC, was not intended to engage in voting and according the Council it was intended to be a middle road between the two swamp factions.⁷³⁰ The test would be whether the extremists would really meet on the middle ground.

The first meeting took place on the twenty sixth of April at 2:30 pm at the WDC offices. Mr Hindrup’s son Phillip represented Otonga pocket, only to find he was completely outnumbered and the old guard was just as antagonistic as ever. It was not a balanced group of swamp ratepayers at all.

The TeMata pocket attracted attention first up by claiming that, “The scheme worked well before the resource consent,”⁷³¹ a claim that called into question the recorded data and all the work done by expert engineers and hydrologists. This

⁷²⁷ Mr Ray Hindrup to WDC 13th April 2012 to councilors, & staff Weston, Carvell and Summers

⁷²⁸ Meeting of 6th March 2012

⁷²⁹ 18th April 2012

⁷³⁰ Chairman Deputy Mayor Halse quoted on Morning Report by Lois Williams 8th October 2012

⁷³¹ Mr Evan Smeath in Minutes of TeMata Pocket at Focus Meeting of 26 April 2012 at WDC

meeting indicated that the council had taken a wrong turn and management of the scheme was heading back to where it used to be. The old guard in the new group wasted no time but overstepped the mark.

Backdoor Attack on the Resource Consent

The "Liaison Committee" faction held another meeting and a novel strategy was designed aimed at getting rid of the recent resource consent and forming a new one "in house" to suit the objectives of the group. The consent had previously gone through all the due processes, been officially supported at the hearing by even the 'perpetrators' and Liaison Committee people, no appeal was made whatsoever, but here they were two years later with an unheard of legal move that boiled down to asking the issuing body, the NRC, to replace its own resource consent.⁷³²

WDC and staff were stunned and had no knowledge of this. The Liaison people had botched their liaison with the District Council and were now hoping to move the scheme across to Regional Council control in the hope of getting things their way in new pastures. Mr Hindrup went to Mr Craig Brown, Chairman of the NRC⁷³³ to present some balance with the following.

NORTHLAND REGIONAL COUNCIL AGENDA 17 APRIL 2012 – ITEM: 6.3 – ISSUE: HIKURANGI SWAMP SCHEME – TRANSFER OF RESPONSIBILITY

This is a personal statement from the Hindrups. Upon viewing the above, we wish to draw your attention to the following; please note we have attached a copy of the above to enable you to align our points with the report:-

1. If the majority is going to be listened to, Northland Regional Council ("NRC") should buy the Otonga pocket for \$35 million and use it as a sacrifice pocket as has been done illegally over the last 26 years. Given that most of the illegal banks were done while Northland Catchment Commission ("NCC") and NRC were owners of the Scheme, the NRC involvement at this point does not give us any confidence.

To change ownership of the Hikurangi Swamp Scheme ("HSS") now would have a destabilising effect at a very critical stage in the implementation of the Resource Consent conditions. The illegal alterations to the Scheme have only just been removed. We have not even had one flood which we can monitor.

This proposal has not even been discussed between the two Council's concerned or advertised to the ratepayers for their consideration and input. We would have thought this would have been the proper process.

The disagreement amongst stakeholders has for the last 20 years been Ray Hindrup against the rest of the ratepayers, NRC and Whangarei District Council ("WDC") included. At no stage of those 20 years did either body assist us to put the Scheme back to design. Dr Jones and Mr Watson the independent commissioners had no doubts about what was required and knew exactly the situation that would develop once the WDC carried out the conditions of the Resource Consent, ie the returning it to design. See attachment "A". At this very point we are in the situation that the majority of ratepayers that had an illegal advantage are squealing. The NRC appears to be listening to them. The advantage that certain stakeholders had was total flood protection from all inflow floods that the Scheme was designed to handle. This total protection has been worth millions of dollars to them. By our calculations approximately \$28 million.

⁷³² NRC Agenda Item meeting 17th April 2012 Hikurangi Swamp Scheme Transfer of Responsibility

⁷³³ Meeting re Agenda item 6.3 at NRC Tuesday 17th April 2012 at 9.am

2. In 1985 the Liaison Committee extended the Otonga pocket inflow bank by 1000m, making it the sacrifice pocket, taking most of inflow water. From this point on it has been one pocket against six pockets. The majority carried the day at every vote, therefore the illegal banks and other nefarious activities continued right up to the Resource Consent hearing when the two independent commissioners actually witnessed where members of the Liaison Committee put dirt on their inflow bank. See attachment "B" and "C". The Scheme can never go back to being run by the Liaison Committee where a majority committee vote carries the day. It would be back where it was within a week! The Scheme must be run using technical data, not by majority voting.

3. The stakeholders that have had this proposal put on NRC agenda today seem to have no fiscal ability at all. At a time when the Scheme is virtually broke, they are still requesting spending on items that the Scheme has never spent on before, ie:-

The Liaison Committee has hired a consultant, \$6,500 in three months!!

Request for \$5,000 to pay Liaison Committee member

Request for drain cleanings to be spread – cost, who knows

Request for culvert replacement. This has never been done.

This is extremely dangerous ground when you have a majority of perpetrators who have just lost a 20 year illegal advantage.

4. a) **Deoxygenated water** – Before the Scheme was built this would have been 100 times worse than now, as the floods stayed for weeks and there were more of them. During every flood the commercial eelers take tonnes of eels off the Wairua River. According to our local Kuamata it is not floods that kill eels, but droughts. In floods the eels travel to the upper reaches of each pocket to where the water is still running. We have witnessed this happening on many occasions.

The NRC heard and gave the Resource Consent. There were no submissions against it. There were no objectors to it. As a submitter I had every opportunity to put my concerns before the independent commissioners, and provide them with, in their words "irrevocable evidence" of what was the current situation. I found the entire hearing to be submitter friendly. We were well supported and the commissioners were extremely well qualified. They certainly knew their job. I was made aware of the time frame that I had to object to the decision, if I so wished. I didn't object and no one else did either. There were no appeals.

If the Resource Consent were to be overturned today I would turn up to a new hearing with exactly the same submission as before. We might add a small amount of evidence from floods since the Resource Consent was granted but this would be insignificant when considered against the 44 years of data which we used in our original submission. The Scheme has never had a chance to prove itself, to change the Basic Design philosophy now would be premature. If the items mentioned in the proposal were to be carried out the NRC would eventually find itself back again in exactly the same position as the present Resource Consent with the same process of monitoring and adjustments to the Scheme's performance.

5. Quite simply the Scheme had been so extensively, illegally altered by individuals that five of the seven pockets had a huge flood protection advantage, worth millions of dollars. You must expect to have divisions when the perpetrators

realise that they have lost this significant illegal advantage. The Scheme must be run by technical data not majority voting.

6. Much of the \$2 million debt was run up by WDC trying to justify the illegal banks on the Scheme.

At one point the WDC told me to put up or shut up. I put up. Engaging the second best hydrologist in the country, a top engineer and commissioned the most comprehensive survey of the Scheme ever, at a cost of \$43,000!!

Approximately \$200,000 later the result is the most comprehensive, sensitive and accurate hydrology model of the HSS and I own it, and am continuing to refine it. This is what is upsetting the perpetrators responsible for the illegal alterations to the Scheme. They now know that as long as I have this hydrology model they will not be able to corrupt the Scheme again. They are going to have to learn to live with their share of the inflow flood water.

It does not matter to me if WDC or NRC owns or operates the HSS, both will need to satisfy my model and engineers that any changes are warranted. And if that upsets some of the perpetrators who illegally altered the Scheme for their own advantage they will have to get used to fairness which is what I want for all stakeholders.

We would have thought it would be more appropriate to consult with WDC and all ratepayers before acting on the request of a small group of perpetrators who have illegally altered a public flood control scheme.

7. Obviously the person who prepared "attachment 2 of the agenda" works with the same fiscal ability as the Liaison Committee. Spend and hope. The rates on HSS as proposed are bordering on the unsustainable. To add the costs in "attachment 2 of the agenda" to them would be fiscal suicide.

Recommendation: That NRC does not support the consideration of transfer of responsibility of the HSS. That the NRC positions itself in readiness to support WDC and the honest ratepayers on the Scheme to see that the crest dimensions and conditions set out in the present Resource Consent are carried out in full with total transparency and accuracy, and that the HSS is operated to its design philosophy.

See attachment "D" being a copy of our statement to the WDC on 13 April 2012 outlining the current situation regarding the ratepayers representation on the Scheme.

If you have any questions or require further information please do not hesitate to contact me.

Yours faithfully
Ray Hindrup

SUPPORTING EVIDENCE:

Minutes of the Liaison Committee
Aerial photos of Cyclone Fergus flood
Surveys of the illegal banks

Takeover Prevented

Coincidentally the WDC Deputy Mayor Mr Phil Halse, who was in charge of scheme affairs at that time, emailed the NRC and CC to WDC councilors as follows:

“Refer: NRC Council Meeting 17 April - Agenda Item 6.3 Hikurangi Swamp Scheme. Transfer of Responsibility.”

“NRC Councillors: This is in response to agenda item 6.3 – Hikurangi Swamp Scheme proposed for discussion at your council meeting tomorrow. I find it particularly odd that no formal discussion has taken place with the consent holder (WDC), nor have you received a request from WDC to intervene in the process we are currently dealing with.

Your council, NRC, have issued a resource consent to re-establish the spillways and stopbanks to specific heights and lengths and we are fulfilling those obligations. You must also know that you (NRC) Councillors cannot act as the poacher and then as the gamekeeper, and surprisingly you simply do not have the right to do so.

Discussion on selected information is extremely dangerous and for you to suggest that there is no clear Governance structure is totally incorrect. WDC hold the consent and are responsible for the scheme. The farmers have obligations to the scheme as targeted ratepayers. You as a council have fallen into the trap set by action groups who have been obstructive to WDC proceeding with the work in order to comply with the conditions of your resource consent.

I refer you to the following quote from the Commissioner as written in the consent conditions:

“It is our observation that unless some clear control over unauthorised interference with the control banks is achieved then all this will be in vain and the situation will quickly revert to the current situation which appears to be a “free for all” with landowners protecting themselves ultimately at the expense of the less selfish Scheme partners.”

We the WDC have encouraged a Liaison Group to assist our engineers in developing the intricate “attention to detail” options. We are well aware of the situation and the personalities involved and we will keep evolving a working party of land owners to assist us to move ahead. A further meeting is planned for Thursday night. It is not an easy task but be assured it is in hand. At this particular stage NRC should be a spectator and not a player member or you run a severe risk of sabotaging your own Commissioner’s recommendations.

Both council’s have an obligation to make sure this Hikurangi Swamp Scheme is protected and we should be seen by the wider public to be working together on this important issue. It has been suggested that WDC complete the work required under the Resource Consent and that the NRC monitor the end results to satisfy them (NRC) that all things and matters comply. I feel this is what your recommendation should be.”

Councilor P R Halse / Deputy Mayor Whangarei District Council.

WDC Appointed Member Hikurangi Swamp Scheme.

Farmer 43 years experience.

The prompt outcome was that the NRC acknowledged that government legislation prevented taking the scheme over without WDC agreement as it owned the land and the scheme and this was conveyed to the Liaison Committee faction by an email from WDC Deputy Mayor Mr Halse.⁷³⁴

⁷³⁴ Email from WDC Deputy Mayor 20th April 2012 to Cara Lindsay and copy to Councillors

"Hi Cara, You are certainly incorrect in your statement regarding the outcome of the Regional council meeting. I was present along with Greg Martin and Conal Summers our staff member. At the start of discussion the NRC chairman stated The Whangarei District Council owns the scheme, and NRC Councilor Tony Davies-Colley commented that 'We cannot do anything if we do not own it' (the scheme). There will be discussions and there already have been some, but in the mean time WDC will continue to manage the scheme. It is little wonder that farmers can't move ahead positively when there is so much misinformation being circulated. The NRC will not take any part in the swamp management until WDC sign it over to them. Regards Phil. (Deputy Mayor WDC.)"

The NRC also sent a letter out to the same effect.⁷³⁵

Then it was time for Long Term Plans to go through public discussion.⁷³⁶ A handful of submissions were made to the NRC and WDC hearings by a few members from the Smith faction who magnified the recent March 2012 flood in isolation in an effort to use an over-design event to derail the resource consent and repairs to the scheme.

Both Ray Hindrup and I made separate independent submissions to both Councils. Mine is included below as it summarized events to 2012.

WDC Hearings LTP 17th May 2012. Submission from Merv Rusk.
DIRECTION AND MANAGEMENT OF THE HIKURANGI SWAMP SCHEME.

BACKGROUND:

The Scheme performed reasonably well from 1978 for seven years after construction.

In the mid 1980's Otonga pocket had one kilometer secretly bulldozed off the top of its stopbank and restitution work was halted onsite by the Liaison Committee. After the large flood events Cyclone Bola 1988 & Delilah 1989 other pockets had their inflow crests filled in illegally by landowners.

By the nineties the scheme was so distorted that 47% - 58% of storage floodwater was diverted onto other properties, with no word of protest from the controlling Committee.

Five out of the seven 'pockets' had a huge economic benefit and the remaining two pockets suffered accordingly. The beneficiaries out-numbered and outvoted the disadvantaged few.

Inequitable flooding forced the disadvantaged landowners to push for bank surveys and a WDC review began in 1997 stretching to 14 years, by which time the costly and unfair flooding had continued for twenty five years.

The WDC review was based on 14 years of work and involved specialized NZ and international professionals. The work was well peer reviewed over the 14 year period and these professionals included those listed below:

⁷³⁵ NRC letter of May 2nd 2012

⁷³⁶ NRC LTP submissions process 8th May 2012

Mr Mark Simpson WDC, formerly Engineer for the scheme.
 Mr Brian Kouvelis, Engineer and MWH International, Project Manager, Manawatu.
 Peer Review by Murray Menzies of Water Resources Consulting Group NZ, Auckland.
 Peer Review by Dr Steve Joynes, Principal of Hydraulic Modelling Services, Hamilton.
 Mr Hugh McMurray of MWH and private consultant, Hamilton.
 Weijun Zwang I.R.S. Independent professional acting as an Arbitrator, Christchurch.
 Mr Anthony Van Schalkwyk, Project Manager for MWH Ltd Auckland.
 Mr Tristan Jamieson Professional engineer of Watershed Consultation Ltd Auckland.
 Mr James Blackburn local Consultant Civil Engineer of Hawthorn Geddes Ltd.
 Mr Alan Watson Hearings Commissioner for NRC.
 Dr Jeff Jones, for NRC, a Hearings Commissioner with experience in flood schemes.
 Peer Review of the modelling for NRC by River Edge Consulting Hamilton.
 Mr Nigel Mark-Brown, Consultant and Reporting Officer NRC.
 Mr Dale Hansen, NRC Hydrology office, and others.

Your Council applied to renew the expired scheme resource consent to return the flood scheme to its design philosophy of fairness and equitable performance.

Notably all swamp landowners supported the application, including the first step provisions and the monitoring conditions.

A recent vociferous protest leader even submitted his congratulations to the WDC **for a consent job well done!**

The hearing commissioners were very experienced and well qualified in flood scheme management and made their decision in mid 2010 to grant the consent for 35 years.

There was not one single appeal against the decision therefore there are no grounds for meddling with the consent.

The decision of the commissioners for the NRC was accompanied by the following pertinent statement of warning:

WARNING STATEMENT BY COMMISSIONERS:

"Over the years, on the basis of what we have heard and read, it would appear that the scheme has departed significantly from its original concept largely as a result of unauthorized and unchecked modifications undertaken at a good number if not all of the "controlled" overflows or designed low areas of the flood control banks.

The control banks were intended to prevent river flooding of adjacent lands up to the then assessed 5 year ARI flood, but allow waters in excess of that to flow into the various pockets or sub-catchments that had been delineated naturally before the Scheme existed. Such overflows were designed to occur progressively downstream on the rising limb of the flood hydrograph above the 5 year flood level as it moved downstream. Each pocket would receive flood waters in proportion to that which would have been received by that pocket had the control banks not been there at all.

We were advised by submitters that unauthorized filling of these overflow spillways, in an effort to ensure that the perpetrator's land received less floodwater,

has been going on for some time. Indeed when we undertook our site inspection, we saw, firsthand, where very recent filling of an overflow spillway had occurred.

It was acknowledged that unintentional departures from the original scheme concept also existed as a result of settlement where the banks were built over old river channels or swamp areas and also as a result of stock damage eroding the levels of the bank.

The proposal is to restore the Scheme to comply with the original design concept where that is necessary. This will be achieved by repairing low areas of the stopbank and re-establishment of the controlled overflow "spillways" by fixing their levels permanently and initially setting the length of each overflow to achieve the original Scheme concept detailed above. We were told by the applicant that this initial length has been established using more sophisticated modeling techniques than that which was available when the original Scheme design was done and with the benefit of some 33 more years of hydrological and hydraulic data which has been collected since the scheme has been in operation.

After the initial re-establishment, it is proposed that following further targeted data collection and refinement of the model that adjustments on the length of the respective overflow spillways will be made as necessary with the intention of achieving the original Scheme concept in reality.

It is our observation that unless some clear control over unauthorized interference with the control banks is achieved then all this will be in vain and the situation will quickly revert to the current situation which appears to be a "free for all" with landowners protecting themselves ultimately at the expense of their less selfish Scheme partners.

*The stopbanks are on land owned by the applicant (albeit under some form of lease or license to occupy). The applicant therefore has absolute control over its flood control structures **and should exercise that control in the future.***

*In any case, as a Local Authority, it can clearly control such unauthorized interference by using powers vested in it under Section 232 of the Local government Act 2002. The applicant may well need to fully exercise such power, at least as an example to others, **to ensure that the proposed works authorized by these consents can result in improvements to the equity of the scheme and not be simply overridden by locals who disagree with them.**" Unquote.*

Inevitably some farmers were going lose their unlawful benefits and that, I submit, is the reason for all the recent noise.

The landowners who have been trying to overturn your resource consent are the same ones who benefitted from the scheme being kept in an altered state.

*Any re-hashing of the recent resource consent, would simply add many more years of delay and expense. **Inevitably it would arrive at the same consented position as now,** that is, to repair the scheme as in step one now completed, and then monitor performance for enough floods to ensure the scheme operates fairly as originally designed, and if adjustment is required, to progressively adjust it until it does. This seems a fair and just process.*

What is not fair and just are the attacks against people, councilors, staff, professional engineers, neighbours and farmers, who have all worked hard to have the flood scheme restored. There have been various threats, violence, disruption, and

obstructive behaviour. Threats have been made to kill farmers, officials, and their families. Graciously, those people declined to press charges with police to avoid inflaming the situation. There were verbal attacks and libelous accusations, some in this very Council Chamber. It has been necessary to have police at meetings. A police escort was needed to allow earthworks to repair the TeMata inflow crest. The Hikurangi Swamp has been a unique cesspit of immoral behavior by a handful of rich dairy farmers getting richer at other people's expense.

I submit that it's past time for the council and other ratepayers, to stop financing, subsidizing, and bending over backwards, to molly coddle a small handful of farmers who abuse the system, and choose to behave in an unacceptable manner. It's time for people to change their ways.

The flood scheme itself should be changed only according to engineering and hydrological evidence.

Following step one modifications the scheme has moved to a level playing field from where it can be monitored and adjusted. Council needs to carry out this procedure and prevent the scheme from being undermined and returned to the previous situation, as per the NRC Commissioner's warning.

PERFORMANCE:

The recent flood in March 2012 was only the first flood since step one repairs but was unusually steep. It is unreasonable and selfish for a vocal few to make judgments on just a single event. A knee jerk reaction on one single flood is not appropriate.

The recent flood had almost the highest ever peak and most concentrated rainfall in the upper catchment areas. Since the 150 year event in 2007 there have been two such floods. Compare these with more than 110 river flood events since 1977. **The largest 15 that caused overspilling had much flatter and controllable profiles. Those floods are a matter of record and their average peak river gradient still matches the gradient of the original scheme stopbanks.**

Don't get confused between flooding caused by rainfall in the 7 pockets and flooding caused by river overspilling. Pocket catchments do flood as originally designed, but **internal rainfall flooding is not part of the scheme's overspill to storage system.** The pumping stations are proportionally sized to take care of that.

Apart from extraordinary upstream spilling into Junction Pocket, **the distribution percentages of overspill to storage in March were within the ranges of the last twenty years.** It's just that different people were involved this time. The flooding in TeMata pocket was no worse than it has been for Otonga and Ngararatunua pockets for twenty five years.

And remember - not one single flood has been officially monitored yet!

MANAGEMENT:

Council needs to hold the scheme debt levels within both council and farmers' ability to service. This is no time to increase debt for non-essential items. If the public

knew how many millions were being used to support the demands of a handful of noisy farmers the increased borrowing proposed could be hotly opposed.

I submit that council needs to enforce lease-holders cleaning up and maintaining the bermland which has deteriorated, and the NRC needs to attend to river maintenance in lower reaches.

The most efficient and economical way to reduce flooding and electricity costs would be to do the work at the lower end of the scheme that was planned 44 years ago.

In completing the requirements of the resource consent, further data collection from five floods will allow the WDC to progressively fine tune the scheme to be fair to all, now that the infrastructure is in place to do so.

Apart from some poor behaviour by some landowners who had their inflow crests corrected it is pleasing that communication between the WDC and farmers has never been more open and accessible, with open public meetings, emails, and group meetings. But I encourage council to take firm control of the situation to provide certainty and to ensure affordability.

I submit that both councils, the WDC and NRC, both need to cooperate as set down, to **resolutely hold expenditure, and to firmly hold the consent requirements on track, until the entire process is completed.**

RECOMMENDATIONS:

- That WDC is to remain in control of the scheme.
- That a clear commitment to complete all the conditions of the resource is needed to provide certainty.
- That pumps to be replaced only as needed to avoid financial burdens.
- That huge financial commitments should be put to a ballot of all the ratepayers concerned rather than voted on by a small invited group.
- That there will be no changes to the Resource Consent, nor to its Conditions, nor to the philosophy of the scheme.
- That the existing scheme design to control five year category floods should be achieved and paid for before any attempts are made to control large events.

Thank you.

Merv Rusk.

May 2012.

A submission from the dairy giant Fonterra was supportive of the WDC saying, "In the light of historical knowledge and familiarity with the scheme we welcome council's continued responsibility operating and managing the scheme and the proposals for capital improvements."⁷³⁷ Federated Farmers, whose lawyers were also acting for Ben Smith, submitted asking for, "A peer reviewed independent Hydrological report to form the basis of scheme consents."⁷³⁸ Seemingly the Feds were not informed that the hydrology and consent application had in fact been independently and seriously peer

⁷³⁷ Fonterra submission no. 897 to WDC Long Term Plan page 5

⁷³⁸ Submission 843 Federated Farmers of NZ 3.3

reviewed. It would be no exaggeration to say that the most qualified people in the country had worked on or reviewed the engineering and hydrology during the thirteen years of the scheme Review. A submission of some TeMata ratepayers suggested "A study, possibly carried out by a university student undertaking a thesis."⁷³⁹ How on earth could those practical farmers prefer a raw inexperienced university graduate over the top qualified professionals in the land who work for recognized international companies?

After the hearings the WDC's 10 year plan was approved and Council basically said it would carry out the resource consent conditions, maintain the scheme and set rates at an affordable level to achieve these. Wording of the Plan was also clarified and amended thus: 'Raise' stopbanks was deleted and 'Repair' stopbanks inserted per the resource consent.

Swampie Philosophy

At this stage an amusing incident took place during the statutory visit by the Auditor General's staff member from Wellington to monitor council planning. This qualified gentleman first commented favourably on aspects of the WDC's 10 year planning document before adding lightly that the "Swampies" had received their requested rating adjustments that would make rating burdens for the scheme more bearable. Within minutes his cellphone went off so he left the room longfaced, followed by two senior WDC officials.

It turned out that Ben Smith had been alerted and phoned the Auditor General in Wellington making an official complaint to the effect that, "Farmers on the swamp had been grossly insulted by an official referring to them as "Swampies" hence the boss's instant call to his man in Whangarei. It seemed that Mr Smith was offended at joining Truckies, Chippies, Surfies, Boaties and Wharfies and so on. How odd then that swampie Smith had thought it was acceptable for him to insult people in the same council chamber. And who knows, the farmers on the Hikurangi swamp may indeed become known as *Swampie's*....

Three District Councillors later visited Mr Hindrup,⁷⁴⁰ concerned at how he was being treated. Mr Hindrup learned that certain Swampies had indeed approached the District council with a view to rewrite the scheme philosophy, namely the inflow shares allocated among the pockets, which would involve his property and others being substantially devalued. The WDC then issued a strongly worded statement saying it would not alter the scheme philosophy.

So for the time being another move to return the scheme to the unfair way it had previously been in was rebuffed, with Regional and District councils both holding on course so the scheme could continue to be restored and monitored to prove the repairs and justify any fine tuning required.

But the drums of the bush telegraph continued to beat out warnings of a threat by the West Bank faction to take both the Regional and District Councils to court claiming inaccuracies in the process and information used in applying for the scheme resource consent.⁷⁴¹

⁷³⁹ Submission 2819 from 5 TeMata Pocket landowners April 2012 page 2

⁷⁴⁰ This took place late June early July 2012. Councillors Deeming, Glenn, and Deputy Mayor Halse.

⁷⁴¹ See the consent determination, item 27 clause D page 48

OPTIONS TO IMPROVE THE SCHEME.

One of the sad effects about all the negative activity that went on for decades was that positive and cooperative work to improve the scheme was largely ignored. The NCC had always intended that the scheme would be improved over the years.⁷⁴² They also wrote, "It is expected that eventually there will be demands for higher standards of protection⁷⁴³ and the scheme as designed allows for a variety of improvements in future." Of course these statements were made when both landowners and the Commission already knew that the protection level was really too low. What the NCC didn't expect was that the 'higher standards of protection' would be achieved for a few by a different route. It has been unfortunate that since the scheme was built most effort has been put into individuals extracting personal advantage from it rather than collectively improving it as originally planned.

Apart from the huge cost that has been incurred to repair the illegal modifications the fact is that more than three decades of opportunity has passed by during which little if any improvements have been made to the major scheme. Furthermore, now that a Resource Management Act is in place any improvements may be more difficult to attain and will cost much more. Raising all stopbanks would now be very costly and probably uneconomic and unaffordable.

Any idea of larger capacity pumps is unlikely to succeed and the only modeling done has shown that doubling pumping capacity of the scheme would merely reduce flooding by one single day.⁷⁴⁴ The capital costs of pumps, wiring and power lines plus electricity costs make that option very expensive relative to the gain.

Pumping more water out

In 2007 the then Liaison Committee, arranged a meeting with WDC⁷⁴⁵ to discuss and approve installing larger capacity pumps at Okarika, TeMata and possibly elsewhere on a selective basis. There had been no discussion with all pockets or ratepayers who believed that any increased pumping capacity should be spread in proportion to design criteria across the whole scheme. Certainly no attention was being given to correcting the illegal stopbanks and unfair flooding. Liaison Committee members and the west bank landowners simply wanted more pumps installed to increase their protection but unfortunately they had not done their homework first.

Firstly the proposed Amcan pumps, or any 'over the top' pump for that matter, in spite of better efficiency, would not remove the water from a pocket one day faster than the old Pleugers. This is because of the Pleuger's very high output at low heads, which is where most of the water pumping occurs. Nevertheless, expectations were high, particularly in Okarika pocket, and the push for some new pumps, at least for them, or all new pumps for the scheme, was on.

Therefore I produced an amateur analysis of the proposal and sent it to council. This was scoffed at until, on the spot, the CEO phoned the pump suppliers who told him I had it right and as a result the idea of immediately replacing all pumps on millions of borrowed dollars was dropped on account of confirmation that they would not get rid of flooding any faster than the old Pleuger pumps⁷⁴⁶ and also the bigger

⁷⁴² Review of Hikurangi Swamp Scheme NCC September 1978

⁷⁴³ Data sheet circa December 1973

⁷⁴⁴ Report by C B Judd for Water Right application 4637 to the NRC 27th August 1990

⁷⁴⁵ Meeting held on the 15th August 2007

⁷⁴⁶ CEO Simpson checked by phoning the manufacturers on the spot by and was very surprised

rise in debt and rating would be too painful for farmers. New pumps were then discussed at a public meeting to allow everyone to be in on it.⁷⁴⁷ I was asked to attend several meetings at WDC to elaborate and discuss the pumping issues.⁷⁴⁸ Council staff and consultants then went on to develop the idea of replacing pumps that either broke down or on a program based on hours and maintenance factors until all were replaced. There was a projected saving of some \$1.7 million so I considered my attendance had benefitted the scheme accounts, (which was surprising for a 'person with no qualifications'.)

People were unaware the idea of doubling the scheme pumping capacity had already been examined 17 years before and found wanting.⁷⁴⁹ The finding was that doubling pumping would only reduce flooding on pastures by one day, for a gain of 5% in production. The cost benefit ratio was only 0.4 to 1. Or spend \$2.5M to get \$158,000 a year.⁷⁵⁰ Doubling pumping is hardly worth raising power and maintenance costs dramatically and permanently but one interesting point was made *that downstream effects would be negligible*. As power costs rise over the coming decades the sensible way is to improve the way water naturally runs downhill. This is feasible.

The Liaison Committee changed the type of pumps to be installed to a brand other than the commonly stocked Flygt pumps widely used by the WDC and already installed on the scheme. The original German Pleugers had apparently been second hand having been designed by Hitler's Germany as propulsion units for U-Boats and more recently for bow-thrusters.

Overspill to Storage along the Whakapara River

Regarding overspilling on the Whakapara River it must be pointed out that this acts as an ideal detention area taking the very top off the peak of the high floods at exactly the best time.

If the Whakapara stopbanks below SH1 were simply raised and SH1 outlet was increased the scheme would suffer by the increased volumes reaching the pockets where it would overspill and increase pumping costs and pasture damage.

It is important to remember that widespread overflowing of all the scheme stopbanks/control banks during large floods, particularly 50 to 150 flood events, was deliberately incorporated as a design feature to protect the spillways and the scheme stopbanks from serious damage. It is a necessary safety valve so to speak.

Raising the scheme stopbanks was bandied around particularly during 2012 but the outcome was to top the scheme up to the 1978 as built levels. The costly raising of all the scheme stopbanks would benefit some people in some floods for some of the time, but a better investment would be cleaning the river bottom and exit and that would benefit everybody in every flood all the time. In this writer's experience there is a growing problem with bed-flow shingle build-up as far down as the Junction.

Improved protection levels were to be equal, roughly based on the need to re-grass and in this regard the stretch between Whakapara SH1 and Junction fares well considering the flooding it had before the scheme. It is worth noting that since construction one older house on Old North road (down from Whakapara Hall) had to be demolished because of flooding. More recently high peak floods upstream from the Russell road bridge have lapped against the doorstep of Simon Donnelley's farmhouse and several homes are being inundated on Old North Road Whakapara.

⁷⁴⁷ Meeting at Jordan Valley Fonterra farm 25th August 2009

⁷⁴⁸ 29th September and 8th October and 18th November 2009

⁷⁴⁹ A must see document: NRC Water right application 4637. 1990 Reports by C. B. Judd and MAF

⁷⁵⁰ Engineer Mr Green in Liaison Committee minutes 7th February 1991 page 14

The high level flow data at the Whakapara Cableway gauging site is deficient in that only one single peak level flood was ever gauged there and that event overflowed the stopbank. The gauging personnel hurriedly escaped as the river continued deepening across their vehicle getaway along the stopbank. The cableway then fell into disuse and level recording methods changed to automatic radio sender units. The Regional council could well use their modern electronic gauging raft, pulling it across at peak flow nearer the Junction on both supply rivers. The only reason this has not been done to date is that the NRC floating recorder has been too busy around Northland. Better data needs to be collected at the upper end of the scheme if computer modeling is proposed in future.

An option to improve modeling would be to construct a proper inflow crest or two on the Whakapara River fitted with crest meters to record overspill data but the writer believes the use of towable electronic flow estimation at the Junction is the cheapest and best option. Some of the above would provide improved information, keep the scheme fair, and save on pumping costs to everyone's benefit.

More Options:

For some years the WDC consultant's computer model had been a joint effort with contributions from the ratepayers via the WDC and from Dr Joynes privately funded by Ray Hindrup. Dr Joynes felt and Mr Hindrup agreed, they deserved a copy of the computer model as it was a joint effort over a considerable period to produce it. Senior staff discussed it and together with MWH's modeler Tristan Jamieson agreed a copy should in fairness be provided.⁷⁵¹

Then at the Hindrup's expense Dr Joynes further improved Hindrup's version of the model and Mr Hindrup funded some \$20,000 worth of work to model the regrading of the main river channel and increasing outflow sufficiently to avert overspilling into pockets up to the five year return period. This was the return period landowners had originally expected they were getting when the scheme was built.

After looking at the work of both Mr Judd in 1990 and Mr Joynes in 2010 it is obvious that the original ideas of the NCC and those of Mr Hindrup are sound and feasible. Believe it or not, the old NCC drawing of the proposed invert (new 1970's channel bottom) from Junction to Lewis shows the scheme river bottom was dead flat for the whole 13 km.⁷⁵² The scheme could be improved by regrading the invert to about one metre lower not far past Lewis Bridge. Original works lowered the summer level there by only 2.5 feet or less than this⁷⁵³ so there is still much more to be gained than the original works achieved. Most of this work would take place just below Lewis Bridge and would improve low flows and assist the scheme to self clean.

Such works and their effects on the Northern Wairoa River are not nearly as dire as some farmers claimed years ago. The Hikurangi Swamp scheme catchments are only 10% of the total Northern Wairoa catchment with the river catchment areas in sq km being: Northern Wairoa 3,648, Kaihu/Awakino/Tangowahine 594, Mangakahia 826, and the Wairua catchment is 749.⁷⁵⁴ The actual Hikurangi scheme and its catchments are only 552 sq km and this represents only a tenth of the total. A swamp scheme flow increase of one tenth would have a very small effect, about a tenth of 10% or 1% of the total. The present scheme was unofficially said to have raised the peak level at

⁷⁵¹ Requested on 20th October 2010 and agreed upon on 1st November 2010

⁷⁵² NCC Plan 407 Longitudinal Sections Waiotu river, Whakapara River, Wairua river

⁷⁵³ NCC Volume two Inside cover information on The Scheme

⁷⁵⁴ NCC volume 2 page 12

Tangiteroria by one inch, which is not very significant on such a large river. Therefore an increase of just one quarter of an inch to make the Hikurangi Swamp Scheme function better would be minimal.

The idea mooted by original design engineers and recently thought of by Mr Ray Hindrup, showed promise. That is the regrading and partial widening or at least cleaning, of the channel from the Junction to the Rapids, particularly across several limestone outcrops and a basaltic lava flow. Mr Hindrups professional modeling has shown very good benefits from these works could be attained both in reduction of inflows and power costs. From Mangere Rapids to a little upstream of Lewis Bridge rock bars across the bed of the river are encountered, limestone at the upper end, basalt at the lower end.⁷⁵⁵ In the original work with the equipment of that time removal of rock bars was difficult and was not completed. See re bars in appendix.

The original NCC long range NCC priority⁷⁵⁶ was exactly what Mr. Hindrup and his engineer independently came up with thirty two years later. In the preliminary report in 1965 Mr Moores said, "The work necessary to make the scheme more effective involved limited improvements to the Wairua River channel to obviate the worst bottlenecks without endangering the lower river valley."⁷⁵⁷ Mr Moores had said, "Investigation of this will be phased in as work on the swamp scheme is completed,"⁷⁵⁸ but perhaps the bad reception farmers gave the scheme and staff put it on the back burner. Mr Ross Finlayson had asked the NCC in 1976 to prepare by starting the recording of flow information from the Northern Wairoa River. Mr Finlayson always supported good record keeping knowing how important it is to hydrology work. He also supported cleaning the lower reaches and one of his annual reports mentioned \$20,000 spent between Lewis and Purua Bridges on maintenance.

In 1979 the NCC canvassed the Local Body councils downriver asking, *"Do you agree that the NCC investigate and obtain design data for works on the Northern Wairoa River and tributaries and prepare an outline Plan of works as a whole?"* Hobson and Otamatea County Councils and Dargaville Borough council all supported the idea.⁷⁵⁹

Unfortunately the farmer dissatisfaction and infighting over the years has fragmented the unity needed to improve the flows out of the scheme, and improvement work that was expected later by the Catchment commission of the day has not yet been done. If a collective effort could be made in a cooperative manner this could be revisited and the scheme taken to the next level of performance. Or at least reach the achievable level of protection it was originally expected to reach. Much of the cost could be recouped in electricity savings.

And unfortunately in July 2014 there was a large flood and farmers in TeMata pocket put cuts in their stopbank to drain floodwater out early. People downstream considered they suffered loss and the public outcry and national media publicity was widespread and formed negative attitudes that may impede future progress.

Plans to raise the stopbank levels

Despite WDC assurances to the contrary persistent talk abounded in mid-2012 about plans to raise the scheme banks by some 600mm. This would be the same mistake as consultants MWH made in their \$80,000 1998 report to Council which as

⁷⁵⁵ NCC Volume 2 page 12 on Practical Engineering

⁷⁵⁶ NCC Interim Report Review 1978 pg 5 CEO Mr Moores

⁷⁵⁷ Northern Advocate 'Solution was known at start of the scheme' 27th February 1976

⁷⁵⁸ Reported in the Northern Advocate 23 November 1976 page 3

⁷⁵⁹ As reported in the Northern Advocate 16th February 1979 page 7

explained was set aside. The Northland Catchment Commission built a safety mechanism into the scheme whereby the 150mm difference in elevation between the inflow crests and the stopbanks would automatically allow the scheme to evenly overtop throughout its length during the extra large flood events. There is no way the really big floods could be directed across a small number of inflow crests without scouring the crests if not eroding and breaching the stopbanks entirely.

Increasing the scheme's stopbank levels higher than the 150mm crest overflows was never mentioned in a single NCC design document not in any council engineering study or report since 1970 to the present day. There is no economic sense in budgeting to control the extreme events. In addition there have been only about four such floods since the scheme's construction in 1977.

Forming official Pockets on the Whakapara River with crests to allow controlled overspill could be beneficial in small to medium floods. At present there are haphazard, uncontrolled and unmeasured inflows. It would increase fairness in terms of scheme philosophy and rating. The Whakapara River is the ideal place to take a little off the peak the flood and the fact that no pumping is needed is a bonus, but while this overspilling to storage occurs already it is of little benefit in very large flood events unless special inflow crests are constructed in a designated storage system in Otonga. Detention dams upstream are ineffective because they store the wrong water instead of creaming the peak off just at the top of the floodplain. But there is another plan.

An Offer of a Potential Solution.

Mr Ray Hindrup of the Otonga pocket privately commissioned a privately funded investigation that was carried out by Golovin of Hamilton and reported on in March 2015. A second report followed soon afterward that further optimized a storage proposal and removed the other six pockets from having any inflow spillways at all. This was followed in May by a detailed 37 page study report titled *Flood Control on the Hikurangi Swamp*, prepared by AgFirst Waikato Ltd.

This study investigated the economic impact of a proposal to use the Otonga pocket as the sole control factor to protect the Hikurangi Swamp from flooding. Modelling indicated that is possible to use Otonga pocket as the ponding area to collect flood waters entering the swamp, up to a 1:100 year level, which is significantly higher than the current design. Subsequently a letter from the two landowners concerned, Mr and Mrs Hindrup and Mr and Mrs Donnelly went to the Whangarei District Council in the form of an offer to make the land available.

"Hikurangi Flood Plain Enhancement Proposal for Community Good.

This letter offers a potential solution for the issues surrounding the effectiveness and ongoing viability of the Hikurangi Flood Plain Scheme.

Current position:

The flood scheme has operated since its inception to minimize the effect of heavy rainfall on the Hikurangi flood Plain. In recent years however, the following issues have become apparent.

- Increasing frequency and intensity of flooding has caused major issues for the farms on the scheme and potentially on downstream farming communities as well.
- Climate change reports suggest there is likely to be more frequent extreme events in the future.

- The flooding is debilitating for farm productivity on those farms affected which in turn is costing the region considerably from an economic and social point of view.
- The well known flood history on the Hikurangi Swamp is depressing capital values across the swamp properties.
- The cost of maintaining the scheme is increasing and leading to rates which are marginal from a farming perspective.
- Increased frequency of flooding combined with the high rate burden could potentially make farming operations on the swamp uneconomic.
-

Proposed Solution:

The proposed solution is to use the Otonga pocket as a sacrifice pocket for the Hikurangi Flood Plain to provide enhanced protection for the balance of the Flood Plain and provide a tool for the management of water downstream for the balance of the Wairua and Northern Wairoa rivers and major communities such as Dargaville. The Proposal would see the Otonga pocket holding capacity increased to hold a 1 in 100 year flood which is significantly larger than has been experienced. Using the existing pocket means the enhanced protection could be achieved simply, cost effectively and at a quantified cost. This is a major point of difference between this proposal and other possible options for enhancing the scheme.

The proposal would allow the removal of water from the various pockets by gravity as the water held in the Otonga pocket would not be released until the balance of the scheme was clear of water. This would lower pumping operating costs of the scheme through lower maintenance and power costs through less pumping. To further defray the costs of the scheme the Otonga pocket would remain a viable farming operation between floods providing a resource for the region's farmers to utilize.

In support of this proposal two reports are attached to this letter. The first is a hydrology report from Dr Steve Joynes. The second is an economic assessment of the proposal undertaken by Phil Journeaux, an agricultural economist based in the Waikato. The Joynes report, which utilizes the combined hydrology model used in the Scheme's resource consent, shows the ability of the proposal to lift the schemes protection from a one in three to a one in 100 year flood.

The Journeaux report shows the economic merit of the proposal and suggests the amendment to the scheme will have a positive economic contribution to the Northland region. The combined report makes a compelling physical and economic case for the project to be undertaken.

The proposal is being put forward by the Hindrup and Donelly Families and their various farming entities who own between them the Otonga flood plain and the area which would be used as the sacrifice pocket. The proposal has an obvious direct affect on them.

The Otonga pocket land owners support the proposal but reserve the right to withdraw from the process at any time because:

- It is taking too long to progress.
- They consider they are being economically disadvantaged.

- They consider the proposal is being derailed by one of the many factions involved in swamp scheme politics.
- They consider they are being physically or emotionally pressured by the wider community or the scheme owner.
- The owners reserve the right to sell to a third party at any time should a suitable offer be received.

In addition to the flood management potential there are other benefits not emphasized or explored in the reports. They include, but are not limited to, the following:

- More silt entrapment during flood events.
- Reduction in de-oxygenation of water released after floods due to the increased volume and reduced de-composting material and the depth of water.
- Less aquatic life harmed during pumping operations ie: eels.
- Possible irrigation potential.
- Possible benefits surrounding the eutrophication of the water bodies by capturing nutrients in the pocket.
- Mental health improvements for those directly affected by flooding.
- Recreational opportunities eg: cycle trails along stop banks etc.
- The opportunity to protect significant natural areas eg: Kaihikatea groves and possible rehabilitation of other areas.

The cost:

In order to assess the project the economic report uses \$40M as an estimate of the cost of relocating the existing farmers to properties of existing quality, contour, and potential productivity and the necessary capital works to enhance the scheme to maximize its productive potential.

The breakdown of this being Donelly's property \$8M, Hindrup property \$30M and capital works \$2M. These values put the properties on a comparable basis to other properties being marketed and sold on the Hikurangi Flood Plain.

Where to from Here:

Subject to the conditions previously set out the farmers whose properties comprise the Otonga flood plain have put the proposal forward and will allow the Scheme owner 12 months to confirm its intention to purchase the properties and move forward with the scheme. As part of this letter they have made the various reports prepared on the proposal to prove its viability available to the owners. From here on the Scheme will need to:

- Appoint a suitably acceptable person to act as an agent for the scheme owner.
- Complete their due diligence on the viability of the proposal.
- Develop a funding model.
- Continue the existing scheme under the existing resource consent until such time as it is the registered owner of the properties in the Otonga pocket and suitable amendments to the consent can be made.

Summary:

This proposal is a one-time offer made to allow a problem, which is likely to get worse with climate change, to be managed and contained. Should one or the other of the properties involved be sold and end up in new ownership and other

productive uses there will not likely be the opportunity in the future to enhance or fix the scheme's current failings.

The business case study undertaken is only one simple example, used because it was verifiable and applicable. There may be different uses and other funding avenues available for the pocket that may provide equal or better returns.

The funding and structuring of the scheme to take advantage of the offer will require considerable maturity, foresight and courage by the scheme owners and wider community. It will also require considerable communication with the Otonga owners which they are open to.

We look forward to your considered response.

Kind regards,

(signed) Ray and Margaret Hindrup.

(signed) Simon and Kim Donelly.

Since construction of the original scheme this improvement proposal was certainly the most detailed and technically feasible study ever made. It was backed up with sound qualified modeling and analysis, something not always a part of the various ideas floated at that time. In real terms the financial burden of the proposal would be similar to the original cost of the scheme but there could be very large benefits, lower costs, and an income stream to help ratepayers fund the scheme. That in essence was the proposal.

In spite of the idea being as old as the scheme itself, it was turned down somewhat flatly by the WDC / landowner Working Group without further research. While other ideas may assist the present scheme to function this offer promised a solution to the basic problems of the scheme, recognized right from when it was planned and built. Landowners missed their chance in 1990 when the Otonga Station pocket land could have been purchased and a storage system built that would have increased protection from 3-5 year events up to at least fifteen year events or more. The cost then would have been less than three million dollars, much less than the forty million dollar cost in 2016. So the problem remains, the level of protection is too low. Mr Moores the engineer in the 1960' and 1979's stated he would never build any scheme again with such a low level of protection. The recent decision to shelve the Otonga storage option may be regretted in future, for a second time.

The writer has long believed that a high level storage design could be considered using the Junction pocket. A manually controlled peak off-take gate system could remove the peak water at the right time and the high elevation of this pocket could allow the water to gravitate away without expensive pumping and all done within a reasonable time-frame. Although smaller in capacity than the Otonga option above the cost of purchase and detention in Junction pocket could be affordable and effective.

THE FIRST FLOOD AFTER REPAIRS

By 2012 the scheme repairs and modification earthworks were largely, but not totally, completed on a Friday and the first flood from dying cyclone Wilma hit three days later on Monday 20th March 2012. Work filling the final 25 metres of Otonga crest

was unfinished. Unfortunately the Ngararatunua crest meters had not quite been installed but the complaining camp could have blamed themselves for that because it was they who blockaded the works with a tractor the previous year causing such a huge and costly delay. Because of this flood the final leveling of some inflow crests was not completed.

There were clear signs of positive improvement in scheme performance in spite of the unusual high rainfall intensity that produced about the third steepest flood gradient in history after the so called '150 year event' of March 2007.

Upstream at Marua my wife Maureen recorded the highest and fastest flood levels in 42 years. But for once the inflow crests did start overflowing at the top end first and proceeded to progressively peak downstream in the designed manner. Unfortunately the Whakapara River overspilled into Junction pocket and totally filled it then flood water actually poured *outward* across its inflow crest.

I made an effort to estimate the inflow shares as best as possible. With no crest meters installed at Ngararatunua the inflow volume for that pocket was derived using two different methods. One was by using the modified duration curve from Okarika crest recorder with the depth taken between Tanekaha and Okarika depths with reference to the peak river level line recorded by the recorders. The other method was the same as used by the NCC in the early days but computerized and refined by the author.

Please note that the two sets of figures for Junction and TeMata vary. The reason is that the considerable stopbank overspill into those two pockets was not measured by the crest meters whereas any stopbank overspill was obviously included in the level rise method.

Table Of the March 2012 Flood.

DISTRIBUTION SHARES TO POCKETS IN FLOOD OF 20 TH March 2012				
		Method of Calculation		
Pocket	Design %	From Meters %	Level Rise %	Average %
Junction	5%	2%	22%	12%
TeMata	20%	32%	24%	28%
Otonga	23%	23%	19%	21%
Mountain	14%	13%	9%	11%
Tanekaha	3%	6%	9%	7.5%
Ngararatunua	10%	16%	13%	14.5%
Okarika	25%	7%	5%	6%

Indications were that Ngararatunua pocket took under twenty percent of scheme inflow for the first time in the 33 years since the scheme was built. TeMata averaged more than a third more inflow than design but it must be remembered that some other pockets had been taking double and up to four times their design volume for many decades, so TeMata landowners briefly experienced what some others, especially in Otonga and Ngararatunua pockets, had put up with for decades. This rainfall event was near record in its intensity and the river gradient or steepness was second only to March 2007. Peak level at the cableway in March 2012 was only 200 mm less than the so-called 150 year 2007 event. This was clearly an over-design flood for the scheme.

As the reconstruction delays caused by Ben Smith's and Neville Thorne's protest group had resulted in no crest recorder being installed at Ngararatunua this event could not qualify as one of the required five official monitoring floods because some parts of the modifications were still not completed. This was also an over-design flood and the larger distribution of inflow proportions into upstream pockets diminishing in size down to Okarika was quite typical for an 'over-design' event. This flood did not qualify as a design event and more floods would be needed before any conclusions can be drawn. That was why the adaptive management approach was taken in order to get a fair spread of flood events.

There seems little wisdom in continuing to spend large sums on modeling the river system when the software is at or beyond its limits and when the process has gone about as far as it can go. That phase really ended when the crest flow recorders were put in place and it would now be better to concentrate on improving the methods of measuring actual inflow shares across the crests.

It remains my view that in addition to the use of crest meters, which is reasonably effective, there is an additional and transparent way to check on flood distributions. That is to measure the pocket levels before inflows start and immediately after inflows cease and then calculate the pocket volumes caused by rise in water levels (overspilling) then comparing those as percentages. This gives some back-up to the crest meters and once the staff gauge readings are available it takes less than several minutes to do. This method of calculating volume was used by the NCC and review consultants MWH examined and accepted my methodology. It helps by providing some back up to the data from the crest depth recorders.

A PROPHECY FULFILLED

Improvements not to be overridden

Was the warning given by the RMA consent hearing Commissioners coming true? The District Council was warned there could be moves to return the scheme back to its unfair condition thus: *"In any case, as a Local Authority, it can clearly control such unauthorized interference by using powers vested in it under Section 232 of the Local government Act 2002. The applicant (WDC) may well need to fully exercise such power, at least as an example to others, to ensure that the proposed works authorized by these consents can result in improvements to the equity of the scheme and not be simply overridden by locals who disagree with them."*

It was known that parts of the old Liaison committee faction had been lobbying for another review and changes to the basic philosophy of the whole scheme⁷⁶⁰ late in 2011. Mr Hindrup had stated that, "An effort was made to change all the inflow percentages." This occurred eighteen months after the RMA consent hearing process had not received one single submission from those same people to alter the swamp scheme's philosophy or the inflow percentages or file any appeal on any matter whatsoever. The new Swamp Focus Group went on to hold monthly meetings chaired by a WDC councillor who did modify things somewhat but efforts were made by several pockets to change the rating system, to get new pumps in certain pockets and generally look after the position of those with the most persuasion.

⁷⁶⁰ Statement during a visit June July 2012 by three WDC councillors to Mr Hindrup's property

The protest faction then upped its efforts to get media attention when swampies Ben Smith and Neville Thorne gate-crashed a monthly swamp focus meeting⁷⁶¹ held between the council's engineering staff, administrators and the officially listed swamp representatives. Substitutions are not permitted. Deputy Mayor Phil Halse who was to have chaired the meeting said later, "The CEO Mr Mark Simpson had called on council staff to leave because two men had turned up who were not members of the Hikurangi Swamp Working Group (members only had been invited to attend). When the gate-crashers refused to leave, Mr Simpson had taken the correct step in ending the meeting because we couldn't continue except within the terms of reference and established protocols," Mr Halse said.⁷⁶² Mr Thorne said he was, "Absolutely fuming." The gate-crashing was less successful than at Whakapara.

On radio' Morning Report Lois Williams reported Ben Smith was about to accuse the WDC of sending the scheme broke with an annual deficit of \$213,000 a year. "We should not be in debt," Smith said. "Absolutely bully tactics," said Thorne. Williams finished her broadcast with, "They are about to challenge the Regional Council in the High court."

The focus meeting scheduled for the 19th October 2012 was preceded by a promise by a farmer group member that, "*We will be bringing lawyers along and we are going to take the scheme over.*" That supported what Ben Smith had previously stated his objective was in a news release⁷⁶³ on behalf of his farmer group that was aiming to take the scheme back. Did not the consent Commissioners openly give a warning of this?

What the protestors and gate-crashers seemingly failed to realise was that they could pay big money for their own claims to go to court but they could end up paying more big money as council's defence bill would also be paid by the swamp ratepayers themselves, so they would both pay to claim and pay to defend. And they were concerned about going broke? Plus they reportedly were spending \$30,000 on private modelling which could only result in the same repair works followed by ongoing monitoring of the scheme that has just begun. Furthermore the Auditor General's Office had examined the scheme accounts over time as part of its normal function and had found nothing out of order.

The 19th October arrived and the meeting was held at WDC's Walton Plaza after the Agenda emailed out stating, "All invited representatives will be required to sign a declaration prior to the meeting commencing that they are not involved in organising or undertaking any legal action against WDC with regards to the Hikurangi Swamp Scheme." The matter was discussed for some time before Pedro McHardy representing Moutian pocket walked out at 9:45, (McHardy had his main dairy farm in TeMata pocket). He was followed out 15 minutes later by TeMata representative Evan Smeath, and Mr Martin Smith representing Okarika Pocket, where his dairy farm was for sale. Excluding any persons from participating in a meeting when they are taking part in legal action against that local body is normal practice. The swamp working group then proceeded with its meeting, renewing the contract for swamp maintenance and operation work and the meeting was described as one of the most productive and useful that had been held to date.⁷⁶⁴

⁷⁶¹ Scheduled WDC Hikurangi Swamp Focus meeting 4th October 2012 in Council rooms

⁷⁶² Northern Advocate page A5 on 11th October 2012

⁷⁶³ Sorensen Communications 16th December 2011

⁷⁶⁴ Comment by several Councillors and staff present

Smeath and M. Smith promptly gate-crashed the very next meeting⁷⁶⁵ then refused to budge but the qualified attendees with WDC staff simply moved to another room leaving them alone.

Four days later Evan Smeath, Ben Smith, and Neville Thorne featured in the local Leader newspaper⁷⁶⁶ blaming WDC over having to fence their bermland and install water troughs. What they didn't know was that the lease rules put in place by the Northland Catchment Commission thirty years before were fair and reasonable, made no demand upon the lessee for reticulation and had been accepted by other farmers for decades.

Thorne wanted another public meeting, presumably as a venue to grandstand more attacks on the Council, but Deputy Mayor Phil Halse politely replied that Council was refusing to have public meetings any more, "Because they got so rowdy." "I don't think we should be having meetings where we need to get the police there for control and I will not be putting our staff through that."⁷⁶⁷ Deputy Mayor Halse added that, "The targeted rates were fairly distributed, so farmers who benefit the most from the scheme pay the most."

The proceedings beg the question: why were the very people who considered themselves the only persons suitable to form a Liaison Committee so poor at relationship skills that the process broke down so they were excluded? The answer seems to be that some basic skills were lacking. By November 2012 the people who had excluded themselves from relating with the Council's scheme administration included, B. Smith, N. Thorne, P. McHardy, E. Smeath and M. Smith.

Unfortunately, after all this time and work, the gaining of a resource consent with reinstatement of control banks and pump stations and a monitored regime of fairness, farmer attitudes toward cooperation on the swamp were showing little sign of improvement. So if the lessons of swamp history have not been learned, might the wheel of history simply turn again?

Criticism

Criticism of the author began fifteen years after the 1997 decision by the farmers to review the scheme and restore the inflow crests. When the inflow crests were restored close to original design intentions there was criticism and sometimes verbal abuse insinuating that the scheme or the modelling had been "Hijacked by Merv Rusk"⁷⁶⁸ and that information supplied by me was erroneous and so on. Unfortunately not a single one of them was ever courageous or courteous enough to speak to me about their concerns. Early on in the WDC scheme review I had visited some of them with free material and I would have been pleased to discuss and explain any matters at any time during the scheme review if approached in a civil manner, but apparently lacking in relationship skills they missed out. My offer to talk and discuss was there throughout the entire period and it is still there.

The facts were as follows:

⁷⁶⁵ Swamp Focus Meeting at WDC offices 7th December 2012.

⁷⁶⁶ Whangarei Leader page 5 11th December 2012 'Swamp Fence Cost Disputed'

⁷⁶⁷ Whangarei Leader pg 5 11th December 2012 'Swamp Farmer Group Harmonious'

⁷⁶⁸ WDC Public Forum in council Chambers 22nd February 2012 at 10 am. Also see the Warren Slater website over a period of years

- In the early years all of my contributions, which comprised of official records, were given to the District Council and it was the WDC Engineer who made the decision on whether to send it on to the consultants MWH or not.
- It was this author who located most of the old NCC drawings and critical documents that were sent by WDC to the consultants for use in the review.
- The water levels in the WDC pump station logs were often written by the critics themselves! All I did was send those logged water levels off for the consultants. The data was always checked against the WDC automatic level recorders anyway.
- Rainfall records were from the Regional council hydrology office. The author did not invent the records, he merely had them forwarded on.
- The author did not survey the scheme. I only located, researched and sent on the official surveys done by the NCC and more recent surveyors. I did carry out spot surveys of all pump station gauge boards and finding them in error pressed for official surveying to be carried out, and that was in fact done.
- None of the information supplied to any engineer or professional was created by this author. It was all from public records and was located and or collated, then offered freely with all references and sources for use by the engineers or hydrologists if they chose to use it as they saw fit.
- Much of the data was actually requested from me by various consultants.
- Everybody had the same freedom to do any of the above and to take photos.
- Anybody had the right and freedom to make a submission to the resource consent application and many of the critics did so but surprise, they all actually supported it! Mr Ben Smith even complimented the WDC on doing a fine job.
- All of what this author did or contributed was examined, most rigorously questioned, grilled and evaluated, and approved by one or more engineers or computer modelling professionals. Sometimes all of them. These qualified professionals included:

Mr Mark Simpson WDC Engineer for the scheme and later CEO.

Mr Brian Knowles (Kouvelis) MWH Project Manager.

Mr Murray Menzies of Water Resources Consulting Group Ltd.

Dr Steve Joynes Principal of Hydraulic Modelling Services Ltd.

Mr Hugh McMurray of MWH and later a private consultant.

Weijun Zwang I.R.S. Independent professional acting as an arbitrator.

Mr Anthony Van Schalkwyk Project Manager MWH Ltd.

Tristan Jamieson Professional engineer of Watershed Consultation Ltd.

James Blackburn Consultant Civil Engineer of Hawthorn Geddes Ltd.

Mr Alan Watson NRC Hearings Commissioner.

Dr Jeff Jones, a NRC Hearings Commissioner with wide NZ experience.

Peer Review of the modeling for NRC by River Edge Consulting.

Mr Nigel Mark-Brown NRC Consultant and Reporting Officer.

The Northland Regional Council Hydrology office staff.

And others.

I sometimes wondered how some of the efforts of my critics would have stood up to rigorous scrutiny and judgment by those same professionals? Murray Menzies of Water Resources Consulting Group NZ wrote, "All of Mr Rusk's work in collating

significant amounts of data is independently verifiable.”⁷⁶⁹ Mr Hugh McMurray a private consultant and formerly the swamp scheme modeler for Montgomery Watson Harza Ltd said, “Everything that Merv Rusk has done is correct.”⁷⁷⁰

The evidence was also confirmed by the work of experts in their field. When I began my work in 1997 I sincerely believed that processing records and examining recorded data of past flooding would assist in the scheme review for the better, one way or the other and I believe it has. Near the end of the stalled process it was access to my supply of scheme records that allowed MWH modeler Tristan Jamieson to complete his work in just a few weeks.

While hydrological calculations normally have an acceptable range of error I have formed the conclusion that with all the work done by so many people, the facts of the situation did emerge.

It is a well known scientific principle that good data tends to lie much less than people do.

⁷⁶⁹ Summary of Modelling Work by M Menzies 31 Jan 2002 pg 4

⁷⁷⁰ 23rd August 2001 to Mr Hindrup after McMurray's resignation to go into private practice

SWAMPIES KICK OFF LEGAL ACTION

The protestor group evolved into a support group of about fourteen farming couples and these could conceivably have included the odd 'Perpetrator' as referred to by the Consent Commissioners, and they proceeded to support the legal action applying for a Judicial Review.⁷⁷¹ The push to return the scheme back to the lopsided state it had been in prior to the recent council restoration work largely came from the west bank of the Wairua river where much of the illegal protection from floodwaters had taken place for decades until late in 2011.

SWAMP FARMERS KICK OFF LEGAL ACTION screamed the local newspaper headline. "Hikurangi group spokesman says democratic rights have been trampled".⁷⁷² The article went on to say that Swamp farmers Michael and Roberta Collins, Peter Richards, Neville Thorne, and Mark and Heather Gurr had lodged a statement of claim wanting the High Court to review the scheme consent that had been lodged by WDC in 2004, amended in 2009 and granted by NRC in 2010. They were reported to be contending that they made submissions in 2004 but the WDC had applied to amend the application in 2009 to include altering the length of certain spillways and stopbanks. (Note: the original application had always included works involving restoring the inflow crests).

The claim was made that the NRC did not assess whether the second application should be publicly notified. (Note: At the time the NRC had made it plain to all original submitters that they could submit again on the second application.)

Spokesman Ben Smith reportedly said, "We have had our democratic rights trampled on." This was from a person who had made a submission, spoke at the hearing to his submission, and had even congratulated the District Council on its performance.

Radio New Zealand's updated report of 8th December described the four farmers applying to have the consent quashed as being led by Ben Smith and Neville Thorne.

The claimants sought, "To have the court rule that granting of the consent was invalid and to quash the decision." They wanted the application to be notified again and sought costs from the two councils.⁷⁷³ In short they wanted the resource consent hearings re-run all over again nearly three years after the event. Most of the supporting group had already made submissions and spoken or attended the original hearings in March 2010. Why all this fuss three years after the consent was granted and why didn't a single one of them appeal during the thirty day appeal period advertised at the time? To re-run the process would cost the swamp ratepayers some \$80,000 just as it did the first time.⁷⁷⁴

Having pleaded financial hardship and shouted across the country for two years about cost increases and going broke, members of this group now undertook High Court action for which they must not only fund their own side to take on the two councils but win or lose they would then pay again through their rates for council's legal defense costs and possibly for appeals and another expensive consent hearing.

The application was made just prior to the 2012 Christmas break so with a filing deadline of only 25 working days and the Christmas holiday break this made it difficult

⁷⁷¹ The Regional and District Councils received notices of action on the 3rd December 2012

⁷⁷² Northern Advocate 8th December 2012 page A3 headline.

⁷⁷³ See the Applicants Statement Of claim 3rd Dec 2012

⁷⁷⁴ Paragraph 52 of affidavit of Mr Conal Summers for WDC

for both councils' to respond in time. Engineering staff invited me to a meeting⁷⁷⁵ where I could show some of my research and subsequently I was asked if I would consider contributing an affidavit. I agreed to do this and prepared a considerable amount of data that included the 2012 flood in question.

Preparation of Regional Council and District Council defense evidence went on through January and into February 2013. The complainants then asked for an extension of time and final filing of documents was made on 10th June 2013.

In addition to the four complainants listed there was originally a support group of about a dozen other swamp farmers known loosely as the Concerned Farmers Group, but as legal costs began to come in their numbers dwindled with some of them deserting ship. The names of those claimed to be in the supporting group were listed on one court document but with no signatures against the names. It is understood that several of those names were not actually supporters of the group.

The Judicial Review Application Fails

The statement of claim by the four farmers' to invalidate the resource consent of 2010 ran to 9 pages.⁷⁷⁶ By mid June 2013 the cases for both sides had been put together and affidavits filed.⁷⁷⁷ For the Applicant side M. Collins of TeMata pocket wrote a 4 page statement and attached 6 pages of exhibits, N. Thorne of Okarika pocket wrote a 5 page statement and attached 342 confusing pages that were largely NRC, WDC, and MWH reports etc. M. Gurr wrote a 3 page statement adding 5 pages of exhibit notes. P. Richards who owned land that did not flood and did not file an affidavit or seemingly take any active part at any time. A supporting affidavit was contributed by Mr P. Wallace, a civil engineer from Wellington who wrote a 7 page statement and attached 88 pages of exhibit notes.

For the First Respondent, the Northland Regional Council, the Consents Program Manager Mr Stuart Savill wrote a 5 page statement with 35 pages of evidence in the form of exhibits; Mr R Lieffering, Senior planner and environmental scientist for MWH who had been NRC Regional Policy Program Manager wrote an 8 page statement with 3 pages of evidence; and Mr Nigel Mark-Brown a civil engineer in flood management wrote a 12 page statement with 96 pages of evidence.

For the Whangarei District Council as Second Respondent Planning Team Leader Heather Duncan wrote 15 pages along with 7 of evidence; Mr Tristan Jamieson a contracted professional hydraulic engineer of Auckland wrote a 15 page statement with 22 pages of evidence; Mr James Blackburn civil engineer of Hawthorne Geddes Whangarei wrote a 25 page statement with 7 pages of photographic evidence; Mr Conal Summers stormwater asset engineer for the WDC wrote a 14 page statement along with 232 pages of evidence; and my own affidavit comprised a 27 page written statement of 138 paragraphs along with 187 pages of evidence showing some of my flood research and photographs. A total of 465 pages for the applicants' side and 710 for the Respondents'. With the 9 page statement of claim that made up a total of 1,175 pages for the court to wade through.

The local press reported under the heading, "Swamp Farm Case Costly for Council."⁷⁷⁸ This was a misnomer as the costs would not be paid by the council but by the complainants for their own legal costs and they would likely pay for the WDC defense

⁷⁷⁵ 8th January 2013 at Walton Plaza offices

⁷⁷⁶ 3rd December 2012 under letterhead of DLA Phillips Fox of Wellington

⁷⁷⁷ Affidavits were filed by 10th June 2013 with the claimants reply affidavits due by 24th June

⁷⁷⁸ Northern Advocate 15th June 2013 page A5

costs as well along with the other swamp ratepayers. Those costs were reported as being \$21,000 to date with \$60,000 - \$70,000 forecast this financial year and further costs likely after that.

The complainant's affidavits in reply were due in court by June 24th June 2013 but on the 27th I was informed the complainants were apply to the court for an extension of time to the 29th of July so they were obviously in some difficulty. At that time members of the group canvassed other landowners in an effort to obtain original design documents and original specifications for the scheme reportedly saying, "We have got only a month to get it in."⁷⁷⁹ If they had hoped to broaden their case to alter the original scheme design philosophy and inflow shares they failed because the Judge quite rightly refused to allow another extension of time by demanding that the applicants must file their reply affidavits by the 8th July, which they narrowly did.

Notably the complainants' supporting engineer in his final reply affidavit belatedly admitted various mistakes and agreed with the defendant side that yes the March 2012 flood event was too large to be counted and was in fact best regarded as an over-design event.

An approach was then made 'without prejudice' asking that if the council would drop claims for costs then the complainants would withdraw their case but the WDC declined to waive the costs the complainants had caused and refused the offer.

The case was heard in the Whangarei High Court on the 16th of October 2013 finishing at 6 pm the following day. Halfway through day two the lawyer representing the two claimants from Okarika pocket, Mr Thorne and Mr Gurr, withdrew their claims effectively leaving the whole sorry affair hanging on just one small lifestyle block landowner, Mr. Collins, a lawn mowing contractor of the TeMata pocket who farmed twenty or so drystock animals. Meanwhile some 64 commercial farmers on the swamp awaited the outcome with little say apart from thinking about paying the bill.

As is common in cases involving rivers and hydrology the Judge appeared to have some difficulty getting his mind around how the scheme worked but given his relatively brief introduction to this difficult subject that was quite understandable. It was also difficult to discern what the judge was thinking and at the end of the day he reserved his decision to be announced at some future time. Normally 75% are handed down within one month. Neither side went away confident of victory.

Seventeen days short of a year after the case was filed the High Court returned its decision on the 18th November 2013. The application for judicial review was dismissed and judgment was entered for the respondents. Costs were expected to be paid.

Apart from several minor typist errors the Judgment read clearly and logically and made no bones about what had occurred. The judgment also referred to the fact that there had been a significant delay by the applicants after the resource consent was given on 30 April 2010, a delay of some two years and seven months.⁷⁸⁰ It went on to mention, "The whole expensive consent exercise could be repeated, and nothing might change. And if there was a change to the (TeMata) spillway dimension, that change in itself could ultimately be shown to be insufficient or flawed, such is the imprecision of the science. There is nothing to suggest that there is another model which could lead to a better result."⁷⁸¹ ...It is a real possibility that any further notification and consent process would be a futile exercise."⁷⁸² In conclusion it stated, "The council officers' decision against re-notifying was fair and justified in terms of the expectation of the

⁷⁷⁹ A request was made to a Tanekaha pocket landowner on 27th June 2013

⁷⁸⁰ Judgement of Asher J dated 15th November 2013 para (80)

⁷⁸¹ Para (86)

⁷⁸² Para (87)

affected parties..... It has not been shown that if the applicants had known of the change they would have done anything different." "The modifications to the TeMata pocket spillway dimensions on the 2009 application process to better achieve the end goal of a 20 percent spill fell within what could be expected in this resource management process." ⁷⁸³

Afterward there was a widespread feeling among landowners suggesting the whole exercise had been a big waste of time and money. But the complainant's supporters wasted no time in trying to reduce their share of the waste of money they were now liable for and hastened to negotiate with the council within the 14 day period the judge allowed. ⁷⁸⁴

A whole fortnight after the judgment the local press reported lamely that, "The swamp farmers' group has failed to persuade the High court the 2010 resource consent is invalid. The newspaper also reported, "Justice Asher was not able to infer any suffering by the farmers resulting from the modifications." ⁷⁸⁵

Applications to cover costs caused by the complainants' failed court action in respect of the Regional council were \$42,000 and costs to the District Council were \$51,000 ⁷⁸⁶ making total defense costs of \$93,000 dollars.

The court upheld the claims by both councils in full leaving the complainants with the full \$93,000 to pay. Added to that would have been their payments to their own Wellington lawyers of at least \$50,000 plus an engineering consultant, so it all left them perhaps \$200,000 out of pocket for their adventure.

It must be remembered that some of them had prospered while the scheme was over-protecting their land and furthermore, in such a good dairying season on the swamp, with no significant floods and getting all time record prices for their milk at \$8.75 per Kg of milksolids, the costs to claimants and supporting individuals were relatively minor. The income lost from about ten cows out of a herd of 300 would be relatively minimal.

While everybody waited for the arrival of design category floods to test the scheme repairs at least no farmers were heard complaining about the absence of flooding. A good season and record dairy payout bolstered confidence.

Slippery Eels and a Fishy Venture

By March the following year with a new Mayor and change of WDC Swamp committee chair, the protesters managed to get the possibility of a second legal action onto the swamp committee agenda. ⁷⁸⁷

In addition to that Mr Ben Smith had encouraged local Maori into the affairs of the swamp. A protest meeting at the Whakapara Hall took place after which a widely known Maori political activist was reported on air as saying, "*The Hikurangi swamp was a major eel fishery before it was drained for farming,*" and "*The local Pakeha community is wanting to allow the plains to re-flood and rebuild the tuna farms....*" ⁷⁸⁸

Rebuild tuna farms? There were never any such things on the flood plain. The facts are that New Zealand's commercial eel fishing only reached its height around the time the scheme was constructed and declined from about 2000 tons per year nationwide

⁷⁸³ Paragraphs (88) and (89)

⁷⁸⁴ Ben Smith, Neville Thorne, and Evan Smeath were seen at the WDC on 25th November

⁷⁸⁵ Northern Advocate December 2nd 2013 page 4

⁷⁸⁶ Hikurangi Swamp Meeting Minutes 19th December 2013

⁷⁸⁷ Swamp Working Group Agenda 20th March 2014, Item 3. Update re possible new legal case

⁷⁸⁸ MP Hone Harawira reported on Radio Waatea 28th November 2013 at 13.42 pm

to 1,000 tons and less over a period of some 20 years,⁷⁸⁹ mostly through over fishing and the decline in food supplies. Commercial netting arrived right when the Hikurangi flood control scheme was being constructed and did more to reduce eel numbers than the scheme ever did.

Until 1970 and before whole milk supply was introduced some 90% of the country's milk production went into the front end of pigs then out the back end into the streams and creeks where, in addition to some cow manure, worms had flourished and eel populations grew profoundly. The introduction of tanker collection and subsequent disappearance of pigs in the early 1970's had already cleaned up waterways immensely and compulsory dairy farm effluent ponds in the 1980's cleaned them up slightly more. Unfortunately the resulting drop in worms for eel food plus commercial overfishing both contributed to reduced numbers of eels. Maori quit their regular weekends eeling on our farm then. Data shows the fall in eel populations was nationwide and was certainly not restricted to the Hikurangi Swamp scheme area.

Eels have never (yet) been 'farmed' in the Hikurangi area and it is unlikely that the 'pakeha' community would ever choose to flood all the plains thus destroying their considerable assets, incomes and many tens of millions of dollars in annual value to the Northland economy and the people who live there.

Early 2015 saw Ben Smith in the press again announcing plans for a back to the future fish farm industry that among other things might reduce the effects of dairy effluent in streams.⁷⁹⁰ But the venture did not proceed very far. Of interest is that many farms, and mine is one of them, have had tens of thousands, uncountable masses of small fish thriving in their effluent discharge drains and streams for many decades. Obviously developing fish farming could be a very good thing but a notable point is that many effluent drains and dairy farm creeks have had very good standards of water quality for many decades otherwise the high small fish populations would not be there. A lot of mis-information has been bandied about but we have trout in our creek, lots of waterfowl breeding on our effluent system ponds and hundreds of frogs in our aerobic pond in summer. The emotional perversion of the news media by people with vested political interests has done more harm than good.

More recently, claims of eels dying in the pumps have been publicized. Most farmers know that eels that are in the pockets move up into the shallows during storms to cleaner fresh black water and feed on worms under cowpats if they can. For most of the time open flap gates allow travel by eels in and out of the pockets. The main river system is not blocked by a single scheme structure and not even one pump, so eels still have the freedom of passage through and past the scheme as they have always had. And the annual amount of water passing through the pumps is only a small fraction of the total flowing past in the river, between one and ten percent.

Noise and vibration probably keep most eels away from pumps during pumping operations. Shortly after the scheme became operational and before weed screens, some stations had weed build up and a Catchment Commission surveyor who was involved in installing the stations was called on to use his diving skills to go down and check some intakes. This was my cousin Gary Rusk. While he was deep down under the water near some pump intakes his mischevious mates switched the pumps on as a prank. He told me later that the noise was so loud and the vibration so violent and terrifying that no eel would ever go near those pumps in operation!

⁷⁸⁹ Ministry of Fisheries data

⁷⁹⁰ Northern Advocate March 7th 2015 page 5, "Farmer cleaning up with fishy venture"

People making claims really need to come up with some factual data and evidence rather than generalizing with opinions. More on eels later.

Another Attempt to Change Control

In mid May 2014 Mr Ben Smith made a submission to WDC Draft Annual Plan on behalf of the Hikurangi Swamp United Farmers Group,⁷⁹¹ the group more or less, that had recently lost its High Court case against the two councils. A request was made for the scheme administration to be handed over to the Regional Council. A handover would seem rather unlikely although District Councilors and many staff were known to be thoroughly fed up with the subject of the Hikurangi swamp for obvious reasons. At this very time there had not been a single inflow flood on the swamp for two years and four months and the landscape was pretty as a picture. It had never looked better. Then, as it has a habit of doing, the weather changed.

INFLOW SHARES AFTER REPAIRS

Almost like divine judgment two big floods struck in quick succession followed by a third one that was smaller. Having three large floods in three months was reminiscent of 1978 during the very first floods of the scheme.

At Marua for June-July-August 2014 Maureen measured 1,150 mm for 92 days and for June-Sept 1,333 mm. (Maureen was an official raingauge reader for the NRC.)

The first flood from dying cyclone Lusi on 10th-11th June 2014 overspilled from 4.30 pm to noon next day and I had the crest overspill volume shares calculated two hours after inflows ceased. Although this flood was distributed closer to design proportions than the 2012 event some overspilling still occurred across some stopbanks at the upper end, so unfortunately it could not qualify as flood for evaluation of the scheme per the resource consent.

Some swampies promptly visited the Tangiteroria valley downstream to share their negative views with farmers there on the failings of the Whangarei District Council regarding the scheme.

Then in a change of tack a number of swampies at the next WDC swamp Working Group meeting⁷⁹² succeeded in getting initial support for what they believed was a solution to solve the ills of the scheme. This was to spend some \$200 million dollars on building detention dams in the hills upstream to prevent flooding and to provide for irrigation at the same time. In another possible objective it could enable the scheme philosophy to be altered, which could suit certain landowners and penalize others.

A relevant point is that empty dams for retention and full dams for irrigation are conflicting objectives and such schemes in our climate are risky if not impossible. This was learned the hard way in Brisbane when the Queenslanders let their detention dam discharge to get storage space, just when a cyclone was due with the result the city's flooding was made twice as bad as before. Similarly the local evidence demonstrated that Mr Smith's irrigation dam in Tanekaha pocket failed to reduce the flooding on his own land only a fortnight after airing his idea.

Cyclone Ita produced a second big flood on 10th-11th July 2014, which was notable for several reasons. The hill country catchment rainfall was 500 – 700 mm and the storm had two peaks close together rather like cyclone Bola of 1988. Overspilling that

⁷⁹¹ Pages 218-220 WDC Draft Annual Plan 2014

⁷⁹² WDC Swamp Working Group meeting of 27th June 2014

normally ran 12 to 24 hours continued for an all time scheme record of 64 hours and the two smallest pockets of Junction and Tanekaha were both levelled to the brim each with crest inflows plus widespread overtopping of stopbanks. Tanekaha had the biggest flood ever and water ran across Jordan Valley Road (stopbank) into Okarika pocket for 12 hours damaging the tar seal. The other pockets were inundated.

It is worth re-stating that the scheme stopbanks were designed to overtop in big over-design events to protect the control sections from damage. But in spite of the sheer size of this flood, the distribution shares and close grouping of inflow durations suggested that the repairs and modifications to the scheme after the 2010 resource consent were improving distribution shares.

But the large size of this overspill flood with the very high volumes of rainfall ponded in the pockets and its timing just as spring calving began was a disaster for farmers. On a personal level I was again involved in supporting applications for government assistance for farmers on the swamp. The Minister of Primary Industries met with the two councils and attended a barn meeting at Ben Smith's afterward⁷⁹³ to meet farmers where everyone from farmers to Mayor, bankers and Ministry officials all put up with the putrid stench of rotting vegetables and fruit and palm kernel extract that Smith was obliging his herd to consume. Sadly all the tears⁷⁹⁴ and negativity on television by several swamp landowners⁷⁹⁵ portrayed a poor image of dairy farmers to the nation and again the negative public relations were unhelpful to farming.

Cutting Stopbanks

After a flood in July 2014 two cuts were made through TeMata stopbank and one cut made through Junction pocket stopbank. The same two pockets where inflow crests had been largely filled in some twenty-five years earlier. Several landowners farming in those pockets had now cut stopbanks to get water off their land as soon as possible. They then telephoned the Regional Council to say what they had done.⁷⁹⁶ The unauthorised cutting of stopbanks appeared on nationwide television news causing a public outcry, again adding to the negative view of the Hikurangi swamp already held by the public. Mr Evan Smeath of TeMata pocket featured in the press alongside a fresh cut and a digger. He was said to have admitted it was wrong but defended doing it. The local press began, "Hikurangi Swamp farmer Evan Smeath is unrepentant about digging through a swamp drainage-scheme stopbank to allow flood water on his and neighbouring farms to drain into the Wairua River."⁷⁹⁷

While others slept Ben Smith sent letters⁷⁹⁸ to the Mayor Cheryl Mai and the Regional Council Chairman, Ruatangata dairy farmer Mr Bill Shepherd:

"Dear Sheryl and Bill

This is a very interesting email trail. Thank you.

I now understand why NRC control the top of the scheme, recording the inflow for information only for SH1 transport, which currently does not work. NRC then control the bottom of the scheme, limiting outflow and with WDC's 40m3/sec extraction within the swamp their limiting factor.

As a farmer limited by extraction I question NRC on why those above and below the scheme do not contribute to the \$7m recovery for ponding water you and your staff

⁷⁹³ Held 14th July 2014

⁷⁹⁴ Ben Smith on TV One evening News

⁷⁹⁵ Ben Smith of Tanekaha and Evan Smeath of TeMata pocket were reported on TV1

⁷⁹⁶ Rural News page 10 May 5th 2015

⁷⁹⁷ Northern Advocate 17th July 2014 by Peter de Graaf page 3

⁷⁹⁸ Emailed at 4.47 am 17th July 2014

have created. It seems FNDC, as a TLA do not contribute and I know for a fact KDC do not contribute either.

Bill and Sheryl, when are you going to take MPI minister Nathan Guy's comments of the beginning of the week seriously? If you and your staff are going to use the Hikurangi Swamp as a ponding area for Kaipara rate payers why don't you come out and admit it?

Please show some form of leadership and sort this out as your complete inaction is embarrassing to say the least given the heightened media attention you both have created on a poor performing region. We have farmers in our community that need direct answers from you both! If you want to use the swamp as a holding pond get your chequebooks out and start buying some land rather than rating us off this potential goldmine for the regional economy by inaction and extremely weak leadership!

Regards

Ben Smith BAgSci

Director

JV Farms Ltd."

The Smith salvo drew a quick reply from NRC Chairman Bill Shepherd.⁷⁹⁹

"Good morning Ben

Throwing insults at people is always a good way of getting results on controversial issues - NOT. Neither the WDC nor the NRC created the Hikurangi Swamp as a ponding area, nature did!

If you think that changes need to be made to the Resource Consent for the Hikurangi Swamp Drainage Scheme then there is a process for doing that, and it doesn't involve slinging insults at other parties whether they be councils or other farmers. I know for a fact that there are other farmers farming on the Swamp who do not share your views because they have told me so.

A variation to the Resource Consent for the Hikurangi Swamp Scheme will be a public consulted process and to have any chance of success you will need to ensure that the farmers on the swamp can come to a consensus view on what that Variation might look like. Neither the WDC as operators of the Scheme nor the NRC as the regulators on resource consents can force the farmers to agree.

The NRC as the regulator cannot involve itself in the process of formulating a Variation application because that would undermine the integrity of the process and would open it to legal challenge.

Regards

Bill

Bill Shepherd - QSM Chairman"

The District Council Mayor Sheryl Mai said, "Unauthorised actions like the TeMata cut could not be condoned." The Regional Council promptly issued an abatement notice to a farmer on the Swamp concerning the cutting of a stopbank which let tens of millions of cubic metres flow out to disadvantage others downstream.

Ben Smith made his assertion that his farm was limited by extraction (pumping?) when in fact his was the only pocket with nearly double its design pumping capacity

⁷⁹⁹ emailed at 7.11 am 17th July 2014

compared to the rest. The fact that Smith's farm also had a large irrigation dam in its catchment that failed to save it from flooding was also noted by neighbours.

The illegal bank cuts put farmers in a bad light on the TV news for weeks, not to mention the ongoing negative publicity in the press. The TeMata group triggered a high degree of antipathy among landowners in the farming community both above and downstream and that probably put paid to any chances of improving the river flows out of the swamp scheme for some time.

The farming press reported, "Farmers downstream who were affected badly by flooding won't trust the Hikurangi farmers again."⁸⁰⁰ The Farmers Weekly article put it succinctly with the comment, "Arrogant greed has triumphed over community cooperation for very little benefit in TeMata and Junction pockets."⁸⁰¹ Notably these two pockets were the very same two pockets that had filled in their inflow crests some two decades earlier.

Both councils prepared court actions. There was ample evidence in the press, TV, personal witnesses, photographs and videos of people and actions in TeMata pocket. The consent conditions barred earthworks in winter, WDC bermland lease conditions were transgressed and the alleged transgressors thumbed their noses at warnings from the consent commissioners about unauthorized alterations to the scheme.

So after some 24 years of trouble on the swamp the authorities were still struggling to prevent unauthorized interference with the scheme.

In October 2014 a letter was received by the Whangarei District Council from several landowners, some involved in the bank cuts, asking that the council cease administration of the scheme and hand it over to a commissioner. Of course this didn't happen and the alleged perpetrators of the stopbank cutting were charged in the Whangarei District Court.

The first press report⁸⁰² was as follows:

"Three people have been charged after cutting a stopbank on the Hikurangi swamp during the first of two storms that hit Northland in July 2014. The Northland Regional Council issued infringement notices to farmer Evan Smeath, Clim Lammers and Stephen Brown after the July 8th storm. Smeath and Lammers have pleaded not guilty to two charges of diverting water and discharging contaminants when the Hikurangi Swamp Major Scheme stopbanks were cut. Lammers elected a jury trial. Smeath was yet to elect what course of action he would take.

Any person found to have cut stop banks potentially faces NRC enforcement action under the Resource Management Act, which includes prosecution. The maximum fine for breaching the Act by an individual is \$300,000 and can face imprisonment for up to two years."

In April 2015 the press reported the fines⁸⁰³ under the headline "**Stopbank cuts cost pair \$112 k.**" The article reported that Stephen Brown who made one cut pleaded guilty in the Environment Court to three charges relating to the Resource Management Act and was fined \$22,500 for each making a fine of \$67,500. Clim Lammers, who made two cuts, admitted to two charges by the NRC of cutting the stopbank on July 14th and 15th 2014, and was fined \$45,000.

Charges against another farmer Mr Evan Smeath were withdrawn after Mr Lammers provided details that confirmed he acted alone.

⁸⁰⁰ NZ Farmers Weekly August 4th 2014 pg 10

⁸⁰¹ Ditto ref 756 reporting comments of Ray Hindrup

⁸⁰² Northern Advocate December 6th 2014 page 4

⁸⁰³ Northern Advocate Monday April 13th 2015 page 3, Whangarei Report April 21 2016 front page.

Distribution Table for Over-Design Floods with Inflow Shares

The earlier 2012 flood was recognized as an over-design event and the June and July floods of 2014 were likewise over-design. With the inflow crests repaired but the stopbank restoration work not yet completed neither flood could officially qualify for comparative purposes per the resource consent monitoring conditions.

A smaller flood at the end of August 2014 was more normal in size but the stop bank restoration works were still not completed. Although none of these floods qualified and no official evaluations have been made I have included my tentative calculations of overspill shares.

The method of calculation uses individual crest recorder data from each of the seven swamp pocket inflow crests and the seven pockets are all calculated using the same methodology. The friction element for grassed crests is set the same for all crests at a setting that produces the best average fit with flooding records. Altering the friction component actually shows little if any effect on individual pocket comparisons.

The table shows that the correlation to design data of the inflow shares for the six calibration floods as used earlier in the review model were very low, indicating the poor condition of the scheme. However, by late 2014, even though the floods were over-design and the scheme was not yet fully restored, the inflow share distribution correlations actually showed considerable improvement since the repairs were made. (A score of say 0.99 out of 1 would be near perfect.) So after sixteen years of review it looked like the scheme was finally improving. See correlation results below.

Historical Volume data				Volume From the inflow crest recorders data			
Pocket	Design 1970 (NCC)	Obs 6 MW calibrated floods . (M Rusk)	2009 modelling of 6 floods. MWH	June 11 2014 flood	July 10 2014 flood	1 Sept 2014 flood	
Junction	5%	1%	1%	15%	9%	10%	
TeMata	20%	6%	6%	21%	25%	25%	
Otonga	23%	33%	30%	21%	20%	20%	
Mountain	14%	5%	5%	9%	10%	9%	
Tanekaha	3%	10%	7%	3%	6%	6%	
Ng'tunua	10%	37%	38%	11%	12%	9%	
Okarika	25%	12%	10%	17%	18%	21%	
Correlation	1.0	0.23	0.20	0.76	0.85	0.87	

By autumn 2015 the stopbanks and inflow crests had all been fully restored, the conditions of the Resource Consent were finally all in place and the scheme was ready for its first qualifying flood to test the repairs.

From the time of the consent in 2010 it had taken another five years to get that far. At last it was announced that official monitoring of overspill events could begin.⁸⁰⁴

After that announcement the international prices for dairy products promptly fell in 2015 by some sixty-two percent, or twice the fall during the five years of the great

⁸⁰⁴ WDC Swamp Working Group Meeting 18th February 2015 at Fonterra Jordan Valley Farm

depression of the 1930's. As a result of this, plus no serious flooding for about six years, the swamp became a more peaceful place, at least for some time.

Surprisingly, the planting of thousands of shrubs and trees on the bermland between the main channel stopbanks has been allowed. Other flood control schemes of similar design in New Zealand require flow resistance factors to be kept to the absolute minimum to reduce friction that increases overspilling and flooding on farmland. In the Hikurangi scheme only time will tell how far good engineering practice and design has been compromised by planting trees in the flood channel waterway.

The following table may be used to record the five floods that will be used to check performance in terms of the 2010 resource consent.

When five floods have occurred and the table below is completed the data should indicate the success, or otherwise, of the review and the 2012 modifications and repairs to the scheme.

Table of inflow shares for Design Range floods monitored.

Historical data				Official Shares from the inflow crest recorders				
Pocket	Design 1970 (NCC)	Obs vols 6 calibration floods. MR	2009 MWH modelling 6 floods	Flood 1	Flood 2	Flood 3	Flood 4	Flood 5
Junction	5%	1%	1%					
TeMata	20%	6%	6%					
Otonga	23%	33%	30%					
Mountain	14%	5%	5%					
Tanekaha	3%	10%	7%					
Ng'tunua	10%	37%	38%					
Okarika	25%	12%	10%					
Correlation	1.0	0.23	0.20					

The resource consent to enable the scheme to continue was gained in 2010.

Following the delays previously mentioned mentioned, the repairs were largely completed by March 17th of 2012. There were three large flood events followed by the usual pattern that has been repeated on numerous occasions.

My observations are that after about 19 years with inflow floods occurring there tends to be a period of about three or four years with no inflow floods. We have just experienced such a break from inflow events so can expect the normal flooding cycle may resume around 2020 or soon after. It is worth noting that New Zealand often follows the regular periods of drought in Australia.

As there have been no inflow floods since resoration that fall within the design criteria, the performance of the rebuild has not yet been officially tested to date. Interested readers may like to record results in the table above when overspilling data becomes available. This will be the acid test of the Review and all the earthworks.

Switching all the Pumps Off to Save Eels

Under the headline **Hell and High Water: Farmers left in the dark** the Northern Advocate reported on June 4th 2020 that the Whangarei District Council admitted Hikurangi Swamp Farmers were not consulted regarding a decision to turn off the flood pumps as flooding began. WDC Drainage manager Simon Charles alongside Maori members of the local Hapu, fronted to farmers who quickly turned up at the Ngararatunua pump station in alarm.

Some 107 mm of rain fell the day before, the fourth highest daily rainfall for May since 1943. Mr Charles said Maori from the Hapu had made a request that was approved by the department of which he was head, and admitted farmers had not been consulted.

So, after the recent drought many hundreds of hectares of recently sprouted young grass could fail through pumping being delayed for some 24 hours, an expensive potential disaster for the dumbfounded farmers. The pumps were promptly turned on.

A meeting was to be held later where no doubt the subject of eels would be discussed.

There seems to have been confusion in recent years concerning a belief that the pumps were decimating eels in large numbers, as some people believe that eels approach the stations and brave the extreme noise and vibration to swim through the pumps when operating. Some even believe that virtually all the water leaving the scheme has been through a pump on its way. That is far from reality.

Here is how I estimated how much swamp scheme water goes through the pumps. At the start of the scheme review in 1998 I researched the run-time of pump clocks for every pump including the few replacements, to produce a continuous ten-year record of pumping from May 1983 to May 1993. NRC records show this decade was a stable and typical decade to survey.

Using pump capacity, pumping hours and recorded water levels from logsheets, and output rating curves, I was able to find volumes pumped by each pump.

The totals were added together then divided by ten to find the average annual volume pumped by the flood control scheme over that ten-year period.

The average Pumping volume amounted to **60,246,115** cubic metres each year.

From the Northland Regional Council hydrology office I recently obtained the annual volumes of water that flowed out of the scheme during that same ten-year period, and divided total by ten also. As expected, the total average annual flow from the scheme down the Wairua River was a big number at **625,456,700 cubic metres**.

Expressing the pumping as a percentage of this total flow **shows that only ten percent was pumped while ninety percent never passed through a pump**.

The 5 years to 2020 were some of the driest years since 1908 and the proportion of pumped flow during such periods would be nearer to one percent than ten. In 2016 an \$18,000 monitored study on eel migration and pumps was expected back within six months but four years later there still seems no sign of it.

The above points and earlier comment on pages 275-276 and page 249 4a may contribute something towards clearing up a few basic misunderstandings in the ongoing discussion concerning eels.

FUTURE OPERATION AND OWNERSHIP

Oddly, in late 2019, proposals were floated to the District Council from commercial sources to undertake hi-tech modelling of the scheme and what would obviously have resulted in a second full review and re-design of the scheme. Doing this before official results of the current 22 years of review were even known seemed absurd if not illegal under the resource consent.

Changes made, now before the official results are even known, could have rendered the entire two-decade review and modifications a total waste of money. Farmers must beware of being milked for cash and fortunately the promotion above was not acted on.

Risks to the scheme's operation and viability include the idealistic but misguided planting of trees in places that will inevitably increase flow friction thus lowering output from the scheme and increasing flooding, pollution through rotting fields, and raise power costs and replacements through more pumping.

Farming landowners, most already under severe cost pressures, may need to find a more cost efficient operational model instead of continuing with the District Council's comfortable cost plus methods. Many landowners see inefficiencies, rising costs, debt and interest charges rating burdens, plus some loss of confidence in their own ability to survive.

Discontent over structure and management has been increasing for some years and there are good reasons for a new arrangement using continued District Council ownership, but with operational responsibility transferred to some form of Landowners' Trust. This would be similar to other successful examples within the Whangarei District, and could be an improvement on the present situation.

The change could prove beneficial to both partners, and if Auckland gobbles up more local government as it will, then the real owners of the scheme might need to be in a stronger position to manage it rather than finding themselves more remote.

While it was and still is the landowner's tens of millions of dollar value invested in the asset, it has been flicked off between local authorities for one dollar with the original owners still paying for everything. The scheme has endured a history of shabby local government changes that have not served those rural landowners well.

Failure to act now could see the scheme becoming the biggest cow milked, as central government, local government and well intentioned but un-informed idealists start sucking the economic life out of the scheme.

None of the above are really new to farming, however, when new imported problems and mushrooming demands of the new social bureaucracy are added to the natural challenges of such an important flood control scheme, then there are serious questions and issues that require solutions.

SUMMARY

History has clearly shown that the early idea to drain and reduce flooding on the Hikurangi swamp was a good one, but also that the scheme got off to a bad start. The 1960's proponents had wanted a scheme in place without the delays of research and planning or too much expense and debt, lest it become uneconomic. This hurried cost cutting approach regretfully resulted in a protection level that was too low. To control costs the Commission did most of its own work with a small staff of 22 to 26, which contributed to delays and criticism for not making more use of consultants. During and following construction as inflation grew and scheme costs trebled the Commission was turned upon in anger by the very landowners it had done its best to serve.

The history of the Hikurangi swamp scheme also shows it has been a long and sometimes bitter saga right from its conception and construction. This was followed by decades of individual farmer interference to 'fix' it for their personal benefit but that not only made it unfair, it prevented the very progress that the Catchment Commission envisioned would take the scheme forward. With the loss of the Catchment Commission there was not sufficient disciplined vision and cooperation to ensure continued progress, thus cooperation was replaced by cunning and claims of cheating.

Selective maintenance, or total lack of it in places, and deliberate filling of inflow spillways eventually led to unfair distribution and storage of excess floodwaters and poor performance. Eventually after twenty-five years, a crisis point arrived when nearly half the overspilled water was diverted, and after a long struggle by the disadvantaged farmers a review was agreed to. There was a growing feeling by some that the scheme had been run by a group for its own interests. The review was delayed by some landowners, who had defenses against flooding and it took 17 years, which was far too long. The Regional Council as the regulatory authority had failed to take action for 22 years after knowing the scheme had been unofficially altered and the District Council was at fault for failing to address the filled in crests after the 1994 survey revealed what had been done. Repairs to the scheme were originally a four thousand dollar job, then a one hundred and forty thousand dollar job and finally it cost the best part of a million dollars all up. Of course the cost of repairing the scheme was relatively smaller for those landowners who partially filled in their inflow crests more than two decades ago. But for those who took the brunt of the diverted floodwaters it was a long haul. A number of farmers fell by the wayside, died, or sold and left. Behaviour and relationships continued to be poor throughout the seventeen-year review and reconstruction period from 1997 to 2014.

During fourteen years of review the basic problems as I saw them included:

- The process was deficient. The consultants MWH were initially starved for data.
- They assumed a main channel peak water gradient that was far too steep.
- The shortage of factual information was exacerbated by the attitude of the Liaison Committee and a District Council that was for some time persuaded to turn a blind eye or even acquiesce.
- The consultants did not benefit from openness as normally exists in such reviews.
- The consultants did not receive or make good use of the pump station log sheets.
- For ten years they used the wrong survey profiles for the inflow crests.

- For nine years MWH modeled theoretical return period or 'average return interval' events instead of modeling actual floods as instructed in their brief.
- They had the difficulty of trying to fine-tune a scheme rather than just design one.
- The scheme runs so flat most of the time that the software was at its limits.
- There was a need to get the scheme nearer to design before fine-tuning it. I likened it to getting the bubble on a carpenter's spirit level roughly visible within range so it can then do its leveling job.
- The first thing was done last and the last thing first. Cutting the filled crests should have been done first as was agreed and decided. That would have saved years of damages to the disadvantaged and assisted the review.
- The massive expense lies squarely on the heads of committee members who for twenty years frustrated moves to get the scheme fixed. They should blame themselves and not the WDC or anybody else.
- Some Liaison committee members past and more recent can partially thank themselves for wasting over one million dollars of fellow ratepayer's money.
- The Commissioners who reported on the granting of the resource consent made uncommonly strong criticisms of 'perpetrators' and gave clear warnings that future control and management of the scheme should not be subverted. Their warnings were prophetic.
- Continued behaviour that resulted in a police presence was unhelpful.
- Those who embarked on a legal challenge simply added to the costs and delays.
- Ongoing diversionary activities were aimed at overturning the consent.

The first five WDC review reports comprised the MWH Draft Report, the MWH Report of 1999, Calibration Report of 2001, Draft Hydraulic Performance Report 2002, and Hydraulic Performance Report 2003. All of these reports plus subsequent work by MWH right up until 2007 were based on theoretical ARI⁸⁰⁵ events. However, when observed data from log books and other observations were eventually accepted into the model it was finished to its reasonably achievable optimum in only 90 days and the computer modelling quickly went on to receive a new resource consent. When put together, the comments of Messrs Cathcart and Blackburn clearly indicate that without the efforts of Mr Hindrup and Mr Rusk that enabled a Resource Consent to be gained, the scheme could quickly have come to an end through the gravity gates being removed, something that would have been welcomed by environmental groups. By 2010 engineers were saying, "We are going to monitor the inflows and adjust the length of the spillways to get the design proportions of overspill into each pocket". Was this surprising? No, it was exactly what the first design engineers wrote forty years earlier. If the Liaison Committee had allowed it to happen as earlier planned it would have saved the best part of a million dollars by not having an expensive review. It just goes to show there must be a benefit after filling your inflow crest in!

Why did CEO Moores say it would be better to keep the scheme design documents under wraps? ⁸⁰⁶ Did some faction think it better to keep everyone in the dark? Or was it because he had personally altered the design in critical places and didn't want those details discovered? One original participant publicly commented, "Which design do you mean, Mr Moores' one or the NCC's?" ⁸⁰⁷

⁸⁰⁵ ARI means Average Return Interval. Not to be taken too seriously according to Mark Simpson

⁸⁰⁶ NCC CEO Moores to Swamp Works Committee. Minutes July 1978 pg 4/5.

⁸⁰⁷ Mr Ross Finlayson at a Council Liaison meeting.

Recently there have been ratepayer suggestions of taking the scheme out of control of local body administration so that farmers can run it themselves, but total privatisation to place the scheme in the landowners' direct control could in this instance be risky considering its history to date. A report on privatisation⁸⁰⁸ has already warned of capture by one faction to the detriment of others.

There are obvious dangers in privatisation when the landowners have such a poor record in terms of fair play among themselves. Distrust became embedded in swamp affairs but that is not to say that a new beginning and real cooperation is not possible.

It has been a tragedy that some on the Liaison Committee have been so woefully ignorant on the subject of hydrology for so long. There has long been ignorance across the swamp scheme, which, combined with greed and distrust, has paved the way for misunderstanding, friction, cheating and unfairness. The scheme suffered after early construction delays and inflation tripled its cost, which caused rating pressures and reluctance to keep rates up with inflation, which eventually all led to a lack of progress and shortage of funds to renew pumps. The signs went unheeded for years.

Following first step repairs the complaining and criticism through 2011 about cost over-runs from Liaison Committee proponents was quite out of place considering that the then Liaison Committee had tried to manipulate the Review to the extent of starving it for information. The escalation of costs caused by their own activities has come back to bite them, yet astonishingly they were still the most vociferous in making complaints.

Mr Hindrup of Otonga pocket got no credit for saving the huge cost that would have occurred if he had not intervened and put a stop to implementation of the planned overly steep earthworks gradient based on the 1998, report which would have been a disaster. Mr Hindrup always emphasized that he wanted the scheme to be operated fairly for everyone because, in his opinion, that was the only way it could possibly work properly and he claimed in particular that the four big pockets needed to have the right inflow proportions, because if that was not so then the rest of the scheme could not work properly.

What of the future? The re-grading of the channel from Junction to the rapids, as recently proposed and modeled by Mr. Hindrup, had been the number one long-term plan of the Catchment Commission. This improvement to the scheme still remains the most environmentally attractive option in terms of reduced electricity consumption, environmental gains through the reduction in rotting vegetation that would benefit water quality, fish life, and ongoing economy.

There is a media and public impression of a swamp full of whingers always needing help and a bailout. The scheme had a poor reputation from the beginning and this deteriorated further as soon as it was built. The factions who meddled with the scheme added to the poor image and recently there has been a group stirring up more trouble. The effect of constant criticism over time and continuing criticism of council sadly risked losing public goodwill toward the scheme and government support. This was already evident after the big 2007 deluge when financial aid from both taxpayers and ratepayers was declined for swamp farmers although provided to others.

News of the strife travelled far and wide assisted by the print media, national farming journals, TV and word of mouth. The negative publicity inevitably lowered values of swamp farmland. A couple from the South Island came looking to buy a dairy farm in the District but while on their way out to a property the farmer asked the agent,

⁸⁰⁸ Privatisation of Drainage Districts (NRC) File 800.1

"Is this farm on the Hikurangi swamp?"

"Yes it is."

"No thanks, take me somewhere else."

All is not well between councils either. Initially the Far the North District advised they were not going to collect the swamp rate in their area because of opposition to it.

⁸⁰⁹ If the swamp farmers had demonstrated over the decades that they could get along together then respect, help, and better relationships with the down-river people may have be more forthcoming.

The contractor who did the recent restoration work is unlikely to work on the swamp again and sold some equipment after he was abused, blockaded and frustrated on the scheme. A previous long term and experienced swamp earthworks contractor virtually found his business destroyed and went to Australia to recover his health and fortunes. Longtime swamp scheme contractors of Hikurangi retired and left the swamp, as did another large drain cleaning business. This all begged the question: How smart was it to undermine the contractor base that competes to repair your scheme and help your farming business?

By 2011 the public attitude was that swamp farmers, who mostly run multimillion dollar businesses, who choose to buy, live, and farm on the swamp, should live with their decision, a sentiment of let them like it or leave it. Some of them had gross business incomes of several million dollars and a modest dairy farm producing 100,000 kg of milk solids earns the best part of one million. Swamp farmers should realise other ratepayers have every right to decline subsidising and carrying debt for them and it is not helped by concerns over parochialism and factions in previous liaison committees.

⁸¹⁰ Public sympathy eventually waned. The world has moved on from the 1970's and pre-Covid19 a bit of milk production is not seen by the public as valuable as it used to be. The Hikurangi Swamp controversy has taken an inordinate proportion of council time and expense considering the scheme's relative regional importance.

The Scheme is partly subsidised by rating upstream landowners who receive no benefit at all. If these people knew the facts they may well request that their 'rainfall taxes' be spent on broader aspects of river management.

Some may wonder what the motive was for the perpetrators to act together for so long? What could have glued a small group together for twenty something years? Was it a common desire to tacitly help one another in defending their unspoken alterations to the scheme? Junction landowners because they filled in their crest, TeMata landowners because they benefitted hugely from largely filling their inflow crest, Mountain pocket because they half filled theirs? Then there was the mutual benefit of keeping the Otonga inflow crest pushed out to 1.5 kilometres for thirteen years. To cap it off there was the common benefit to the 'in group' from two particular things put in place when the scheme got under way.

The first was the Ngararatunua inflow crest having been lengthened, a move that doubled inflow to that pocket immediately and up to three times more as time went on, thus acting as a safety valve that helped protect certain other pockets. The second was the extensive lengthening of Otonga inflow crest to use that pocket as a dumping ground and help protect the other pockets. By various tactics the effective diversion of floodwater was vigorously defended by various persons for decades until almost half

⁸⁰⁹ Email FNDC to WDC 7th December 2011

⁸¹⁰ Deputy Mayor Phil Halse to Public Forum meeting of 30th March 2011 at Fonterra's Shed

the overspill in the more regular events was diverted onto other landowners' properties.

No voting majority system was going to change all these things but all of the above were of direct benefit to some members of the group. The glue was dollars of farming income plus the desire to keep things the way they were. It then required the light of truth to shine strong enough and long enough to effect change. As a US Supreme Court Justice once said, "*Sunlight is one of the best disinfectants.*"⁸¹¹

On the positive side the larger floods before the scheme had covered about 3,800 hectares of virtual swamp but the average flooded area of design inflow floods since the scheme's construction has been around 1,900 hectares, or about half the area that had previously remained under water for weeks. That was a big gain. Today the land is also far more productive, although in terms of Northland's total farming area the 1900 hectares of grass lost by flooding on the swamp is hardly a major proportion.

Opportunities to improve the scheme, as originally intended decades ago in 1970, were largely frittered away. The question became - could there be a change of heart by all concerned to enable them to work constructively together to improve the scheme together as was originally intended?

It was most unfortunate that the new resource consent process and subsequent efforts to strike it down occurred during a period of large over-design flood events that included the floods of 2007, 2011, 2012, and two in 2014. Because the flooding was more widespread during this period a higher level of emotion resulted. Oddly both the severe winter weather and the high emotions were re-runs of the very first year of the scheme. It had all happened before when the scheme was first completed.

There was the appearance on November 29th 2011 of a pressure group, namely the Hikurangi Swamp Scheme United Farmers group, which acted for some time as an arm of the older Liaison Committee. The same small group engaged Wellington lawyers, who perhaps could have made a better check on the swamp situation first. The strategy as openly admitted in a press statement was, "To put pressure upon the District Council to return the running of the scheme back into the hands of the farmer liaison committee in the way it was done in the past."

However, the idea of reverting back to that form of management proved unacceptable to most, and so a new ratepayers' organization was formed to work positively and cooperate with council to complete repairs and conditions of the resource consent. For a time the District Council did allow much of the old Liaison committee to reform, albeit under a Code of Conduct and chairmanship of council. But again unacceptable behaviour was attempted until the Deputy Mayor took a firm hand and sorted some difficult out and so scheme works and management proceeded more efficiently.

In the 1970's the beneficiaries of the scheme had treated their governing authority poorly and thirty-five years later a similar thing was repeated. As on the first occasion this resulted in more costs and impediments to improving the scheme. These costs are now looking large in relation to occasional losses on the average regularly flooded area of almost 2000 hectares.

A group pushed via legal channels to persuade the Regional Council into taking the scheme over then hopefully to set the resource consent aside, an idea that both Councils wisely resisted. Perhaps the concern of some landowners was not that the repair work would fail but that it would succeed and remain in place, meaning that

⁸¹¹ Justice Louis D. Brandeis quoted by Stephen D. Levitt

previously advantaged farmers could be stuck with storing more overspill water if the scheme was returned to operate fairly to all.

Late in 2012, two and a half years after the resource consent had been granted by the Regional Council to the District Council, a group took the District and Regional councils to the High Court in the hope that a Judicial Review would overturn the consent and potentially return the scheme to its previous (unfair) condition that had existed for twenty years until the 2010 repairs. The High Court rejected that attempt and it was dismissed. The group concerned paid the full costs of their legal foray, but wasted no time in looking for alternative routes to achieve their goals.

Over the decades the two sides of the argument slowly swapped places. Following the ad-hoc filling in of certain inflow crests the then dominant power bloc had successfully defended the new status quo against the disadvantaged ones who wanted to repair the scheme back to its design dimensions and performance. After years of struggle the disadvantaged bloc slowly became the dominant group, and won the respect of officialdom to the point where the scheme was in fact repaired. The restoration work was hotly opposed and criticised by the former power bloc, however that group was reduced to become a group of protestors outside the tent where the disadvantaged people had previously been.

Although further Local Government amalgamation was recently rejected the question of how the swamp might fare under any future changes to local government is anybody's guess. The previous local government reorganization in 1989 served the swamp scheme poorly in that an opportunistic free for all resulted, the scheme was not repaired and the costs of that eventually came home to roost. Today, if any farmers still believe that inequality and injustice are acceptable in such a community flood control scheme, then economic failure could be seen by outsiders as poetic justice. Better controls need to be exercised and the resource consent commissioners made this very clear. By 2015 a new form of WDC/Swamp Working Group was functioning efficiently and a new day was dawning.

From 2016 the situation was that after five floods in the size-range that the scheme is designed for, a mandatory decision on any further fine-tuning of the inflow crests if the variation from design distribution is outside the parameters. The philosophy of fairness was written more firmly into swamp statutes than ever before and the repairs and modifications looked promising. The terms and conditions of the resource consent should be used if required as a guide and to avoid any future abuse.

Indicative estimates of overspilling durations are now more even and to date overspill volume distributions seem to be moving closer to original design targets. Official monitoring began from mid 2015 when all inflow crests and stopbanks were restored and all conditions of the Resource Consent were finally put in place, however by April 2020 no design qualifying flood of measurable proportion for overspilling had occurred for official monitoring purposes. Unofficial modeling has been encouraging.

By 2020 a number of farmers, mostly west bank landowners, some who had benefitted from illegal defences against crest inflow flooding, had sold out and left for various other reasons. Then there are those like the Hindrups and others on the east side who remained, those who took the extra flooding for decades but skillfully coped, slogging on at great cost to come through in spite of what had been done to them.

The scheme finances are presently challenging but debt has been on track as agreed with council to be fully paid off in 2027. There are serious questions regarding management of the scheme in a cost efficient and affordable manner and these will need to be addressed.

The good news is that an atmosphere of peace has emerged, farmers working quietly and cooperatively together and with the councils. Protesting has given way to progress. There is now hope. Even the weather settled down somewhat. The theory of man-made climate change has seemingly failed to alter the overall scheme of things. I remember being out in the the so called "scheme design flood" of 1966 when upstream residents of our Paia district recorded more than 450 mm of rainfall in one single night with most gauges still overflowing next morning. Several such events occurred between the years 2007 to 2014. The present scheme was not designed to cope with these 50 to 100 year return period floods.

It is worth remembering past periods of extreme wet weather when high rainfall wreaked havoc in Northland. For example in the 1880's, 1930 to 1935, (this wet period raised calls for a scheme), the 1960's, 1978, (the first year of the scheme), 1988, 2007, and 2011-14. All these historical periods saw unusual flood events of some kind. And it was no accident that the oldtimers built the railway track in 1910 at what was, and at times still is, the peak flood level today. For some years I have held the view that a large flood event will turn up around the autumn of 2026. Time will tell.

With great vision but limited means, did the courageous old timers who launched and built the scheme bite off more than they could chew? Even with modern technology would it be attempted today? Not likely. Has the huge and difficult project resulted in a lot of stress? Yes. Produced a lot of wealth for Northland? Yes. Those pioneers and today's farmers have certainly endured and persevered to overcome huge stress and continue to contribute much to the District and everyone's prosperity. That should be acknowledged today, and in a post Covid19 world it might be vital for society to be supportive and work together to survive and succeed as Hikurangi swamp Farmers have done.

Actual fairness in the distribution of floodwaters stored within the Hikurangi Swamp Scheme as originally designed is now hopefully restored. Landowners are showing real commitment to cooperate together to live in peace with their neighbours and to maintain a flood control scheme that is just and fair to all and environmentally sound. So the future could become better for all concerned. I hope that my small efforts over the last twenty years have proved of some value and I wish every one of them well for the future.

Those who don't know history are destined to repeat it. ⁸¹²

"It is difficult to make predictions – especially about the future."

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⁸¹² Edmund Burke 1729-1797 British statesman and philosopher.

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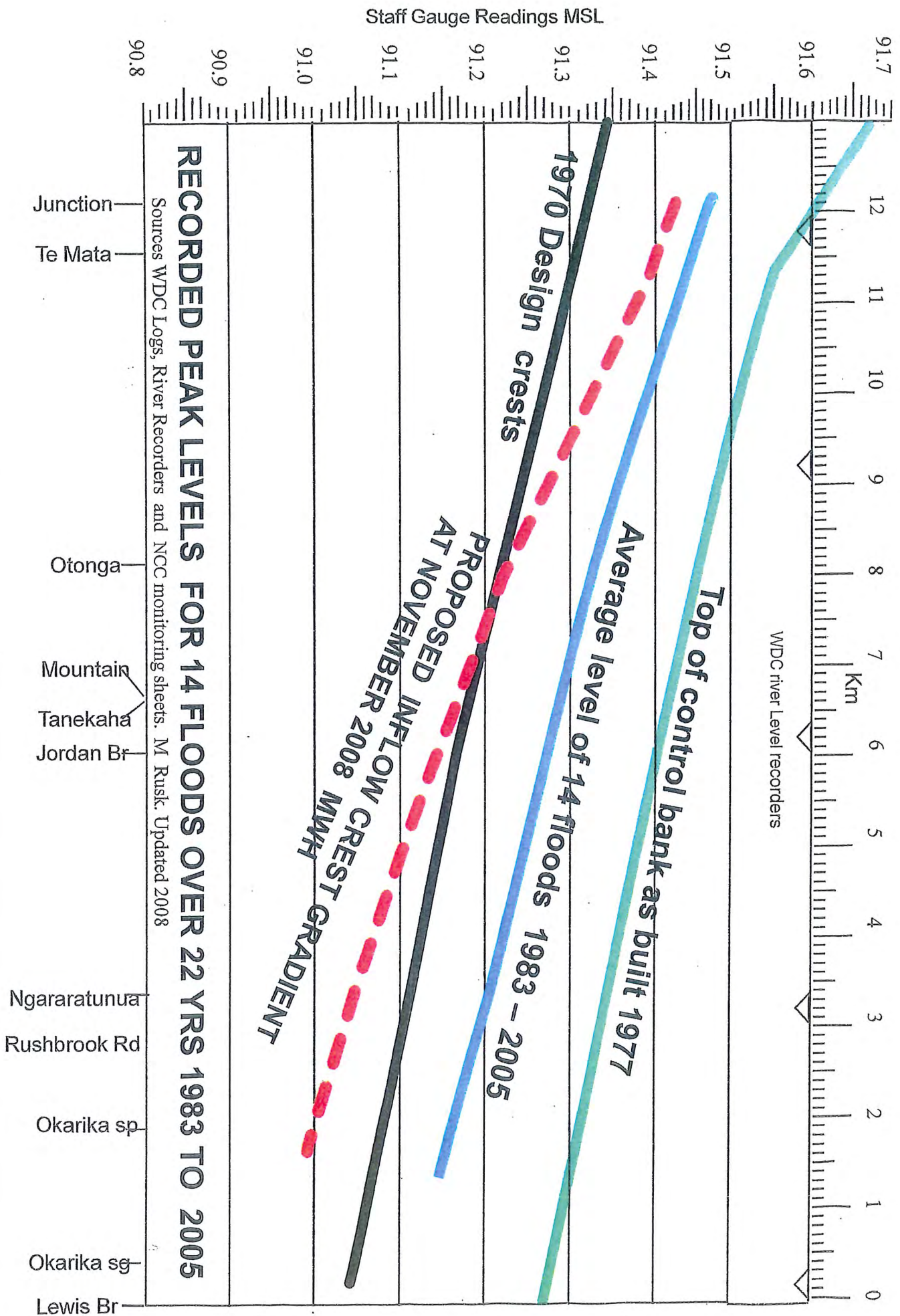
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APPENDIX: A FEW TABLES AND DRAWINGS.

The attached pages are included for the interest of readers. These few pages represent a small part of the total but provide some indication of the author's work.



HIKURANGI SWAMP DRAINAGE SCHEME MODEL

Review	H/Graph	Metric	Imperial	Rivers Inflow to scheme CuM										Rain in Pockets	53,388,456	
Total Rain at Puhipuhi		599	24.0	Rainfall within Pockets Cu M										+ Spillways in	60,601,000	35.3%
Peak Flow into Scheme		1,113	38,950	Any channel Storage at start										Through / storage	113,989,456	100%
Peak Flow from Scheme		273	9,555	Total Water in CuM										Less Pumping	41,849,127	37%
Runoff %		88%		Discharged Lewis Bridge										Gravity out-flows	75,898,937	67%
Channel Storage at start		0%	%	Indicative Ha Flooded:										Volume error	-3%	0.00%
Inflows:				Design	Test inflow%	Inflow CuM	Flood Day 1	Day 2	Day 3	Day 4	Day 5	Peak Ha	Peak CuM 10 ⁶	Durations		
Junction	5%	9%		5,454,090	145	434	540	540	540	540	540	540	7	16		
TeMata	20%	26%		15,756,260	411	540	540	540	540	540	540	540	23	13		
Otonga	23%	20%		12,120,200	376	710	768	768	768	768	768	768	19	17		
Mountain	14%	10%		6,060,100	142	315	419	440	440	440	440	440	7	15		
Tanekaha	3%	6%		3,636,060	68	171	192	192	192	192	192	192	5	14		
Ngararatunua	10%	12%		7,272,120	475	727	833	833	833	833	833	833	18	12		
Okarika	25%	17%		10,302,170	247	693	735	735	735	735	735	735	22	15		
Totals				60,601,000	1,863	3,588	4,026	4,047	4,047	4,047	4,047	4,047	100			
Puhi Rain day 1	Peak river levels at Jordan Bridge			91.366	91.366	91.366	91.366	91.366	91.366	91.366	90.511	89.535	89.292	89.049		
→ 84	86	174	150	36	0	0	69	0	0	0	0	0	599	Total Puhi rain		

HIKURANGI SWAMP DRAINAGE SCHEME MODEL

WATER SUM M/cuM

Total water in was

226

July 10-12 storm 2014

Runoff From Upper catchments

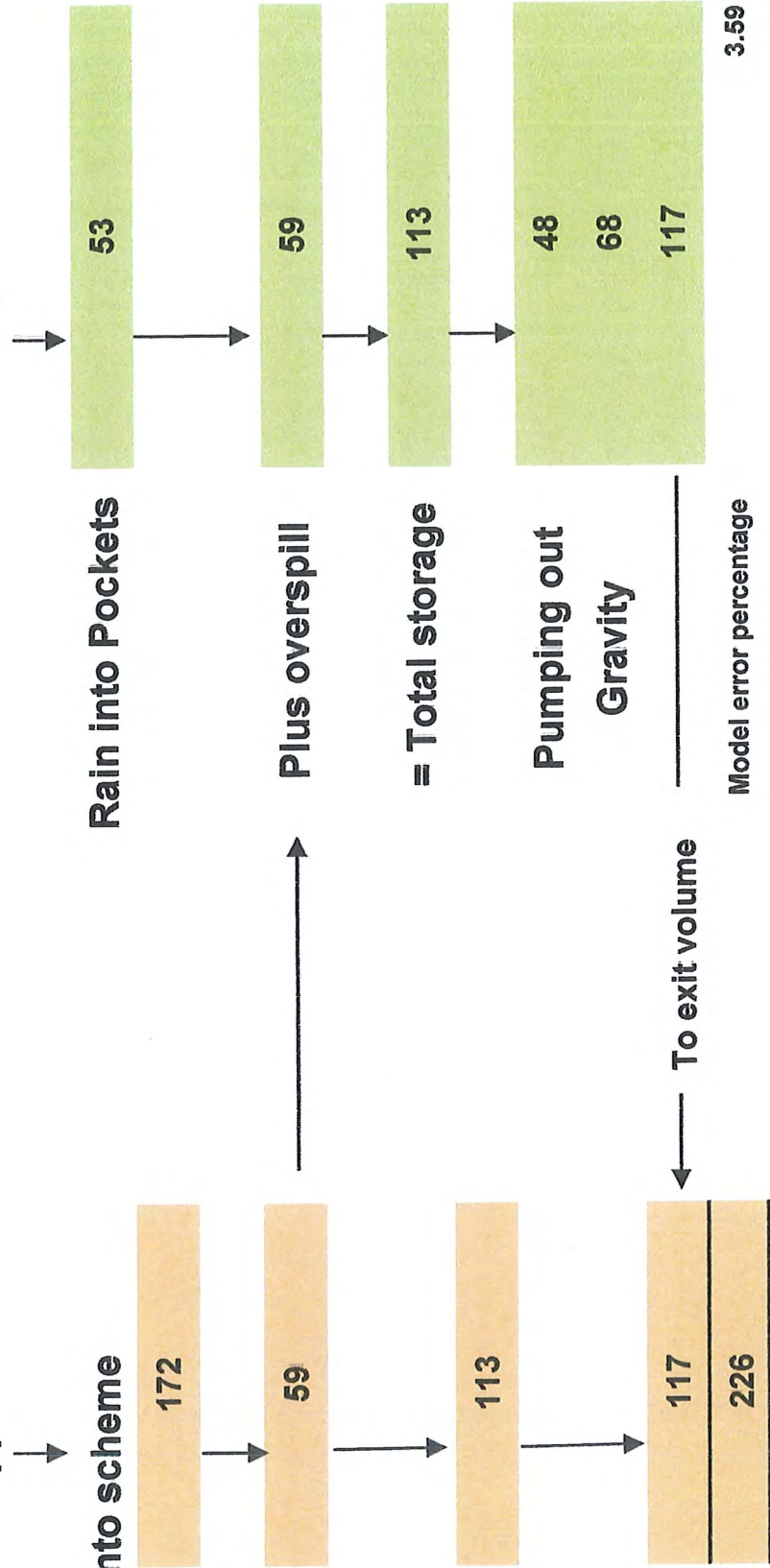
4 Rivers into scheme

=

Less to spillways

Remainder to exit

Total exit Volume



1	Introduction
2	Chapter 1: The History of Mathematics
3	Chapter 2: The Foundations of Mathematics
4	Chapter 3: The Development of Mathematics
5	Chapter 4: The Applications of Mathematics
6	Chapter 5: The Future of Mathematics
7	Chapter 6: The Philosophy of Mathematics
8	Chapter 7: The History of Mathematics in the West
9	Chapter 8: The History of Mathematics in the East
10	Chapter 9: The History of Mathematics in the Middle East
11	Chapter 10: The History of Mathematics in the Americas
12	Chapter 11: The History of Mathematics in Africa
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47	Chapter 46: The History of Mathematics in the Farmland
48	Chapter 47: The History of Mathematics in the Urban
49	Chapter 48: The History of Mathematics in the Suburban
50	Chapter 49: The History of Mathematics in the Rural
51	Chapter 50: The History of Mathematics in the Wilderness

CREST RECORDER VOLUMES**For flood of 20/03/2012****BEST MODEL TO DATE - AS USED IN JUDICIAL REVIEW DEFENCE****Crest inflow Volumes calculated using data from 13 WDC crest recorders. ***

Depth recordings were taken at intervals of 5 minutes from 1 mm depth through to 1 mm depth. (Junction was a special case)

POCKET	JUNCTION	TEMATA	OTONGA	MOUNTAIN	TANEKAHA	NGARARATUNUA *	OKARIKA	Total scheme
CREST INFLOW CU/M	363,037	4,859,524	3,575,487	2,038,535	975,391	2,479,000	1,011,735	15,302,709
CREST INFLOW %	2	32	23	13	6	16	7	100
1970'S DESIGN %	5	20	23	14	3	10	25	100

Note: Junction pocket was filled with more than four million cubic metres, ninety two percent of this came from stopbank overfills, not the spillway. The stopbank overfills to Junction came largely from a 3 km stretch of the Whakapara river and there was overland flow from the Wairiki valley. The crest data for Junction is low because the crest could no longer flow in because the pocket was already full of floodwater.

*Contractors were prevented from completion of Ngararatunua work and with no recorder installed volume from the rise in internal water level is used for that pocket to enable fair comparisons to be made across the scheme.

Merv Rusk May 2013.

HIKURANGI SWAMP SCHEME

ESTIMATED CREST RECORDER VOLUMES

For flood June 11-12 2014.

Crest inflow Volumes calculated using data from WDC crest recorders.

Shown from upstream to downstream.

Depth recordings taken at intervals of 5 minutes.

POCKET	JUNCTION	TEMATA	OTONGA	MOUNTAIN	TANEKAHA	NGARARATUNUA	OKARIKA	Total scheme
CREST INFLOW CU/M	3,734,031	5,251,518	5,178,443	2,307,941	1,284,222	2,731,952	4,126,148	24,614,254
CREST INFLOW %	15	21	21	9	5	11	17	100
1970'S DESIGN TARGETS %	5	20	23	14	3	10	25	100

Comment:

24 million cubic metres of inflow stored with improved distribution following restoration and modification works.

OSP start and stop times were much more even, consistent and consecutive going downstream.

All distributions moved nearer their targets except for Junction.

It is possible this pocket had some inflow across the upper stopbanks on the Whakapara.

M. Rusk 11/6/2014.

ESTIMATED CREST RECORDER VOLUMES
HIKURANGI SWAMP SCHEME

For flooding July 10-11th 2014.

DRAFT 2 6TH AUG 2014

Crest inflow Volumes calculated using data from WDC crest recorders. Shown in order from upstream to downstream.

Recorder data is copy pasted directly into each spreadsheet. Depth recordings are taken at intervals of 5 minutes.

POCKET	JUNCTION	TEMATA	OTONGA	MOUNTAIN	TANEKAHA	NGARARATUNUA	OKARIKA	Total scheme
CREST INFLOW CU/M	5,450,779	15,311,367	12,122,733	5,805,291	3,739,365	7,310,824	10,945,820	60,686,179
CREST INFLOW %	9	25	20	10	6	12	18	100
1970'S DESIGN TARGETS %	5	20	23	14	3	10	25	100
OVERSPILLING IN HOURS	60	60	64	61	64	64	77	64

Comment:

The 5 year events store overflow of about 6 million cu/M, in 2012 17 million, a month ago 24 million, this one was 60 million. Overspilling durations were very even and increase downstream as expected. It was a two headed rainfall event but the distribution shares to pockets were probably nearest to design ever achieved. The Junction and Tanekaha recorders indicated reverse flows. While the data does not immediately help the landowners' plight it's good to see the alterations are working. There was overflowing of the stopbanks as the original design intended to protect the scheme in over-design events. The TeMata No 2 recorder showed no data until after overflows ended. Its data is twice No 3 and this needs reconciling.

M. Rusk 6-8-14

ESTIMATING INFLOW VOLUMES

Calculated using data from WDC crest recorders.

Recorder data is copy pasted directly into each spreadsheet.

If a recorder failed to operate then adjust Cell A5 so the last digit is the # of recorders working for that inflow crest. Adjust Cell F5 for crest length.

Updated 3 Sept 2014

Shown in order from upstream to downstream.

Depth recordings are taken at intervals of 5 minutes.

POCKET	JUNCTION	TEMATA	OTONGA	MOUNTAIN	TANEKAHA	NGARARATUNUA	OKARIKA	Total scheme
OVERSPILLING IN HOURS	20	16	19	16	20	17	13	17
CREST INFLOW CU/M	951,701	2,427,389	1,957,383	871,779	621,184	891,398	2,100,718	9,821,552
CREST INFLOW %	10	25	20	9	6	9	21	100
1970'S DESIGN TARGETS %	5	20	23	14	3	10	25	100

Comment:

This event appeared to have an overspilling characteristic of a 4 to 5 year event, not 20 yrs + like the previous one. Overspills began progressively in order downstream which again was a good sign that the restoration work is working. Overspilling durations were reasonably uniform near the scheme average of 17 hours, another good sign. Inflow shares were not unreasonable. A very marked improvement on distribution in the 1990's. Junction was too high, TeMata a bit high, Otonga a bit low, Mountain was low, Tanekaha high. Ngararatunua about right and Okarika near design.

M. T. Rusk.

HIKURANGI SWAMP SCHEME

EVENT:

June 20-21 2018

CLEAR ALL RECORDER DATA ?

ESTIMATING INFLOW VOLUMES

Calculated using data from WDC crest recorders.

Checked and Updated 28 June 2018

Shown in order from upstream to downstream.

Recorder data is copy pasted directly into each spreadsheet.

Depth recordings are taken at intervals of 5 minutes.

POCKET	JUNCTION	TEMATA	OTONGA	MOUNTAIN	TANEKAHA	NGARARATUNUA	OKARIKA	Total scheme
OVERSPILLING IN HOURS	12	7	16	21	25	0	46	21
CREST INFLOW CU/M	2,022,892	2,361,592	4,079,933	2,124,447	1,700,328	2,130,250	4,821,507	19,240,949
CREST INFLOW %	11	12	21	11	9	11	25	100
1970'S DESIGN TARGETS %	5	20	23	14	3	10	25	100

Comment:

While upper catchment rainfall was not huge at around 150mm it came from the south east as often occurs.

This direction hits the east side swamp pockets worse than western catchments.

Junction recording was too big, possibly OSP into the pocket at the top end of Whakapara.

Tanekaha was too big as it often is. (the small pockets are more difficult to get right.)

Otherwise the event gave the best results and probably nearest to design proportions since the scheme was designed in the 1970's.

The scheme repair job looks promising.

Okarika crest depth recorder #3 is suspect, it got the same result as #1 recorder although recording for about half the hours.

Because both crest recorders failed at Ngaratanua, volume data from internal level rise was used for that pocket.

The correlation between overspilling shares in this event compared to design shares was indicated to be 0.82.

Previous correlations have been in the order of 0.2.

In terms of distribution shares this result is therefore a huge improvement on the past.

PEAK RIVER LEVELS (TRUE) RECORDED AT PUMPING STATIONS FOR 13 INFLOW FLOODS OVER 22 YEARS FROM 1983 TO 2005

Source: Whangarei district Council Log sheet records. (Uses corrected staff gauge levels*** surveyed by Donaldson Surveyors in 2002)

Staff gauge:	Junction	Te Mata		Otonga		Mountain		Tanekaha		Ngararatunua		Okarika	
		corrected	Log	corrected	Log	corrected	Log	corrected	Log	corrected	Log	corrected	Log
Date: ARI yrs													
9-Jun-83	20	-	91.450	91.430	91.100	91.340	91.200	91.200	91.400	91.350	91.200	91.210	91.050
8-Mar-88	50	-	91.600	91.580	91.241	91.481	91.170	91.170	91.480	91.430	91.350	91.360	91.250
2-May-93	10	-	91.600	91.580	-	-	Gauge fallen down		-	-	91.300	91.310	91.250
30-Mar-95	10	-	91.500	91.480	91.100	91.340	-	-	91.300	91.250	91.150	91.160	91.025
30-Dec-96	5	-	91.500	91.480	91.100	91.340	-	-	91.400	91.350	91.180	91.190	91.100
2-Jun-97	1	-	91.540	91.520	91.200	91.440	-	-	-	-	91.200	91.210	90.600
1-Jul-97	3	-	91.350	91.330	91.100	91.340	-	-	-	-	91.200	91.210	90.940
14-Jun-98	2	-	91.450	91.430	91.100	91.340	-	-	-	-	91.200	91.210	91.080
29-Nov-98	2	-	91.450	91.430	91.050	91.290	-	-	91.300	91.250	91.200	91.210	91.050
5-Nov-00	2	91.540	91.450	91.510	91.140	91.380	-	-	-	-	91.205	91.215	91.070
13-Apr-01	1	-	91.370	91.350	91.000	91.240	-	-	91.200	91.150	91.080	91.090	90.950
20-Jun-02	Unique	91.545	91.500	91.515	91.220	91.460	-	-	91.320	91.270	91.280	91.290	91.130
7-Jul-05			Tristans	91.540	Tristans	91.400						Tristans	91.150
		91.543		91.491		91.377						91.229	91.069

EARLY SHARES OF FLOODING IN EACH POCKET IN THE FIRST TWELVE YEARS AFTER CONSTRUCTION.

Pockets	Jun-78			Jun-83			Oct-83			Mar-88			Sep-89			Average %		Design		1966 flood	
	Ha	Share		Ha	Share		Ha	Share		Ha	Share		Ha	Share		Share ha		Vol		Share	Ha
Junction	39	2%		100	4%		65	5%		265	7%		55	3%		4		5%		7%	265
TeMata	410	20%		380	16%		297	16%		653	18%		250	14%		17		20%		17%	629
Otonga	479	23%		565	23%		595	32%		776	22%		330	19%		24		23%		20%	772
Mountain	148	7%		155	6%		72	4%		225	6%		110	6%		6		14%		12%	459
Tanekaha	86	4%		87	4%		82	4%		192	5%		61	3%		4		3%		5%	180
Ngararatunua	458	22%		667	27%		246	13%		749	21%		465	26%		22		10%		10%	393
Okarika	450	22%		487	20%		526	28%		719	20%		500	28%		24		25%		28%	1069
Totals	2,070	1.00		2441	1.00		1,883	0.97		3,579	1.00		1771	1.00		100.31		1.00		1.00	3,767
Frequency		8 yr			10 yr			6 yr			20 yr			8 yr							20 yr

Notes:

Mountain crest was altered to about half design length, Ngararatunua to about three times intended design length.

As there is no data for Junction in Oct 83 and September 89 the average comparable figure was inserted to maintain balance in

Sources: Catchment Commission records, minutes, Ha, arial surveys, Pumpstation logged pocket peak levels, NCC contour map
Data for the Sept 1989 flood came from the engineers Report NRC File 4637 dated 27/8/1990 and listed the hectares flooded.

THE CLOSE RELATIONSHIP OF AREAS FLOODED IN 1966 TO THE DESIGN PERCENTAGES FOR POCKETS SET IN 1968.

Sources: NCC drawings of this flood (C. N. Anderson), photos, NCC 1980 contour maps etc & NRC 1993 contour maps.
Minimum plotting grid squares used 1/8th & 1/16th Ha.
Peak level listed by NCC vol 3 at Jordan Bridge 89.95 MSL.
Rainfall totalled 306mm in 2 days, 24 hr 228mm, 20 yr return period.

Dates: **Junction** **Te Mata** **Otonga** **Mountain** **Tanekaha** **Ngaratunua** **Okarika**
18th **18th** **18th** **18th** **18th** **19th** **18th**
Day 2 Day 2 Day 2 Day 2 plotted 192 ha Plotted on day 3. Photo level 90 M NCC drawings
280 ha plotted 629 plotted plotted 772 460 at 89.95 at 91.10 M (was 249 on 18th) Plotted 1091 @ 90 C. Anderson
from 1966 to 90.0 M 457 Plotted NCC full = 190 (was 393 on 19th) 90 M calc extn 1047 figure given
275 max Used - 10 @ 180 (was 434 on 20th) Midpoint fig is used. 3751 ha (18th)

Pocket:	Junction	Te Mata	Otonga	Mountain	Tanekaha	Ngaratunua	Okarika	Total
1966 February flood, Hectares flooded :	265	629	772	459	180	393	1069	3767
Flooded area Feb 1966 as % of total area:	7	17	20	12	5	10	28	100
1968 Design Inflow % share :	5	20	23	14	3	10	25	100

Total area in design calc for 1966 flood in Ha was 3,751

Total area found in this exercise in Ha for 18th was 3,623

Observations: Ha Difference: -128

The distribution of floodwater by area is within 3 percentage points of design distribution in every case. Flooded Area Accuracy of this study w

The correlation coefficient (r^2) between 1966 flood area and design inflow allocation % is 0.91

A correlation over .90 is considered by engineers to be very good with high predictability (0 = poor) (1 = complete agreement)

Designers took no special allowance for rainfall as this was common to all pockets and automatically included.

It is demonstrated here that in substantial floods, the level & area can be an excellent guide when accurately used with contour maps.

The design engineers did not have full and accurate surveys of pockets contours to base volumes on so it was largely done this way.

Reliable pocket contour surveys were not done until 1981, four years after construction was completed in 1977.

NCC design documents stipulated that for fairness the storage to pockets was to be in proportion to the storage before construction.

Data researched and collated by Merv Rusk. May 2000.

Arrival time of peak river flows reaching the Junction.

Waiotu NRC Recorder						Whakapara NRC recorder				
Frequency	Date	BM 85.547		Time of peak	Travel time Minutes	Waiotu R Arrival	Wkp river		Time	BM 84.462
		Level	MSL				Arrival	Minutes of peak		
25+ ⁶	6/01/1989	6.962	92.509	1531 ¹	55	4:26 PM	WAIOTU before/after WKP			
10	1/05/1993	7.322	92.869	1115 ¹	57	12:12 p.m.	0:28 after ²		58	8.949 ⁵
10	30/03/1995	6.691	92.238	645	57	7:42 a.m.	2:21 before ²		63	8.796
5	30/12/1996	6.557	92.104	1745	60	6:45 p.m.	1:39 after		63	8.988
2	2/06/1997	7.142	92.689	500	62	6:02 a.m.	5:37 after		68	8.993
2	30/06/1997	7.262	92.809	1845	62	7:47 p.m.	1:11 before		73	8.834
2	13/06/1998	6.742	92.289	2100	62	10:02 p.m.	3:26 before		73	8.888
2	28/11/1998	6.542	92.089	645	62	7:47 a.m.	1:39 before		73	8.444
2 ⁸	4/11/2000	6.223	91.770	415	62	5:17 a.m.	15:30 before		73	8.916
1 ¹	13/04/2001	6.803	92.350	830	62	9:32 a.m.	5:19 after		58	9.058
							1:49 after		73	8.838

Distance, time and velocity ft/sec calculations for above table from SH1 to the Junction.

Imperial distances and velocities are from NCC Vol 3 1968 pages 18 -26						
	Distance feet	Velocity		time in minutes		
		2 yr	50 yr	2 yr	5 yr ³	10 yr ⁴
Waiotu river	3,860	3.23	3.5	20	19.5	19
Upper reach						
Lower reach	9,900	3.95	4.53	42	40	38
Total Waiotu				62	60	57
Whakapara river	18,110	4.12	5.16	73	68	63
						58

¹ this foxbro recorder was not particularly accurate for time and was replaced.

² Uses corrected velocity as noted

^{3 & 4} Interpolated

⁵ Recorder failed to function, level calculated from debris points.

⁶ Cyclone Delilah was smaller than Bola. The Whakapara recorder failed in Bola.

⁷ Unlike the other floods events listed this one only lapped some crests and caused no inflows.

⁸ Although a relatively small rainfall event this flood had the highest ever peak at Whakapara SH1.

Researched and collated by M Rusk
January 2000 Updated 2001

1960's ESTIMATE OF PEAK FLOW FROM WHAKAPARA RIVER A COMPUTERISED CHECK OF THE ORIGINAL 1960'S NCC CALCULATIONS - BY MERV RUSK 1999. TM 61 METHOD - PEAK FLOW CALCULATION (Imperial version)

Storm of:
Catchment:
Channel length
Av gradient
Area:
WIC
Ws:
W is:
Shape:
Daily rainfall inches
Standard depth from table

31/12/1996
Whakapara
13.9
0.35
62
1.05
42
820
1.36
10.6
16

River
Miles
per hundred
sq miles
Higher WIC values should be selected when catchment is saturated.
From table
(Robertson's 24 hr rain adjustment)
x
read opposite concentration time

= 22.09 (area to the power of 0.75 or 3/4)
= 22.09
1.14
12.08

Formula	Channel miles	Gradient per 100	WIC (Est)	x by Ws	coeff C	=W	R factor x R	Shape x S	Area ^{3/4} x A	Qp Cusecs
	13.9	0.35	1.05	42	820	44.1	0.7553	1.36	22.09	18,610
						16				

Output:

Qp Cumecs	Qp TIDEA	MW Model
532	546	480

ESTIMATE OF EXPECTED LOSSES IN JULY 2014 FLOOD AT HIKURANGI

This area of 5000 ha earns about 60 million into the local economy.

Much of this between July and January so is heavily affected by this flood.

BACKGROUND INFORMATION from the 2007 flood event.

Some guidance is taken from the March 2007 flood as reported for rates relief purposes.

However most of the 2007 losses were for regrassing only

Note that the smaller March 2007 flood was at the end of the dairying season for most farmers

Many farmers did not apply for rates relief in 2007 so have no data for them.

Landowners that reported in the far smaller 2007 flood:

	Business loss/Regrassed	Ha
Farmer 1	280,000	700
Farmer 2	250,000	200
Farmer 3	221,250	100
Farmer 4	133,750	200
Farmer 5	250,000	100
Farmer 6	250,000	260
Farmer 7	103,000	190
Farmer 8	200,000	80
Farmer 9	100,000	150
Farmer 11	55,000	65
Farmer 12	111,700	40
Farmer 13	120,000	60
Farmer 14	75,000	89
Farmer 15	115,000	230
Farmer 16	20,000	100
Farmer 17	50,000	93
Farmer 18	108,375	90
Farmer 19	85,000	30
Totals in 2007	2,528,075	2,777

Therefore a 2014 Ballpark Calculation thus:

1	Reported 2007 Loss to businesses was	2,528,075
2	Ha regressed in 2007 were	2,777
3	2007 av business losses per ha were	910
4	Adjust for inflation (Res Bank)	1,150
5	Indicated extent of regrassing in 2014	4,200 ha
6	Estimated business losses 2014	4,830,000
7	Above normal PKE needed	960,000
8	Drop in stocking rate for season	4,200,000
9	Lost milk production by cows away	6,174,000
10	Allow something for transport say	400,000

Estimated losses for July flood 2014 16,504,000

Explanation of above points:

- 1 Based on 2007 flood by farms reported
- 2 Based on 2007 flood for farms reported
- 3 Based on 2007 flood for farms reported
- 4 Res Bank general inflation not farming inflation which is even higher.
- 5 Based on records of historical flooding and current observation
- 6 Multiplied the 2007 business loss grazing per ha by present ha
- 7 40 ton/month x 3 months @ \$400 delivered for 200 ha farm = \$240 per Ha x 4000 ha
- 8 0.5 cows per ha *400kg at \$7 per kg
- 9 7000 cows 12 weeks at 1.5 ms/dayx\$7

Note: More farmers are affected in 2014 than in 2007.

Note: This flood is similar to Cyclone Bola of March 1988 26 years ago
BUT THE TIME AT THE START OF THE SEASON INSTEAD OF AT THE END IS SERIOUS.

COMPARE FLOODED AREA WITH PAST EVENTS:

The average in large floods over three decades for pasture damage is about **1900 ha**.

The March 2007 event was just over **2500 ha**.

Cyclone Bola of 1988 was **3500 ha**.

This 2014 flood looks like **4000 ha** plus.

Taxation Problems:

Need to enable the relatively few farmers to reassess their provisional tax.

OR

Allow them to put the expense back several months against last year's income.

Point: Last year was a high payout year with good production.

This year the payout is falling and for these farmers production will fall too.

Add the tax bill for last year and a high provisional tax bill and there is a problem.

There is a need to find a way to get through this.

Inflows over spillways: (Report attached.)

Outline 5 15 and 20-30 year spilling.

6 M, 17 M, 23 M compared to this one at 64 M

See page of model results.

Uses 17 Crest meters' data at 5 min intervals and a standard wier formula.

48,000 calculations were used to establish the volumes.

Animal welfare is important to farmers:

Trucking cows away and back so close to calving is not ideal.

There are issues of nutrition with changes in feed.

Stock may be away from facilities and intensive observation, more travelling.

Feed problems:

Some farmers are down to one paddock.

A number maize stacks and hay barns have been deeply flooded.

Round bale silage is reported to be in short supply in the North Island.

Sharemilkers and workers:

The farm workload is huge – keeping staff on is critical.

Sharemilkers miss out on some kinds of assistance. Remember them.

PUMPED WATER AS A SHARE OF TOTAL WATER GOING THROUGH THE HSMS MAJOR SCHEME.

Using District Council pump station records, Northland Catchment Commission and Northland Regional Council data.

Average total volume through the Scheme.

Period	Volumes in Cubic Metres		
	Recorded raw data	Gap days	Gap Corrected data
10 years 1983 to 1992	Flow at Wairua Gauge	No record	Flow at Wairua Gauge
	Some data has gaps		
1983	573,129,300	25	638,235,600
1984	608,720,300	23	679,332,000
1985	722,966,700	162	1,166,372,000
1986	418,769,600	41	530,819,500
1987	325,824,100		325,824,100
1988	644,708,900		644,708,900
1989	1,049,941,300		1,049,941,300
1990	412,889,600		412,889,600
1991	308,754,500		308,754,500
1992	497,689,500		497,689,500

Total flow (for the same ten years as pumping records)

6,254,567,000

10 year Average annual Wairua river flow Purua Br.

625,456,700

CuM per second average flow for Wairua at Purua.

20

Pump Station Volumes pumped:

From logged records of every pump on the scheme from May 1983 to May 1993: (M. Rusk 1998 using latest available records)

Total volume pumped in same ten year period **602,461,152** CuM

Percentage pumped:

Average CuM volume as above pumped in one year

60,246,115

Annual Total Scheme run-off as above

625,456,700

Pumped fraction percent

9.6 Percent

WAIRUA WATER NOT PASSING THROUGH A PUMP

90.4 Percent

Compiled by M. Rusk. June 2020.

May 83 to May 93 STATION	HOURS RUN BY PUMPS			WATER PUMPED OUT		STATION TOTAL	% COMPARISON	
	PUMP	TYPE Pfeuger	AV CAPACITY CuMsecs	10 YRS Hours	CuM DELIVERED 1983 - 1993		% PUMPED	INFLOW %
Okarika	A	482	1.00	5,860	21,096,000	179,161,200	30	25
	B	482	1.00	4,922	17,719,200			
	C	482	1.00	6,785	24,426,000			
	D	922	4.00	4,324	62,265,600			
	E	922	4.00	3,726	53,654,400			
Ngararatunua	A	482	1.10	4,764	18,865,440	147,474,720	24	10
	B	482	1.10	6,251	24,753,960			
	D	922	4.30	3,696	57,214,080			
	E	922	4.30	3,013	46,641,240			
			10.80					
Mountain	A	482	0.85	6,773	20,725,380	42,093,360	7	14
	B	482	0.85	6,983	21,367,980			
Tanekaha	A	482	1.10	1,993	7,892,280	16,288,920	3	3
	B	Mac 24/30	0.70	3,332	8,396,640			
Otonga	A	482	1.08	6,947	27,009,936	107,110,512	18	23
	B	482	1.08	6,112	23,763,456			
	D	922	4.14	3,780	56,337,120			
Te Mata	A	482	1.10	7,453	29,513,880	99,090,000	16	20
	B	482	1.10	6,521	25,823,160			
	D	922	4.22	2,880	43,752,960			
Junction	A	482	1.10	2,839	11,242,440	11,242,440	2	5
TOTALS					602,461,152		100	100

Wairua River. Locating Limestone bars causing white water at low flows.

Most are about 30m long. One is 139 m long.

Approximate GIS coordinates.

	<u>SOUTH</u>	<u>EAST</u>
Lewis Bridge	35 DEG 37min, 56.74	174 11 58.72
425 m to bar 1 at	35 38 06.21	174 11 46.30
148 m on to bar 2.	35 38 08.94 (139 m long)	174 11 36.78
318 m on to bar 3.	35 38 9.39	174 11 30.12
204 m on to bar 4.	35 38 10.13	174 11 21.90
164 m on to bar 5.	35 38 10.76	174 11 15.33
380 m on to bar 6.	35 38 06.45	174 11 02.08
220 m on to bar 7.	35 38 08.07	174 10 55.28
356 m on to bar 8.	35 38 16.77	174 10 52.94
Vegetation for 145m?	35 38 20.59	174 10 31.89
1020 m on to bar 9.	35 38 29.47	174 10 28.24
1600 m on to bar 10.	35 38 48.40	174 09 36.43
1177 m on to Purua Bridge.	35 39 09.72	174 09 07.10

80% of the limestone bars are within the first 1700 river m below Lewis Bridge.

Satellite imagery was dated 8/1/18. This is the first imagery showing these bars.

Imagery was read at 'camera height' of around 250 m.

Water at Purua Bridge recorder was: stage = 1100mm, flow = 7 cuM/sec.

Note: There is a lime works at each end of this stretch of river in screenshot.

Lewis Br to Purua Br by line of sight is 4.7 km and following the river it is 6 km.

These estimates are freely supplied for the public good by Merv Rusk, graciously assisted by Mr. Google.

This copy printed 30th June 2018.

From: Whangarei District Council
Sent: 1 Apr 2021 02:29:35 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Justine Rowe - 2021-LTP-SUB-467

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.



Long Term Plan 2021-2031 Feedback - Justine Rowe - 2021-LTP-SUB-467

Receipt Number: 2021-LTP-SUB-467

Your details:

Name:	Justine Rowe
I am making this submission as:	On behalf of an organisation
Organisation name:	Hikurangi Swamp Scheme - Pocket Rep Members
Postal address:	PO Box 142, Kumeu, Auckland
Best phone number:	021611192
Email:	justine@baylyrowe.co.nz

Hearing:

Do you wish to be heard	Yes
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	I don't support rate increasing but there are only two options here so not a choice

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hīhītaua Cultural Centre, and existing facilities at Forum North.
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 3: No new funding towards climate change or waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

See submitted documents regarding Hikurangi Swamp Scheme as a submission sent on email

LTP submission

9 letters of support from pocket reps

appendix of book by Merv Rusk "The Hikurangi Swamp Scheme"

Thank you

Justine Rowe

From: Whangarei District Council
Sent: 31 Mar 2021 10:18:55 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Capt. Paul Hines - 2021-LTP-SUB-388

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Long Term Plan 2021-2031 Feedback - Capt. Paul Hines - 2021-LTP-SUB-388

Receipt Number: 2021-LTP-SUB-388

Your details:

Name:	Capt. Paul Hines
I am making this submission as:	As an individual
Organisation name:	
Postal address:	36 Albany Rd, Marsden Bay
Best phone number:	0275409520
Email:	capt.p.hines@gmail.com

Hearing:

Do you wish to be heard	No
-------------------------	----

at the hearing?	
-----------------	--

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	Reduce debt and provide budgets without increased borrowing.

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hīhītaua Cultural Centre, and existing facilities at Forum North.
Why?	Do one thing right - it is apparent that over the years many projects have been commenced but ran out of funding to complete as designed. This means more funds or borrowing to complete the project over a few further years.

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	<p>Its a gamble on the unknown. There are many that predict drastic climate change but have proven to be incorrect. Protect the major areas that will possibly be effected.</p> <p>Do not get confused between the perceived effects of climate change (which may be a natural global cycle) and natural degradation.</p>

Key issue - Revitalising	OPTION 3: No additional funding for the city centre.
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our city centre (see page 32)	
Why?	Major cost for minimal return. In most cities the centre of the city has become the financial district. Satellite shopping centres and malls (eg. Westfields) world wide have become the shopping complexes required and enjoyed by the citizens. Unless you make the whole town centre a modern type mall - then invest in better things.

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

It appears biased - there are a lot of great ideas for Whangarei, but the majority are for Whangarei central. We have a fantastic world class clean stretch of beach on our door step, but it is neglected by the council and its vision. Bream bay could be another tourist mecca, a northland Gold Coast, an exciting and vibrant coastal tourist, holiday and housing development area. But in this plan - it gets no attention whatsoever. This plan is a biased central plan which as an overview neglects the Whangarei hinterland and the opportunities the whole district could benefit from.

From: Whangarei District Council
Sent: 29 Mar 2021 19:23:02 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Grant McLeod - 2021-LTP-SUB-274

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Long Term Plan 2021-2031 Feedback - Grant McLeod - 2021-LTP-SUB-274

Receipt Number: 2021-LTP-SUB-274

Your details:

Name:	Grant McLeod
I am making this submission as:	On behalf of an organisation
Organisation name:	Hockey Northland
Postal address:	PO Box 8021 Kensington, Whangarei.
Best phone number:	0274315430
Email:	grant@northlandhockey.org.nz

Hearing:

Do you wish to be heard at the hearing?	Yes
---	-----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	
Why?	

Key issue - Spaces for gathering (see page 24)	
Why?	

Key issue - Climate change and sustainability (see page 28)	
Why?	

Key issue - Revitalising our city centre (see page 32)	
Why?	

Tell us what you think - any further comments on key issues or other points

raised in the Consultation document:

Whangarei District Council

30 March 2021

Submission to the Long-Term Plan (LTP) from the Northland Hockey Association
(Hockey Northland)

Executive Summary

Hockey Northland is aware that the Whangarei District Council (WDC) has requested submissions on its draft Long Term Plan. We would, therefore, like to ensure that the WDC takes the forecast growth in hockey player numbers into account in its Long-Term Planning process.

Before the COVID-19 lockdown, Hockey Northland's player growth forecasts showed the need for a fourth turf in 2021 to meet the growing demand for hockey playing facilities. Post lockdown, the Hockey Northland Board reviewed its player growth forecast, and its associated long-term Facilities Plan.

Our pre-COVID-19 forecasts showed that Hockey Northland's existing three turfs would have reached maximum capacity by 2021, and we would need a fourth. Re-forecasting now indicates that our existing three turfs will reach maximum capacity in 2025, and we will need a fourth turf in 2026.

Local government requirements treat artificial turf carpet replacement as a Capex item, which must be included in the LTP. However, turf carpets wear out and become dangerous for players, so the carpet replacement is actually a repairs and maintenance item, similar to grass mowing etc. on grass sports fields.

Hockey Northland has also revised its artificial turf carpet replacement programme in the

light of our new player growth projections.

As always, Hockey Northland is conservative with its forecasting, and always delivers on its commitments. The following LTP requests have factored in Hockey Northland's revised forecasts.

Long-Term Plan Request

Hockey Northland, therefore, requests that the Whangarei District Council include the following amounts in its LTP review:

- \$1,750,000 to be available in December 2026 for a contribution to the construction of a fourth turf at the Hockey Centre in Whangarei
- \$450,000 in 2023-24 for carpet replacement and shock pad replacement on the Real Deal Tyres turf
- \$350,000 in 2025-26 for carpet replacement on the Currie Electrical turf
- \$120,000 in 2027 in the form of a loan for building additional changing rooms at the Hockey Centre
- \$350,000 in 2032-33 for carpet replacement on the Eves turf (note we understand that this is outside of the time frame of this LTP)

Background

In its Report on Active Recreation and Sport Strategy, the WDC lists several strategic issues to take into account and recommends an increase in forward planning for the District and Region's needs. It talks about the under-utilisation of many sporting facilities, the value of sporting Hubs and the need for the Council to develop a proactive land acquisition strategy.

Hockey Northland applauds the recommendations on planning for the future and makes the following points:

- Hockey Northland already operates a sports Hub at its Kensington Park facilities.
- Hockey Northland's active Hub enables the Association to employ professional sports and facilities management and maintenance staff to guard against under-utilisation of the facilities.
- Small, localised facilities (e.g., spokes) with scarce financial resources, can result in an unsatisfactory standard of maintenance and a loss of interest by a small group of enthusiastic local people, leading to under-utilisation and redundant facilities.
- Hockey Northland has a development plan for its players, umpires, and facilities, which we would be keen to integrate with the WDC's plans.
- Provision for a fourth artificial turf at Kensington Park will reduce the pressure on the WDC to find additional sports park land because one artificial turf can easily carry the same playing load as at least 10 grass grounds.
- Hockey Northland is keen to work with the Council in the development of land acquisition, land protection, land banking and sports field demand studies as required.

Unlike many other sports, Hockey is a multi-generational sport, with Hockey Northland offering the opportunity for families - mums, dads, children and grandparents - playing together at the one venue. We actively encourage all ethnic groups to take part in hockey at whatever level they choose. It is a very safe environment for families, and the game offers opportunities for all levels of players, from the purely social, to the highly competitive, and those who choose officiating as their sport.

Despite the COVID-19 lockdown and its associated challenges during 2020, Hockey Northland demonstrated the ability to respond quickly to changes in Alert Level requirements and was subsequently able to facilitate ongoing opportunities to play hockey. Our membership responded positively to these opportunities with minimal player loss incurred throughout the season. This ability to react quickly also enabled Hockey Northland to share its COVID-19 systems with other Northland sporting codes.

Hockey Northland teams punch above their weight in domestic competitions, and we have an excellent track record in developing players and umpires to achieve selection for international representative teams.

As noted above, one artificial turf can carry the load of ten grass fields! This factor alone has reduced the amount of capital that local government has had to commit to purchasing sports field land around the country. In many cases, councils, including the Whangarei District Council, have been able to reallocate existing sports field land to other sports and reduce or eliminate the need for additional capital expenditure on land acquisition.

Managing and utilising artificial turfs to optimise their capacity differs from managing grass sports fields. A central facility with multiple turfs, good security, professional management and regular maintenance are critical components of a successful and well used recreational and sporting facility. Hockey Northland operates and uses its facilities for 2000 hours per year, the equivalent of a 40 hours per week working year. Very few sporting facilities can achieve this level of efficiency.

Artificial turfs:

- do not require any recovery time between games
- do not require regular mowing

(carpet replacements funded by WDC are a substitute for the grass cutting provided for other sports in the Council's Operational Budget - see Note 1.)

- require floodlighting to optimise hours of use
- need access to irrigation water for lubrication of the fibre

(Hockey Northland recycles all its irrigation water)

- require good security fencing to prevent wilful damage to expensive carpets
- need to operate between 7:00 am and 10 pm to optimise usage
- are more efficient and get more use when they are grouped together in a "Hub" to spread the cost of security, managing the facilities, etc
- when grouped together in a Hub, improve the viability of kitchen and bar facilities, enhancing the overall experience for players and supporters

Hockey Northland Board members recall guests at an international test match being astounded to see junior club teams going on to our Grandstand turf for a club game at the

same time as the test players were walking off. This is just one example of the benefits of a comprehensive facility available to all!

Hockey Northland members have paid for all floodlighting at the Hockey Centre, and approximately 40% of new turf construction over the years. The Association remains grateful to the Whangarei District Council for its ongoing support with turf carpet replacements when required and the construction of new turfs.

Note 1

Whangarei District Council includes approximately \$13,500 in its annual operating budget for the mowing and upkeep of individual grass sports fields. Artificial turfs do not require mowing, but they wear out, and the carpet needs replacing every 10 years.

See Table 1 for cost comparisons

Table 1

Comparison of maintenance costs of grass sports fields versus the maintenance cost of artificial turfs

WDC Annual maintenance costs for 1 grass sports field \$13,500.00

WDC maintenance costs for 1 grass sports field over 10 years \$135,000.00

WDC maintenance costs for 10 grass sports fields over 10 years \$1,350,000.00

Utilising floodlighting and extended operating hours 1 artificial turf can carry the same number of games per week as 10 grass fields

Replacing the artificial turf carpet is the equivalent of the maintenance costs of grass sports fields

Cost of replacing 1 artificial turf carpet every 10 years \$350,000.00

Difference between maintenance cost of 10 grass fields over 10 years compared with 1 artificial turf over 10 years \$1,000,000.00

Savings to WDC over 10 years \$1,000,000.00

Summary

Hockey Northland is grateful for the ongoing support from the Whangarei District Council in growing and maintaining one of the best hockey venues in the country.

Hockey Northland invests considerable time and financial resource into encouraging young people into healthy outdoor activity through its coaching and development programmes. We provide training and games for all participants across all levels of their preferred involvement.

Hockey Northland's consistent growth in participation numbers over many years proves that our formula is working. COVID-19 has impacted this growth progress to a degree; however, we believe this to be a minimal fluctuation as community hockey continues as do our coaching and development programmes.

Therefore, in order to continue to provide healthy, outdoor, intergenerational sport and recreation opportunities for individuals of the Whangarei district and region, Hockey Northland appeals for the ongoing support of the Whangarei District Council as detailed in our LTP request.

Yours sincerely

Grant McLeod

Chief Executive, Hockey Northland

From: Whangarei District Council
Sent: 1 Apr 2021 02:51:44 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Maria Hodgson-Williams - 2021-LTP-SUB-448

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Long Term Plan 2021-2031 Feedback - Maria Hodgson-Williams - 2021-LTP-SUB-448

Receipt Number: 2021-LTP-SUB-448

Your details:

Name:	Maria Hodgson-Williams
I am making this submission as:	As an individual
Organisation name:	
Postal address:	1628 Matapouri road
Best phone number:	094344442
Email:	chris.thebarn@xtra.co.nz

Hearing:

Do you wish to be heard at the hearing?	Yes
---	-----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	The proposed rates increase is to support proposals that rely on additional funding and further debt levels. I believe Council should be minimising borrowing and working with its partners to better prepare for sea level changes and climatic changes that are currently occurring. To spend excessive amounts of money on 'projects' other than core infrastructure in a fast changing climatic environment is negligent. Council needs to focus on its core statutory works and spend this time consulting with its treaty partners and its community on how best to move forward. Expanding on the Northland Mātauranga Māori to include other members of the community and gather local knowledge, expanding the parameters of the relationship building.

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North.
Why?	Support Hihiaua Cultural Centre. It is well supported locally and is a place that will integrate community and visitors. Investment does not need to be a great. Whangarei Boys High School are currently building a 1300 seated auditorium and theatre with access directly from Western Hills. It would seem

	an opportunity for ratepayers, if they want to see investment in theatres, to invest in this project which is currently being built.
--	--

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	I do believe that this needs more funding. Its not just our emissions but the health of our environment that we have to consider urgently. We need to minimise what goes in and we need to adapt our lifestyles. Its not ok for our waste, be it grey water or other to go into our oceans. It is not ok to use products that go directly into our stormwater drains that are toxic to our environment. Its not ok to continue with the current management practice of using chemical sprays in our environment. Council needs to adapt and to lead the way. It needs to invest in systems and technology that we no longer use or substantially minimises our use of water and want we choose to dump in and on our whenua.

Key issue - Revitalising our city centre (see page 32)	
Why?	I support improvements need to be made but not necessarily the options above.

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

I do not support the funding for the Sandy Bay seawall. This fund could be used to purchase land currently for sale in Sandy Bay that would provide toilets, surf club, space for

freedom camping and overflow carpark.

Council needs to invest in their relationships with the Community and listen. They need to improve and provide greater resourcing for compliance with the District Plan and statutory legislation it administers.

Council needs to take urgent steps to immediately stop the use of chemical sprays in our environment. I support the submission and endorse Nora Shayeb and others in this regard.

From: Whangarei District Council
Sent: 26 Mar 2021 01:54:23 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Linda Holdaway - 2021-LTP-SUB-86

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Long Term Plan 2021-2031 Feedback - Linda Holdaway - 2021-LTP-SUB-86

Receipt Number: 2021-LTP-SUB-86

Your details:

Name:	Linda Holdaway
I am making this submission as:	As an individual
Organisation name:	
Postal address:	35 Quayside, Town Basin, Whangarei.
Best phone number:	021437277
Email:	l.holdaway@wbhs.school.nz

Hearing:

Do you wish to be heard	No
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	
Why?	Rate increases should be kept to a minimum at this time. Make sure proposed spending is actually essential.

Key issue - Spaces for gathering (see page 24)	OPTION 3: Build a Whangarei District Council-owned theatre on the current Forum North site.
Why?	This is a good option. There are less space constraints than in the other two sites, the land itself is more stable, not being reclaimed land, and it brings life to the city centre.

Key issue - Climate change and sustainability (see page 28)	
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 1: Spend \$13m to make improvements to James and John St.
Why?	Link the city centre to the Town Basin. Also, bring life to the city centre through sponsoring some live

	music there on Sunday afternoons. it's a great space that doesn't get sufficiently used.
--	--

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

I live in the Marina. Traffic goes too fast along Riverside Drive in the Marina area. It is basically an inner city residential area and as such the traffic needs to be slowed down, NOT sped up. (This will encourage more cars to use Te Matau a Pohe instead of coming right through Riverside Drive.)

Speed cameras would help pay for improvements needed. It's hazardous for pedestrians crossing the road, even at the pedestrian lights, as cars quite often do not stop for the red light.

There have been a lot of crashes in this area, mainly through speed and poor driving skills. Sleeping policemen would be one solution, or chicanes. The trees must be kept.

The beautiful old pohutukawas must not be sacrificed to the Traffic God. The fact that cars crash into the trees is not the trees' fault. The drivers need to SLOW DOWN, especially if it's raining. We can force them to with inconveniently slow traffic, and with revenue-generating speed camers.

From: Whangarei District Council
Sent: 23 Mar 2021 02:34:48 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Jaclyn Holder - 2021-LTP-SUB-139

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Long Term Plan 2021-2031 Feedback - Jaclyn Holder - 2021-LTP-SUB-139

Receipt Number: 2021-LTP-SUB-139

Your details:

Name:	Jaclyn Holder
I am making this submission as:	As an individual
Organisation name:	
Postal address:	211 Prescott Road
Best phone number:	0211393635
Email:	

Hearing:

Do you wish to be heard	No
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at the hearing?	
-----------------	--

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North).
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	We have wildlife dying in our estuaries and stream due to the impact of climate change. We need to start caring and doing more.

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	The city centre has so many empty shops, why allocate money on an area that is not utilized. Making it shiny and clean will not bring more people to the centre. Parking and the right shops

	will.
--	-------

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

Please consider seal Prescott Road in Ruakaka. I live right where the seal ends and metal begins and the dust is shocking- we have to get our water tank cleaned more often than others in the area due to the dust that is flicked up. The build up of sediment in the bottom of our tank impacts the water quality and also the amount of water we can hold the the tank. I would imagine the dust makes its way down towards Wilson Dam when the wind is blowing the other way, this can't be good for the ecosystem down there and the water quality.

My Mother has chronic obstructive pulmonary disease which is a breathing disorder- when she is coming to visit i need to keep the doors closed due to the dust that drifts across when each car passes by, I also get her to wear a mask over the oxygen because if she started to have issues breathing there is no guarantees the ambulance would get here in time.

From: Whangarei District Council
Sent: 26 Mar 2021 00:24:05 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Leonie Jane Hona - 2021-LTP-SUB-8

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Long Term Plan 2021-2031 Feedback - Leonie Jane Hona - 2021-LTP-SUB-8

Receipt Number: 2021-LTP-SUB-8

Your details:

Name:	Leonie Jane Hona
I am making this submission as:	As an individual
Organisation name:	
Postal address:	4 Arawa place
Best phone number:	0210523680
Email:	leoniehona@gmail.com

Hearing:

Do you wish to be heard	No
-------------------------	----

at the hearing?	
-----------------	--

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
--	---

Why?	I was shocked when I retired to Whangarei ,to find I was paying exactly the same rates with a quarter of the core services I had in Auckland .
------	--

Key issue - Spaces for gathering (see page 24)	OPTION 3: Build a Whangarei District Council-owned theatre on the current Forum North site.
Why?	Budget needs to be put in one direction

Key issue - Climate change and sustainability (see page 28)	OPTION 3: No new funding towards climate change or waste minimisation.
Why?	Because this is a town with a population of low sociopath-economy

Key issue - Revitalising our city centre (see page 32)	OPTION 1: Spend \$13m to make improvements to James and John St.
Why?	We need a corridor from the city mall to the river basin . It is an untidy mess

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

Focus on the core council services . Rubbish, we need wheelly bins and one truck . We need better water service . No open dam and more reserves for dry spells . Animal control is poor too many roaming, dangerous dogs . What a joke 3 breaches in 24 months before owners are banned from dog ownership . Terrible footpaths tree roots have uplifted paths nothing is repairing. No disabled access to beaches. Kerb cuts too steep for disabled in wheelchairs the whole town of Whangerei is inaccessible for the disabled. Tidy the town centre above all the sports venues which are hardly used .

11 MAR 2021

WHANGAREI
DISTRICT COUNCIL

John Horrocks

717 Helmsdale Road, Waipu

Phone 09 553 3726 (evening)

Email: horjo222nz@yahoo.co.nz

Whangarei District Council, Whangarei

8 March 2021

Long Term Plan 2021 - 31 Consultation

SUBMISSION FOR TARSEAL ROAD HELMSDALE ROAD, WAIPU

In 2021, a new 10 year draft plan is be approved by Whangarei District Council.

Please support my submission for a tarseal road on Helmsdale Road, Waipu.

My reasons are:

- Reduce dust and noise from passing motor vehicles.
- Dust going into water tanks and into tap water.
- Current road condition is dangerous.
- Reduced ware and tare on motor vehicles.
- Improved access for customers, clients and visitors to Helmsdale Road, Waipu.
- Bicycle to Waipu township.
- School bus route for children.
- Increased vehicle activity from subdivisions in Grant Road, Waipu.
- Through traffic from Taipuha and Ruarangi using Helmsdale Road to Highway 1 and Waipu township.
- On Friday, 5 March 2021, earthquakes near Kermiddec Islands, triggered sirens for tsunami warning, Waipu shops closure, and Waipu residents instructed to go to higher ground.

Yours faithfully

John Horrocks



From: Whangarei District Council
Sent: 25 Mar 2021 19:52:52 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Karen Houlihan - 2021-LTP-SUB-196

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Long Term Plan 2021-2031 Feedback - Karen Houlihan - 2021-LTP-SUB-196

Receipt Number: 2021-LTP-SUB-196

Your details:

Name:	Karen Houlihan
I am making this submission as:	As an individual
Organisation name:	
Postal address:	329 Otaika Valley Rd RD 10 Whangarei
Best phone number:	021433322
Email:	khoulihan1969@gmail.com

Hearing:

Do you wish to be heard at the hearing?	No
---	----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North).
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 1: Spend \$13m to make improvements to James and John St.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

From: Whangarei District Council
Sent: 28 Mar 2021 07:44:11 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Wayne Huggard - 2021-LTP-SUB-244

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Long Term Plan 2021-2031 Feedback - Wayne Huggard - 2021-LTP-SUB-244

Receipt Number: 2021-LTP-SUB-244

Your details:

Name:	Wayne Huggard
I am making this submission as:	As an individual
Organisation name:	
Postal address:	PO Box 340260 Birkenhead
Best phone number:	021655550
Email:	wayne@huggard.com

Hearing:

Do you wish to be heard at the hearing?	No
---	----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	We must all live within our means.

Key issue - Spaces for gathering (see page 24)	
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 3: No new funding towards climate change or waste minimisation.
Why?	maintain existing funding

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	limit rates increases

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

The council to designate off-road cycle-ways in the Ruakaka/Marsden area before it is

developed further.

The flat, and as yet largely undeveloped, area between Ruakaka beach and One Tree Point offers a once in a lifetime opportunity to provide a world-class cycle network. Once the area has been developed the opportunity to build off-road, separate, safe cycle-ways at low cost will be lost.

A designations now will allow it to be developed in future as funding is available.

(This is as a tourism enabler, not a transport issue.)

Submission to

Whangārei District Council's Long-Term Plan



Hundertwasser Art Centre

***with* Wairau Māori Art Gallery**

Contents

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pp 2-4 **Hundertwasser Art Centre with Wairau Māori Art Gallery**

- A unique art and nature experience
- Jobs and opportunity
- An essential service
- Tourism won't recover for three years
- We must charge an entry fee to be sustainable
- Our community is suffering hardship
- Access for our diverse community
- Vibrancy will fuel our success
- Strong visitor numbers open the door to public funds
- **Our request**

Appendices

“The success of the Hundertwasser Art Centre and Wairau Māori Art Gallery will be a key factor in Whangārei’s brand clarity and success as a destination.”

- Experience Local, WDC Events Strategy 2019-2024

Introduction

Whangārei is on the cusp of a new era, with unprecedented growth and development. We want to support the Council to deliver the foundations of a **creative city** which stimulates job growth, increases productivity and contributes towards social cohesion and a vibrant, diverse community.

Whangārei's Town Basin is establishing itself as a flourishing centre of creativity, relaxation and dining, in a waterfront location which is connected to nature. The Hātea Loop, a destination in itself, has a new children's playground, which will soon be complemented by a new park and an exciting new building. From December, the Hundertwasser Art Centre and Wairau Māori Art Gallery will form a significant drawcard for visitors to our city.

We aim to deliver a **premium regional experience of creative arts** - driving social and economic growth, while positively impacting people's lives through the power of art and nature.

We are committed to Māori participation in decision-making. We have a formal partnership with Wairau Māori Art Gallery Trust and maintain regular contact with Te Parawhau. Letters of support from these core collaborators are attached to this submission.

Uncertainty threatens our success. Covid-19 has ushered in a new reality, so we must reformulate business and revenue plans in order to be sustainable. We ask for support from the Council while the economy rebuilds, to allow us to become sustainable and to truly realise the potential we and our partners offer Whangārei.

Hundertwasser Art Centre

with Wairau Māori Art Gallery

A unique art and nature experience

In December 2021, New Zealand's most exciting new cultural destination will open its doors here in Whangārei. We will deliver a world-class visitor experience featuring works by Hundertwasser and the finest in contemporary Māori art programmed by our country's leading Māori curators. On the roof, visitors will discover plants with medicinal qualities and rare native species. There will be learning programmes, guided tours, entertainment, special events and activities which fuel conversations about ecological sustainability. A museum store and a restaurant featuring Pacific rim cuisine, will offer new shopping and dining opportunities in a relaxed atmosphere.

Jobs and opportunity

So far, over 550 people have been employed by the project, with more to follow.

An essential service

Each year, 1.2million visitors travel north to the Bay of Islands. Our building will be a major new enticement for them to visit Whangārei, with the potential to attract people to stay, spend and discover the district - and to generate positive word of mouth, as they spill out of local attractions, bars, cafes and shops, to talk and post about their experience. **Capturing people's attention for more than just a toilet stop, increases the economic benefits exponentially.** Every person who is here for a day spends an average of \$50, while those who stay overnight spend \$350 - *NZ Tourism Economic Impact Report*. Hundertwasser Art Centre provides a significant economic driver which has not previously existed, acting as an essential service to the City. The Art Centre's success is therefore vital to our region's future.

Tourism won't recover for three years

While some local businesses remain optimistic, tourism expenditure in Northland is not expected to recover until 2024-25 according to the Infometrics Report on Oruku Landing (November 2020).

We must charge an entry fee to be sustainable

An entry fee for art experiences is a rarity in our country - and in a Covid-19 environment we have an even tougher task ahead. Our feasibility model suggests we need 70,000 paying visitors per annum. Entry may be out of reach for the people of our district, including hapū - who have remained loyal to, and excited about, this project for years. We want locals to enjoy the experience we offer - and we want that experience to be affordable.

Our community is suffering hardship

While Northland's economy remains resilient, the lowest rate of spending is in Whangārei. With numerous businesses closed or wary of the potential spread of Covid-19, a slowdown and possible fall in spending is anticipated. Nationally, around 6.6% of all households do not have a motor vehicle. In Otangārei this number is 23.8% - while in Whangārei as a whole it is 18.9% - three times higher than the national average - *Northland Economic Snapshot, Infometrics, 26 January 2021*.

Access for our diverse community

We had planned to bring on board a corporate sponsor to subsidize local admission, but because of Covid-19, that opportunity has evaporated. Free or discounted access for whānau is the express wish of our partner, the Wairau Māori Art Gallery Charitable Trust and of our local hapu, Te Parawhau (see attached letters), with whom we are working closely.

Vibrancy will fuel our success

A busy, bustling Hundertwasser Art Centre, well used by locals, will set the tone for visitors' comments, bringing vibrancy to the Town Basin and wider CBD. We need the whole community to be ambassadors for what we have to offer. New Zealand's most significant historic place, Waitangi has an entry fee of \$25 for New Zealanders. Local people can enter for just \$5 per person annually (at zero profit as this covers the cost to produce an access card).

Strong visitor numbers open the door to public funds

Access to public funding sources is dependent upon admission numbers. If we can demonstrate high visitation, this enables us to apply for public funding, thereby safe-guarding our future and lessening the need for government support.

Our request

Please sponsor locals for the first three years of our operation, at which point the economy is expected to recover. Your support will democratize access by our diverse community. Strong admission numbers will bring vibrancy to our operation and open the door to future financial support from public funds, thereby lessening our reliance on local government.

- a. **Either** discount the ticket price by 50% for Whangārei residents - **estimated at \$200K**
- b. **Or** cover the full entry for Whangārei residents - **estimated at \$400K.**

We want to work with the Council to deliver prosperity and growth to the Whangārei District region. Fundamental to this goal is driving visitation for New Zealand's newest cultural destination, the Hundertwasser Art Centre with Wairau Māori Art Centre.

Thank you for the opportunity to present this proposal.

Yours sincerely



Kathleen Drumm
Chief Executive
Hundertwasser Art Centre – Wairau Māori Art Gallery

Appendices

1. Letter of support for WAMT Submission - Wairau Māori Art Gallery
2. Letter of support for WAMT Submission- Te Parawhau

WAIRAU MAORI ART GALLERY CHARITABLE TRUST BOARD

25 March 2021

Letter of support for the Whangārei Art Museum.

The Wairau Māori Art Gallery Charitable Trust Board supports the submission made to the Whangārei District Council's Long Term Plan by Kathleen Drumm, Chief Executive, Whangārei Art Museum.

We agree with the aspirations of having art galleries that offer affordable and accessible experiences for everyone in their supporting communities, above all. We confirm the negative impact paid entry has made to visitor numbers, as recorded in the galleries in New Plymouth and Auckland.

We applaud progressive and forward thinking Councils bold enough to have free admission to their art galleries. This Annual District Plan is the opportunity for the Whangārei District Council to take a courageous step forward and join the Councils of Napier, Hamilton, Hastings and Christchurch and open the doors of Whangārei galleries free of charge.

He aha te mea nui o te ao?

He Tangata! he tangata! he tangata!

What is the most important thing in the world?

It is people! It is people! It is people!

Elizabeth Ellis CNZM

Chair Wairau Maori Art Gallery Charitable Trust

elizabeth.aroha.ellis@gmail.com





Wednesday, 10 February, 2021

TO WHOM IT MAY CONCERN

Re: Support for Whangārei Art Museum/Hundertwasser Art Centre with Wairau Māori Art Gallery

Tēnā koutou:

I write in support of the request for Council from Director, Kathleen Drumm, to sponsor access for locals to the Hundertwasser Art Centre and Wairau Māori Art Gallery, when the building opens – either free of charge or half price – for a period three years and until the economy rebuilds after the ravages of Covid-19.



The Wairau Māori Art Gallery, with its planned programme of three to four exhibitions annually, will be the major reason why local and regional people especially will return for repeat visits. As you are also aware from a previous submission by Wairau Māori Art Gallery Charitable Trust, the matter of a fees-based approach has concerned us as being a certain deterrent for most Māori and other disadvantaged people even thinking of attending. We know from recent national research that Māori will attend and support exhibitions of relevance to them but not where there is an entry fee involved. Good examples are the blockbuster Toi o Tāmaki, Lindauer show of 2016-17, which attracted almost 500,000 visitors and their current, record-breaking Toi Tū Toi Ora show, curated by Wairau Māori Art Gallery Charitable Trust, Trustee, Nigel Borell. Te Parawhau supports these proposals.

Nāku noa nā

Dr Benjamin Pittman
Chairman, Te Pouwhenua o Tiakiriri Kūkupa Trust
(& Secretary & Trustee, Wairau Māori Art Gallery Charitable Trust)

TE POUWHENUA O TIAKIRIRI KŪKUPA TRUST – CC55667
Registered address : 49 Valley Road, Hikurangi 0114
Chairman: Dr Benjamin Pittman
Please address all mail or mail all correspondence to the Chairman
Email: pittman.benjamin@gmail.com

SharePoint document links:

 [Appendix 2 - Te Parawhau Letter of Support for WAMT Submission - March 2021](#)  [Appendix 1 - Wairau Maori Art Gallery Letter of Support for WAM submission - March 2021](#)

From: Kathleen Drumm
Sent: 1 Apr 2021 00:10:16 +0000
To: Mail Room
Cc: Thomas Biss;Deborah Kragten;Rob Forlong;Sandra Boardman;Jonny Gritt
Subject: Hundertwasser Art Centre - Submission to LTP
Attachments: Hundertwasser Art Centre - Submission to Council's LTP - March 2021.pdf, tmpCDDC.tmp.gif

Dear WDC

Many thanks for the opportunity to make a submission which is attached for the Hundertwasser Art Centre with Wairau Maori Art Gallery.

Two letters of support are also attached.

Kind regards

Kathleen Drumm

Kathleen Drumm

Chief Executive
Whangārei Art Museum
Hundertwasser Art Centre with Wairau Māori Art Gallery
M: +64 21 243 0597
whangareiartmuseum.co.nz
<https://hundertwasserartcentre.co.nz/>



From: Whangarei District Council
Sent: 25 Mar 2021 00:07:25 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Tony Hunt - 2021-LTP-SUB-178

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.



Long Term Plan 2021-2031 Feedback - Tony Hunt - 2021-LTP-SUB-178

Receipt Number: 2021-LTP-SUB-178

Your details:

Name:	Tony Hunt
I am making this submission as:	As an individual
Organisation name:	
Postal address:	90 Puriri Park Road, Whangarei
Best phone number:	0212254933
Email:	tony@apexroof.co.nz

Hearing:

Do you wish to be heard	No
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	I have no issues with rates increasing if it allows the council to fund new projects

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hīhītaua Cultural Centre, and existing facilities at Forum North.
Why?	I would like the money to go to the Oruru Landing Conference and Events Centre. With the projected growth we have for Whangarei we need infrastructure like this. What an amazing addition to the town basin along with the new park and the new Hundertwasser building. It will give us things for the tourists to attend and somewhere to stay.

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	Definitely an area we need to invest in.

Key issue - Revitalising our city centre (see page 32)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
Why?	It would be great to link the CBD/mall to the waterfront.

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

I believe we need to invest in Whangarei to ensure tourists dont just drive to the Bay of Islands. If that means as a ratepayer I need to contribute more then I am happy to. We need to keep Whangarei fresh and modern and give people a reason to visit us.

From: Whangarei District Council
Sent: 23 Mar 2021 06:45:35 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - HaPe Infanger - 2021-LTP-SUB-130

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.



Long Term Plan 2021-2031 Feedback - HaPe Infanger - 2021-LTP-SUB-130

Receipt Number: 2021-LTP-SUB-130

Your details:

Name:	HaPe Infanger
I am making this submission as:	As an individual
Organisation name:	
Postal address:	107 Pataua South Road RD1 Onerahi
Best phone number:	
Email:	hapeinfa@gmail.com

Hearing:

Do you wish to be heard at the hearing?	No
---	----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
--	---

Why?	Don't know why the Council did that Rebate last year. The Fall out of Covid 19 is now upon us. Where as I for instance still had a Job last year, that has come to an abrupt end in the new year. But I think that is better to do that catch up now than later!
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Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hihītaua Cultural Centre, and existing facilities at Forum North.
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Why?	Existing Forum North facilities. Construction of new Facilities tend to go massively over Budget anyways as seen with Hundertwasser building.
------	---

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
---	--

Why?	Even Option 2 seems a rather disappointing allocation of funds, when I think, that the council has declared a climate change
------	--

	<p>emergency!</p> <p>Does not look like a commitment to change any of what actually brought us into that situation.</p>
--	---

Key issue - Revitalising our city centre (see page 32)	OPTION 1: Spend \$13m to make improvements to James and John St.
Why?	<p>Start on those two streets and see how that goes! At the moment you gaze into empty shops in increasing numbers. I wonder whether your Plans will have a mitigating effect on that. Shopping is probably not such a a full filling activity anymore.. Adding to that, to get to this shop I have to pay more and more for my stupid car to wait for me. Here is waiting for better bicycle access into town!</p>

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

From: Whangarei District Council
Sent: 9 Mar 2021 17:54:19 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Brooke Irving - 2021-LTP-SUB-32

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.



Long Term Plan 2021-2031 Feedback - Brooke Irving - 2021-LTP-SUB-32

Receipt Number: 2021-LTP-SUB-32

Your details:

Name:	Brooke Irving
I am making this submission as:	As an individual
Organisation name:	
Postal address:	18 Manawa Drive Ngunguru 0173
Best phone number:	021434350
Email:	brooke.irving@live.com

Hearing:

Do you wish to be heard	No
-------------------------	----

at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	A rates hike that significant is simply not fair and better lengths should be taken to budget and forecast better to prevent these huge rates increases.

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hīhītaua Cultural Centre, and existing facilities at Forum North.
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
Why?	

Tell us what you think - any further comments on key issues or other points

raised in the Consultation document:

From: Whangarei District Council
Sent: 27 Mar 2021 19:19:07 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Rishi Iyer - 2021-LTP-SUB-24

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Long Term Plan 2021-2031 Feedback - Rishi Iyer - 2021-LTP-SUB-24

Receipt Number: 2021-LTP-SUB-24

Your details:

Name:	Rishi Iyer
I am making this submission as:	As an individual
Organisation name:	
Postal address:	150B Austin Rd Maunu
Best phone number:	0277104347
Email:	eclecticmuso@gmail.com

Hearing:

Do you wish to be heard at the hearing?	Yes
---	-----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	Seems to be the best long term option. Option 2 might be better in the short term but ultimately we'd have to play catch up eventually.

Key issue - Spaces for gathering (see page 24)	OPTION 3: Build a Whangarei District Council-owned theatre on the current Forum North site.
Why?	I have studied classical singing at uni and have a bachelor of music with honours. The theatre that is being proposed would be invaluable to Whangarei and the Northland community, and is something which is long overdue for Whangarei. It would enable us to have a facility which is up to the current standard requirements of a theatre, and would draw bands both local and international, touring productions of a wide variety, and nurture the development of local talent while also serving as a boost to the local economy by driving tourism to Whangarei.

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

From: Whangarei District Council
Sent: 31 Mar 2021 19:54:22 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Greg Jackman - 2021-LTP-SUB-400

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.



Long Term Plan 2021-2031 Feedback - Greg Jackman - 2021-LTP-SUB-400

Receipt Number: 2021-LTP-SUB-400

Your details:

Name:	Greg Jackman
I am making this submission as:	As an individual
Organisation name:	
Postal address:	17 Fifth Avenue
Best phone number:	0210652395
Email:	

Hearing:

Do you wish to be heard	No
-------------------------	----

at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hīhīāua Cultural Centre, and existing facilities at Forum North).
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 1: Spend \$13m to make improvements to James and John St.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

From: Whangarei District Council
Sent: 18 Mar 2021 18:18:02 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Jake - 2021-LTP-SUB-96

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Long Term Plan 2021-2031 Feedback - Jake - 2021-LTP-SUB-96

Receipt Number: 2021-LTP-SUB-96

Your details:

Name:	Jake
I am making this submission as:	As an individual
Organisation name:	
Postal address:	64 Pipiwai Road 0110
Best phone number:	0279404083
Email:	goodwijk@gmail.com

Hearing:

Do you wish to be heard	No
-------------------------	----

at the hearing?	
-----------------	--

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	

Key issue - Spaces for gathering (see page 24)	
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 3: No new funding towards climate change or waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 1: Spend \$13m to make improvements to James and John St.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

Well I would be nice to but a crosswalk outside tikipanga high school and some kids could

get hit because the car drive fast on the road and it is hard for kids to see the cars coming

From: Jackie James - Rata Studios
Sent: 31 Mar 2021 04:14:03 +0000
To: Mail Room
Subject: Submission in support of Option 3

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Good afternoon,

I am writing in support of Option 3 in the WDC plans.

I am strongly in favour of a NEW THEATRE in Whangārei. I have years of experience working in the Arts and currently work with many industry professionals in Wellington who have all told me that they would travel to Whangārei to run workshops or put on performances IF there was an industry standard theatre to perform in.

One of the reasons why they don't come here is that the current theatre doesn't meet many of the Health and Safety requirements of larger international and regional shows.

I have close ties with people like Miranda Harcourt. Miranda has told me that she would definitely come up to run workshops in screen acting if there was a suitable facility to do so. She is sought after all over the world and with the talent that is in Whangārei, having someone of her calibre, working with the actors in this region could be life changing.

I also have spoken with my good friend Jenny B who is an internationally reknown singer and is well known as the voice of the 90's hit song "The Rhythm of the Night" by Corona.

<https://www.stagepresence.co.nz/>

Jenny now lives in Auckland and runs Stage Presence workshops, and performs jazz sessions in Auckland. She would come up here in a heart beat if there was a facility that was acoustically and technically at industry standard.

There are so many reason why a new theatre would add richness to the area. People would travel to see quality shows and performances and then enjoy the hospitality of the restaurants in the Town Basin.

There is no way that a conference centre can double as a theatre in today's standards.... however, a Theatre can definitely double as a conference centre...

Whangārei needs this more than anything in my opinion and I support this 100%

Regards

Jackie James

Jackie James - Rata Studio

s

Rata Studios Manager

DD +64 4 380 0850

Email jackie@ratastudios.co.nz

www.ratastudios.co.nz

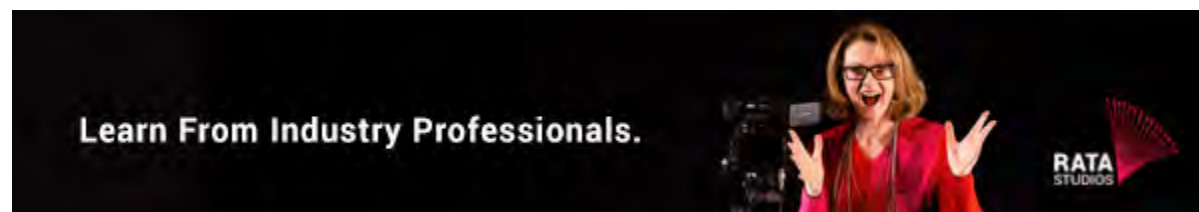
PO BOX 15064, MIRAMAR, WELLINGTON 6243, NZ



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LONG TERM PLAN 2021-31 FEEDBACK FORM

THE CLOSING DATE FOR FEEDBACK IS
THURSDAY 1 APRIL 2021



RECEIVED - CUSTOMER SERVICES

31 MAR 2021

WHANGAREI
DISTRICT COUNCIL

We would love your feedback on some key issues for our District.

POINTS TO REMEMBER WHEN SUBMITTING YOUR FEEDBACK

- Please print clearly. Make sure it can be easily photocopied, read and understood.
- All feedback is considered public under the Local Government Official Information and Meetings Act, so it may be published and made available to elected members and the public.
- Your feedback will not be returned to you once lodged with Council. Please keep a copy for your reference.
- You can also attend a hearing, scheduled for 13-14 April, to speak to your submission.

HOW TO GET THIS FORM TO US

Mail to: Long Term Plan feedback, Whangarei District Council, Private Bag 9023, Whangārei 0148

Email to: mailroom@wdc.govt.nz

Deliver to: Customer Services, Forum North, Rust Ave, Whangārei or Ruakākā Service Centre, Takutai Place, Ruakākā

YOUR DETAILS

Name

Shirley James

I am making this submission as: ☒ An individual ☐ On behalf of an organisation

Organisation name

Postal address

23 E Princes St
Whangarei

Best number to contact you on

4383082

Email

Shirleyjames@Xtra.Co.NZ

Do you wish to be heard in support of your submission at a traditional hearing on 13-14 April?

☒ Yes ☐ No

YOUR FEEDBACK

Please give us your feedback on the key issues raised in the Consultation Document.

KEY ISSUE – HOW WILL WE PAY FOR WHAT WE NEED – RATES OPTIONS (SEE PAGE 17)

☒ **OPTION 1:** Rates increase in year one (2021-22) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'.

Rates increase in years two to ten (2022-31) of 2% + 2.5% LGCI.

☐ **OPTION 2:** Limit the rates increase to LGCI plus 2% only across ten years of the Plan

WHY?

There should be no rates increase.

Council is inefficient and mismanaging rate payers affairs.

Operating costs are excessive and have to be reduced.

KEY ISSUE – SPACES FOR GATHERING (SEE PAGE 24)

☐ **OPTION 1:** Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North).

☐ **OPTION 2:** Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, or existing facilities at Forum North. Please state which site in your comments.

☒ **OPTION 3:** Build a Whangarei District Council-owned theatre on the current Forum North site.

WHY?

Whangarei needs this

KEY ISSUE – CLIMATE CHANGE AND SUSTAINABILITY (SEE PAGE 28)

- ☒ **OPTION 1:** Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
- ☐ **OPTION 2:** Put \$7.4 of new funding towards climate change mitigation and adaptation and waste minimisation.
- ☐ **OPTION 3:** No new funding towards climate change or waste minimisation.

WHY?

KEY ISSUE – REVITALISING OUR CITY CENTRE (SEE PAGE 32)

- ☒ **OPTION 1:** Spend \$13m to make improvements to James Street and John Street.
- ☐ **OPTION 2:** Spend \$21m to make improvements to James Street and John Street as well as either Robert Street or Cameron Street.
- ☐ **OPTION 3:** No additional funding for the City Centre.

WHY?

John St needs a
good clean up Bad for
the centre

TELL US WHAT YOU THINK – ANY FURTHER COMMENTS ON THE KEY ISSUES OR OTHER POINTS RAISED IN THE CONSULTATION DOCUMENT

From: Whangarei District Council
Sent: 17 Mar 2021 02:22:31 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Rhys Jeffery - 2021-LTP-SUB-75

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Long Term Plan 2021-2031 Feedback - Rhys Jeffery - 2021-LTP-SUB-75

Receipt Number: 2021-LTP-SUB-75

Your details:

Name:	Rhys Jeffery
I am making this submission as:	As an individual
Organisation name:	
Postal address:	2 Lake Ora Road kamo
Best phone number:	0278570797
Email:	rhys@jeffery.net.nz

Hearing:

Do you wish to be heard	No
-------------------------	----

at the hearing?	
-----------------	--

Your feedback:

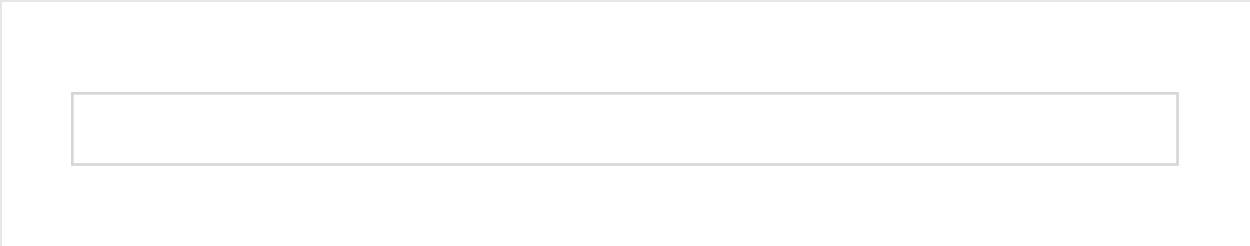
Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hīhītaua Cultural Centre, and existing facilities at Forum North.
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:



From: Whangarei District Council
Sent: 6 Mar 2021 00:38:01 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Sue Jensen - 2021-LTP-SUB-21

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Long Term Plan 2021-2031 Feedback - Sue Jensen - 2021-LTP-SUB-21

Receipt Number: 2021-LTP-SUB-21

Your details:

Name:	Sue Jensen
I am making this submission as:	As an individual
Organisation name:	
Postal address:	6 Gilbert Rd R D 1 Mata
Best phone number:	021407346
Email:	sueyjensen@gmail.com

Hearing:

Do you wish to be heard at the hearing?	No
---	----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
--	---

Why?	Spread out the cost increase to ratepayers, or spread the "catch up" rates over the next 3 years
------	--

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihihua Cultural Centre, and existing facilities at Forum North).
--	---

Why?	Need upgrade of these facilities and something near town basin, but we also need tourists! May become an issue if the borders stay closed.
------	--

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
---	--

Why?	Needs investment. Hopeful the Hatea river will become cleaner
------	---

Key issue - Revitalising our city centre (see page 32)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
--	--

Why?	Needs to have boutique retail and eateries with some inner city
------	---

accommodation and a metro supermarket. Time for the "old guard" to move aside and stop holding the city centre to ransom by keeping their buildings empty. We need good security measures so that the area feels safe. Once the area becomes more inviting then the lack of parking will become an issue. Why not develop a "Hop on, Hop off" bus service? Patrons park at Pohe Island, transit bus picks them up and loops around through the city centre, then the town basin, past the stadium, over the bridge and back to Pohe Island. (And the other way as well). This would be good for sports games at the stadium and if the city centre was enough of a destination to support this.

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

Roads Roads Roads!!!! We live on a dirt road and we're getting tired of the under-investment and dis-interest by council about making these roads better. We barely get a grader over the potholes to make the surface better, let alone any actual improvement to the quality of the surface as well as dust reduction. We're sucking dust into our lungs, drinking it in our water and cleaning it off every surface. The drains and culverts are blocked, the potholes are deep, and the road surface is slippery. The seal extension programme has been reduced from \$3m p.a. to \$1m p.a from what I understand. How is this going to make a difference? I am told there is nothing in the budget for dust mitigation products. I am paying good rates, but I don't feel like I am getting good value for money at the moment.

Also, building compliance...I have anecdotal evidence that it is taking over a year for some new build paperwork to get through council. Why so long? Why so inefficient? I realize the RMA has a lot to answer for, but surely if we have a housing crisis, there can be more done to streamline this process? It also seems to depend on who you get at council to help you with the compliance paperwork. Some of the council staff are helpful and keen to make it as easy as possible, others seem to make a real trial for those wanting to build.

From: Whangarei District Council
Sent: 14 Mar 2021 09:47:24 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Joanne - 2021-LTP-SUB-52

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Long Term Plan 2021-2031 Feedback - Joanne - 2021-LTP-SUB-52

Receipt Number: 2021-LTP-SUB-52

Your details:

Name:	Joanne
I am making this submission as:	As an individual
Organisation name:	
Postal address:	13 Awatea Street Raumanga Whangarei 0110
Best phone number:	0210677685
Email:	jo_rollo@hotmail.com

Hearing:

Do you wish to be heard at the hearing?	No
---	----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North).
Why?	So people have different options and different places to use and book out. Can have 3 events running at the same time for different things etc

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
--	--

Why?	Town has had enough funding. Spend the money on preparing for more covid levels 2 and 3 etc... So businesses can still make money and Whangarei can still move in a safe way by getting their essential items etc. (More shops / supermarkets) close to Smeaton Drive.. Blue goose.. Toetoe Road... Entrance to Whangarei.
------	--

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

Transport. Bring back the trains.

People to travel on trains to Auckland (Airport, CBD, Manukau). Freight trains (less trucks on road.. More trains).

Earlier and later buses eg, 6am-6pm.

Free buses (school, countdown.. Okara Park) in Smeaton Drive.

Parks.

Kids fenced bike park (like in Napier) at entrance of Whangarei or by Mac Donald's or Smeaton Hall.

Basketball court in Awatea Street or by Hall.

Tables and chairs (Rest area) by Mac Donald's for visitors, truck drivers, campervan etc.

Do up Bluegoose (holes in ground).. Add more activities to do there as it is entrance to Whangarei (its an eye sore at the moment).. Shops.. Supermarkets.. Maybe another shopping center complex eg Westfield (Bluegoose area).

More cheap parking in town. (High levels of parking like at the cinema) but put it in Water Street / Walton Street carpark.

Safer streets, lights and path ways to walk from Smeaton Drive to Raumanga (Dr's and shops) especially for the elderly, children walking to schools and parents with prams.

E scooters, uber or transport so young people, youth can get to their sport games/trainings

from Smeaton Drive (lots of Whanau don't have transport) kids/teens have to go all the way to Kensington / Highschools.

From: Whangarei District Council
Sent: 17 Mar 2021 21:15:58 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Amanda Johnston - 2021-LTP-SUB-84

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Long Term Plan 2021-2031 Feedback - Amanda Johnston - 2021-LTP-SUB-84

Receipt Number: 2021-LTP-SUB-84

Your details:

Name:	Amanda Johnston
I am making this submission as:	As an individual
Organisation name:	
Postal address:	8 Hall Ave, Regent Whangarei 0112
Best phone number:	021612233
Email:	ajjohnston49@gmail.com

Hearing:

Do you wish to be heard at the hearing?	No
---	----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	Our rates are still affordable and we need to make some progress while the population of the area is growing so rapidly

Key issue - Spaces for gathering (see page 24)	OPTION 3: Build a Whangarei District Council-owned theatre on the current Forum North site.
Why?	The theatre is crucial to the development of our town and will give opportunities to so many people through performance, hospitality and culture. The lack of art, theatre and music offered in Whangarei currently is very disappointing - we are behind so many other towns the same or similar size.

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	It is crucial for Northland's future to lead the way in protecting the environment. We have a tiny area surrounded by ocean - we must protect it

Key issue - Revitalising our city centre (see page 28)	OPTION 1: Spend \$13m to make improvements to James and John St.
--	--

32)	
Why?	We certainly need to link the cbd and torn brain by improving this area. For me though, the environment and theatre are higher priority

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

I love living in whangarei and am proud of the way our town is becoming more beautiful. We must continue to grow our cultural possibilities and protect the environment

From: Whangarei District Council
Sent: 26 Mar 2021 04:04:43 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Craig Johnston - 2021-LTP-SUB-207

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Long Term Plan 2021-2031 Feedback - Craig Johnston - 2021-LTP-SUB-207

Receipt Number: 2021-LTP-SUB-207

Your details:

Name:	Craig Johnston
I am making this submission as:	As an individual
Organisation name:	
Postal address:	14 De L'Isle Lane Maungatapere. 0179
Best phone number:	0274702091
Email:	craigmjohnston57@gmail.com

Hearing:

Do you wish to be heard at the hearing?	No
---	----

Your feedback:

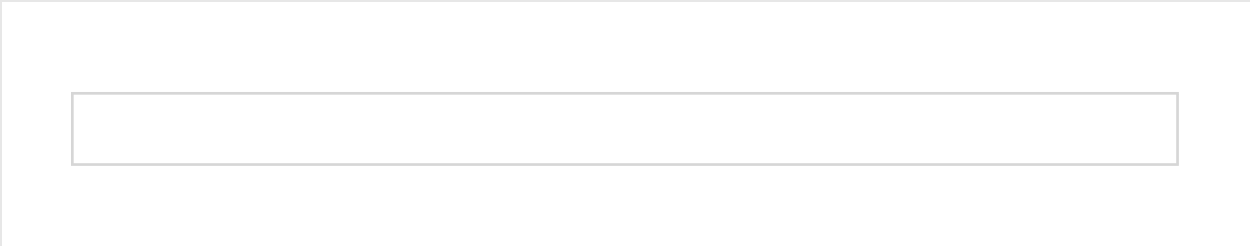
Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hihīāua Cultural Centre, and existing facilities at Forum North.
Why?	Only Oruku Landing appeals to me

Key issue - Climate change and sustainability (see page 28)	OPTION 3: No new funding towards climate change or waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:



From: Whangarei District Council
Sent: 15 Mar 2021 20:43:52 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Marilyn Johnston - 2021-LTP-SUB-62

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Long Term Plan 2021-2031 Feedback - Marilyn Johnston - 2021-LTP-SUB-62

Receipt Number: 2021-LTP-SUB-62

Your details:

Name:	Marilyn Johnston
I am making this submission as:	As an individual
Organisation name:	
Postal address:	1232 Pipiwai Road, RD 6 Ruatangata
Best phone number:	0273087109
Email:	purplemj@hotmail.com

Hearing:

Do you wish to be heard at the hearing?	No
---	----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	
Why?	

Key issue - Spaces for gathering (see page 24)	
Why?	

Key issue - Climate change and sustainability (see page 28)	
Why?	

Key issue - Revitalising our city centre (see page 32)	
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

I note there is nothing in this document to support the ever increasing rural community of Whangarei. Ruatangata has been classed as a rural village but is certainly not treated like one. There is no footpath for the safety of walkers, children and the like with an 80kph speed limit through our village it is very dangerous. The village should be protected with a speed limit commensurate with its name which would be 50kph from before the refuse recycling center to beyond the straight around 2 further corners giving vehicles time to climb down from 100kph to a safe speed for all residents and visitors. I personally have to clear my letter box right within 12inches of the road with vehicles racing past often at more than 80kph. For my safety I step back 2 meters and turn my back to the road in case of flying stones and debris from the large trucks which frequently pass by. There are many, many people in this community with the same concerns please dont give us the same saccharine answer that has been given for the last 5 years that you are looking into it and reviewing the speed limit. We require you to actually do something about it. We pay fair sized rates for very little in return. Our stretch of road is where we live, not I the town basin. Our requirements are equally as important as wherever you decide you want to locate the council. That's your life, this is ours and you should be honoring this too.

From: Richard Johnston
Sent: 31 Mar 2021 02:48:14 +0000
To: Mail Room
Subject: Long term plan
Importance: High

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.

To whom it may concern

I have been a member of the Acting and Music community for 20 years in Whangarei and have performed and seen performances many times at the current Captain Bougainville theatre.

As a performer I take great pride in the productions and that I have been a part of over those years and believe that our City is well overdue to have a theatre that we can truly say is world class and a facility that would be seen as a must to tour.

A theatre that can accommodate in comfort audiences of up to 850 People will ensure on going uses for more than just theatre goers and given the plans that have been submitted by the Forum North Trust it seems to me that the City has an opportunity and a duty to upgrade our current offering.

The fact that this Plan has been proposed by utilising the current Councils existing site shows a true understanding of how all northlanders can benefit from the plan – utilising the current site means no need of taking any other land for the project, minimises the cost of development and therefore saves the council money – a win win.

Whangarei is growing and with this Growth we need better facilities.

I choose

OPTION 3: Build a Whangarei District Council–owned theatre on the current Forum North site

Kind Regards

Richard Johnston
New and Used Vehicle Sales
09 4704000
021522529
Port Road
Whangarei

MARK CROMIE MOTOR GROUP

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From: Whangarei District Council
Sent: 1 Mar 2021 21:20:00 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Mike Jolley - 2021-LTP-SUB-9

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Long Term Plan 2021-2031 Feedback - Mike Jolley - 2021-LTP-SUB-9

Receipt Number: 2021-LTP-SUB-9

Your details:

Name:	Mike Jolley
I am making this submission as:	As an individual
Organisation name:	
Postal address:	373 One Tree Point road
Best phone number:	0274159486
Email:	jolley.haha@xtra.co.nz

Hearing:

Do you wish to be heard	No
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hihihua Cultural Centre, and existing facilities at Forum North.
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 3: No new funding towards climate change or waste minimisation.
Why?	People are all slowly changing there ways and untill India,china,ussr,usa etc come on board what will our bit help?

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	dont know how small businss survives in whangarei, lack of parking is chronic and needs fixing

Tell us what you think - any further comments on key issues or other points

raised in the Consultation document:

Stop the crappy stone on top seal that falls aprt and makes a mess in housing areas
A lot of your income is from marsden/One tree point area please spend money here and
finally finish the OTP boat ramp then Marina is all ways to full, sick of asking council and
police to stop speeding in OTP

From: Whangarei District Council
Sent: 29 Mar 2021 06:18:53 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Rochelle Jones - 2021-LTP-SUB-265

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Long Term Plan 2021-2031 Feedback - Rochelle Jones - 2021-LTP-SUB-265

Receipt Number: 2021-LTP-SUB-265

Your details:

Name:	Rochelle Jones
I am making this submission as:	As an individual
Organisation name:	
Postal address:	190 McLean Road waipu
Best phone number:	02102946422
Email:	rochelle@ccp.nz

Hearing:

Do you wish to be heard at the hearing?	No
---	----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hīhīaua Cultural Centre, and existing facilities at Forum North).
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 3: No new funding towards climate change or waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 1: Spend \$13m to make improvements to James and John St.
Why?	

Tell us what you think - any further comments on key issues or other points

raised in the Consultation document:

URGENT ROAD SEALING in a very high growth area.

We have been living on McLean Road for 12 years and have watched traffic numbers double or triple.

McLean Road is the main route to local beaches and nearby towns such as Mangawhai for residents living on the below listed roads

South Road

Glenmour Road

Massey Road

Millennium Way

Harwood Road

Waienehu Road and many more.

The population of residents up ALL of these roads has exploded and is growing all of the time yet McLean road remains largely unsealed.

McLean Road is used very regularly for large heavy vehicles heading south that cannot pass over the one way bridge leading out of Waipu towards Waipu Cove.

McLean Road is used as a detour for accidents on Cove Road.

With McLean road being such a busy road now it's become very dangerous as there are no centre lines and cars, school buses, cranes, heavy traffic, cyclists, joggers often meet on blind corners and at certain times of the morning due to the road running east/west, sun strike is also a factor.

Dust, there are many more houses now on McLean road, some of which have been allowed to be built very close to the road and during summer months are hammered with fine dust

which can cause major health implications.

McLean Road is half sealed, why not finish the job for a popular, busy and vital road.

From: Whangarei District Council
Sent: 31 Mar 2021 23:16:48 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Jeroen Jongejans - 2021-LTP-SUB-326

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Long Term Plan 2021-2031 Feedback - Jeroen Jongejans - 2021-LTP-SUB-326

Receipt Number: 2021-LTP-SUB-326

Your details:

Name:	Jeroen Jongejans
I am making this submission as:	As an individual
Organisation name:	
Postal address:	3-5 Rona place Tutukaka
Best phone number:	0272288882
Email:	jeroen@diving.co.nz

Hearing:

Do you wish to be heard	Yes
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at the hearing?	
-----------------	--

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	<p>Rates are very low compared with services provided and other similar cities.</p> <p>Maybe we can shift the perception of rates being a tax to rates being an investment in our future!</p> <p>We will need to spend to develop our district- I also think WDC should not be holding back on further debt increases to develop our district.</p>

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North).
Why?	<p>This is a no brainer- Oruku landing has attracted over \$60 million in govt funding- amazing opportunity to get a facility we need- and a great catalyst for needed hotel development.- Supporting conferences/events and our international sporting events bids!</p> <p>Hihiaua also provides for a sector need in our community- complimentary to Oruku landing.</p>

	<p>Theater on Forum North site is 30 years overdue- there is no better time to built this much needed facility than now!</p> <p>Please note that in my humble opinion as a tourism industry stalwart that these facilities will drive the visitor industry, jobs, economic development and fill a huge cultural facilities gap in our Rohe.</p> <p>My expectation will be that Councillors for this decision will not just look at the number of boxes ticked, but show courage and leadership.</p>
--	---

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	<p>We are going to face significant severe challenges to our comfortable way of life- the impacts will be severe, we need to plan and act now- not entirely sure if we fully understand the magnitude of the scenarios that await us-</p> <p>So yes, go with option 2, focus on adaptation as we will unlikely be able to availed a 2C temperature rise in the next few decades.</p> <p>With that in mind, the inevitable rise in sea levels will put all our downtown infrastructure at risk- I grew up 2m below sea level in the Netherlands- the building of a “dye” near Onerahi with a water management system is the appropriate and proven solution which is by far the most cost effective approach- it would be smart to start planning “mega” impact adaptations.</p>

Key issue - Revitalising our city centre (see page 32)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
Why?	In order to make a positive difference to our inner city experience let's design the best we can with the finances needed to make it happen. The inner city is our beating heart.

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

There are significant opportunities ahead of us- a lot of positive direction, thanks team.
A few considerations to look at:

- 1) Rates- reassess the balance between residential and commercial- they are well out of balance- high coastal land values tend to exacerbate this issue.
- 2) With Climate change one of the constant results is an increase in sea level rises- early preparation such as planning a ring of protection around essential infrastructure cannot be done early enough- having grown up 2m below sea level in the Netherlands I know how successful this is, but also aware of time, cost and planning issues.

LONG TERM PLAN 2021-31

FEEDBACK FORM

THE CLOSING DATE FOR FEEDBACK IS

THURSDAY 1 APRIL 2021

We would love your feedback on some key issues for our District.

POINTS TO REMEMBER WHEN SUBMITTING YOUR FEEDBACK

- Please print clearly. Make sure it can be easily photocopied, read and understood.
- All feedback is considered public under the Local Government Official Information and Meetings Act, so it may be published and made available to elected members and the public.
- Your feedback will not be returned to you once lodged with Council. Please keep a copy for your reference.
- You can also attend a hearing, scheduled for 13-14 April, to speak to your submission.

HOW TO GET THIS FORM TO US

Mail to: Long Term Plan feedback, Whangarei District Council, Private Bag 9023, Whangarei 0148
Email to: mailroom@wdc.govt.nz
Deliver to: Customer Services, Forum North, Rust Ave, Whangarei or Ruakākā Service Centre, Takutai Place, Ruakākā

YOUR DETAILS

Name SHANENE REBECCA REYNOLDS
 I am making this submission as: ☒ An individual ☐ On behalf of an organisation
 Organisation name KAMO COMMUNITY INCORPORATED
 Postal address RD 1
KAMO
 Best number to contact you on 0275135076
 Email rep.reynolds@kmo.co.nz
 Do you wish to be heard in support of your submission at a traditional hearing on 13-14 April? ☒ Yes ☐ No THE GROUP WOULD.

YOUR FEEDBACK

Please give us your feedback on the key issues raised in the Consultation Document.

KEY ISSUE - HOW WILL WE PAY FOR WHAT WE NEED - RATES OPTIONS (SEE PAGE 17)

- ☐ **OPTION 1:** Rates increase in year one (2021-22) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up';
Rates increase in years two to ten (2022-31) of 2% + 2.5% LGCI.

- ☐ **OPTION 2:** Limit the rates increase to LGCI plus 2% only across ten years of the Plan

WHY?

Option 3 - Rates Increase to be
done every 3 years - 1% each year
over 3 years

KEY ISSUE - SPACES FOR GATHERING (SEE PAGE 24)

- ☐ **OPTION 1:** Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North).
- ☐ **OPTION 2:** Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, or existing facilities at Forum North. Please state which site in your comments.

- ☒ **OPTION 3:** Build a Whangarei District Council-owned theatre on the current Forum North site.

WHY?

However the needs to be big
enough to be able to handle the
symphony orchestra, New Zealand
Balliet and other major events

TELL US WHAT YOU THINK - ANY FURTHER COMMENTS ON THE KEY ISSUES OR OTHER POINTS RAISED IN THE CONSULTATION DOCUMENT

WHY? There needs to be connection between the town centre and the town basin - A pedestrian over pass would be a good option.

- ☐ **OPTION 3:** No additional funding for the City Centre.
- ☐ **OPTION 2:** Spend \$21m to make improvements to James Street and John Street as well as either Robert Street or Cameron Street.
- ☒ **OPTION 1:** Spend \$13m to make improvements to James Street and John Street.

KEY ISSUE - REVITALISING OUR CITY CENTRE (SEE PAGE 32)

WHY? We have declared a climate issue. We feel it is better to put the money into this rather than risky which is only going to add to the issue

- ☐ **OPTION 3:** No new funding towards climate change or waste minimisation.
- ☒ **OPTION 2:** Put \$7.4 of new funding towards climate change mitigation and adaptation and waste minimisation.
- ☐ **OPTION 1:** Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.

KEY ISSUE - CLIMATE CHANGE AND SUSTAINABILITY (SEE PAGE 28)

FEEDBACK ON CONSULATION FOR WHANGAREI DISTRICT COUNCIL FOR THE NEXT 10 YEARS -2021 TO 2031

- PROVIDED ON BEHALF OF KAMO COMMUNITY INC – SOMEONE WILL BE PRESENT TO PRESENT THESE CONCEPTS ON THE 13-14 OF APRIL AT THE HEARING

There is nothing directly relating to the Kamo Area in the document that has been provided by Council – Therefore as a group we would like to propose the following

1. KAMO ROAD

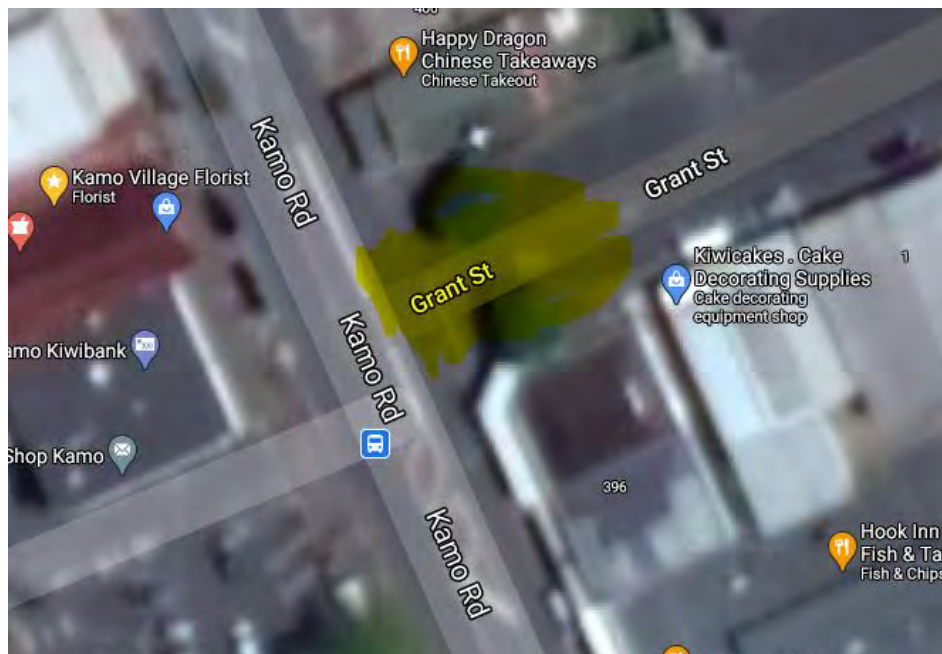
- Painting Kamo Road to create a visual slow down zone. We acknowledge that Kamo Road is deemed part of State Highway 1 – however it would be a safer area if the traffic was slowed down. We do not propose any speed bumps or anything that could cause a hazard. We acknowledge that Pedestrian Safety is paramount.



- We would also like to see the car parks marked so that you can see clearly when someone is taking up two spots on the main road rather than one. This will promote people to be courtesy when trying to park. (Similar to what has been completed on Three Mile Bush Road outside Kamo Primary)
- Remove the car space directly outside Hammer Hardware on Kamo Road – the last one before you pull into the Hammer Hardware carpark as this creates a blind spot for motorists when trying to pull out of this carpark.

2. GRANT STREET

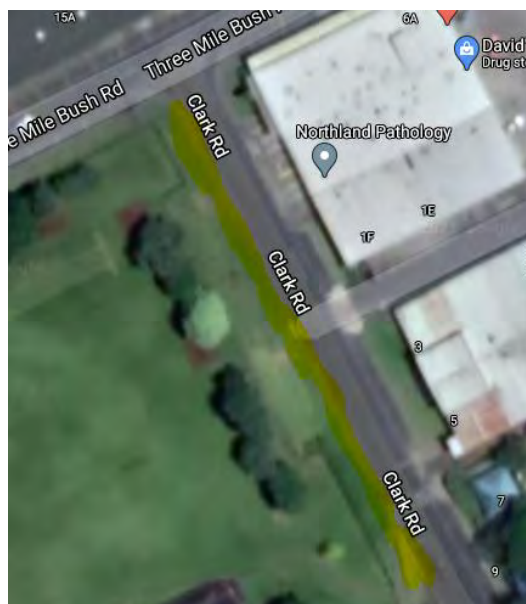
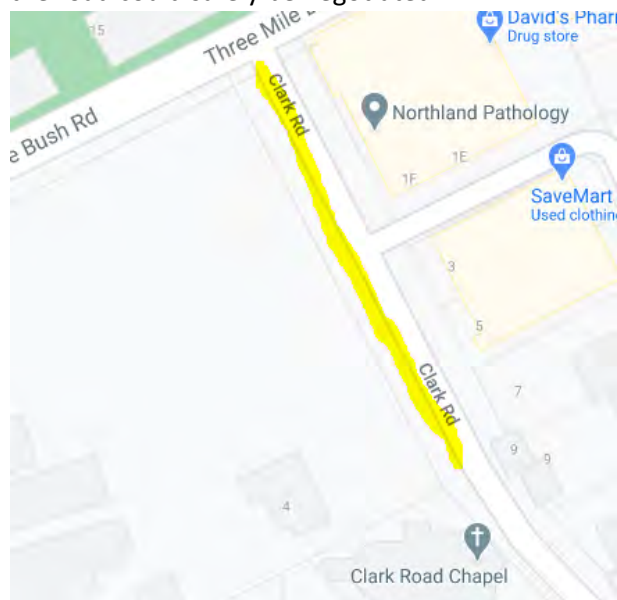
- When the Kamo Village Place Race was completed a number of years ago it was suggested that Grant Street become a public space. This would involve blocking off the Kamo Road end of the Street – This could have bollards put at each end – Seating could be provided and the road could be painted to create a fun space – This does not have to be a huge area and could go up as far the current driveways would allow.



- Bike Parking Areas could be provided – There is currently nowhere in Kamo to park a bike – and this would be a visual space that would mean that the bikes were safe while they were there.

3. CLARK ROAD

- Outside Kamo Primary, the road is not designed for parking on both sides of the road, and to provide for two lanes of moving traffic. In the afternoon Kamo Primary have pedestrian crossing signs in place on the crossing here. The road is very narrow and there have been a number of incidents and near misses over the years. There are also a number of trucks that come out of the service lane between Arc Security and SaveMart. We have two proposals for this area that will achieve the same overall result, providing more vehicle accessibility—keeping people safe.
 1. The first would be the cheapest option. Paint yellow lines on the left side of the road coming towards Three Mile Bush Road. This would mean that there would only be parking on the right-hand side in the designated parking spaces.
 2. The second option is to move the footpath and cut into the green area so that there are parking spaces created off the road – this would mean that the two lanes one the road could safely be negotiated.



4. PLAYGROUND UPGRADE

- Council has recently upgraded the playground and the town basin and put in a new playground Tikipunga. We would like to see an upgrade to the playground at the Rugby Grounds end of the Kamo Rec.

We feel that there are a number of beautiful parks and walkways around the Hodges Park area in Kamo and this would promote parents and families walking in the area.

SharePoint document links:

 [FEEDBACK ON CONSULATION FOR WHANGAREI DISTRICT COUNCIL FOR THE NEXT 10 YEARS](#)  [council feedback form](#)

From: Shane & Rebecca Reynolds
Sent: 28 Mar 2021 19:35:00 +1300
To: Mail Room
Cc: colin@twyman.kiwi
Subject: Feedback for long term plan 2021-2031
Attachments: tmp7D7.tmp.gif

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Please find attached the council feedback form and another document to go with it as there was not enough space available for comments.

Regards
Kamo Community Inc

From: Whangarei District Council
Sent: 16 Mar 2021 07:08:34 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Cindy Kane - 2021-LTP-SUB-65

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.



Long Term Plan 2021-2031 Feedback - Cindy Kane - 2021-LTP-SUB-65

Receipt Number: 2021-LTP-SUB-65

Your details:

Name:	Cindy Kane
I am making this submission as:	As an individual
Organisation name:	
Postal address:	8 Gannet Place, One Tree Point
Best phone number:	021624285
Email:	cindyannkane@gmail.com

Hearing:

Do you wish to be heard	No
-------------------------	----

at the hearing?	
-----------------	--

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	Nothing is done here in One Tree Point and we can't afford more increases!

Key issue - Spaces for gathering (see page 24)	
Why?	NONE!

Key issue - Climate change and sustainability (see page 28)	OPTION 3: No new funding towards climate change or waste minimisation.
Why?	It is a waste of money that we cannot afford!

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	It makes absolutely NO difference!

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

We spend a FORTUNE in rates for absolutely nothing in One Tree Point, we absolutely cannot afford anymore increases!

From: Whangarei District Council
Sent: 24 Mar 2021 23:33:06 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Nicki Kane - 2021-LTP-SUB-174

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.



Long Term Plan 2021-2031 Feedback - Nicki Kane - 2021-LTP-SUB-174

Receipt Number: 2021-LTP-SUB-174

Your details:

Name:	Nicki Kane
I am making this submission as:	As an individual
Organisation name:	
Postal address:	PO Box 1602 Whangarei 0140
Best phone number:	272455132
Email:	kanenicki17@gmail.com

Hearing:

Do you wish to be heard at the hearing?	No
---	----

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hīhīaua Cultural Centre, and existing facilities at Forum North.
Why?	Because I believe Oruku Landing is key to us getting more visitors, conferences and entertainers, all of which are great for the local economy. When Elim had it's building on Porowini Ave available to hire, it was solidly booked for weddings that were too big to fit anywhere else, and I have no doubt this centre would be heavily in demand for this type of function. This would be only one type of contributor to the success of the project- there is a huge need for a purpose built centre to house gatherings of all types in Whangarei.

Key issue - Climate change and sustainability (see page 28)	
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

LONG TERM PLAN 2021-31 FEEDBACK FORM



HOW TO GET THIS FORM TO US

Mail to: Long Term Plan feedback, Whangarei District Council, Private Bag 9023, Whangārei 0148

Email to: mailroom@wdc.govt.nz

Deliver to: Customer Services, Forum North, Rust Ave, Whangārei or Ruakākā Service Centre, Takutai Place, Ruakākā

YOUR DETAILS

Name Nick Chave

I am making this submission as: On behalf of an organisation

Organisation name: Kauri Mountain Restoration Society

Postal address: PO Box 3070, Onerahi 0142, Whangarei

Best number to contact you on: 027 438 2596

Email: nickchave@gmail.com

Do you wish to be heard in support of your submission at a traditional hearing on 13-14 April? **Yes**

The reason for our submission is to ask for council support for our community-led project – this may include financial and non-financial support.

Please see below our Vision Statement in Appendix A.

This community-led project closely aligns with the 2021-2031 LTP focus:

- *building a plan that enables us to create a more inclusive, resilient and sustainable Whangarei.*
- *the four 'well-beings' (social, economic, environmental, and cultural well-being)*

The key benefits of this community-led project include:

- **Environmental**
 - Preserving and restoring the indigenous biodiversity
 - Creating more habitat for endanger native flora and fauna
 - Providing a corridor of conservation land between Kauri Mountain forest and Bream Head Te Whara
- **Social/ Cultural**
 - Engaging with local hapu to rebuild traditional connections and promote intergenerational kaitiakitanga
 - Promoting wellbeing for locals and visitors alike
 - Protecting and ensuring costal access for communities in perpetuity
 - Te Araroa trail and campground enhancement (tourism benefits for our district)
- **Economic/ Educational**
 - Educational programmes for local schools/ kura kaupapa on regeneration, land management and matauranga maori
 - Regeneration and management will strive to be self-sustaining via the revenue streams as outlined in the attached document
 - To provide a platform/ location for local social support organisations

What this community-led project is asking for from the WDC:

- Consider a land purchase (\$1-3 million) for this community-led project
 - Purchased land would be owned by the WDC and managed by the Kauri Mountain Restoration Society in consultation with the WDC
 - The total purchase price for Kauri Mountain Farm will be between \$8 and \$10 million, the balance of the purchase price will be fundraised by the Kauri Mountain Restoration Society

Appendix A – Vision Document

SAVING KAURI MOUNTAIN



The Kauri Mountain Restoration Society

The Kauri Mountain Restoration Society is formed by a group of Northlanders who believe that a unique opportunity exists to purchase Kauri Mountain Farm from the current owner and form a public ownership model.

The society's first objective is to restore the viability of the natural ecosystems that used to exist on the land through regeneration of the native biodiversity, and to control invasive plants and animals.

To do this we will raise funds for the land purchase and establish a reserve/parkland for public use which will link in to neighboring DOC land.

**Regenerate the ecosystem
Preserve the biodiversity
Empower future kaitiakitanga**



Our Vision / Kaupapa

Protect the existing centuries old native forest on the site

Regenerate the native forest that has been lost and restore the biodiversity of the area

Provide a new coastal walking track from mountain to sea - and re-establish the existing camping area (potentially to act as a Te Araroa Trail campsite as the trail runs through the farm)

Purchase an important piece of privately owned, iconic NZ coastline to prevent development so that all may enjoy it in the interest of public wellbeing

Promote responsible beach access in sympathy with the endangered species that frequent and inhabit the area





Kauri Mountain

Where

The 240 hectare Kauri Mountain Farm sits at the Northern end of the stretch of coast known as Ocean Beach east of Whangarei.

It has 2km of coastal frontage and a further 2km border with Kauri Mountain Bush and comprises part of the largest area of coastal native forest between Bream Head and Russell. The amount of forest on the private land is significant - equal to the DOC protected area of Kauri Mountain Forest.

A successful regeneration project would more than quadruple the size of protected forest and habitat in the area.

The Russell Forest to Whangārei Heads section of Te Araroa/New Zealand's Trail runs through the heart of Kauri Mountain Farm.



Why here?

This is an area of very high conservation value, and as part of the Whangarei Sanctuary it provides key habitat to numerous important and at risk animal and plant species including the **Bar-tailed Godwit** (one of only a few landing and habitat sites in the country), **North Island Brown Kiwi**, **Whangarei Heads Daisy** (endemic to the Heads), **Elegant gecko**, **Fuchsia procumbens**, **Banded Kokopu**, **Spotless crakes and fernbirds**, large stands of **ancient Kauri** - increasingly under threat from dieback disease.

And numerous others as outlined in the attached ecological report.

Human impact has meant habitat reduction, biodiversity loss, and freshwater degradation. Large parts of the farm used to be wetland but as per the MO of the time was drained to make way for pasture. Over 90% of New Zealand's wetlands have been drained or filled over the last 150 years. Some of our most threatened natural ecosystems now include lowland wetlands and bogs such as those that existed on Kauri Mountain Farm.

Kauri Mountain Farm is the last piece of privately owned property that prevents a contiguous ecological corridor all the way from DOC owned Bream Head, along the the 6km of DOC coastline duneland reserve, Oceans, Proctors, and Kauri Mountain beaches up into the DOC part of Kauri Mountain Forest.

Beyond the ecological reasons there is less and less coastline in NZ and particularly the Northern North Island that remains untouched and undeveloped. This provides and extra incentive to preserve what we have but to also restore what we once had in an important coastal ecosystem. Previous development plans for the site have all included subdivision which will restrict access to parts of the land and further degrade this important mountain to seascape ecosystem.



Why now?

For the first time in 70 years this piece of land is for sale. With the owner wanting to sell the land but not wanting to see it subdivided, we feel that now is the opportunity to purchase the land on the behalf of the NZ public and begin the process of regeneration and habitat restoration. A dedicated charitable trust would be set up to own the land and manage it in the interest of nature - as the primary stakeholder - and in the public's interest for ongoing access, wellbeing, and education. We feel this is a unique opportunity to retire marginal farmland and include it in the nationally important Whangarei Sanctuary.

It is a truism that the best time to plant a tree is 20 years ago,
the second best time is now



How will we achieve this?

The property purchase requires generous public and private donors to take action. Those that want to make a difference and leave a lasting legacy to future generations of New Zealanders.

The regeneration/restoration project requires careful ecological management and self-sustaining resources to ensure its efficacy.

Property purchase funding

Public - funding from the Nature Heritage Fund / NRC / WDC

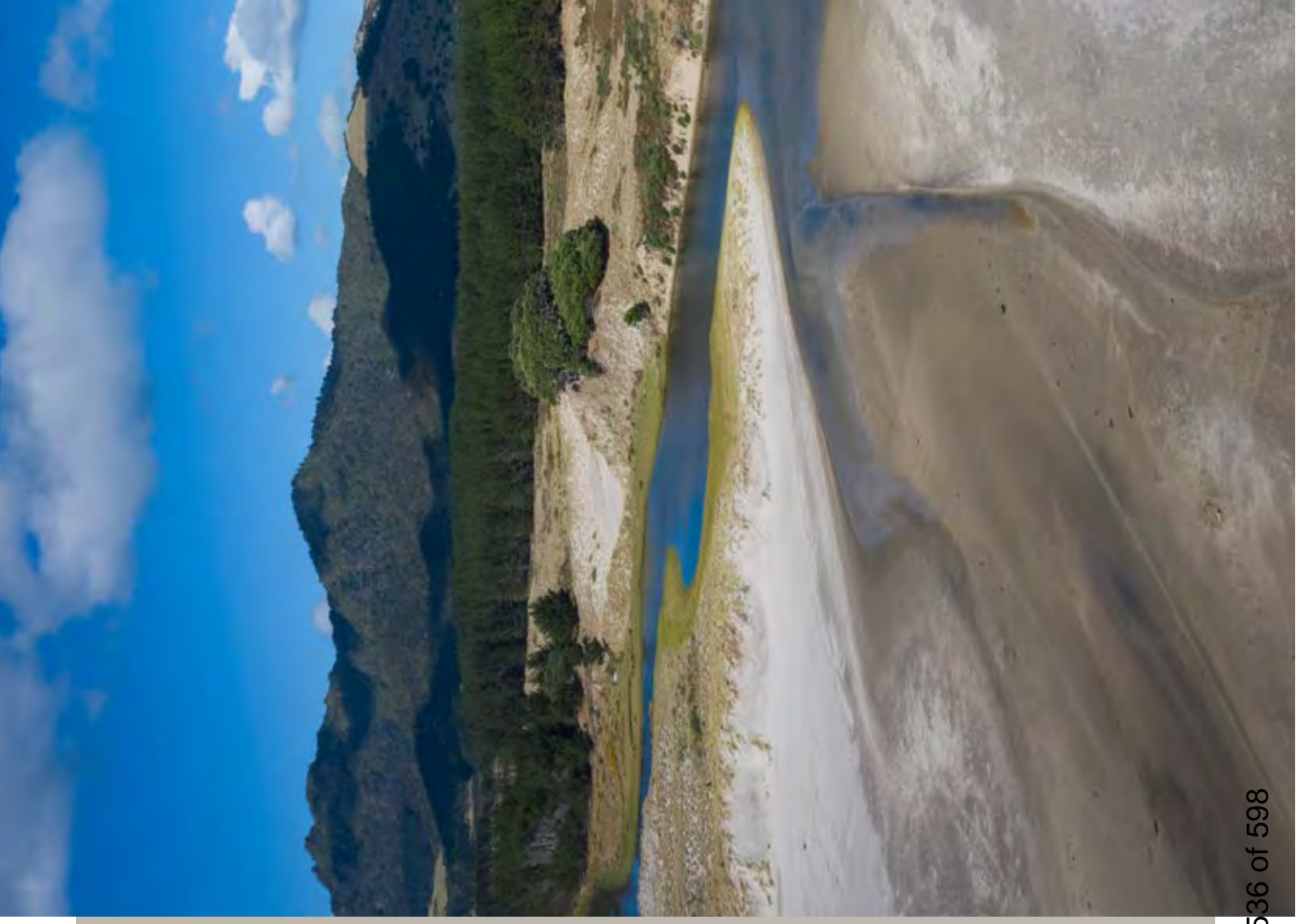
Private - private donor philanthropy / foundations

Existing identified revenue streams for ongoing management / restoration

- 10Ha of mature radiata forest ready to be processed
- Over 100Ha of arable cattle farmland which can be eventually fenced off and phased out once regeneration takes effect - also potential to create a blend of conservation, recreation and sustainable farming - an example of this would be Tawharanui.
- A nine cabin campground with existing amenities as a revenue source.

Potential identified revenue streams for ongoing management

- **Emission Trading Scheme carbon credits** - whether through radiata and harvesting or through native forest regeneration, **honey production, part block forestry** - while the regeneration project becomes economically self sustaining, **grant applications** for afforestation, pest control, research, or education projects.



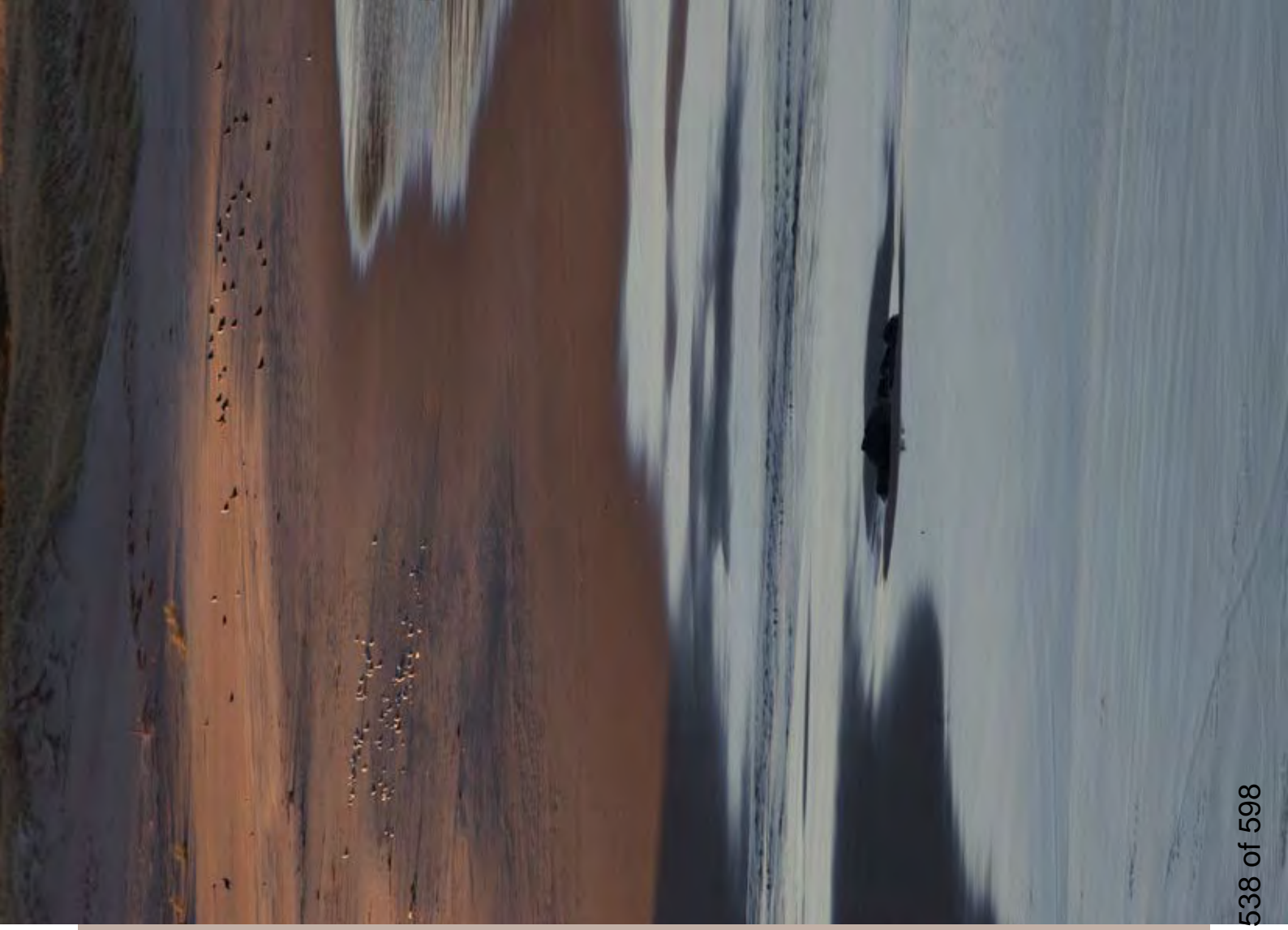
If we can achieve this, purchasing and managing this piece of land will have wide ranging benefits broadly divided to into the following categories

Environmental	Social	Educational	Economic
<ul style="list-style-type: none"> This initiative aligns closely with the NZ Biodiversity Strategy 2020 by not only preserving the indigenous biodiversity that exists on the site - but also by providing more habitat in which native biodiversity can reestablish and thrive. The opportunity exists to create a reserve 'corridor' stretching between the two DOC owned land reserves at Kauri Mountain Forest all the way to Bream Head. The protection of existing wetland and restoration of original wetland will provide important habitat for wetland wildlife. 	<ul style="list-style-type: none"> Work with local hapu and iwi to restore the land, rebuild traditional connections and promote inter-generational kaitiakitanga. Wellbeing for both locals and visitors alike with an amazing coastal reserve for all to enjoy. The formation of a new walking track and picnic area running from kauri mountain peak all the way down to the beach. Beach access and coastline access - a Kiwi institution - this project will ensure ongoing responsible beach access for outdoor recreation. 	<ul style="list-style-type: none"> The formation of education programmes for local schools and kura kaupapa on regeneration, land management, and matauranga maui. To show regeneration in action. Much like similar work at Elliot Farm, Awaroa, Motu Kaikoura, and Hinewai, these 'lighthouse projects' show what can be achieved through positive action while encouraging thought about afforestation and habitat loss. The opportunity for Te Araroa trail walkers to experience and learn about mountain to sea ecosystem and regeneration. 	<ul style="list-style-type: none"> It is our intention to create a self sustaining regeneration project. The revenue streams outlined above - particularly the ETS scheme - will, with good management allow this project to be perpetually self sustaining. The farm in its current state is not overly productive - much of it is marginal land and steep - however there is some arable farmland on the site that if properly managed could be run sustainably. If we pursue a mixed use model where a portion of the farm can be run more sustainably in conjunction with regeneration then the outcome will be not only of intrinsic value, but also of productive value.

If we cannot achieve this:

If this land is sold into private ownership, with its proximity to the coast, views and amazing natural beauty, the likelihood is it will be developed and therefore will never again be made available for sale as an entire block again. Previous plans for the property have included a golf course and multi site estate style dwellings. These types of developments have been proven to have major negative impacts on biodiversity through decreased habitat and the free movement of flora and fauna.

Of equal importance is the fact that if Kauri Mountain goes back into private hands - a unique opportunity will have been lost to save and regenerate an iconic part of NZ for this generation, and for generations to come, to treasure and enjoy.



To find out more about this project or pledge a donation
to the Kauri Mountain Restoration Society email us at
contact@kaurimountain.org.nz
or give us a call on
(+64) 274 382596

We really appreciate your interest.

Nick Chave


Chairman

The Kauri Mountain Restoration Incorporated Society



From: Nick Chave
Sent: 31 Mar 2021 10:27:18 +1300
To: Mail Room
Subject: LTP Submission for Kauri Mountain Restoration Society
Attachments: tmpF8BF.tmp.gif

SharePoint document links:

 [Long Term Plan 2021-2031 - Kauri Mountain Submission](#)

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Kia ora

Please see attached our LTP submission (representing The Kauri Mountain Restoration Society) with our vision document as an addendum.

Link to our promotional video found here: <https://vimeo.com/518253646/51f3cd8493>

We have received a lot of community support for our project including from local residents, environmental experts, as well as from Councillor Innes (who features in the video) and other local body reps.

We have presented this to MP Emily Henderson who is very enthusiastic about the initiative and we plan on seeking Govt funding as well.

Please note we wish to be heard in support of this submission and would like to play our promotional video at the hearing.

In the meantime we will look forward to hearing from you.

Many thanks and nga mihi

Nick Chave

From: Whangarei District Council
Sent: 19 Mar 2021 23:19:15 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Candice Kay - 2021-LTP-SUB-107

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.



Long Term Plan 2021-2031 Feedback - Candice Kay - 2021-LTP-SUB-107

Receipt Number: 2021-LTP-SUB-107

Your details:

Name:	Candice Kay
I am making this submission as:	As an individual
Organisation name:	
Postal address:	61 Beazley Crescent, Tikipunga
Best phone number:	0224372740
Email:	candydkay@gmail.com

Hearing:

Do you wish to be heard	No
-------------------------	----

at the hearing?	
-----------------	--

Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	

Key issue - Spaces for gathering (see page 24)	
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 1: Spend \$13m to make improvements to James and John St.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

--

Submission to Whangarei District Council Long Term Plan

From Nick Keene, BSSC Limited T/A Schnappa Rock Restaurant & Wahi Restaurant Tutukaka

nick@schnapparock.co.nz

0272227757

I would like to acknowledge the positive work of the council in the development of the loop and town basin areas, on-going support for the Hundertwasser project and the support of community initiatives such as 116 Bank St. We respectfully submit the following and would like to speak in support of this submission.

Local Alcohol Policies (LAPs)

1. Since the implementation of SSAA 2012 Act it has become apparent that some Councils often attempt to include rules within an LAP that are beyond their authority. This is a timely and expensive process. We would submit that WDC should revert to the National Default as outlined in the Sale and Supply of Alcohol Act 2012 (SSAA). WDC fees for Liquor Licensing are up to 84% higher than the national default, brought about by historical inefficiencies. Rate payers money would be saved by using the 'Off the shelf' national default
2. The wider hospitality industry would like the process of LAPs to be either repealed or significantly amended.
3. Within the current District Licencing Committees system, there is the ability for each licence to have appropriate restrictions placed on it if deemed necessary by the committee. A shift in the system whereby DLCs administer appropriate restrictions would render the LAP process unnecessary.
4. Many good quality pieces of work have been generated by WDC around inner city living e.g Sonya Seutters work , WDC has sought input from hospitality VEW, Hospitality NZ, local operators but the WDC has seemingly had a mandate to eliminate the late night activity in the CBD. Work with hospitality. Win the war for talent – we will need talent for the prosperous future.
5. Get a night Mayor – or conduit for communication between WDC and night time operators. Lead the charge!

Rates

The burden of commercial rates is difficult to carry, as a business owner I would like to submit that the imbalance of domestic and commercial rates is urgently addressed. Tutukaka sees no commercial rubbish collection, no water and no recycling. The cost is on the business owner.

Oruku Landing

We are in favour of council support of the Oruku Landing development

Waste management and Recycling

WDC continues to aim for better return rates for recycling and seek support from industry we are opposed to a container returns scheme being adopted and are in favour of a producer responsibility model

Responsible Camping

6. The number of international visitors who did some freedom camping in New Zealand has been rising recently, from 54,000 in the year ended 2013 to around 123,000 in the year ended 2018. This followed a period of moderate growth from around 10,000 visitors at the beginning of the 2000's. Total estimated spending by visitors who did some freedom camping has also increased significantly in this period, from \$210 million in 2013 to \$540 million in 2018. The growth in numbers and spending from this group of visitors followed a similar pattern to that seen for total international visitors. However, even with this increase, only 3.4 per cent of visitors to New Zealand did some freedom camping in 2017 and 2018.
7. The definition of "self-contained" now means freedom campers wanting to stay in restricted areas will need a toilet that can be used inside the vehicle even when the bed is made up.
8. Businesses primarily impacted are holiday parks as these freedom campers would traditionally have stayed in these facilities. Currently issues for holiday parks include freedom campers using facilities without paying.
9. We submit the WDC continues to develop and strengthen appropriate regulations for responsible camping, and create infrastructure cost support for the future.

Infrastructure Funding

10. Local Councils in some parts of the country have recognised infrastructure funding is a significant issue and are working towards change, some Councils are looking at targeted rates while others have openly criticised the funding investment options put forward by the Government.
11. In 2019, Productivity Commission undertook its report into Local Government Funding and Finance. The report recommended that "Better use of existing tools and central government funds should be enough to close the tourism funding shortfall. Given the small scale of the funding gap, introducing new funding tools would incur significant implementation, administration and enforcement costs and is unlikely to result in a net benefit to councils."
12. We endorse those sentiments – rather than introducing new tools that target specific sectors, councils should make better use of existing tools to achieve their goals.
13. Hospitality NZ believes a consistent and fair nationwide approach to the funding of core infrastructure needs to be introduced.
14. Hospitality and accommodation sectors are viewed by local councils as an easy source of funds, via targeted rates on commercial businesses, or implementing bed taxes. We oppose the introduction of bed tax as it targets only those people staying in commercial accommodation.
15. If a targeted rate or visitor levy is deemed necessary, Hospitality NZ believes these must be broad based taxes, and ensure that they are appropriately designed, are fair and equitable to those contributing, have community support, and are used solely for initiatives that benefit the visitor economy. Alternatively, those funds raised must be ring-fenced and used for the benefit of those contributing to the fund. However, Hospitality NZ's preference would be for any funding of tourism infrastructure to come from a centralised pool.
16. Prior to COVID, tourism was struggling to maintain social license in communities – in part given the infrastructure pressure tourism growth was placing on some regions. We recognise that tourism and hospitality use and benefit from a wide variety of mixed-use infrastructure. We now have a real opportunity to resolve some of these infrastructure issues and prepare for the rebuild of the sector.
17. Targeted rates and 'tourism' or 'bed taxes' concern us
 - These unfairly place the burden of funding infrastructure or promotion on just one part of the tourism/hospitality industry;
 - As ratepayers, businesses oppose increased rates to fund basic infrastructure they may not receive a direct benefit from i.e., infrastructure for freedom campers;
 - We would prefer to see Central Government funding of infrastructure, where local councils are unable to fund it themselves; and
 - If new funding schemes are required, there needs to be an emphasis on broad-based levying. They need to be fair and equitable and all businesses who will benefit from further infrastructure development should contribute.

Tutukaka Specific

1) Retain the purchase of the Tutukaka Trailer park,

This is the most important and urgent issue for Tutukaka with long term ramifications.

Either Tutukaka will remain one of our District and Region's foremost Tourism attractions (for both international and domestic markets) or it will be capped through lack of car parking.

The opportunity to purchase the last flat land to deal with the growing demand of parking (that is now done on the Village Green) will **not** come back.

The opportunities for the community to stage events in Tutukaka (Winery tour, sporting events, family time, weddings, open green space, events, markets etc) has been eroded with the demand of car-trailer parking.

The widening of the boat ramp has been **so successful** that the village green has now been "relegated" to car-parking for 5 months of the year, with numerous days an overflow throughout the township and onto the main road.

2) Refuse station opening hours

The change in opening hours of the refuse station on the Tutukaka Coast has seen a noted increase in dumped rubbish.

Outside the refuse station we see the dumping of bags of rubbish, furniture, televisions, mattresses, etc.

Previously these items were an "income" for WDC, now they are an added burden.

Some people see the closing hours as an opportunity to discard their refuse without having to pay...

Bags get ripped open, rats and other vermin feed on this opportunity, at the same time that locals try to create a "Kiwi friendly" environment.

The roadsides have become more polluted, all in all the experience from locals and visitors driving on our coast is marred by this experience..

Ultimately this will all end up in the Ocean, not acceptable.

The immediate return to the previous time table of the refuse station in Ngunguru.

Thank you for your consideration

Nick Keene

From: Nick Keene
Sent: 1 Apr 2021 16:08:31 +1300
To: Mail Room
Subject: Long Term Plan Submission
Attachments: tmp9AF7.tmp.gif

SharePoint document links:

 [Submission to Whangarei District Council Long Term Plan](#)

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Submission to Whangarei District Council Long Term Plan

From Nick Keene, BSSC Limited T/A Schnappa Rock Restaurant & Wahi Restaurant
Tutukaka

nick@schnapparock.co.nz

0272227757

I would like to acknowledge the positive work of the council in the development of the loop and town basin areas, on-going support for the Hundertwasser project and the support of community initiatives such as 116 Bank St. We respectfully submit the following and would like to speak in support of this submission.

Local Alcohol Policies (LAPs)

1. Since the implementation of SSAA 2012 Act it has become apparent that some Councils often attempt to include rules within an LAP that are beyond their authority. This is a timely and expensive process. We would submit that WDC should revert to the National Default as outlined in the Sale and

Supply of Alcohol Act 2012 (SSAA). WDC fees for Liquor Licensing are up to 84% higher than the national default, brought about by historical inefficiencies. Rate payers money would be saved by using the 'Off the shelf' national default

2. The wider hospitality industry would like the process of LAPs to be either repealed or significantly amended.

3. Within the current District Licencing Committees system, there is the ability for each licence to have appropriate restrictions placed on it if deemed necessary by the committee. A shift in the system whereby DLCs administer appropriate restrictions would render the LAP process unnecessary.

4. Many good quality pieces of work have been generated by WDC around inner city living e.g Sonya Seutters work , WDC has sought input from hospitality VEW, Hospitality NZ, local operators but the WDC has seemingly had a mandate to eliminate the late night activity in the CBD. Work with hospitality. Win the war for talent – we will need talent for the prosperous future.

5. Get a night Mayor – or conduit for communication between WDC and night time operators. Lead the charge!

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Rates

The burden of commercial rates is difficult to carry, as a business owner I would like to submit that the imbalance of domestic and commercial rates is urgently addressed. Tutukaka sees no commercial rubbish collection, no water and no recycling. The cost is on the business owner.

Oruku Landing

We are in favour of council support of the Oruku Landing development

Waste management and Recycling

WDC continues to aim for better return rates for recycling and seek support from industry we are opposed to a container returns scheme being adopted and are in favour of a producer responsibility model

Responsible Camping

6. The number of international visitors who did some freedom camping in New Zealand has been rising recently, from 54,000 in the year ended 2013 to around 123,000 in the year ended 2018. This followed a period of moderate growth from around 10,000 visitors at the beginning of the 2000's. Total estimated spending by visitors who did some freedom camping has also increased significantly in this period, from \$210 million in 2013 to \$540 million in 2018. The growth in numbers and spending from this group of visitors followed a similar pattern to that seen for total international visitors. However, even with this increase, only 3.4 per cent of visitors to New Zealand did some freedom camping in 2017 and 2018.

7. The definition of "self-contained" now means freedom campers wanting to stay in restricted areas will need a toilet that can be used inside the vehicle even when the bed is made up.

8. Businesses primarily impacted are holiday parks as these freedom campers would traditionally have stayed in these facilities. Currently issues for holiday parks include freedom campers using facilities without paying.

9. We submit the WDC continues to develop and strengthen appropriate regulations for responsible camping, and create infrastructure cost support for the future.

Infrastructure Funding

10. Local Councils in some parts of the country have recognised infrastructure funding is a significant issue and are working towards change, some Councils are looking at targeted rates while others have openly criticised the funding investment options put forward by the Government.

11. In 2019, Productivity Commission undertook its report into Local Government Funding and Finance. The report recommended that “Better use of existing tools and central government funds should be enough to close the tourism funding shortfall. Given the small scale of the funding gap, introducing new funding tools would incur significant implementation, administration and enforcement costs and is unlikely to result in a net benefit to councils.”

12. We endorse those sentiments – rather than introducing new tools that target specific sectors, councils should make better use of existing tools to achieve their goals.

13. Hospitality NZ believes a consistent and fair nationwide approach to the funding of core infrastructure needs to be introduced.

14. Hospitality and accommodation sectors are viewed by local councils as an easy source of funds, via targeted rates on commercial businesses, or implementing bed taxes. We oppose the introduction of bed tax as it targets only those people staying in commercial accommodation.

15. If a targeted rate or visitor levy is deemed necessary, Hospitality NZ believes these must be broad based taxes, and ensure that they are appropriately designed, are fair and equitable to those contributing, have community support, and are used solely for initiatives that benefit the visitor economy. Alternatively, those funds raised must be ring-fenced and used for the benefit of those contributing to the fund. However, Hospitality NZ’s preference would be for any funding of tourism infrastructure to come from a centralised pool.

16. Prior to COVID, tourism was struggling to maintain social license in communities – in part given the infrastructure pressure tourism growth was placing on some regions. We recognise that tourism and hospitality use and benefit from a wide variety of mixed-use infrastructure. We now have a real opportunity to resolve some of these infrastructure issues and prepare for the rebuild of the sector.

17. Targeted rates and ‘tourism’ or ‘bed taxes’ concern us

- These unfairly place the burden of funding infrastructure or promotion on just one part of the tourism/hospitality industry;
- As ratepayers, businesses oppose increased rates to fund basic infrastructure they may not receive a direct benefit from i.e., infrastructure for freedom campers;
- We would prefer to see Central Government funding of infrastructure, where local councils are unable to fund it themselves; and

- If new funding schemes are required, there needs to be an emphasis on broad-based levying. They need to be fair and equitable and all businesses who will benefit from further infrastructure development should contribute.

Tutukaka Specific

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-

1) Retain the purchase of the Tutukaka Trailer park,

This is the most important and urgent issue for Tutukaka with long term ramifications.

Either Tutukaka will remain one of our District and Region's foremost Tourism attractions (for both international and domestic markets) or it will be capped through lack of car parking.

The opportunity to purchase the last flat land to deal with the growing demand of parking (that is now done on the Village Green) will **not** come back.

The opportunities for the community to stage events in Tutukaka (Winery tour, sporting events, family time, weddings, open green space, events, markets etc) has been eroded with the demand of car-trailer parking.

The widening of the boat ramp has been **so successful** that the village green has now been "relegated" to car-parking for 5 months of the year, with numerous days an overflow throughout the township and onto the main road.

-

2) Refuse station opening hours

The change in opening hours of the refuse station on the Tutukaka Coast has seen a noted increase in dumped rubbish.

Outside the refuse station we see the dumping of bags of rubbish, furniture, televisions, mattresses, etc.

Previously these items were an "income" for WDC, now they are an added burden.

Some people see the closing hours as an opportunity to discard their refuse without having to pay...

Bags get ripped open, rats and other vermin feed on this opportunity, at the same time that locals try to create a "Kiwi friendly" environment.

The roadsides have become more polluted, all in all the experience from locals and visitors driving on our coast is marred by this experience..

Ultimately this will all end up in the Ocean, not acceptable.

The immediate return to the previous time table of the refuse station in Ngunguru.

Thank you for your consideration

Nick Keene

Nick Keene, 09 4343774, 027 2227757

Schnappa Rock, Tutukaka

Wahi At Oceans

National Vice President, Hospitality NZ.



From: Whangarei District Council
Sent: 25 Mar 2021 04:52:06 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Michael Kelly - 2021-LTP-SUB-188

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Long Term Plan 2021-2031 Feedback - Michael Kelly - 2021-LTP-SUB-188

Receipt Number: 2021-LTP-SUB-188

Your details:

Name:	Michael Kelly
I am making this submission as:	As an individual
Organisation name:	
Postal address:	11B Magnolia Ave Kamo
Best phone number:	0212139713
Email:	mixelkelly@gmail.com

Hearing:

Do you wish to be heard	No
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North).
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

From: Whangarei District Council
Sent: 15 Mar 2021 07:15:15 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Brady Kerewaro - 2021-LTP-SUB-60

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.



Long Term Plan 2021-2031 Feedback - Brady Kerewaro - 2021-LTP-SUB-60

Receipt Number: 2021-LTP-SUB-60

Your details:

Name:	Brady Kerewaro
I am making this submission as:	As an individual
Organisation name:	
Postal address:	9 Grey Street Regent Whangārei 0112
Best phone number:	0211391672
Email:	bradykerewaro@gmail.com

Hearing:

Do you wish to be heard at the hearing?	No
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	Without money we can't do what needs to be done in our region

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North).
Why?	The more available the better for us all

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	We need to figure out new ways to manage the whole city's waste streams. We have a problem currently that needs new ideas

Key issue - Revitalising our city centre (see page 28)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
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32)	
Why?	These are prime spots and need to be updated. Intensifying the city's housing along with spaces for people to be at home is a priority that this city needs to have.

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

I have an idea for developing the inner city.

Laurie Hall carpark is a black hole.

Redesign it to be the town square, where markets can be held, celebrations can happen, city workers can eat their lunch, people can make some noise, performances can happen.

To extend the idea Laurie hall carpark could have all the facilities built in so that food trucks and stalls could set up to create an atmosphere in the city for food. It could become known cheap and tasty food. An example of this is in Portland, Oregon.

Currently it is a black hole during the day and night. Car parks are no fun and it has an unsafe feeling during the night. When there is more activity and people then people feel more safe.

LONG TERM PLAN 2021-31 FEEDBACK FORM

**THE CLOSING DATE FOR FEEDBACK IS
THURSDAY 1 APRIL 2021**

We would love your feedback on some key issues for our District.

POINTS TO REMEMBER WHEN SUBMITTING YOUR FEEDBACK

- Please print clearly. Make sure it can be easily photocopied, read and understood.
- All feedback is considered public under the Local Government Official Information and Meetings Act, so it may be published and made available to elected members and the public.
- Your feedback will not be returned to you once lodged with Council. Please keep a copy for your reference.
- You can also attend a hearing, scheduled for 13-14 April, to speak to your submission.

HOW TO GET THIS FORM TO US

Mail to: Long Term Plan feedback, Whangarei District Council, Private Bag 9023, Whangarei 0148

Email to: mailroom@wdc.govt.nz

Deliver to: Customer Services, Forum North, Rust Ave, Whangarei or Ruakākā Service Centre, Takutai Place, Ruakākā

YOUR DETAILS

Name Lynette Kerr

I am making this submission as: ☒ An individual ☐ On behalf of an organisation

Organisation name _____

Postal address _____

Best number to contact you on 021 029 539 11

Email Pinzel17@gmail.com

Do you wish to be heard in support of your submission at a traditional hearing on 13-14 April? ☐ Yes ☒ No

YOUR FEEDBACK

Please give us your feedback on the key issues raised in the Consultation Document.

KEY ISSUE - HOW WILL WE PAY FOR WHAT WE NEED - RATES OPTIONS (SEE PAGE 17)

- ☒ **OPTION 1:** Rates increase in year one (2021-22) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'.
Rates increase in years two to ten (2022-31) of 2% + 2.5% LGCI.
- ☐ **OPTION 2:** Limit the rates increase to LGCI plus 2% only across ten years of the Plan

WHY?

To fund ongoing operational costs. Debt is cheap now, best to use it sensibly and build/improve assets for the enjoyment of the ratepayers.

KEY ISSUE - SPACES FOR GATHERING (SEE PAGE 24)

- ☒ **OPTION 1:** Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, and existing facilities at Forum North).
- ☐ **OPTION 2:** Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hihiaua Cultural Centre, or existing facilities at Forum North. Please state which site in your comments.
- ☐ **OPTION 3:** Build a Whangarei District Council-owned theatre on the current Forum North site.

WHY?

All 3 projects will bring joy to ratepayers and money making opportunities to local business.

KEY ISSUE - CLIMATE CHANGE AND SUSTAINABILITY (SEE PAGE 28)

- ☐ **OPTION 1:** Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
- ☒ **OPTION 2:** Put \$7.4 of new funding towards climate change mitigation and adaptation and waste minimisation.
- ☐ **OPTION 3:** No new funding towards climate change or waste minimisation.

WHY?

It's important!

Waste minimisation is crucial for
our planet.

KEY ISSUE - REVITALISING OUR CITY CENTRE (SEE PAGE 32)

- ☒ **OPTION 1:** Spend \$13m to make improvements to James Street and John Street.
- ☐ **OPTION 2:** Spend \$21m to make improvements to James Street and John Street as well as either Robert Street or Cameron Street.
- ☐ **OPTION 3:** No additional funding for the City Centre.

WHY?

It seems like enough to focus on this
area at this stage

TELL US WHAT YOU THINK - ANY FURTHER COMMENTS ON THE KEY ISSUES OR OTHER POINTS RAISED IN THE CONSULTATION DOCUMENT

Oranau site is currently wasting away, it's an eye sore
on The Loop. Developing it will link the lake car park
to central city, encourage walk/cycle and community
use of what is becoming a beautiful outdoor
experience!

SharePoint document links:

 [Image-2 \(2\)](#)  [Image \(2\)](#)  [Image-1](#)

From: lynnette K
Sent: 27 Mar 2021 14:50:17 +1300
To: Mail Room
Subject: Long term plan 2021-31 feedback
Attachments: tmp1561.tmp.gif, tmp19E5.tmp.gif

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Kia ora

Attached the above feedback form.

Thanks for the Family Fun day today (Sat 27th). Free 'anything' is much appreciated by families, the queues were long as this was a well patronised event. The new skate park looks great, very busy.

Kia tino pai tō rā - *have a great day*
Lyn

From: Whangarei District Council
Sent: 2 Mar 2021 02:01:45 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - John Keswick - 2021-LTP-SUB-10

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Long Term Plan 2021-2031 Feedback - John Keswick - 2021-LTP-SUB-10

Receipt Number: 2021-LTP-SUB-10

Your details:

Name:	John Keswick
I am making this submission as:	As an individual
Organisation name:	
Postal address:	87 Mill Road
Best phone number:	0211184496
Email:	john.keswick@gmail.com

Hearing:

Do you wish to be heard	No
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihihua Cultural Centre, and existing facilities at Forum North).
Why?	We can still replace forum north later

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

I would like to know more about the future sports hub, water treatment plant in Poroti, taking

water from the wairua and a possible dam

From: Whangarei District Council
Sent: 7 Mar 2021 23:47:37 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Jade Keswick - 2021-LTP-SUB-25

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Long Term Plan 2021-2031 Feedback - Jade Keswick - 2021-LTP-SUB-25

Receipt Number: 2021-LTP-SUB-25

Your details:

Name:	Jade Keswick
I am making this submission as:	As an individual
Organisation name:	
Postal address:	87 Mill Road, Kensington
Best phone number:	0277050328
Email:	jade.keswick@gmail.com

Hearing:

Do you wish to be heard	No
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	Whangarei's rates are quite low and definitely need to play catch up to pay for all the services and improvements that the district is getting

Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hihihua Cultural Centre, and existing facilities at Forum North.
Why?	The running costs for these are exceptionally high. I'm not too keen on so much public money to be devoted into three of these in such a small timeframe. It would be prudent to do one and see how well it is utilized and whether it can prevent running cost blow outs before signing up for a second or third

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	We need to act on climate change now to make a difference

Key issue - Revitalising our city centre (see page 32)	OPTION 1: Spend \$13m to make improvements to James and John St.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

From: Jeanette King
Sent: 1 Apr 2021 16:39:24 +1300
To: Mail Room
Subject: Long Term Plan Submission

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Please deliver to Customer Services, Forum North, Whangarei.

Name: MR PHILIP AND MRS. JEANETTE KING
228 Nook Road, RD4, Whangarei
Tel: 09 436 4027
Email: kings@xnet.co.nz

1. KEY ISSUE - RATES OPTIONS

We support option 2 - Limit the rates increase to LGCI plus 2% only across ten years of the plan. We do not support the Council's preferred options as it will result in significant increases for ratepayers.

2. BORROWING MORE : We support keeping debt to a minimum.

3. KEY ISSUE - SPACES FOR GATHERING

We support Option 2 to provide \$5m starting in year 2 of the LTP to HIHIAUA Cultural Centre to support its continued development as a community landing space and a unique Maori Arts and Cultural excellence. we support a more cautious approach with a focus on investing in existing assets, improving infrastructure and **not** increasing debt.

4. KEY ISSUE - CLIMATE CHANGE AND SUSTAINABILITY

We support option 2 to provide funding \$740k per annum over 10 years towards climate change and waste minimisation. As outlined in the LTP, sea level rise, drought and flooding are all important issues that could have significant social, economic and environmental impacts on the Whangarei Heads residents, community and district. It is important to outline what percentage of \$740 will be spent on Climate Change and what will be spent on Waste Minimisation.

5. KEY ISSUE - REVITALISING CITY CENTRE

We support Option 3 - no additional funding for the city centre as this would increase debt by \$13m.

6. KEY ISSUE - CYCLEWAYS AND SHARED PATHWAYS

We support the allocation of funds for the improvement of cycleways.

7. KEY ISSUE - RIVERSIDE DRIVE/ONERAHI ROAD

We have not been involved in any community consultation regarding the upgrade of the existing road or an alternative bypass. Therefore we request that this should be done prior to making a decision or starting this work.

8. KEY ISSUE - NORTHLAND EVENTS CENTRE

We support the the upgrade of existing infrastructure rather than borrowing more at this time, but would request additional information on the proposed new Trust/structure and expected revenue relating to this facility.

9. KEY ISSUE - COMBINING THE UNIFORM ANNUAL GENERAL CHARGE AND DISTRICT WIDE REFUSE RATE

We do not support combining the Uniform Annual General Charge and District Wide Refuse Rate. It is important to maintain transparency for Ratepayers so that they can see exactly what they are being charged for.

Whangarei District Council (WDC) Long Term Plan 2021-31

Subject: Feedback.

Name: (Dr) Mere Kepa, Chair.

Organisation: Kopuawaiwaha 2B2 Trust

E-mail: tkep001@gmail.com

Deadline: Thursday, 1 April 2021.

Contact: mailroom@wdc.govt.nz

Climate change - which initiatives shall WDC fund?

Behind the COVID-19 pandemic lurks the climate crisis and the wholesale destruction of habitats, making it easier for infectious diseases to jump the species barrier. At present, a sense of shared purpose, care for others, and a trust in scientific approaches *and* Mātauranga Māori are vital to dealing with these existential challenges, and to restore a planet that is habitable for humanity.

The Council should fund landscapes that enhance food security which in turn means greater social stability; when people know how, why, and where to grow their own food, they don't need to migrate to large cities where they may not be able to find a home and employment.

The Council should promote restoration efforts that require processes and systems that lead to enhanced humanity, increased biodiversity, increased biomass, and increased soil organic matter.

Transport congestion is going to get worse and with it the quality of the air we breathe. The Mayoral Declaration on Climate Change commits a council to promoting walking, cycling, and public transport, to improving energy efficiency and supporting renewable electricity and electric cars.

Tax incentives, a district database of native species, monitoring and increased funding for pest control and the potentially contentious focus on forcing a council to identify "significant natural areas" on public and private land are among a suite of measures that might promote climate action and the restoration of the planet. The collateral benefits of council's encouragement and support for these actions would be breathable air, cleaner water, beautiful Native forests, and healthier animals and people.

Rating options - how shall we pay for what we need?

The rhetoric that the Māori population is a "problem", or "burden" or "drain" or even a "crisis" is pervasive and contributes to negative attitudes to the Tangata Whenua. Council has to move faster on reforming rating options for Māori owners of shared ancestral land. Māori are sick and tired of being picked on by the imperial wisdom that our land is waste land, therefore, ripe for taking by Crown agencies such as council.

Te Karearea should pick up the wero offered by the rating options and co-design a new system for Māori owners of ancestral land to end our cultural and economic devastation. The challenge to Te Karearea is to use their ability to harness change for the better for the district's Māori land owning ratepayers.

Māori need calm, intelligent, trustworthy leadership, focused on the future and the collective survival of Whangarei District. Get 'foiling'!

Revitalisation of our city centre - changes to James Street and John Street.
funding for event facilities - where to allocate this budget?

Arts-related skills are being recognised in employment discourse around the world. It is a welcome and much-needed turnaround from recent perceptions that an arts education is irrelevant. Nothing could ever have been further from the truth! Arts faculties all over the world are preparing a workforce with skills and knowledge to slot into so many sectors and industries.

An arts graduate who has studied historical transformations like the industrial revolution, the technological revolution we are going through now or the dot.com boom of the 90s, can use that knowledge to analyse where the world may be heading. Their knowledge of the past will help them identify industry disrupters of the future, question what they see, look at the effect they have and use this thinking to predict what the world of work might look like decades ahead.

Historical knowledge is hugely relevant in the wider picture too. We are seeing evidence that many young people don't know about recent events like 9/11, or what happened in the Vietnam war. These world-changing major events that were part of upbringing for older generations are in danger of being forgotten, But history, as we know, repeats itself so we need people who have studied history, understand the past and can use that knowledge to analyse current situations, problem-solve and guide.

Then there is communication. This is a skill fundamental to most arts subjects and always relevant to the working world. We will always need effective communicators who can write and speak to persuade, advocate, articulate ideas, vision, and lead. And in our current world of information overload, precise and accurate messaging has never been more crucial, from day-to-day communication through to academic research. (Source: 30 APRIL 2019. Professor Robert Greenberg is Dean of Arts at the University of Auckland. IDEASROOM, *Robots won't replace all that makes us human*).

People with art, history, and communication are key to the proposed changes to James and John Streets, and funding for event facilities.

Mere Kepa.



18 March, 2021.

From: Mere Kepa
Sent: 18 Mar 2021 06:37:15 +1300
To: Mail Room
Cc: Rina Rata;Paddy Walker;Marina Fletcher;Mira Norris;Margi Kay;Jared Pitman;Heidi Pirihi
Subject: WDC LTPlan submission from Kopuawaiwaha 2B2 Trust.
Attachments: tmp80B9.tmp.gif

SharePoint document links:



[WDC SUBMISSION APRIL 2021](#)

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fyi attached.
Noho ora mai na Mere

Suspiro ergo sum, I sigh, therefore I am.
A sigh isn't just a sigh. We inhale the world and breathe out our meaning.
While we can. While we can.

From: Whangarei District Council
Sent: 6 Mar 2021 04:35:54 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Oliver Krollmann - 2021-LTP-SUB-22

EXTERNAL: This email originated from outside Whangarei District Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.



Long Term Plan 2021-2031 Feedback - Oliver Krollmann - 2021-LTP-SUB-22

Receipt Number: 2021-LTP-SUB-22

Your details:

Name:	Oliver Krollmann
I am making this submission as:	As an individual
Organisation name:	
Postal address:	17 Wai Place, One Tree Point 0118
Best phone number:	0210378967
Email:	olli.krollmann@live.com

Hearing:

Do you wish to be heard	Yes
-------------------------	-----

at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 1: Rates increase in year one (2021) of 2% + 2.5% Local Government Cost Index (LGCI) + 2% 'catch up'. Rates increase in years two and three (2022-23) of 2% + 2.5% LGCI.
Why?	I'm happy to support option 1. However, to enable additional capital investment, better levels of service, and improved preparedness for climate change mitigation and adaptation I would like to propose a higher rates increase of 12% total in 2021-22 and 10% total per annum in years 2022-2031. Most property owners, including me, have profited immensely from large increases of our property values in recent years. Having to pay \$3 or \$5 or even \$10 per week more in rates when my home makes \$400 in tax-free capital gain every week is nothing I should ever complain about, and if I did and pretended that this was a burden or even unaffordable, it would be implausible, disrespectful and outright greedy.

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hihihua Cultural Centre, and existing facilities at Forum North).
Why?	I'm happy to support option 1. The \$60m government grant for Oruku is an opportunity that is too good to miss out on, both Oruku and Hihītaua will tie in nicely with the Waterfront Precinct Plan, and upgrading Forum North will make the best of the existing facilities.

Key issue - Climate change and sustainability (see page 28)	OPTION 2: Put \$7.4m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	I strongly support option 2. In fact, I'd rather see a much larger investment of around \$15m to \$20m, to enable more decisive and early action, funded by a higher rates increase as suggested earlier. I'd also like to repeat my earlier suggestion to establish a Climate Emergency Action Advisory Group, first presented to Council in February 2020.

Key issue - Revitalising our city centre (see page 32)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
Why?	I'm happy to support option 2, including the required rates increase. Again, I'd like to suggest to go even further and extend the improvements to the triangle inside Bank St, Walton St and Dent St, include connections to the Forum North / Civic Centre precinct and the Town Basin, and reroute all vehicle traffic (excluding public transport and delivery services) out of and around this extended area. We have to give up our obsession with wanting to drive everywhere and park 20m from the front door - this isn't our future anymore. As stated in the Climate Change Commission's Advice Report, section 6.2.2, we have to actively support behaviour change to support climate action, by creating an enabling environment that prompts people to make the right choices by default. Also, as the tsunami evacuation on 5-Mar 2021 showed, it's not a good strategy to allow a large number of cars inside a CBD that's at risk of flooding.

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

With regards to One Tree Point, where I live, I'd like to ask you to include work items in the infrastructure plan to finish the LED light upgrade (some of the taller streetlights still have orange vapour lights), complete missing footpath segments inside the Kowi Lakes subdivision (Wai PI and Kamahi PI) and connect it to Plover St with additional footpaths through the swale drains. Also, there is currently no safe walking or cycling connection between One Tree Point and the Ruakākā Town Centre, so delivering a shared path between these, physically separate from existing roads, should be prioritised when addressing alternative transportation in Bream Bay.

The LTP does not include a strategy for organic waste. Please consider an organic waste collection scheme and processing facility (like a composting plant, or cooperation with existing providers like Garden Waste Solutions in Onerahi), to divert from landfill and reduce biogenic methane.

Planning work on a new regional airport should be suspended, given the uncertainty and likely changes to air travel caused by the pandemic, climate change and a fresh approach to tourism. Any funding should be reallocated to upgrade the existing airport at Onerahi to an R&D, education and training facility for low-emissions air travel solutions, like air taxis and VTOL aircraft, and a Northland hub for such air travel, both of which won't require an airport extension or relocation.

A cat bylaw is sorely needed. I've wasted close to \$1,000 on unsuccessful solutions (like odour granules or audio devices) to deter neighbours' cats from defecating in my garden, and I'm over it.

One final suggestion: Please don't listen too much to the public, particularly not the small but vociferous bunch of naysayers and past-as-future advocates. Please show leadership and educate the public, do try new things, don't try to please everyone, don't be afraid to make mistakes, and do ask for help where needed.

From: Whangarei District Council
Sent: 10 Mar 2021 01:58:57 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Mike Langwell - 2021-LTP-SUB-35

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Long Term Plan 2021-2031 Feedback - Mike Langwell - 2021-LTP-SUB-35

Receipt Number: 2021-LTP-SUB-35

Your details:

Name:	Mike Langwell
I am making this submission as:	As an individual
Organisation name:	
Postal address:	72 Stace Hopper Drive One Tree Point 0118
Best phone number:	
Email:	

Hearing:

Do you wish to be heard at the hearing?	No
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	What the councillors have proposed putting money towards (new theatre in town, \$7m per year maintenance bill for middle of town renewal projects) I think is ridiculous. We should not have to pay extra for silly spending like this. Spend money on things that matter to the people of the greater Whangarei area, like sport complexes and activity zones, public safety in more isolated areas.
Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hīhītaua Cultural Centre, and existing facilities at Forum North.
Why?	We do not need a new theatre, there is already a theatre that is under utilized, and every time I have been there attendance is low. That should show you that it is not needed.
Key issue - Climate change and sustainability (see page 28)	OPTION 3: No new funding towards climate change or waste minimisation.
Why?	Not needed when there are bigger issues facing Whangarei in the next 10 years, that seem to have been left out of the LTP.

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	AGAIN NOT NEEDED, these are "nice to haves" not "needs"

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

The lack of funding towards sports and activity is alarming. I attended the Ruakaka Public Meeting about the Ruakaka Sports Complex, in which EVERYONE was supportive of the idea and vision that was cast. Unfortunately it didnt seem important enough to WDC to send people to, as there was only 1 WDC staff member there. The LTP is not reflective of the community, and the communities interests, it seems the councillors want vanity projects to hang thier hats on, not actually do what the public wants.

Ruakaka Sport Complex is a NEED

Expansion of McKay Stadium to be a 7 court stadium is a NEED

Vanity projects like the mid town revitalaization project is a waste of money, and will be a sunken cost, much like it was in Birkenhead, Albany town centre, Orewa and Manukau.

From: Whangarei District Council
Sent: 24 Mar 2021 08:57:14 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Latisha - 2021-LTP-SUB-163

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Long Term Plan 2021-2031 Feedback - Latisha - 2021-LTP-SUB-163

Receipt Number: 2021-LTP-SUB-163

Your details:

Name:	Latisha
I am making this submission as:	As an individual
Organisation name:	
Postal address:	First ave
Best phone number:	0210493341
Email:	l.slade@live.com

Hearing:

Do you wish to be heard	Yes
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	Because we didn't want these buildings here! Thank you

Key issue - Spaces for gathering (see page 24)	
Why?	None of them

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	Take advantage of the small businesses in this town and make the council owned buildings in town available and accessible by having cheaper lease. Build the community instead of making it look so bare and dead any more.

Tell us what you think - any further comments on key issues or other points

raised in the Consultation document:

Hundervasser was a waste of money. Doesn't make sense since that council supports pedophiles.

From: Whangarei District Council
Sent: 10 Mar 2021 05:47:46 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Arlene Lattimer - 2021-LTP-SUB-37

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Long Term Plan 2021-2031 Feedback - Arlene Lattimer - 2021-LTP-SUB-37

Receipt Number: 2021-LTP-SUB-37

Your details:

Name:	Arlene Lattimer
I am making this submission as:	As an individual
Organisation name:	
Postal address:	2 Manawa Drive, RD3, Whangarei 0173
Best phone number:	0272331164
Email:	arlenelattimer@yahoo.com

Hearing:

Do you wish to be heard	No
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at the hearing?	
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Your feedback:

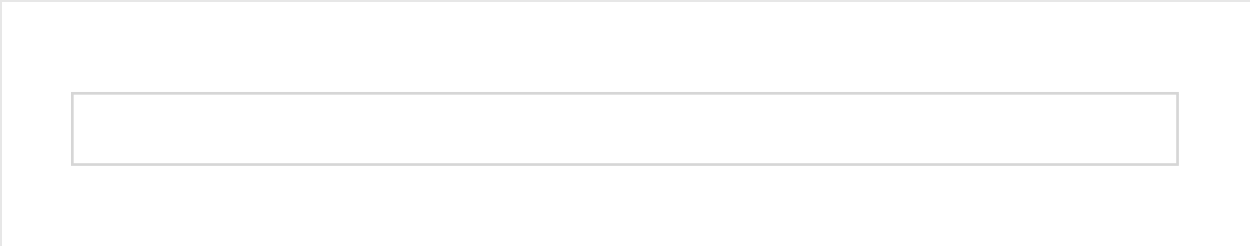
Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	The increase should be no more than 1%. We pay too much as it is.

Key issue - Spaces for gathering (see page 24)	OPTION 1: Allocate budget across three sites (Oruku Landing Conference and Events Centre, Hīhīaua Cultural Centre, and existing facilities at Forum North).
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 2: Spend \$21m to make improvements to James and John St as well as either Robert St or Cameron Street.
Why?	

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:



From: Whangarei District Council
Sent: 9 Mar 2021 10:52:20 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Alex Lattimer - 2021-LTP-SUB-31

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Long Term Plan 2021-2031 Feedback - Alex Lattimer - 2021-LTP-SUB-31

Receipt Number: 2021-LTP-SUB-31

Your details:

Name:	Alex Lattimer
I am making this submission as:	As an individual
Organisation name:	
Postal address:	2 Manawa Drive
Best phone number:	021557959
Email:	alex.s.lattimer@gmail.com

Hearing:

Do you wish to be heard	No
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at the hearing?	
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	<p>Last year I got made redundant due to Covid-19 like a lot of other people.</p> <p>I was one of the lucky people who found another job, but at a reduced income.</p> <p>A rate increase of 6.5% would be a hard burden on a great many people, including renters as landlords pass on the rate increase to them.</p> <p>To be honest any increase should be no more than 1%.</p> <p>There are things on your plan that are not essential, but just follies of the wealthy.</p> <p>Also, why doesn't the council consider tightening its belt.</p> <p>Everyone else has had to.</p>

Key issue - Spaces for gathering (see page 24)	OPTION 3: Build a Whangarei District Council-owned theatre on the current Forum North site.
Why?	

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	

Key issue - Revitalising our city centre (see page 32)	OPTION 1: Spend \$13m to make improvements to James and John St.
Why?	The CBD needs more parking. The reduced parking is killing the cbd.

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

Why do you constantly repair the same stretches of roads every year or two.
Is it not time to bring in someone who will do a better job and make it last longer.

From: Whangarei District Council
Sent: 31 Mar 2021 17:33:33 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Jennifer Lawrence - 2021-LTP-SUB-394

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Long Term Plan 2021-2031 Feedback - Jennifer Lawrence - 2021-LTP-SUB-394

Receipt Number: 2021-LTP-SUB-394

Your details:

Name:	Jennifer Lawrence
I am making this submission as:	As an individual
Organisation name:	
Postal address:	1935 Whangarei Heads Road RD 4
Best phone number:	0211649992
Email:	lawrence.jennmarc@gmail.com

Hearing:

Do you wish to be heard at the hearing?	No
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
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Why?	The reason why, is that New Zealand is in an economic downturn and many people have taken reductions in pay or lost their jobs. Now is not a time to increase or try to "catch up".
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Key issue - Spaces for gathering (see page 24)	OPTION 2: Put budget towards only ONE of the following: Oruku Landing Conference and Events Centre, Hīhītaua Cultural Centre, and existing facilities at Forum North.
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Why?	There are already several major projects underway in Whangarei. Now is not the time to take on more. I actually would be in favour of no new spending. Let's see what the financial implications are of completing the projects currently underway. Definitely no, to a new conference centre.
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Key issue - Climate change and sustainability (see page 28)	OPTION 3: No new funding towards climate change or waste minimisation.
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Why?	Out in Whangarei Heads, the citizens association has been working toward a resource recovery centre. Once this goes ahead, it could be a model for other communities to help minimize waste. I believe central government has increased the
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	<p>waste minimization levy so I am not in favour of additional spending.</p> <p>Council is mis guided when it comes to climate change. This is not an issue that should come under local councils agenda.</p> <p>Council should be spending ratepayers money on infrastructure like roads and footpaths, playgrounds, storm water etc.</p>
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Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	<p>The city centre has had money spent in the wrong places so apparently council is more interested in building new stuff than maintaining what is already in place. This has been an issue for many years. Clean up the city centre.....it looks grubby.</p> <p>Continue with attractive gardens and planting. Give an hour free parking. Link the town marina with the city centre with a simple pathway indicator like they use at the airport to guide people there.</p>

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

Don't keep pushing debt. I was shocked to read the debt levels council is prepared to put onto Whangarei. Once the projects that are currently underway are complete, focus on cleaning up the place and give the new projects a break or we will end up with a few nice places settled amidst a tired looking CBD. And what about the rest of the district? This is the Whangarei District Council not the Whangarei City Council.

Footpaths and roads in the district are terrible. A goal is a safe district, but now it is not safe. Footpaths have trip hazards and berm growth all over them...remind residents that the footpath in front of their home needs to be kept clear, but ensure broken and damaged areas are repaired. The same for roads and PLEASE lower the speed limit on Whangarei

Heads Road to 80km/he.

From: Whangarei District Council
Sent: 13 Mar 2021 23:32:51 +0000
To: Mail Room
Subject: Long Term Plan 2021-2031 Feedback - Lawrence. William Basil - 2021-LTP-SUB-48

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Long Term Plan 2021-2031 Feedback - Lawrence. William Basil - 2021-LTP-SUB-48

Receipt Number: 2021-LTP-SUB-48

Your details:

Name:	Lawrence. William Basil
I am making this submission as:	As an individual
Organisation name:	
Postal address:	11 Clotworthy Crescent
Best phone number:	0274926187
Email:	marandbil@xtra.co.nz

Hearing:

Do you wish to be heard at the hearing?	No
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Your feedback:

Key issue - How will we pay for what we need - Rates Options (see page 17)	OPTION 2: Limit the rates increase to LGCI plus 2% only in years one to three
Why?	Finnish the project and capex projects before starting new ones

Key issue - Spaces for gathering (see page 24)	
Why?	Don't NEED Any of those, just nice to have

Key issue - Climate change and sustainability (see page 28)	OPTION 1: Put \$3.7m of new funding towards climate change mitigation and adaptation and waste minimisation.
Why?	We are a part of the problem

Key issue - Revitalising our city centre (see page 32)	OPTION 3: No additional funding for the city centre.
Why?	The area is past its use by

Tell us what you think - any further comments on key issues or other points raised in the Consultation document:

Because excessive building consents issued for Whangarei Heads area Onerahi is in gridlock at times

Move the planned bypass forward