Infrastructure and Services Committee

Creating the ultimate living environment

WHANGAREI DISTRICT COUNCIL

Notice of Meeting

A meeting of the Infrastructure and Services Committee will be held in the Council Chambers & Committee Room 1, Forum North, Whangarei on:

Wednesday 14 July 2010 10.00 am

Committee:
Cr C B Christie (Chairperson)
His Worship the Mayor
Cr V P D Cocurullo
Cr S M Glen
Cr P R Halse
Cr G M Martin
Cr B L Mclachlan
Cr S L Morgan
Cr K J Sutherland
Cr W L Syers

Vision Statement

To be a vibrant, attractive and thriving District by developing sustainable lifestyles based around our unique environment; the envy of New Zealand and recognised world wide.

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

1. Minutes: Infrastructure and Services Committee Wednesday 9 June 2010

Minutes of a meeting of the Infrastructure and Services Committee of the Whangarei District Council held in the Council Chamber Forum North on Wednesday 9 June 2010 at 10.01 am.

Present:
Cr C B Christie (Chairperson)

His Worship the Mayor, Crs V P D Cocurullo, S M Glen, G M Martin, B L Mclachlan, S L Morgan, K J Sutherland and W L Syers

Apology:
Cr P R Halse

Moved: Cr Martin
Seconded: Cr Syers

"That the apology be sustained."

CARRIED

Also Present:
Crs S J Deeming, S L Mai and M R Williams (10.03 am)

In Attendance:
Chief Executive Officer (M P Simpson), Roading Manager (G Devine), Waste and Drainage Manager (G Oldcorn), Solid Waste Engineer (J Langsford), Executive Assistant (F Watson), Councillor Support (J Benyon) and Senior Meeting Co-ordinator (C Brindle)

1. Confirmation of Minutes of a Meeting of the Infrastructure and Services Committee held on 12 May 2010

Moved: Cr Glen
Seconded: Cr Sutherland

"That the minutes of the meeting of the Infrastructure and Services Committee held on 12 May 2010, having been circulated, be taken as read and now confirmed and adopted as a true and correct record of proceedings of that meeting."

CARRIED

Cr Williams joined the meeting at 10.03 am during Item 1.

2. Applications – Waste Minimisation Fund

Moved: Cr Morgan
Seconded: Cr Sutherland

"1. That the information be received.

2. That the applications to the Waste Minimisation Fund made by the Waste and Drainage Department be endorsed.

3. That should council applications succeed at Stage 1 of the selection process, they be approved to Stage 2."

CARRIED

3. Tender Spedding Road Extension – CON09065

Moved: Cr Mclachlan
Seconded: Cr Sutherland

"1. That the contract for Spedding Road Extension – Design and Construction (CON09065) be awarded to Downer EDI Works Ltd for the conforming tendered sum of $2,902,100.82 (Two Million, Nine Hundred and Two Thousand, One Hundred Dollars and Eighty Two Cents) excluding GST.

2. That additional funding be allocated for this project from the Council's 2010/2010 Bridge Replacement budget.

3. That additional NZTA funding be sought for this project."

CARRIED

His Worship the Mayor declared a potential conflict of interest and withdrew from the table taking no part in discussions or voting on this item.

The meeting closed at 10.16 am

Confirmed this 14th day of July 2010

C B Christie (Chairperson)

2. Contract 07041 - Parking Meter Maintenance Under Delegated Authority

Reporting Officer: Michael Batchelor (Roading Maintenance Engineer)

Date: 2 June 2010

Vision Mission and Values

This item is in accord with council's Mission, Vision and Values statement as it supports sustainable land use management and transportation, providing a quality environment and protecting those assets that contribute to community health and well-being.

Local Government Act 2002 – The Four Well-Beings

Cultural:	*This item has no impact on cultural significance.*
Economic:	*This item considers the appropriate use of public funds.*
Environmental:	*This item has no effect on environmental issues.*
Social:	*This item considers the needs of the individual against the need to be fair and equitable for the whole community.*

The following contract was authorised under the delegated authority.

ROADING

CONTRACT 07041
Parking Meter Maintenance

The Parking Meter Maintenance Contract is a service contract for the routine inspection, maintenance, new installations and auditing of pay and display units and parking meters in the Whangarei City area. The contract was awarded to Steelcom Electronics Ltd commencing on 1 August 2007 for a three-year period for the tender sum of $274,341.00 (excluding GST).

Provision has been made in the contract to extend the contract for a further two-year period, dependant on the Contractor's performance. The initial three-year period expires on 31 July 2010.

Steelcom Electronics Ltd has held this contract for the past ten years and is very familiar with the requirements of the District Council. They have performed to the contract requirements during their previous term and have advised that they wish to have the contract extended for a further two years.
The contract does not allow for the tendered schedule of rates in the contract to be adjusted for cost increases and this has not been requested by the contractor.

Financial
The annual budget for this work is $123,000.00

Recommendation

That the information be received.

3. Hatea River Bulk Water Main

Reporting Officer: Andrew Venmore (Water Manager)
Date: 14 July 2010

Vision, Mission and Values

To improve the reliability of the raw water supply to the Whangarei Water Supply area

Local Government Act 2002 – The Four Well-Beings

Cultural:	*No direct link.*
Economic:	*This item has no overall impact on LTCCP budgets but does involve moving projects between years.*
Environmental:	*This item assists with the effective management of existing water sources.*
Social:	*This item will reduce the likelihood of water restrictions in the future.*

Introduction

The summer of 2010 was the driest since Water Services' records began. The Whau Valley dam level dropped to 44%, the lowest level since the 1991 drought. The water level in the dam at the end of April was close to an all time low for the month. Water restrictions were imposed in mid April but were lifted again a month later after above average rainfall in May. One method that has been identified to reduce the likelihood of restrictions being imposed as early in the future is the upgrading of the Hatea River bulk water main. This agenda item recommends that the upgrade of this main be brought forward one year so work may start immediately.

Background

During extended dry spells, Water Services' staff change the operational priorities of the City's water supplies to maximise run of river sources and conserve the water in the Dam. Whau Valley Dam usually supplies over 60% of the City's water but during the early stages of a drought this can drop to below 30%. As the drought continues and the run of river sources begin to dry up the dam provides a greater percentage of supply. The effective conservation of water in the dam is the key to surviving an extended drought. The two sources, which allow water in the dam to be conserved, are the Poroti Springs and the Hatea River.

The Hatea River water supply was first developed in 1945 when water was pumped from the river directly into the supply network at Mill Road. Following the construction of the Whau Valley, water treatment plant in 1953 the Hatea main was extended to Whau Valley. After the construction of the Whau Valley Dam in 1969, the Hatea River became a backup supply, used mainly during the summer to conserve the dam. The Hatea supply has been used every year to varying degrees, with the exception of 1999.

Whangarei District Council (WDC) currently holds a resource consent to abstract 9000m^3 per day of water from the Hatea. However, due to the age and poor condition of the pipeline only about 4000m^3 per day can be pumped.

Water Main

The bulk water main was installed in 1945 and extended in 1953 using 225mm fibrolite as the pipe material. By the mid 1980's the capacity of the main had become limited to 2,640m^3 per day due to the poor condition of the main. In 1991, the section of the Hatea main between the pump station and Mill Road was replaced with 300mm PVC pipe. This increased the capacity to 4,000m^3 per day; however, the poor condition of the remainder of the pipe means that bursts are a continued risk when operating the Hatea pumps. By upgrading the remainder of the main to 300mm, polyethylene the full 9000m^3 per day allowed within the resource consent could be obtained. The project had been identified and money allocated in the 2011/2012 financial year.

Drought Management

The recent drought has highlighted the importance of the Hatea Bulk Water Main to the water supply of the city. The Hatea River contributed 529,625m^3 during the drought and without this water, the dam level would have dropped to only 20%. However, had the pipeline been able to take the full amount of water available under the resource consent the dam would not have dropped below 50% and restrictions would not have been required. Whilst the dam is now recovering groundwater levels remain low and it is possible that we could get another dry summer next year. It is therefore considered prudent to bring forward the upgrade of the Hatea Bulk Water Main and begin construction as soon as possible.

LTCCP Budgets

The Hatea Bulk Water Main Upgrade is a project in year three of the LTCCP at a value of $1,675,000. Water Services proposed moving the upgrade forward to year two and reorganising other projects so that the total budget remains the same. The proposed changes to the project lists for years two and three are shown below in $000s.

	Current LTCCP		**Proposed Changes**	
	2010/11	2011/12	2010/11	2011/12
Reticulation Renewals	982	1067	150	1899
Mains Replacement	310	320	200	430
Hatea River Bulk Water Main		1675	1675	
Reservoir Rehabilitation Programme	519	403	450	472
Minor Projects Non Specific	124	213	50	287
Water Meter Renewals	414	213	88	539
Whangarei Heads Main Renewal	414		150	264
Total	**2763**	**3891**	**2763**	**3891**

Moving the Hatea River Bulk Water Main project into the 2010/2011 financial year means some projects will be delayed. The majority of these projects are renewals and mains replacements. However, as the work is only being deferred by one year and the overall costs remains the same, Water Services consider this is a sensible step to reduce the possibility of water restrictions next summer.

Recommendation

1. That the construction of the Hatea River Bulk Water Main be moved forward to 2010/2011 financial year.
2. That the changes to the project lists be managed within the current Water Services Budgets.

4. New Road names

Reporting Officer: Ron Jefcoate (Land Records Support Officer)
Date: 28 June 2010

Vision, Mission and Values

This item is in accord with the Council's Mission, Vision, and Values statement as it supports clear and unambiguous property addressing for emergency and utility services, contributing to community safety and well-being.

Local Government Act 2002 – The Four Well-Beings

Cultural:	*Preferred names may reflect the cultural significance of the locality*
Economic:	*No impact*
Environmental:	*Preferred names may reflect the geographical significance of the area*
Social:	*Preferred names may reflect the historical significance of the area*

Applications for the naming of new road

1. Paul Jamieson (Lindau Holdings) RC39102

Two new public roads.

(a) Road A (Local road)

- Riverglen Road

(b) Road B (Local road)

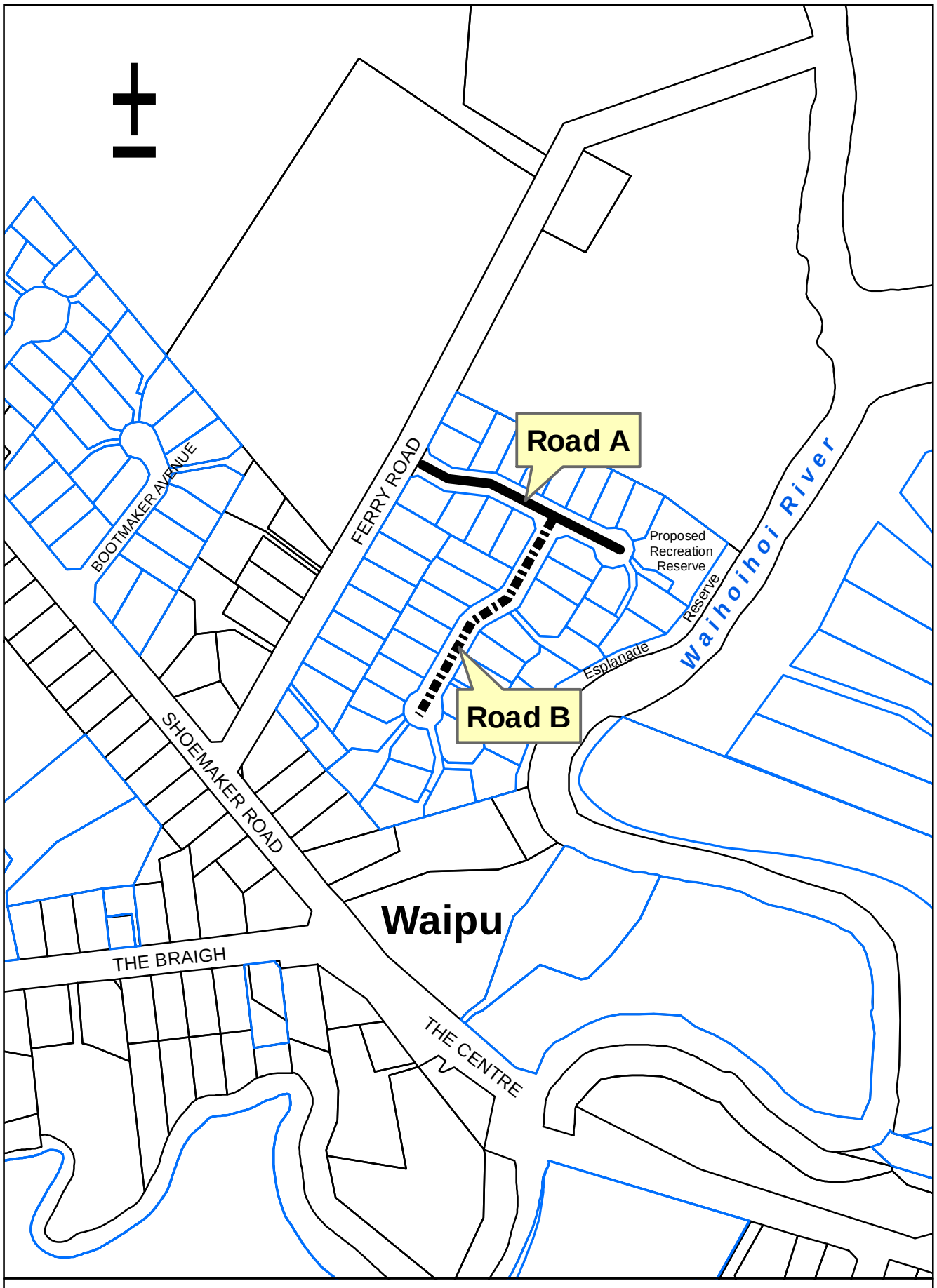
- Celtic Place

Recommendation

1. (a) That the new public road (Road A) off Ferry Rd be named Riverglen Road.
   (b) That the new public road (Road B) be named Celtic Place.

Attachment:

New road name map and application



Roads to be named

RC39102
Lindau Holdings

Public Roads

Application for the naming of new roads

RC39102 – Lindau Holdings
Subdivision at 24 Ferry Road, Waipu

Below is a summary of the road name submissions from the developer in order of preference.

Road No.	Proposed Status of Road (RNP clause 5.4.1)	Proposed Road Name (RNP clause 5.5.2)	Reason & Relevance (Road Naming Policy July 2009 clause 5.4.3)	Accepted or Rejected.	Local Maori consulted & evidence supplied (RNP clause 5.3.2)
A	Local Road to Vest in Council (Lot 47)	**Riverglen Road**	This road will provide public access to the proposed Recreation Reserve and Esplanade Reserve which both back onto the Waihoihoi River. The first part of the name reflects this and the second part reflects the Scottish/Celtic cultural heritage of the Waipu area.	**Accepted.** Reflects the geography and cultural heritage of the area.	Not Applicable
		Riverlea Road	Same reasons as above.	**Accepted.** Same reason as above.	Not Applicable
		Rivervale Road	Same reasons as above.	**Accepted.** Same reason as above.	Not Applicable
B	Local Road to Vest in Council (Lot 49)	**Celtic Place**	This name reflects and recognises the Scottish/Celtic cultural influences evident and applicable to the Waipu area.	**Accepted.** Reflects the cultural heretige of the area.	Not Applicable
		Gaelic Place	Same reason as above.	**Accepted.** Same reason as above.	Not Applicable
		Caledonian Place	Same reason as above.	**Accepted.** Same reason as above.	Not Applicable

Notes: A suitable Scottish/Celtic theme has been established for the subdivision.

Document References: Trim 10/63712 Original road name application (received 18.06.2010).

5. Whangarei City Wastewater Reticulation: Service Level Improvements 2011 - 2019

Reporting Officer: Simon Weston (Group Manager Infrastructure & Services)

Date: 29 June 2010

Local Government Act 2002 – The Four Well-Beings

Cultural: *This item supports cultural values by improving public sewerage facilities.*

Economic: *This item considers the appropriate use of public funds.*

Environmental: *This item provides environmental benefits through providing improved public sewerage facilities.*

Social: *The proposal is equitable and fair for the community.*

The following is a recommended programme of work for service level improvements for the Whangarei City Wastewater Reticulation system for the period 2010 – 2013 and a preliminary programme for long term engineering works for the period 2013 – 2019.

1. Background

In its 2009 – 2019 LTCCP Council committed to undertake capital projects that will improve the level of service provided by the city wastewater system, upgrade the sewerage system and mitigate infiltration and inflow (I/I) effects.

The first stage of this programme was to upgrade the Okara Park pump station to stop wet weather overflows from it and increase the capacity of the wastewater treatment plant so the larger flows from Okara Park can be screened and primary treated. This project is now near completion.

This agenda item sets out the next stage of the programme, recommends a strategy on how to invest the currently available LTCCP funding to year 2013, and sets out possible projects in a long term engineering works programme for the period 2013 - 2019.

This strategy has been driven by a number of factors that include:

- Submissions on the Council's recent application for Resource Consent to increase the volume of primary treated effluent discharge from the treatment plant during storms. Submissions have highlighted the negative impact that this discharge can have on use of the Whangarei Harbour after storm events.

- The availability of the recent completed sewer network model. This model has allowed a quantitative assessment of the sewer systems performance during storms and therefore a prioritisation and analysis of upgrade work.

- The outcome of the NIWA harbour model that demonstrates, due to tidal action, how discharges move through the harbour.

2. Wastewater Improvement Strategy

The overall aim of the strategy is to:

- Maintain the total wastewater capital expenditure through to year 2013 within the current LTCCP budget. This has required reallocation of funding between related capital projects.

Expenditure proposed after 2013 will require additional funds to that identified in the current LTCCP;

- Focus on improvements within the wastewater system that have the largest impact first;
- Ensure capital projects undertaken under this strategy retain relevance in the long term;
- Collect information so that expenditure on long-term engineering options is well founded.

To meet these aims a two-staged strategy and programme of works has been prepared that covers the period from 2010 to 2013 and from 2013 to 2019.

Stage 1: 2010 - 2013

This stage includes projects that would be funded under the current LTCPP programme and includes:

a) Continue an ongoing programme to reduce inflow and infiltration into the network

The advice Council staff have received to date, and our local experience, is that significantly reducing wet weather sewer flows using I/I mitigation is costly and hard to achieve in terms of specific targets. It is also difficult to correlate expenditure versus improvement and therefore difficult to predict what and when improvements may be gained from an I/I works programme. Nonetheless, it is considered worthwhile to continue an I/I mitigation to address major infiltration issues (the low hanging fruit) and monitor improvement through further sewer flow monitoring.

b) Treat all flows that come to the Whangarei Wastewater Treatment Plant

Wastewater received at the treatment plant goes through a range of processes. The processes the wastewater goes through vary depending on how much is coming into the plant. The fraction of flow that exceeds 57,400 m^3/d (664 L/s) is screened and primary treated. Although better than discharging raw sewage, this 'extreme flow' fraction stills contains a lot of pathogens.

With the upgrade of the Okara Park pump station the volume of 'extreme flows' will increase. The 'extreme flow' discharge represents the single largest discharge of wastewater pathogens into the harbour, and as it is at the treatment plant already, it is cost effective to treat.

Treatment of the 'extreme flow' fraction to reduce pathogen loads in the harbour has been identified as the highest priority project within the strategy. Options to treat 'extreme flows' are under evaluation, and include direct disinfection, new treatment plus disinfection, or modification of the existing process plus new disinfection process.

The expenditure indentified in the strategy is based on the more expensive option of the three, namely treatment and disinfection. The viability of other options would depend on further analysis.

c) Minimise the effect of discharges from the Hatea Pump Station

The network model has identified that the discharge of wastewater from the Hatea pump station during storms is the next most significant point source discharge, after the Okara Park pump station overflow (now resolved) and 'extreme flow' discharge from the wastewater treatment plant.

A review of storage volume needed to contain all wastewater discharges up to a 1 in 5-year event indicated that this was not a viable option, as over 12,000 m^3 of storage would be needed. A more effective approach indicates that a lesser volume of storage, around 1,000m^3, would be more effective as it would:

- Provide operational storage of 12 to 15 hours in dry weather to prevents spills due to mechanical or electrical breakdowns (currently there is only 20 minutes). This is required regardless of success in I/I mitigation;
- Prevent spills due to short duration and intense storms;
- Provide a buffer tank that would allow future treatment of the overflow. Treatment is likely to include screening, a storm flow treatment unit, and disinfection;

d) Refine the assumptions on the long term strategy and causes of network overflows by collecting more information

Although the network model is calibrated, there are a number of areas in the network where more information is needed for it to provide reliable predictions of wet weather flows commensurate with the level of funding proposed in Stage 2. Further flow gauging and model development is proposed within the strategy.

e) Funding for consent applications

A consequence of proposed upgrades at Hatea is that a resource consent will be required for its discharge. Funding has been identified for this purpose and/or a network consent.

Stage 1 of this strategy involves completing the above items against the existing LTTCP budgets for the period 2010 – 2013. Stage 1 has an estimated cost of $11.0 M in addition to the $4.5M spent in 2010/11.

Further detail on the proposed expenditure is provided in Appendix 1.

Stage 2: 2013 - 2019

Stage 2 includes the long-term engineering options to reduce spillage from the network. Expenditure has been estimated assuming that:

- Key infrastructure projects are developed so that they contain/prevent spills at a 1 in 5 year return period. This is the case for Okara Park pump station and future Hatea treatment.

- Network discharges are reduced such that 80% of spills that are predicted to occur in year 2040, accounting for growth, are prevented in an annual storm event. This is in comparison to what would happen if no investment took place.

- No allowance has been made for I/I mitigation in this programme. This assumption will require extensive review before committing to the proposed works programme identified in this strategy.

Detail on a capital works programme is provided in Appendix 2 and includes;

- New large pump station to the treatment plant;

- Upgrade of the treatment plant;

- Increase in capacity of key sewers;

- Interconnection of sewers to maximise use of existing capacity.

There is currently insufficient funding within the LTTCP to complete this work. These works are first approximation and more investigations are required to refine the balance between inflow and infiltration works, network upgrades and treatment. Stage 2 has an estimated cost of $34M.

3. Effects on LTCCP Funding

Stage 1 Improvement: 2010 – 2013 LTTCP

Council has spent $4.5M in 2009 – 2010 to upgrade the Okara Park Pump Station, install a duplicate rising main from the pump station to the Whangarei Wastewater Treatment Plant and upgrade the storm water bypass process at the treatment plant to receive these flows. This work was funded from the Whangarei City Service Level Improvements budget of $4.0M for 2009 – 10, with the balance of $0.5M diverted from other works with the wastewater budget. This work has removed the largest storm flow discharge in the network.

Council has funding of $6.4M for the Whangarei City Service Level Improvements and $2.9M for sewerage system upgrades and Inflow/Infiltration Mitigation in years 2010 – 2013 of the LTTCP, a total of $9.3M; however $11.0M is required for the Stage 1 improvement works as discussed previously and detailed in Appendix 1.

The work can be completed by reallocating funds within the overall wastewater allocation as detailed in Table 1. A comparison of the revised LTCCP programme to the current LTCCP programme is provided in Appendix 3.

Table 1: Revised wastewater allocations for Stage 1 improvements to the Whangarei City Service Level Improvements: 2010 – 2013 LTTCP $

Item	2010 – 2011	2011 – 2012	2012 -2013
Treatment Plant upgrades	300,000	300,000	606,000
Whangarei Treatment Plant	1,000,000		800,000
One tree point/Ruakaka WWTP Upgrade	517,000	853,000	
Waipu trunk sewer system			892,000
Flow meters	0		
Sewerage system upgrade & I/I Mitigation	300	350	350
Wastewater Assessments	50,000	50,000	55,000
Pump stations	0	50,000	138,000
Flow meters	0		
Ruakaka South - Extend Reticulation		4,264,000	7,709,000
Wastewater city service level improvements	3,095,000	4,755,000	2,154,000
Public toilets	114,000	117,000	121,000
Total	**5,376,000**	**10,739,000**	**12,825,000**

Stage 2 Improvement: 2013 – 2019 LTTCP

Stage 2 comprises of long term engineering works. Council has funding of $3.4M for the Whangarei City Service Level Improvements and $8.6M for sewerage system upgrades and

Inflow/Infiltration Mitigation in years 2013 – 2019 of the LTTCP, a total of $12.0M; however $34.0M is required for the Stage 2 improvement works. It should be noted that these works are first approximation and more investigations are required to refine the balance between inflow and infiltration works, network upgrades and treatments.

The effect on the LTCCP for years 2013 – 2019 are presented in Appendix 3.

Recommendation

1. That the information be received.
2. That the Wastewater allocations for 2010 – 2013 be revised as detailed in Table 3 to allow implementation of Stage 1 of the improvements to the Whangarei City Service Level Improvements project.
3. That staff liaise with submitters to the resource consent application process.

Attachments:

1. Appendix 1 Stage One Capital Works
2. Appendix 2 Stage 2 Capital Works
3. Appendix 3 Effect of Strategy on 2009 to 2019 LTCCP Budget

Appendix 1 – Stage One Capital Works

Wastewater city service level improvements				
		2010-11	2011-12	2012-13
Item		**Cost**	**Cost**	**Cost**
		$	**$**	**$**
TOTAL		**3,100,000**	**4,755,000**	**2,150,000**
		$	*$*	*$*
BUDGET		*3,095,000*	*4,755,000*	*2,154,000*
1	**I/I Monitoring**			
1.1	Install new flow gauges	$ 60,000		
1.2	Update model based on monitoring	$ 20,000	$ 20,000	$ 20,000
2	**I/I Investigation and improvements (Separate LTCCP Item)**			
2.1	Visual + smoke testing			
2.2	Visual Inspections			
2.3	Budget to repair obvious leaks (manhole covers, stormwater connections, minor broken pipes)			
3	**Long term Engineering**			
3.1	Design of PS, sewer upgrades and wwtp upgardes	$ 50,000	$ 135,000	$ 800,000
3.2	New City centre pump station and rising main to WWTP			
3.3	Upgrade at WWTP to receive additional flows			
3.4	Treatment system at WWTP to treat additional flows			
3.5	New Tarewa Road sewer			
3.6	Connect Kensingto to Wairohia Sewer Line			
3.7	Kamo Road sewer capacity increase			
3.8	Sewer improvement to address other spill sites			
4	**Hatea PS Upgrades**			
4.1	Construct 1,000 m3 storage tank near station Include for upgrade of electrical cabinet and pump station	$ 1,900,000	$ 300,000	
4.2	Preliminary design and tender documents for treatment unit			$ 50,000
4.3	Treatment system			
5	**Storm Treatment at WWTP**			
5.1	Develop tender documents + design	$ 300,000		
5.2	Purchase treatment Unit	$ 300,000	$ 2,900,000	
5.3	Installation, connection to existing plant	$ 200,000	$ 1,000,000	
5.4	Utilities (chemical handling)	$ 200,000	$ 200,000	
5.5	Storm flow tertiary treatment			$ 480,000
6	**Resource Consenting**			
6.1	Hatea pumps station or Network Consent	$ 70,000	$ 150,000	$ 300,000
7	**Other works - non city I/I works**			
7.1	Hikurangi I/I improvements - model update + design		$ 50,000	
	Hikurangi I/I improvements - Upgrade terminal PS			$ 500,000

Appendix 2: Stage 2 Capital Works

Wastewater city service level improvements

Item		2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
TOTAL		**$ 6,150,000**	**$ 6,300,000**	**$ 8,300,000**	**$ 6,200,000**	**$ 1,300,000**	**$ 1,600,000**
BUDGET		*$ 6,150,000*	*$ 6,300,000*	*$ 8,300,000*	*$ 6,200,000*	*$ 1,300,000*	*$ 1,600,000*
3	**Long term Engineering**						
3.1	Design of PS, sewer upgrades and wwtp upgardes	$ 500,000					
3.2	New City centre pump station and rising main to WWTP	$ 2,300,000	$ 2,300,000	$ 1,300,000			
3.3	Upgrade at WWTP to receive additional flows		$ 2,000,000	$ 5,000,000			
3.4	Treatment system at WWTP to treat additional flows		$ 2,000,000	$ 2,000,000	$ 2,000,000		
3.5	New Tarewa Road sewer				$ 1,300,000		
3.6	Connect Kensingto to Wairohia Sewer Line				$ 300,000		
3.7	Kamo Road sewer capacity increase				$ 600,000		
3.8	Sewer improvement to address other spill sites				$ 2,000,000	$ 1,300,000	$ 1,600,000
4	**Hatea PS Upgrades**						
4.1	Construct 1,000 m3 storage tank near station Include for upgrade of electrical cabinet and pump station						
4.2	Preliminary design and tender documents for treatment unit	$ 150,000					
4.3	Treatment system	$ 2,000,000					
5	**Storm Treatment at WWTP**						
5.1	Develop tender documents + design						
5.2	Purchase treatment Unit						
5.3	Installation, connection to existing plant						
5.4	Utilities (chemical handling)						
5.5	Storm flow tertiary treatment	$ 1,200,000					

Appendix 3: Effect of Strategy on 2009 to 2019 LTCCP Budget

LTCCP Wastewater Capital Projects

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Treatment Plant upgrades	500	517	533	606	626	647	670	694	392	406
Waipu Cover/Langs Beach sewer system					5564		166			
Whangarei Treatment Plant		769	1800							
One tree point/Ruakaka WWTP Upgrade	120	517	853			2882	12175	14505	5222	
Waipu trunk sewer system				892	796					718
Waipu Cover/Langs Beach sewer system					57	59				
Flow meters	100	103								
telemetry system	160				114					135
Install telemetry System at pump station									65	68
Sewerage system upgrade & I/I Mitigation	600	901	854	1101	1138	1177	1304	1360	1350	2298
Wastewater Assessments	150	155	53	55	57	59	61	63	65	68
Pump staions	125	129	133	138	142	147	152	158	163	169
Flow meters	100	103								
One tree point trunk sewer										2705
Ruakaka South - Extend Retic			4264	7709						
Purcahse Land	8000									
Wastewater city service level improvements	4000	2068	2132	2203	2275	1176				
Public toilets	110	114	117	121	125	129	134	139	144	149
Total	13965	5376	10739	12825	10894	6276	14662	16919	7401	6716

Revised Wastewater Capital Projects to fit in wet weather improvements to 2012 - 2013

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Treatment Plant upgrades	500	300	300	606	626	647	670	694	392	406
Waipu Cover/Langs Beach sewer system					5564		166			
Whangarei Treatment Plant		1000	0	800						
One tree point/Ruakaka WWTP Upgrade	120	517	853			2882	12175	14505	5222	
Waipu trunk sewer system				892	796					718
Waipu Cover/Langs Beach sewer system					57	59				
Flow meters	100									
telemetry system	160				0					135
Install telemetry System at pump station									65	68
Sewerage system upgrade & I/I Mitigation	600	0	0	0	0	0	0	0	0	0
Wastewater Assessments	150	50	50	55	57	59	61	63	65	68
Pump stations	125	0	50	138	142	147	152	158	163	169
Flow meters	100	0								
One tree point trunk sewer										2705
Ruakaka South - Extend Retic			4264	7709						
Purchase Land	8000									
Wastewater city service level improvements	4000	3395	5105	2504	6850	7000	9000	6900	2000	2298
Public toilets	110	114	117	121	125	129	134	139	144	149
Total Capital Expenditure	**13965**	**5376**	**10739**	**12825**	**14217**	**10923**	**22358**	**22459**	**8051**	**6716**
Current LTCCP Shortfall	**0**	**0**	**0**	**0**	**3323**	**4647**	**7696**	**5540**	**650**	**0**

Difference

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Treatment Plant upgrades		-217	-233							
Waipu Cover/Langs Beach sewer system										
Whangarei Treatment Plant		231	-1800	800						
One tree point/Ruakaka WWTP Upgrade										
Waipu trunk sewer system										
Waipu Cover/Langs Beach sewer system										
Flow meters		-103								
telemetry system					-114					
Install telemetry System at pump station										
Sewerage system upgrade & I/I Mitigation		-901	-854	-1101	-1138	-1177	-1304	-1360	-1350	-2298
Wastewater Assessments		-105	-3							
Pump stations		-129	-83							
Flow meters		-103								
One tree point trunk sewer										
Ruakaka South - Extend Retic										
Purchase Land										
Wastewater city service level improvements		1327	2973	301	4575	5824	9000	6900	2000	2298
Public toilets										
Total difference	**0**	**0**	**0**	**0**	**3323**	**4647**	**7696**	**5540**	**650**	**0**