



Rangitikei District Council

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Rangitikei
UNspoilt...

Assets/Infrastructure Committee Meeting Order Paper

Thursday, 12 March 2015, 9.30 am

**Council Chamber, Rangitikei District Council
46 High Street, Marton**

Website: www.rangitikei.govt.nz

Email: info@rangitikei.govt.nz

Chair
Cr Dean McManaway

Deputy Chair
Cr Mike Jones

Membership

Councillors Nigel Belsham, Angus Gordon, Tim Harris, Soraya Peke-Mason,
Ruth Rainey and Lynne Sheridan
His Worship the Mayor, Andy Watson (ex officio)

Please Note: Items in this agenda may be subject to amendments or withdrawal at the meeting. It is recommended therefore that items not be reported upon until after adoption by the Council. Reporters who do not attend the meeting are requested to seek confirmation of the agenda material or proceedings of the meeting from the Chief Executive prior to any media reports being filed.

Rangitikei District Council

Assets and Infrastructure Committee Meeting

Order Paper – Thursday 12 March 2015 – 9:30 a.m.

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The quorum for the Assets/Infrastructure Committee is 5

At its meeting of 28 October 2010 Council resolved that 'The quorum at any meeting of a standing committee or sub-committee of the Council (including Te Roopu Ahi Kaa, the Community Committees, the Reserve Management Committees and the Rural Water Supply Management Sub-committees) is that required for a meeting of the local authority in SO 2.4.3 and 3.4.3.' These Standing Orders were confirmed for the 2013-16 triennium by Council on 31 October 2013.

1 Welcome

2 Council Prayer

3 Apologies/Leave of absence

4 Confirmation of order of business

That, taking into account the explanation provided why the item is not on the meeting agenda and why the discussion of the item cannot be delayed until a subsequent meeting, be dealt with as a late item at this meeting.

5 Confirmation of minutes

Recommendation

That the Minutes of the Assets/Infrastructure Committee meeting held on 12 February 2015 be taken as read and verified as an accurate and correct record of the meeting.

6 Chair's report

A report will be tabled at the meeting.

File ref: 1-CT-13-1

Recommendation

That the Chair's report to the Assets/Infrastructure Committee meeting on 12 March 2015 be received.

7 Activity management templates

The non-financial reporting templates for February 2015, covering the following groups of activities, are attached:

- Roding & Footpaths
- Water Supply
- Sewerage & the Treatment and Disposal of Sewage
- Stormwater Drainage
- Community & Leisure Assets
- Rubbish & Recycling

File ref: 5-EX-4

Recommendation

That the non-financial reporting templates for Asset based groups of activities for February 2015 be received.

8 Budget Queries Raised at Finance/Performance Committee, 26 February 2015

A memorandum is attached.

File ref: 3-CT-14-1

Recommendation

That the memorandum 'Budget Queries Raised at Finance/Performance Committee, 26 February 2015' be received.

9 Options to deliver services for Council parks and town maintenance

A presentation will be made at the meeting.

10 Bulls Wastewater Treatment Plant

A report from Lowe Environmental is attached. A verbal report will be given at the meeting.

Recommendation

That the report 'Bulls Wastewater Upgrade: Best Practicable Option Report' by Lowe Environmental to the Finance/Performance Committee's meeting 12 March 2015 be received.

11 Mangaweka Camping Ground Ablution Block

A report is attached.

File ref: 6-RF-1-1

Recommendations

- 1 That the 'Mangaweka Camping Ground Ablution Block' report be received.
- 2 That the Assets and Infrastructure Committee support redirecting the unspent portion of the funding allocated to upgrade the Mangaweka Camping Ground on-site sewage disposal system towards an ablution block upgrade at the camping ground, and that the proposed scope, scale and cost of the upgrade be approved by the Chief Executive within the budget available.

12 Consent Compliance – Jul 2014 to Feb 2015

A report is attached.

File ref: 5-EX-4

Recommendation

That the report 'Consent Compliance – Jul 2014 to Feb 2015' to the Assets/Infrastructure Committee meeting on 12 March 2015 be received.

13 Late items

14 Future items for the agenda

15 Next meeting

Thursday 9 April 2015, 9.30 am

16 Meeting closed

Attachment 1

Rangitikei District Council

Assets/Infrastructure Committee Meeting

Minutes – Thursday 12 February 2015 – 9:30 a.m.

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Present: Cr Dean McManaway (Chair)
Cr Nigel Belsham
Cr Angus Gordon
Cr Tim Harris
Cr Soraya Peke-Mason
Cr Lynne Sheridan
His Worship the Mayor, Andy Watson

In attendance: Mr Hamish Waugh, General Manager Infrastructure
Mr Michael Hodder, Community & Regulatory Services Group Manager
Mr Johan Cullis, Environmental Services Team Leader
Ms Gaylene Prince, Community & Leisure Services Team Leader
Ms Denise Servante, Senior Policy Analyst
Mr Paul Chaffe, Principal Rural Fire Officer
Mr Wayne Keightley, Asset Manager - Roading
Ms Joanna Saywell, Asset Manager - Utilities
Mr Reuben Pokiha, Operations Manager - Roading
Mr Andrew van Bussel, Operations Manager - Utilities
Mr Glen Young, Utilities Project Manager
Mr David Rei Millar, Asset Engineer – Utilities
Ms Samantha Whitcombe, Governance Administrator

Tabled documents: **Item 6** Chair's Report
Item 13 Late Item (presentation on the Santoft Road fire)

1 Welcome

The Chair welcomed everyone to the meeting.

2 Council prayer

Cr Belsham read the Council Prayer.

3 Apologies/Leave of absence

That the apologies for absence from Cr Jones and Cr Rainey be received.

Cr McManaway / Cr Harris. Carried

4 Confirmation of order of business

Resolved minute number	15/AIN/001	File Ref
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The Chair informed the Committee of two late items to be presented to the meeting.

The first would be an overview of the Santoft Road fire on 5 February 2015 by Paul Chaffe, Principal Rural Fire Officer for the Rangitikei District. This fire occurred after the completion of the order paper for this meeting, so it could not be included as an item.

The second would be on the Bonny Glen Landfill Resource Consent hearings. These hearings are scheduled to being on Tuesday 17 February 2015, so this cannot be delayed until a later meeting.

Cr McManaway / His Worship the Mayor. Carried

5 Confirmation of minutes

Resolved minute number	15/AIN/002	File Ref
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That the Minutes of the Assets/Infrastructure Committee meeting held on 13 November 2014 be taken as read and verified as an accurate and correct record of the meeting.

Cr Peke-Mason / Cr Belsham. Carried

13 Late items

Paul Chaffe, Principal Rural Fire Officer for the Rangitikei District, provided a brief presentation on the Santoft Road fire that occurred on 5 February 2015. The cause was being investigated. At its height, the fire extended 2 km long and 400 m wide. 130 firefighters and 23 appliances were involved. An application was being made to the New Zealand Fire Authority for reimbursement of fire-fighting costs, which were in excess of \$100,000. In addition to these costs were the loss of stock feed, destruction of fences and

damage to forests. He listed the civilian groups that helped combat this fire and highlighted the fact that without their help the situation could have been much worse.

The Committee asked that a letter of thanks be sent to all those groups that help bring the Santoft Road fire under control.

Resolved minute number **15/AIN/003** **File Ref**

That a letter of thanks be sent to all those who helped to bring the Santoft Road fire on 5 February 2015 under control.

His Worship the Mayor / Cr Sheridan. Carried

Cr Gordon arrived 9.36 am

6 Chair's report

The Chair spoke briefly to his report, providing further detail on the issue of narrow bridges within our District outlined in the report.

Resolved minute number **15/AIN/004** **File Ref** **1-CT-13-1**

That the Chair's report to the Assets/Infrastructure Committee meeting on 12 February 2015 be received.

Cr McManaway / His Worship the Mayor. Carried

7 Activity management templates

Mr Waugh, Mr Pokiha, Mr Millar, Mr Young and Ms Prince spoke to the activity management templates for Roading & Footpaths, Water Supply, Sewerage & the Treatment and Disposal of Sewage, Community & Leisure Assets and Rubbish & Recycling.

Matters discussed included:

Ongoing investigations into the condition of bridges

Confirmation that Rangitikei would paid one third of the cost of the replacement Wylie's Bridge

- 'Community apportionment' is no longer done, reflecting the District-wide funding of utilities.
- Kaka Road sewerage issue being looked into by the Project Engineer.
- Extra works have been done to restore the Taihape Pool's connection to the sewer
- Horizons has granted consent for the proposed micro-tunnelling and consequent discharge into the Tutaenui Stream to resolve the stormwater issues at Russell

Resolved minute number	1S/AIN/007	File Ref	1-AS-1-1
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- 1 That the report 'Potential Sites for Community Gardens in Bulls' be received.
- 2 That the Assets/Infrastructure Committee approves the inclusion of Haylock Park, Wilson and Johnson Street, as an available site for establishing a community garden, subject to the application process outlined in the Policy, Community Gardens in the Rangitikei.

Cr Sheridan / Cr Peke-Mason. Carried

11 Progress with resolving uncertainty over responsibility for Council's stormwater drainage network in urban areas

Mr Waugh provided a brief update to the Committee and suggested that bi-monthly updates could be brought to the Committee.

His Worship the Mayor left Chambers 11.35am / 11.39am

Cr Peke-Mason left Chambers 11.36am / 11.38 am

12 Consent Compliance – July 2014 to January 2015

Mr Miller spoke briefly to the report and Mr van Bussel provided additional detail on the various incidents of non-compliance.

Resolved minute number	1S/AIN/008	File Ref	5-EX-4
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That the report 'Consent Compliance – July 2014 to January 2015' be received.

Cr Sheridan / Cr Gordon. Carried

13 Late items continued...

Bonny Glen Resource Consent Hearing – to be held at Manfeild Park in Feilding.

The Committee asked that a letter be sent to the Chief Executive of Horizons Regional Council expressing disappointment in the Bonny Glen resource consent hearing being held outside of the Rangitikei District (Manfeild Park, Feilding).

Road User Charges

The Chair explained how road user charges applied to different classes of vehicles

14 Future items for the agenda

None

Street/Wellington Road. However, as there is no stormwater reticulation in part of Russell Street, completing the project will exceed the budgeted \$200,000.

- The proposed upgrade to the Mangaweka campground wastewater system: is on hold. More frequent cleaning of the septic tank during the summer months looks like the cost-effective solution.
- There is no intention to increase the size of sites at any of Council's waste transfer stations. Some are quite congested.

Resolved minute number **15/AIN/005** **File Ref** **5-EX-4**

That the activity management templates for Asset based groups of activities for November and December 2014, and January 2015 be received.

Cr Harris / Cr Peke-Mason. Carried

8 Actions on submission about roading to Council's 2014/15 Annual Plan

Mr Waugh spoke briefly to the item.

Resolved minute number **15/AIN/006** **File Ref** **6-RT-5-6**

That the memorandum 'Actions on submission about roading to Council's 2014/15 Annual Plan' be received.

His Worship the Mayor / Cr Harris. Carried

9 Pedestrian crossing on Broadway, Marton (near Centennial Park)

Mr Pokiha spoke briefly to the item, giving further detail on the proposed action.

The Committee expressed a desire to see something done about this issue prior to the start of the netball season. Mr Pokiha indicated that the report from GHD contained some initial designs for the project and funding could be secured by re-prioritising other projects.

The Committee asked that a report be presented to the Council meeting on 26 February 2015, containing a design for the project and funding options, for approval.

10 Potential sites for Community Gardens in Bulls

Ms Servante spoke briefly to the report. Discussion was held around the need for due diligence to be carried out on the Chief Executive's part regarding any proposals received.

15 Next meeting

Thursday 12 March 2015, 9.30 am

16 Meeting closed – 11.52 am

Confirmed/Chair: _____

Date: _____

Unconfirmed

Attachment 2

ROADING AND FOOTPATHS GROUP OF ACTIVITIES 2014/15

Feb-15

Performance measures in LTP/Annual Plan				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Provide a safe roading network which allows people to travel from A to B, free of loose gravel or potholes and maintaining the level of sealed roads currently available.	Smooth travel exposure rating: target of 96.5%.	Survey due to undertaken during March 2014.	Smooth Travel Survey completed in June.	Continue to monitor the roading network to ensure the required standard is being maintained
The number of callouts to the contractor, both within working hours and after-hours, with the response and resolution times (with the percentage resolved within a specified time). Specific note made of: (i) time to respond/resolve callouts relating to potholes; and (ii) incidents of crashes on Council's roading network and whether the road condition was a cause of each crash.	100% after-hours callouts responded to within 12 hours. 100% callouts during working hours, responded to within 6 hours (i) 80% of all callouts resolved (i.e. completed) within one month of the request. Specific reference to callouts relating to potholes. No fatal crashes attributable to the condition of the roading network.	For the month of February, 30 call outs recorded with 30 responded to on time (100%); Callouts after hours 4(100%) responded to on time. Potholes 5 (100% completed on time); Nil fatal crashes on the network.	Total callouts to date number = 259 (96.5% completed on time); Number of call outs after hours = 15 (93% completed on time); Number of potholes 23 (95% completed on time); One fatal crash.	Ensuring that the required response times are being achieved.
Increased asset length and footpath renewal programme: Adequacy of provision and maintenance of footpaths, street lighting and local roads (annual survey).	A greater proportion (than in the previous year) of the sample believe that Council's service is getting better.	Not achieved: 15% believe the service is better than last year (cf 22% in 2012 and 16% in 2013).		Ensuring that the identification of future programmes is worked on with commitment.
New Mandatory Benchmark Measures				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Road Safety: The change from the previous financial year in the number of fatalities and serious injury crashes on the local road network, expressed as a number.	Targets to be set as part of the 2015-25 LTP	Nil	A safety audit of the network is in its final stages. This survey carried out by GHD.	To ensure that the network continues to be monitored from a safety perspective.
Road Condition: The average quality of ride on a sealed local road network, measured by smooth travel exposure.	Targets to be set as part of the 2015-25 LTP	The smooth travel exposure survey has been completed.	The smooth travel exposure survey completed	Contractual requirement to continue to monitor the roading network to ensure compliance for roughness and mitigate as required.
Road Maintenance: The percentage of the sealed local network that is resurfaced.	Targets to be set as part of the 2015-25 LTP	Nil	Nil	An annual measurement.
Footpaths: The percentage of footpaths within the District that fall within the level of service or service standard for the condition of footpaths that is set out in the territorial authority's relevant document (such as its annual plan, activity management plan, asset management plan, annual works program or long term plan).	Targets to be set as part of the 2015-25 LTP	Nil	Nil	Continues to be monitored to ensure compliance

Response to Service Requests: The percentage of customer service requests relating to roads and footpaths to which the territorial authority responds within the time frame specified in the long term plan.	Targets to be set as part of the 2015-25 LTP	100% achieved	There has been a steady improvement regards the actioning of the RFS's which shows the achievement for the month of February.	To continue to strive to achieve 100% per period.
Requests for Service				
What are they:	Completed on time	Completed late	Overdue	Current
Culverts/Drainage				
Maintenance (culverts/drainage)	0	0	0	0
Road Signs				
Maintenance (road signs)	0	0	0	0
Roads				
Maintenance (roads - potholes only)	5	0	0	0
Maintenance (roads)	8	0	0	1
Roadside Vegetation/Trees				
Maintenance (roadside vegetation/trees)	4	0	0	4
Footpaths				
Maintenance (footpaths)	0	0	0	3
Street Lighting				
Maintenance (street lighting)	5	0	0	0
Other Levels of Service				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Roads in towns to be attractive and well maintained allowing residents to access goods and services	A functional road network that provides access to residential, commercial and retail premises and some beautification of road reserves.	The contractual requirement is that this service is required to be continually monitored so as to ensure that access is maintained.	On going monitoring continuing.	Monitoring of the asset continues.
Attractive and well designed urban street lighting that makes residents feel safe and secure when walking or driving	Maintenance of existing network. No upgrade or renewal.	Progress to come up with a robust programme has been slower than anticipated but is underway.	Progress to get underway has been slowed by other priorities	Aim to complete approved programme.

ROADING AND FOOTPATHS GROUP OF ACTIVITIES 2014/15			Feb-15	
Major programmes of work outlined in the LTP/Annual Plan				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Roothing activity	Capital Projects	Roothing has no Capital projects to report on.	Nothing to report on	Nothing to report on.
	Resealing of specified portions of existing sealed roads (55km)	Resealing programme is now almost complete. Only some minor activities left to close off.	Progress on the resealing contract has certainly been helped by the good weather. Approx 97% complete.	To complete the resurfacing programme.
	Rehabilitation of specified existing sealed roads (8.8 km)	Union Line completed in January.	Bryces line, Union Line, Mangahoe and Kauangaroa AWPT sites completed.	Work has commenced on the Makirikiri Rd site. Wellington Road site planned for April.
Footpath and Streetlighting activity	Variation from the LTP; Wylies Bridge replacement deferred to 2014/15.	Work commenced on the bridge replacement Feb 25 after a blessing of the site from the local IWI.	The contract awarded to Concrete Structures NZ Ltd for \$296,850.88. The cost to RDC is \$765,617 there possibly may be some variations that may need to be taken into consideration.	To complete the construction of the bridge within the identified time frame of June 15.
	Footpath and street lighting activity – specified capital programme.	Work has commenced on the footpath contract and progressing well.	Footpath contract underway.	To complete footpath contract
	Footpath and street lighting activity – specified renewal programme.	Two footpaths contracts currently underway both incorporating elements of the Capital and Renewals budget.	Footpath contract progressing well. Two elements a Northern and Southern contract. Still finalising the lighting programme.	To complete footpath contract. To carry out identified street lighting programme.

PAVEMENT REHABILITATION 14/15				
PROJECT	ROUTE POSITION LENGTH	STATUS	START DATE	COMPLETION DATE
Mangahoe Road	2.00 – 3.97	Completed	March 14	July 14
Wellington Road	6.85 – 7.23	Preliminary design	April 15	June 15
Kauangaroa Road	5.08 – 6.30	Completed	Mid – May 14	August 14
Bryce’s Line	0.02 – 2.34	Completed	August 14	November 14
Union Line	4.85 – 5.15	Completed	November 14	December 14
Makirikiri Road	13.90 – 14.62	Work underway	February 15	April 15

ROADING CAPEX REPORT as at 31 January 2015		
Capital	Budget	YTD
Sealed road surfacing	1,957,711	1,679,706
Drainage renewals	316,193	389,170
Pavement rehabilitation	2,923,515	1,272,338
Structures component replace	246,079	10,000
Traffic services renewals	110,000	84,352
Associated improvements	106,000	82,620
Unsealed road metalling	333,502	167,987
TOTAL	5,993,000	3,686,173

62% of Budget spent.

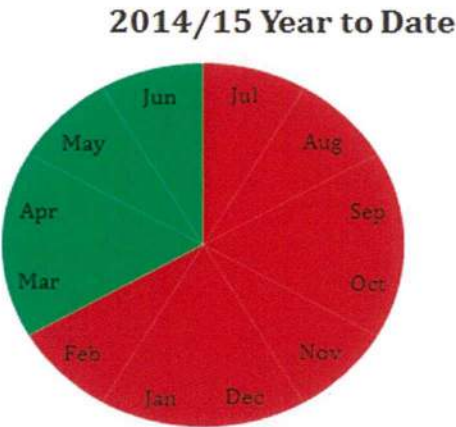
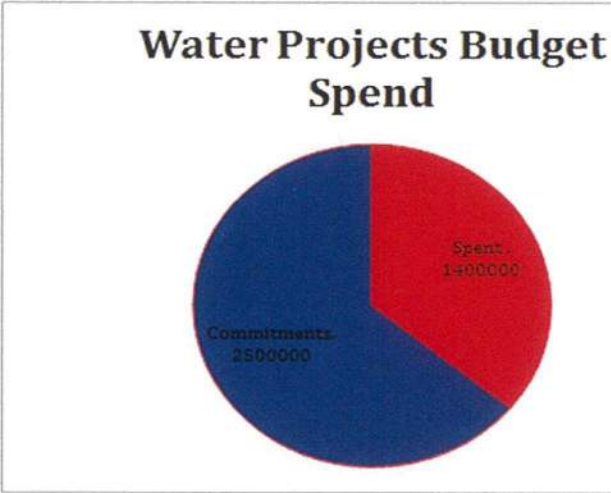
WATER SUPPLY GROUP OF ACTIVITIES 2014/15			Feb-15	
Performance measures in LTP/Annual Plan				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Provide a reliable, accessible and safe water supply to properties on the urban reticulation systems	No incidents of non-compliance with resource consents	Achieved. No non-compliances within reporting period.	Not achieved. Non-compliance for abstraction at Omatane 3-11 Dec 2014 due to leak which has now been repaired. No other non-compliances within reporting period.	Continue implementation of Water Outlook to assist with compliance monitoring. Complete required flow meter verifications. Apply for variation to Taihape consent to allow discharge of excess back to river. Restart consent application for Calico Line bore, Marton.
	No incidents of E-coli detection requiring information to be passed to Ministry of Health's Drinking Water Assessor.	Achieved. No incidents requiring notification to the Drinking Water Assessor.	Achieved. No incidents requiring notification to the Drinking Water Assessor.	Continue implementation of Water Outlook to assist with compliance monitoring.
	Operational compliance with legislation confirmed by Drinking-water Assessor grading in Ratana, Hunterville and Mangaweka water schemes (Marton, Taihape and Bulls continue to be assessed as compliant).	Achieved. Compliance with legislation measured by status of Water Safety Plans (WSPs). Revised Hunterville Urban WSP approved.	Achieved. Compliance with legislation measured by status of Water Safety Plans (WSPs). Revised Hunterville Urban WSP approved.	Update of Bulls Water Safety Plan to reflect WTP process changes by Opus consultants. Marton, Taihape and Bulls Water Safety Plans require final sign off from Drinking Water Assessor by 30 June 2015.
	0 unplanned water supply disruptions affecting multiple properties.	Achieved	Achieved	
Provide a reliable water pressure and flow, which complies with the NZ Fire Service Fire Fighting Water Supplies Code of Practice	100% of fire hydrant installations are in compliance.	Not achieved. 97% of hydrants compliant when tested in 2012. One maintenance issue relating to fire hydrants during the reporting period, for leaking hydrant on SH1, Bulls. Awaiting NZTA approval to repair.	Not achieved. 97% of hydrants compliant when tested in 2012. Two maintenance issues relating to fire hydrants so far this year.	Reticulation team is developing a programme to re-test hydrants according to NZFS Firefighting Water Supplies COP. The main along Rangatahi Rd, Ratana will be upsized, and three hydrants installed, to provide fire flows.
New Mandatory Benchmarking Measures				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Safety of Drinking Water The extent to which the local authority's drinking water supply complies with: (a) part 4 of the drinking-water standards (bacteria compliance criteria), and (b) part 5 of the drinking-water standards (protozoal compliance criteria).	Targets to be set as part of the 2015-20 LTP	Achieved. No incidents of non-compliance during the reporting period.	Achieved. No incidents of non-compliance during the reporting period.	Continue implementation of Water Outlook to assist with compliance monitoring.
	Targets to be set as part of the 2015-20 LTP	Not achieved. Protozoal compliance cannot currently be demonstrated for any supplies. Marton has UV but still needs SCADA installation. Taihape, Hunterville, Bulls will be compliant by end of Jan 2015. All supplies will be compliant by end of Jun 2015.	Not achieved. Protozoal compliance cannot currently be demonstrated for any supplies. Marton has UV but still needs SCADA installation. Taihape, Hunterville, Bulls will be compliant by end of Jan 2015. All supplies will be compliant by end of Jun 2015.	Continue implementation of Water Outlook to assist with compliance monitoring. Identify work needed to achieve compliance. Move towards obtaining secure bore status for bores at Ratana and Calico Line (Marton). Continue upgrade work at plants.
Maintenance of the Reticulation Network: The percentage of real water loss from the local authority's networked reticulation system (including a description of the methodology used to calculate this).	Targets to be set as part of the 2015-20 LTP	Not determined. This will be calculated for each supply using Method 1 (Benchloss) or Method 2 (MNF-based) from the DIA guidelines. One figure for the year for each scheme will be determined before 30 Jun 2015.	Not determined. This will be calculated for each supply using Method 1 (Benchloss) or Method 2 (MNF-based) from the DIA guidelines. One figure for the year for each scheme will be determined before 30 Jun 2015.	Continue implementation of Water Outlook to enable SCADA information to be interrogated in-house.
Fault Response Times Where the local authority attends a call-out in response to a fault or unplanned interruption to its networked reticulation system, the following median response times measured: (a) attendance for urgent call-outs: from the	Targets to be set as part of the 2015-20 LTP	a) 0 Urgent RFS's were received as per the RFS system.	a) 20 Urgent RFS's were received and 13 were responded to in time and 7 were responded to late as per the RFS system.	Review RFS system to ensure correct performance reporting.

<p>time that the local authority receives notification to the time that service personnel reach the site, and</p> <p>(b) resolution of urgent call-outs: from the time that the local authority receives notification to the time that service personnel confirm resolution of the fault or interruption.</p> <p>(c) attendance for non-urgent call-outs: from the time that the local authority receives notification to the time that service personnel reach the site, and</p> <p>(d) resolution of non-urgent call-outs: from the time that the local authority receives notification to the time that service personnel confirm resolution of the fault or interruption.</p>	Targets to be set as part of the 2015-25 LTP	b) 0 Urgent RFS's were received as per the RFS system.	b) 20 Urgent RFS's were received and 13 were completed on time and 7 were completed late as per the RFS system.	Review RFS system to ensure correct performance reporting.
	Targets to be set as part of the 2015-25 LTP	c) 36 Non-urgent RFS's were received 35 were responded to in time and 1 is current as per the RFS system.	c) 237 Non-urgent RFS's were received 218 and 1 is current as per the RFS system.	Review RFS system to ensure correct performance reporting.
	Targets to be set as part of the 2015-25 LTP	d) 36 Non-urgent RFS's were received 35 were completed on time and 1 is current as per the RFS system.	d) 237 Non-urgent RFS's were received 218 were completed on time and 1 is current as per the RFS system.	Review RFS system to ensure correct performance reporting.
<p>Customer Satisfaction</p> <p>The total number of complaints received by the local authority about any of the following:</p> <p>(a) drinking water clarity</p> <p>(b) drinking water taste</p> <p>(c) drinking water pressure or flow</p> <p>(d) continuity of supply, and</p> <p>(e) the local authority's response to any of these issues</p> <p>expressed per 1000 connections to the local authority's networked reticulation system.</p>	Targets to be set as part of the 2015-25 LTP	a) 0/1000	a) 5/1000	
	Targets to be set as part of the 2015-25 LTP	b) 0/1000	b) 0.4/1000	
	Targets to be set as part of the 2015-25 LTP	c) 0.2/1000	c) 1.7/1000	
	Targets to be set as part of the 2015-25 LTP	d) 0/1000	d) 3.2/1000	
	Targets to be set as part of the 2015-25 LTP	e) 0/1000	e) 1.9/1000	
	Targets to be set as part of the 2015-25 LTP			
<p>Demand Management</p> <p>The average consumption of drinking water per day per resident within the territorial authority district.</p>	Targets to be set as part of the 2015-25 LTP	648 L/person/day. Based on daily totals and population for Bulls, Hunterville Urban, Mangaweka, Rātana and Taihape. Data from Water Outlook.	471 L/person/day. Based on daily totals and population for Bulls, Hunterville Urban, Mangaweka, Rātana and Taihape. Data from Water Outlook and Control Box.	Continue implementation of Water Outlook to enable easy reporting of this figure on a monthly basis.
Requests for Service				
What are they:	Completed on time	Completed late	Overdue	
Water				
Bad tasting drinking water	0	0	0	
Dirty drinking water	0	0	0	Consolidate with DIA measures above to avoid repetition.
Location of meter/toby/other utility	1	0	0	Consolidate with DIA measures above to avoid repetition.
Low drinking water pressure (non urgent)	1	0	0	Consolidate with DIA measures above to avoid repetition.
No drinking water supply (urgent)	0	0	0	Consolidate with DIA measures above to avoid repetition.
Replace toby, meter or lid	5	0	0	Consolidate with DIA measures above to avoid repetition.
Water flooding (other than stormwater and wastewater)	0	0	0	Consolidate with DIA measures above to avoid repetition.
Water leak	20 - 1 current	0	0	
Water leak at meter/toby	8	0	0	
Other Levels of Service				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
None				

WATER SUPPLY GROUP OF ACTIVITIES 2014/15			Feb-15	
Major programmes of work outlined in the LTP/Annual Plan 2013/14: Complete				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Capital Projects; Reticulation and Treatment				
Marton	Pressure flow control, backflow protection, Water Treatment Plant Upgrade, Canteen St, Dunsinane Pl/Blennerville Pl, Hereford St/Bredin's Lane, Canteen St		Completed	n/a
Taihape	Pressure flow control, backflow protection, PRV & Boost Pump Station		Completed	n/a
Bulls	Backflow Protection		Completed	n/a
Mangaweka	Seismic flow protection, telemetry upgrade		Completed	n/a
Hunternville	Seismic flow protection, telemetry upgrade, backflow protection		Completed	n/a
Ratana	New treatment plant		Completed	n/a
Erewhon				
Hunternville Rural				
Omatane				
Major programmes of work outlined in the LTP/Annual Plan 2014/15				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Capital Projects; Reticulation and Treatment				n/a
District-Wide	Implement appropriate backflow protection for Council's urban supplies		See first Water Supply Group of Activities Template	n/a
	Review network replacement programme for all assets exceeding threshold risk of 10/25		See first Water Supply Group of Activities Template	n/a
	Develop proposals (including activity/asset management plan) for inclusion in draft 2015.25 Long Term Plan		See first Water Supply Group of Activities Template	n/a
Marton	Complete renewal of Marton water reticulation (from Jeffersons Line to the new treatment plant) - Marton water Treatment Plant Upgrade	WTP entranceway upgrade being designed. Internal concrete works completed.	The WTP Upgrade works is complete except for electrical and process commissioning and landscape/frontage upgrade works . Landscaping works completed	Complete WTP upgrading works
Taihape	Taihape – renewals of treatment and reticulation facilities - Dixon Way, Water supply investigation	Invitation for expressions of interest for design work. Op's team carrying out physical investigation works.	Investigation works underway	Complete investigation works
Bulls	Install new water supply filling station	Preliminary design underway, In consultation with Roading and Operations teams.	Site investigation being scoped, existing service connection options investigated. Preferred site identified at Water Tank facility.	Complete design and award tender
Mangaweka				n/a
Hunternville	Implement network hydraulic modelling at Hunternville			n/a
Ratana	Complete implementation of Ratana water upgrade	Contract for treatment upgrade awarded to FilTech (\$545k) Tenders for reticulation works under review. Ordered Reservoir \$ 200k	Bore installed, water quality tested. Consultation undertaken with landowners, preliminary designs underway. Draft lease and easement documents prepared.	Commence physical works for WTP and reticulation works
	Implement network hydraulic modelling at Ratana			n/a
Erewhon				n/a
Hunternville Rural				n/a
Omatane				n/a
Renewal Works: Reticulation and Treatment				
Renewals for Reticulation and Treatment	District Wide Budget \$2,718,914.00			
Marton	Community apportionment \$1,058,934; Water Treatment Plant Upgrade, Tutaenui Rd Water main renewal, (Complete renewal of Marton water reticulation from Jeffersons Line to the new treatment plant) Wellington Rd renewal works. Grey st and Fergusson St watermain renewals.	Tutaenui Road WaterMain Renewal, (WTP - Jeffersons). Construction works underway.	Tutaenui Road Watermain renewal , WTP -Jeffersons Line, scope revisited, re-tendered. Design and tender docs completed posted on tenderlink, tenders closed Friday 10th October. Tender Awarded (ID Loader \$692k). Works commenced 1/Dec 2014 Construction works underway. Horizontal boring completed. Trenching works 50%	Complete construction of Marton (WTP-Jefferson) falling main renewal.

Taihape	Community apportionment \$987,654; Dixon Way Investigation, Ruru Road stg II & III, Taihape main falling main renewal	Taihape Falling Main Stg II, construction commenced. Ruru Road Stg III, physical works completed.	Completed works: Gretna Corner - 200m of 225mm main complete, Eagle St - 335m of 150mm main complete. Kiwi Rd - 75m of 150mm main complete. Lark/Titi/Thrush - 110m of 150mm & 150m of 100mm, Ruru Road Stg II, Watermain renewals complete. Geotechnical investigations for main renewals in Ruru Road Stage 2 complete, Ruru Road Stg II construction underway. tendered in June, and the raw water falling main on the Williams property (report from Tonkin and Taylor received for review). Timing constraints for access to the Williams property will require deferment of physical pipe installation until January-March 2015.Gretna Corner contract complete - value \$123,548. Eagle Street physical work complete - value \$129,846. Ruru Road Stage 2 Watermain renewal went out to four invited tenderers, tenders closed 13th June, Eng est \$200K. Tender awarded to ID Loaders Ltd. for \$139,709.50. Work commenced 7th July. Ruru Road Stg III design has commenced. Stage 2 of the geotechnical investigation of the Taihape falling main is continuing. costs anticipated at \$30K. Site works are programmed to be carried out in Jan-Mar 2015 due to farm operation constraints. est \$437k. Ruru road Stg II completed. Ruru road Stg III completed	Complete construction of Taihape Stg II Falling Main
Bulls	Community apportionment \$319,318	see new water supply facility above		complete design and award tender
Mangaweka	Community apportionment \$27,524			complete water renewal works
Huntermville	Community apportionment \$29,541			complete water renewal works
Ratana	Community apportionment \$48,183			complete water renewal works
Erewhon	Scheme apportionment \$109,000			complete water renewal works
Huntermville Rural	Scheme apportionment \$104,837			complete water renewal works
Omatane	Scheme apportionment \$2,151			complete water renewal works

Water Projects 2014-15 Budget: \$3.9 million

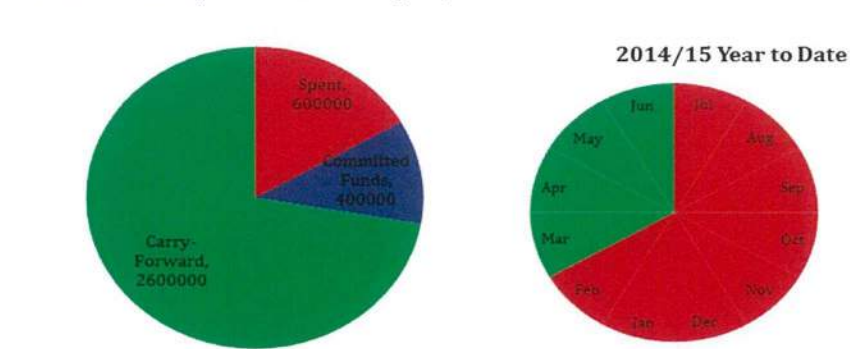


Project	Design/Scoping	Tender/Contract Docs	Under Construction	Complete
Marton: Canteen St <u>Watermain</u> Link				
Marton: <u>Tutaenui</u> Road, falling water main renewal				
Marton: Water Treatment Plant Upgrade				
Marton: Water Treatment reservoir levelling				
Marton: Hereford / <u>Bredins Watermain</u> link				
Marton: <u>Dunsinane Pl/ Blenerville Cl Watermain</u> link				
Marton: Grey St renewals				
Marton: <u>Wanganui Rd/Skerman</u>				
Taihape: Falling Main Renewal				
Taihape: <u>Ruru Road Watermain</u> Stg II				
Taihape: <u>Ruru Road Watermain</u> renewal Stg III				
Taihape: Dixon Way Pressure investigation				
Bulls: Water supply facility (& caravan dump site)				
Ratana: Water Treatment Plant upgrade				

SEWERAGE AND THE TREATMENT AND DISPOSAL OF SEWAGE GROUP OF ACTIVITIES 2014/15			Feb-15	
Performance measures in LTP/Annual Plan				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Provide a reliable reticulated disposal system that does not cause harm or create pollution within the existing urban areas	100% compliance at Marton WWTP. (Bulls, Hunterville, Mangaweka, Hunterville and Taihape WWTP continue 100% compliant)	Ratana, Mangaweka compliant. Marton non-compliant due to ammoniacal nitrogen. Taihape non-compliant due to flow. Bulls consent expired; currently being renewed. Koitiata non-compliant due to irrigation, and inflow meter verification. Hunterville non-compliant due to lack of gauging site, issues with frequency of emergency discharges.	Ratana, Mangaweka compliant. Marton non-compliant due to ammoniacal nitrogen. Taihape non-compliant due to flow. Bulls consent expired; currently being renewed. Koitiata non-compliant due to irrigation, and inflow meter verification. Hunterville non-compliant due to lack of gauging site, issues with frequency of emergency discharges.	Continue implementation of Water Outlook to assist with compliance monitoring. Continue to work through solutions for Marton, Taihape and Koitiata with Horizons Regional Council. Continue consent renewal process for Bulls. Complete upgrade of Taihape WWPS. Hunterville gauging site to be installed in stream.
	No single network to experience more than 2 overflows during a 12 month period. Response/resolution time monitored and compared with benchmark	Achieved. No overflows within reporting period.	Achieved. Two overflows in Marton and one overflow in Taihape within reporting period.	
	Less than 1 blockage per 13.625Km in Council's reticulated system (the total reticulation length is 109 km).	Achieved. 1 blockage within reporting period.	Not Achieved. 12 blockages total within reporting period.	
New Mandatory Benchmark Measures				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
System and Adequacy: The number of dry weather sewerage overflows from the territorial authority's sewerage system, expressed per 1000 sewerage connections to that sewerage system.	Targets to be set as part of the 2015-20 LTP	0/1000	0.2/1000	
Discharge Compliance: Compliance with the territorial authority's resource consents for discharge from its sewerage system measured by the number of: (a) abatement notices (b) infringement notices (c) enforcement orders, and (d) convictions, received by the territorial authority in relation those resource consents.	Targets to be set as part of the 2015-20 LTP	None received within reporting period.	None received within reporting period.	Ongoing work to ensure compliance with consents, as above.
	Targets to be set as part of the 2015-20 LTP	None received within reporting period.	None received within reporting period.	Ongoing work to ensure compliance with consents, as above.
	Targets to be set as part of the 2015-20 LTP	None received within reporting period.	None received within reporting period.	Ongoing work to ensure compliance with consents, as above.
	Targets to be set as part of the 2015-20 LTP	None received within reporting period.	None received within reporting period.	Ongoing work to ensure compliance with consents, as above.
Fault Response Times: Where the territorial authority attends to sewerage overflows resulting from a blockage or other fault in the territorial authority's sewerage system, the following median response times measured: (a) attendance time: from the time that the territorial authority receives notification to the time that service personnel reach the site, and (b) resolution time: from the time that the territorial authority receives notification to the time that service personnel confirm resolution of the fault or interruption.	Targets to be set as part of the 2015-20 LTP	None received within reporting period.	Three RFS's received and responded to on time.	
	Targets to be set as part of the 2015-20 LTP	None received within reporting period.	Three RFS's received and completed on time.	
Customer Satisfaction The total number of complaints received by the territorial authority about any of the following: (a) sewage odour (b) sewerage system faults (c) sewerage system blockages, and (d) the territorial authority's response to issues with its sewerage system, expressed per 1000 connections to the territorial authority's sewerage system.	Targets to be set as part of the 2015-20 LTP	a) 0.7/1000	a) 0.9/1000	
	Targets to be set as part of the 2015-20 LTP	b) 0/1000	b) 0.7/1000	
	Targets to be set as part of the 2015-20 LTP	c) 0.2/1000	c) 3/1000	
	Targets to be set as part of the 2015-20 LTP	Not determined	Not determined	Review RFS system to enable tracking of customer complaints around response.
Requests for Service				
What are they:	Completed on time	Completed late	Overdue	
Waste				
Wastewater blocked drain	1	0	0	Consolidate with DIA measures above to avoid repetition.
Wastewater leak	0	0	0	
Other Levels of Service				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
None				

SEWERAGE AND THE TREATMENT AND DISPOSAL OF SEWAGE GROUP OF ACTIVITIES 2014/15			Feb-15	
Major programmes of work				
Capital works: Reticulation and Treatment	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Capital Works: Wastewater reticulation, treatment and disposal activity	Develop proposals (including activity/asset management plan) for inclusion in draft 2015.25 Long Term Plan	See sewage supply activity report		n/a
Taihape	Network modelling at Taihape to identify capacity problems in conjunction with renewal programmes	See sewage supply activity report		n/a
		Kaka Road Water leak investigation and sewer repair	Investigate leak, CCTV sewer line, slip line old sewer line and repair	Complete repair works
	Waste Water Pump Station: install new Waste water pump station.	Pump station facility and compound physical works completed. Cut-ins to mains completed.	Wastewater pump station, wetwell facility, pumping units and shed and security compound all completed. Resource consent applied to horizons for temp storage facility.	Complete construction works for Taihape Pump Station upgrade.
Bulls	Waste water Treatment plant upgrade (improvement of Bulls treatment plant to meet water quality standards), Caravan dump site	Pre application public consultation being undertaken	Data capture for the purposes of the resource consent. Draft AEE and consent prepared for review. Consent application completed and applied to horizons for BWWTP. Caravan dump site scoped site, and service options. The resource consent application is currently being prepared and is completed. Staff have met with lwi on site to discuss land passage and outfall structure options. Caravan dump site investigation being scoped, existing service connection options investigated	Complete scoping works and formalise application to horizons for resource consent.
	Infiltration inflow study (to reduce stormwater overload of the wastewater system) completed for Bulls	See sewage supply activity report		n/a
	Network modelling at Bulls to identify capacity problems in conjunction with renewal programmes	See sewage supply activity report		n/a
Marton	Improvement of Marton treatment plant to meet nitrogen standard	See sewage supply activity report		n/a
Ratana				n/a
Renewal Works: Reticulation and Treatment	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Renewals for Reticulation and Treatment	District Wide Budget \$1,059,794.00			
Marton	Community apportionment \$205,739; Goldings line sewage renewal,	Commenced I & I investigation of Goldings line sewage infiltration. Investigated alternative tech solutions for pipeline renewal works	Goldings Line renewal alignment and scope being investigated.	Complete design and award contract for Goldings Line renewal works
Taihape	Community apportionment \$79,013; Mataroa rd, Huia st/Gumboot reserve		Identified projects and investigated suitable renewal alternatives	Complete renewal works.
Bulls	Community apportionment \$632,999	See sewage dump site facility		complete installation of dump facility
Mangaweka	Community apportionment \$94,421			Complete renewal works.
Hunternville	Community apportionment \$23,811			Complete renewal works.
Ratana	Community apportionment \$23,811			Complete renewal works.
Koitiata				Complete renewal works.

Wastewater Projects 2014-15 Budget: \$3.6 million



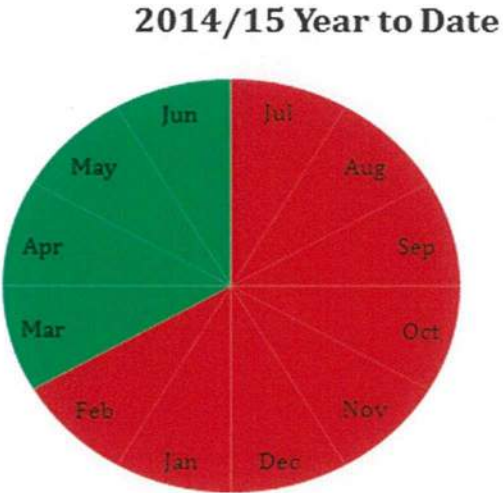
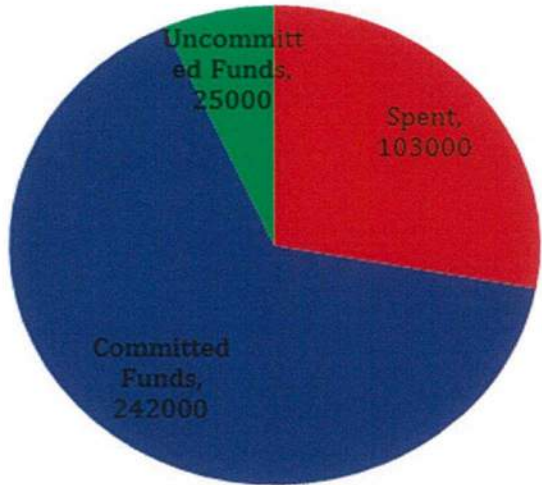
Project	Design/Scoping	Tender/Contract Docs	Under Construction	Complete
Marton: Goldings Line Sewer line renewal				
Taihape: Huia St/ Gumboot reserve				
Taihape: Pump Station renewal rising main				
Taihape: Pump Station compound building				
Taihape: Mataroa St renewal				
Taihape: 55 Kaka Rd renewal				
Bulls: Wastewater Treatment upgrade (physical works)				
Bulls Wastewater Treatment upgrade (consent)				
Bulls: Caravan Dump Site (& water supply facility)				
Bulls: Hammond St renewal				
Hunternville: Ongo Rd renewal				

STORMWATER GROUP OF ACTIVITIES 2014/15			Feb-15	
Performance measures in LTP/Annual Plan				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Provide a reliable collection and disposal system to each property during normal rainfall	In each event of 1 in 20 year storm, no more than 20 dwellings affected for more than 24 hours	None received this reporting period	None received this reporting period	
	60% responded within time and 60% resolved within time, 100% resolved	None received this reporting period	None received this reporting period	
New Mandatory Benchmark Measures				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
System Adequacy (a) The number of flooding events that occur in a territorial authority district. (b) For each flooding event, the number of habitable floors affected. (Expressed per 1000 properties connected to the territorial authority's stormwater system.)	Targets to be set as part of the 2015-25 LTP	None received this reporting period	Three received this reporting period	
	Targets to be set as part of the 2015-25 LTP	None received this reporting period	Surface road flooding - no properties affected	
Discharge Compliance : Compliance with the territorial authority's resource consents for discharge from its stormwater system, measured by the number of: (a) abatement notices (b) infringement notices (c) enforcement orders, and (d) convictions, received by the territorial authority in relation those resource consents.	Targets to be set as part of the 2015-25 LTP	N/A	N/A	Continue collecting baseline data for Marton stormwater to determine whether consent required.
	Targets to be set as part of the 2015-25 LTP	N/A	N/A	Continue collecting baseline data for Marton stormwater to determine whether consent required.
	Targets to be set as part of the 2015-25 LTP	N/A	N/A	Continue collecting baseline data for Marton stormwater to determine whether consent required.
	Targets to be set as part of the 2015-25 LTP	N/A	N/A	Continue collecting baseline data for Marton stormwater to determine whether consent required.
Response Times: The median response time to attend a flooding event, measured from the time that the territorial authority receives notification to the time that service personnel reach the site.	Targets to be set as part of the 2015-25 LTP	None received this reporting period	Three received and responded to on time	
Customer Satisfaction: The number of complaints received by a territorial authority about the performance of its stormwater system, expressed per 1000 properties connected to the territorial authority's stormwater system.	Targets to be set as part of the 2015-25 LTP	0/1000	2.1/1000	
Requests for Service				
What are they:	Completed on time	Completed late	Overdue	
Stormwater				
Stormwater blocked drain (non urgent)	0	0	0	
Stormwater blocked drain (urgent)	0	0	0	
Other Levels of Service				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
None				

STORMWATER GROUP OF ACTIVITIES 2014/15			Feb-15	
Major programmes of work outlined in the LTP/Annual Plan				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
	Continue CCTV condition assessment programme	See Stormwater supply activity report		n/a
	Review system design parameters	See Stormwater supply activity report		n/a
	Review network replacement programme for all assets exceeding threshold risk of 10/25	See Stormwater supply activity report		n/a
	Education programme on the responsibilities of relevant parties	See Stormwater supply activity report		n/a
	Resolve uncertainty over responsibility for Council's stormwater drainage network in urban areas	See Stormwater supply activity report		n/a
	Develop proposals (including activity/asset management plan) for inclusion in draft 2015.25 Long Term Plan	See Stormwater supply activity report		n/a
Other programmes of work identified in e.g. activity management plan/major contracts				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Capital works	Marton: Russell St/Wellington Road new works	Russell St: Brief to Opus to complete detailed design of S/W solution. Option 3 direct connection to Tutaenui Stream is preferred option. Existing alignment through Childcare centre cleaned and currently working adequately. Investigation works has identified limited options for alignment. Revisited drilling option direct to Tutaenui Stream. Design Completed contract docs prepared for tender.	Scoping and design options finalised	Complete design works and award tender for outlet to Tutaenui stream.
	Bulls			n/a
	Taihape			n/a
	Ratana			n/a
Renewals	District Wide Budget \$372,137.00			n/a
Marton	Community apportionment \$268,105; Hammond St, Main/Potaka St, Skerman/Bond St	Hammond St outlet design completed Resource consent applied for. Main/Potaka complete. Skerman/Bond physical works completed	Hammond St s/w outlet design completed resource consent to horizons applied for Works complete: Main/Potaka, Skerman /bond	Complete installation of Hammond St S/W outlet to Tutaenui Stream.
Taihape	Community apportionment \$31,456; Huia st	Huia Street has been investigated. An overflow weir in the stormwater system has been found to be too low, thereby allowing overflow into the sewer system before full stormwater capacity has been achieved. A more practical weir design is under way.	Huia Street has had CCTV investigation with no obvious issues found other than weir design problem.	Complete replacement of Huia St Weir
Rural	Community apportionment \$32,919			Intentionally left blank
Bulls	Community apportionment \$14,510; High St/ Wilson St	Project identified preliminary design undertaken	Project underway	Complete culvert works for High St/Wilson St.
Mangaweka	Community apportionment \$8,259			Intentionally left blank
Hunternville	Community apportionment \$10,898			Intentionally left blank
Ratana	Community apportionment \$5,990			Intentionally left blank

Capital works for new culverts and drains and inlet protection	District Wide Budget \$172,808.00	See Stormwater supply activity report		n/a
Marton	Community apportionment \$31,067			Intentionally left blank
Taihape	Community apportionment \$39,739			Intentionally left blank
Rural	Community apportionment \$49,378			Intentionally left blank
Bulls	Community apportionment \$9,000			Intentionally left blank
Mangaweka	Community apportionment \$10,010			Intentionally left blank
Hunternville	Community apportionment \$16,876			Intentionally left blank
Ratana	Community apportionment \$16,738			Intentionally left blank

Stormwater Projects 2014-15 Budget: \$420000



Project	Design/Scoping	Tender/Contract Docs	Under Construction	Complete
Marton: Russell/Wellington Road Stormwater upgrade				
Marton: Hammond St Stormwater outlet upgrade				
Marton: WTP levelling & Drainage				
Taihape: Skerman St/ Bond St Stormwater renewal				
Marton: Main/Potaka Stormwater inlet				
Bulls: High St/ Wilson St Stormwater renewal				

COMMUNITY AND LEISURE ASSETS GROUP OF ACTIVITIES 2014/15			Jan-15	
Performance measures in LTP/Annual Plan				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Provide a "good enough" range of community and leisure assets at an appropriate proximity to centres of population	Progressive improvement in provision and maintenance of the Library service: A greater proportion (benchmark = 15%) of the sample believe that Council's service is getting better	Survey undertaken during Feb/Mar for reporting during the Annual Planning Process		
	Progressive improvement in provision and maintenance of the swimming pools: A greater proportion (benchmark = 22%) of the sample believe that Council's service is getting better	Survey undertaken during Feb/Mar for reporting during the Annual Planning Process		
	Progressive improvement in provision and maintenance of the sports fields and parks: A greater proportion (benchmark = 5%) of the sample believe that Council's service is getting better	Survey undertaken during Feb/Mar for reporting during the Annual Planning Process		
	Progressive improvement in provision and maintenance of public toilets: A greater proportion (benchmark = 5%) of the sample believe that Council's service is getting better	Survey undertaken during Feb/Mar for reporting during the Annual Planning Process		
	Progressive improvement in provision and maintenance of community buildings: A greater proportion (benchmark = 5%) of the sample believe that Council's service is getting better	Survey undertaken during Feb/Mar for reporting during the Annual Planning Process		
	Progressive improvement in provision and maintenance of community housing: A greater proportion (benchmark = 3%) of the sample believe that Council's service is getting better	Survey undertaken during Feb/Mar for reporting during the Annual Planning Process		
Requests for Service				
What are they:	Completed on time	Completed late	Overdue	
Cemeteries	0	0	0	
Cemetery maintenance	1	0	0	
Council Housing/Property	9	7	2	
Maintenance (Council housing/property)	9	7	2	
Graffiti/Vandalism	0	0	1	
Graffiti/Vandalism	0	0	1	
Halls	2	0	1	
Maintenance (halls)	2	0	1	
Street Cleaning	0	0	0	
Street litter bins/maintenance	0	0	0	
Parks and Reserves	6	0	1	
Maintenance (parks and reserves)	6	0	1	
Playground equipment	0	0	0	
Public Toilets	1	0	0	
Cleaning (public toilets)	0	0	0	
Maintenance (public toilets)	1	0	0	

Other Levels of Service				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
An accessible, affordable, well maintained and pleasant range of community and leisure assets that provide for the cultural and social well-being of communities	60% of residents will have an open space available within 1.5 Km of their dwelling	Council staff assisted with weeding the Hunterville community Library and stock. A meeting was held between representatives from Hunterville School, RDC, National Library School Service, and Hunterville Community Library Committee to discuss the proposal to relocate the library to the school. The relocation is scheduled for Tues 17 March.	Council has indicated its intention over the next 10 years or so to rationalise its community and leisure assets. It anticipates that over the course of the next decade it will have fewer, better community assets. A draft Collection Development Policy, including e-resources, is almost finalised. The District Librarian has been interviewed as part of the first stage of Council's Information Systems/Technology Review. Hunterville School has requested permission for them (the school) to build and pay (they are not seeking financial contribution from the Council) for a 1.1km fitness track at the Hunterville Domain for use by the Community. Hunterville Community Committee was in favour of the proposed fitness trail by Hunterville School, providing it complies with Council requirements. Final details are still being discussed. Centennial Park cricket outfield has been dethatched and swept, and hollow tined. Flat weed spraying was carried out on the fields at Bulls and Hunterville Domains. Staff from Hutt City Council assisted with the strategic review of the swim centres, and visited all three on 29 September. The Hunterville Community Committee agreed that the library be relocated to the School. Review of the present Parks & Town Contract specifications has commenced. On track with options for the swim centres and community housing as part of the draft LTP consultations.	Review of Reserves register and associated licences to occupy.
	A specialised sports field for every major sporting code within the Rangitikei District			Review of the Parks and Town Contract specifications. Present contract finishes 31 July 2015.
	60% of residents will have a community building available within 1.5 Km of their dwelling			Preparation of service agreements for Council owned Rural Halls. Consideration of Town Hall facilities as part of the Town Centre planning at Bulls, Marton and Taihape.
	Pool-safe accredited pools in Marton and Taihape, with affordable access to the pool in			Strategic review of all three swim centres as part of the 2015/25 LTP process.
	Library provision in Marton, Taihape and Bulls + community libraries in Hunterville, Mangaweka and Kawhatau			Finalisation of Collection development Policy. Current subscription databases will be reviewed. Evaluate other potential additions. Investigate options for the library website; Implement self-service for checking out of materials; Investigate options for touch screens for provision of information; Investigate options for self service payments for council services, photocopying and printing;
	Safe and comfortable Community Housing, with additional support services from Age Concern (cost \$1 per week/per unit), within Bulls, Taihape, Marton and Ratana at no less than 1: 60 population			Age Concern continue to visit the tenants in the southern part of the district, and Older & Bolder in the North. This contract has expired, and renewal will be considered as part of the review of the management of community housing.
	A safe, clean public toilet within 100 m radius of CBD			

COMMUNITY AND LEISURE ASSETS GROUP OF ACTIVITIES 2014/15

Feb-15

Major programmes of work outlined in the LTP/Annual Plan				
What are they.	Targets	Progress for this reporting period	Work planned for next three months	Progress to date for this year
Community and Leisure Group activity	Develop proposals (including activity/asset management plan) for inclusion in draft 2015.25 Long Term Plan	On track.	Will be implemented into the draft LTP by mid December.	
Parks and open spaces activity	Work with the community to develop and consult upon detailed implementation plans and budgets for a regional sports development plan.	Lottery funding application was successful, and tenders have been called to refurbish Shelton Pavilion. Priorities are being finalised with the Centennial Park Steering Group.	Funding application to be submitted to Powerco Trust for final funding to refurbish Shelton Pavilion.	Applications for funding submitted to Lottery Community Facilities Fund and Whanganui Community Foundation to refurbish Shelton Pavilion. Asset Management Planning for LTP in process to develop the parks identified. Meeting with Sport Wanganui Chief Executive confirmed that the scope of Council's involvement in the regional sports development plan is to progressively develop the facilities on Memorial Park, Taihape, Centennial and Marton Parks in Marton and Bulls Domain.
	Progress Urban Parks and Reserve Management Planning, including *Implementation of agreed Bulls Domain management plan; *Alternative access, use of buildings, upgrading playground facilities, developing paths/trails and provision of permanent power on Wilson Park, Marton; *Liaison with Clubs Taihape over the projected community leisure hub on Taihape Memorial Park	The playground development proposal for Wilson Park, as per the Playground Centre quotation, will be highlighted in the 2015/25 LTP Consultation Document (along with the proposed upgrades to the district's skate parks).	Meet with users of Wilson Park to discuss use of buildings. Liaison with Clubs Taihape is expected to be considered as part of the Taihape Town Centre Plan, along with upgrade development plans for Memorial Park. Investigate paths/trails at Bulls, Hunterville and Taihape Domains and Wilson Park.	Marton Community Committee have painted and are installing stepping poles at Wilson Park. Onsite meeting has been held with Anne George (Country Music Festival) and personnel from Alf Downs regarding permanent power supply at Wilson Park. Awaiting quotes for this work. Meetings have been held with some users of Wilson Park. Further meetings to be arranged. Separate report prepared for November Assets/Infrastructure Committee. Stage 1 of the upgrade for the permanent power supply at Wilson park has been implemented.
	Upgrade internal shower/ablution block at the Koitiata campground.	Project was completed in November 2014.	Completed	Work has commenced on converting the showers to coin operated facilities. Plumbing work has been completed. Coin operated showers are now functional. Paint has been purchased for interior painting. Koitiata Community Committee members and volunteers will action the painting.
	Install off-road parking bay at Gumboot Park (Mataroa Road, Taihape) and upgrade the two footbridges there.	This project has not yet commenced due to the contractor being delayed.	Implement Parking Bay; Investigate options for footbridges.	A design has been drawn up for a parking bay that will be sufficient for two 12m buses. The Taihape Community Board have approved the suggested proposal for the parking bay and tenders will now be called for this work.
Community Halls and Buildings activity	Implementation of agreed earthquake-strengthening & undertaking further evaluations in response to government requirements (when announced).	Nothing to report		
	Exterior maintenance and painting of the gaol on the old Bulls courthouse site.	Quotes have been received from McIlwaines Building Solutions and are within budget. An update will be provided to the Bulls Community Committee, as requested, on 10 March.	Exterior renovation and painting to occur.	An initial meeting has been held with Bulls & District Community Trust, and Museum representatives. Bulls Community Committee members expressed concern about the possible cost of the project and have asked for detailed estimate before any maintenance was commenced. This project would appear to be more complex than envisaged (and potentially more costly than the budget provision). Council's building officers went on-site and agree with the existing conservation plan but warn that once the roof cladding has been removed, along with the damaged weatherboards, that there may well be water damage to the overall structure which would then need to be replaced if not up to standard. The officers advised that the materials used to match the heritage look of the building could be likely to increase the renovation price of this project. McIlwaines Building Solutions have been asked to provide an estimate of costs. On-site meeting held with McIlwaines on 5 February. Suggested work/preservation programme to be presented by mid-February.
Library activity	Wholesale review of information technology needs of the community taking into account APNK, Marton and surrounds ICT Hub and new e-services (e.g. e-books, Kete).	Library website upgrade is being included as part of the Council website upgrade.	Current subscription databases will be reviewed. Evaluate other potential additions. Investigate options for the library website; Investigate options for touch screens for provision of information.	Partaking in the greater (including the Library service) Council Information and Technology review in the first instance.
Community Housing activity	Research alternative management arrangements for community housing.	On track for inclusion in the draft 2015/25 LTP	Options to be identified for 2015/25 draft LTP.	Staff gathered information to assist with the consideration of a Trust managing the community housing operation. Representatives from Manawatu Community Trust visited all of our Community Housing complexes and will be presenting to the 16 October meeting. A report on the options for the on-going delivery of community housing services, including the provision of community housing via an independent community trust, was presented to the Council meeting of 27 November.

Other programmes of work identified in e.g. activity management plan / major contracts				
What are they:	Targets	Progress for this reporting period	Work planned for next three months	Progress to date for this year
Renewals				
Swimming Pools	Pump and DE filter replacements in Marton and Taihape. Poolside resurfacing in Taihape. Ventilating fans Taihape.	Council representatives met with TCDT , and are waiting for the TCDT Chair to report back to the Chief Executive as to what they consider the priorities are. Work will be carried out at Marton Swim Centre when it closes for the season.	Strategic review of all three swim centres as part of the 2015/25 LTP process.	On track. Marton pump has been purchased and will be installed when the DE filters are due for changing. Marton Swim centre opened on 27 September and Taihape Swim Centre opened on 3 November.
Libraries	Upgrade of PCs, tables, chairs and display shelving. Library Book purchases	On track. 55% of the book budget has been spent. Self service machines have been purchased.	Installation and implementation of self service machines.	Aotearoa Peoples Network public computers have been replaced/installed; Nine at Marton and Taihape and four in Bulls.
Community Housing	\$25K for interior/exterior upgrades.	One shower unit has been re-lined in Taihape.	1 x Russell Street, Marton, and 1 x Hammond Street, Bulls, units are having interior painting carried out in March. Flooring and an oven will also be replaced at a Russell Street unit.	New carpet and vinyl has been installed in one Taihape unit. Kitchen area in one Ratana unit has been painted.
Cemeteries	\$15K available	Some roadway renewal work is due to be undertaken in March at Taihape cemetery.	Seeking prices for concrete seating pads.	
Parks and Reserves	Centennial Park renovations	Lottery funding application was successful. Tenders have been invited from local contractors.		An application has been submitted to the Community Facilities Fund to upgrade Centennial Park Shelton Pavilion to modern day building code standards and to renew the kitchen and changing facilities has been submitted.
Toilets	No renewal budget			
Halls	Ratana Clinic Interior Repaint Hunterville Hall Re-roofing Koitiata Joinery Exterior Paint Omatane	Re-roofing of the Hunterville Town Hall was completed. Prices have been sought for the painting of Koitiata Clinic.	Complete identified projects.	Order has been raised for new roof at Hunterville. Audits are being undertaken on rural halls for the Dudding grant project (and Council programmed maintenance).
Capital				
Swimming Pools	Car-park extension etc. at the Taihape Pool	Due to the strategic review of the swim centres, and the proposed consideration of the Memorial Park facilities as part of the Taihape Town Centre Plan, this development has been placed on hold. Instead remedial repairs only have been carried out.	Plan developed and presented to Taihape Community Board. Consideration of playground in close proximity.	Onsite meeting has been held to discuss options. Infrastructure providing input. Plan was developed, presented, and approved by the Taihape Community Board at their November meeting.
Parks and Reserves	Mangaweka campground sewerage disposal	Some minor works were carried out prior to the peak season. The Infrastructure team determined that the present system was adequate for the current demand (with the septic tank to be emptied twice during the summer holiday break) and no further work will be undertaken on this project.	Project completed.	Initial discussions have been held with Infrastructure, who will supply technical input. Consideration is being given as to whether an alternative option is to empty the septic tank system twice during the peak season.
Library - first time borrowing		February 6451 (6582 Feb 2014)		Total First Time Issues 2014 : 89406 (2013 = 88876) January 6799 (7913 Jan 2014)

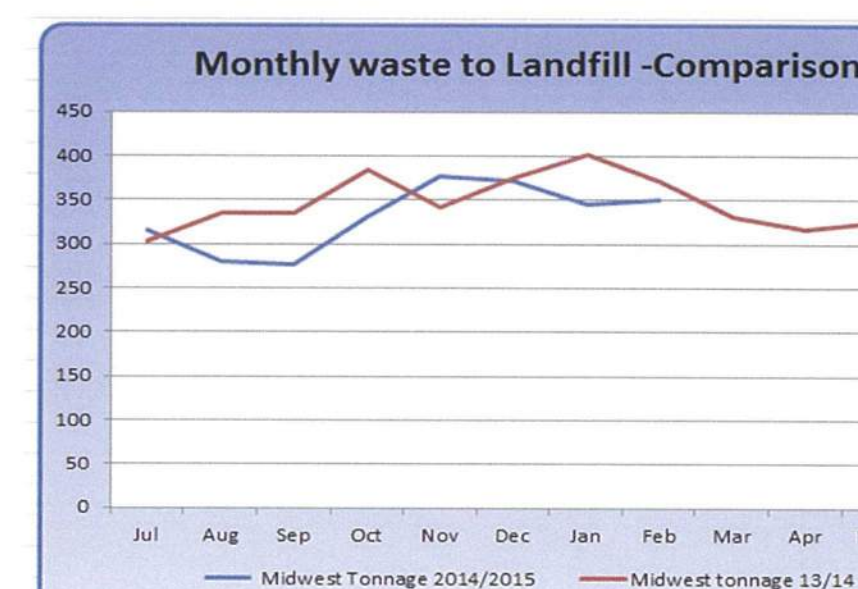
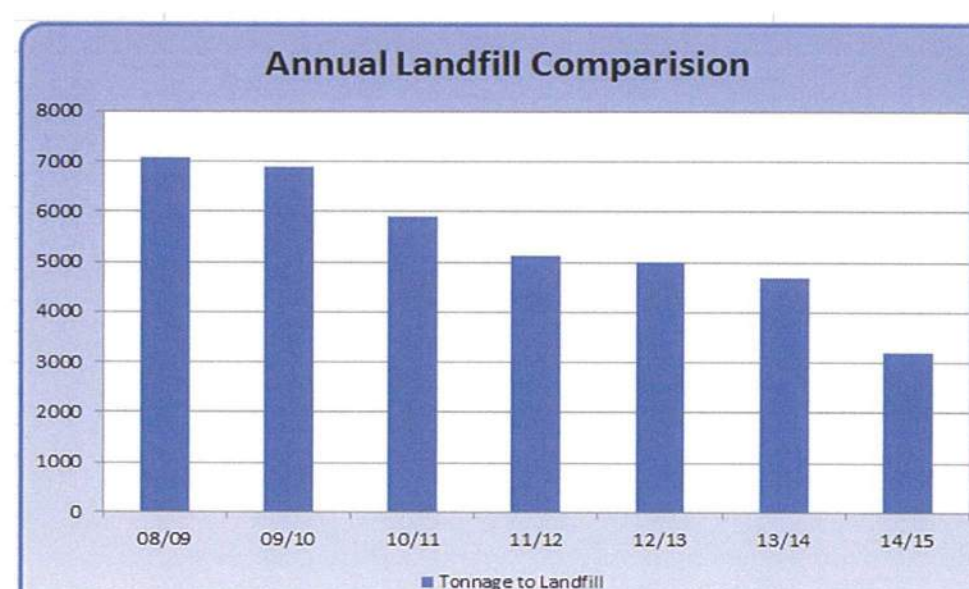
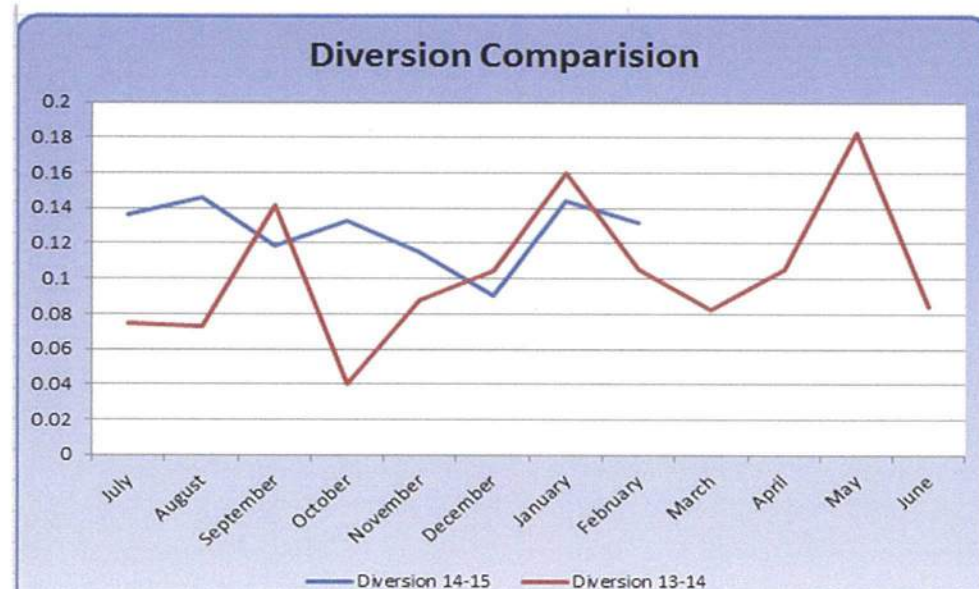
RUBBISH AND RECYCLING GROUP OF ACTIVITIES 2014/15			Feb-15	
Performance measures in LTP/Annual Plan				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Make recycling facilities available at waste transfer stations for glass, paper, metal, plastics, and textiles and e-Waste	5,200 tonnes to landfill	430 Tonnes waste to landfill.Combined total for year of 3206 Tonnes	Waste to landfill 62% of Target (8th month)	General maintenance carried out at WTSs
Extend recycling facilities to include green waste facility at Taihape, waste transfer stations	Percentage of waste diverted from landfill 11%	Diversion 13.2%	12.7% for the year thus far	Feasibility study to be undertaken before green waste received at Taihape WTS
Requests for Service				
What are they:	Completed on time	Completed late	Overdue	
None	1	0	0	
	0	1	1	Ensure effective communication by contractor
Other Levels of Service				
What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Efficient, affordable and convenient access to waste disposal services that can accept a range of different waste streams.	Provide waste transfer stations under contract at Bulls, Marton, Ratana, Taihape, Hunterville and Mangaweka	Targets Met	Targets Met	Continue with infrastructure build for paper and card acceptance at Taihape WTS.

Major programmes of work outlined in the LTP/Annual Plan

What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Waste minimisation activity	Scoped green waste scheme up and running	No change over December period	Green waste acceptance in Bulls and Marton	Scope feasibility of green waste for Taihape RTS
Education in schools	Number of schools that have received zero waste education in Rangitikei district.	No education programmes recorded for February	Three schools received programme Marton Junction, Moawhango, Papanui Junction	Continue to assist Horizons in promotion of Enviroschools

Other programmes of work identified in e.g. activity management plan / major contracts

What are they:	Targets	Progress for this reporting period	Progress to date for this year	Work planned for next three months
Taihape to have paper and cardboard recycling	By 3rd quarter have infrastructure in place	Platform almost finished, chassis work under way	Steel fabrication of shipping container conversions underway	Finish shipping container refit for hook bin movements of P&C



Attachment 3



MEMORANDUM

TO: Assets/Infrastructure Committee

FROM: Samantha Whitcombe

DATE: 6 March 2015

SUBJECT: **Budget Queries Raised at Finance/Performance Committee, 26 February 2015**

FILE: 3-CT-14-1

1 Summary

- 1.1 At its meeting on 26 February 2015, the Finance/Performance Committee identified several issues within various budgets for inclusion in the Assets/Infrastructure Committee's meeting.

2 Community & Leisure Assets Group of Activities

The lower than year-to-date projected expenditure on libraries:

- 2.1 At this stage this budget is underspent in the subscription, software and printing, and stationary area. Staff time is also underspent due to staff time now being allocated against other Community & Leisure Assets activities.

The greater than year-to-date projected non-rates revenue in parks/domains:

- 2.2 The \$100,856 grant from the Lotteries Commission for the Shelton Pavilion upgrade is included in this budget.

The lower than year-to-date projected expenditure on public toilets Budget was based on historic:

- 2.3 Relocating the public toilets to Wallace Development complex has resulted in lower usage than the Bulls High St Toilets (based on stock, this is estimated at approx. 35%) and therefore savings on materials. This is due to the food premises and the BP station within the Wallace Development complex having their own customer toilet facilities. The vandalism issue that was also experienced at the High St Bulls 24hr facility is also not apparent at the Wallace Development complex toilets, and an on-going blockage issue at Hunterville Public Toilets is now fixed.

The low year-to-date renewals capital expenditure in parks/domains:

- 2.4 Several large projects are still to be actioned (e.g. \$40K Shelton Pavilion; \$30K Gumboot Park parking) and others are yet to be invoiced (e.g. \$15K power upgrade Wilson Park). The Mangaweka Waste water upgrade was not required (some minor works have been carried out there; approx. \$5K) and quotes for the Bulls Gaol have just been received.

The low year-to-date renewals capital expenditure on at the swimming pools:

- 2.5 Currently awaiting confirmation from the Taihape Community Development Trust as to their priorities for the Taihape Swim Centre. Works within the Marton Swim Centre are scheduled for after the pool has closed at Easter.

Non-rates revenue receipts and processes at Council's swim centres:

- 2.6 Revenue is now issued as a credit note and deducted from the invoice for management services for the Marton Swim Centre. Income for the Hunterville and Taihape Swim Centre's is retained by these operators.

3 Stormwater Group of Activates

The lower than year-to-date expenditure within the stormwater activity:

- 3.1 Stormwater projects typically are either delayed by the need for consents for outlets or land access. Very dry conditions are needed to undertake work in drainage ditches.

4 Water Supply Group of Activities

The over-spend within the Marton water renewals budget:

- 4.1 The actuals shown against Marton include Taihape, Bulls, Mangaweka and Hunterville. The combined full-year renewals budget for these locations is \$2,455,408. Currently water renewals expenditure in Marton is \$698,336 against a year-to-date budget of \$766,576.

5 Wastewater Group of Activities

The under-spend within the Marton wastewater renewals budget:

- 5.1 The actuals shown against Marton include Taihape, Bulls, Mangaweka and Hunterville. Currently wastewater expenditure in Marton is \$15,000. The large underspend in the wastewater renewals area is because staff are waiting for the Bulls wastewater treatment plant consent (after which renewals will be undertaken there) and the report on Bonny Glen leachate options (so that appropriate renewals can be made at the Marton Wastewater Treatment Plant).
- 5.2 Both these projects are seen as being done in 2015/16.

6 Rubbish and recycling

Non-rates revenue receipts and processes at Council's waste transfer stations:

6.1 This information will be tabled at the meeting.

7 Recommendation

7.1 That the memorandum 'Budget Queries Raised at Finance/Performance Committee, 26 February 2015' be received.

Samantha Whitcombe
Governance Administrator

Attachment 4

Bulls Wastewater Upgrade Best Practicable Option Report

Prepared for
Rangitikei District Council

Prepared by

L E W E
Environmental
I m p a c t

Version 2 - March 2015

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Bulls Wastewater Upgrade Best Practicable Option Report

Rangitikei District Council

This report has been prepared for the Rangitikei District Council by Lowe Environmental Impact (LEI). No liability is accepted by this company or any employee or sub-consultant of this company with respect to its use by any other parties.

Quality Assurance Statement		
Task	Responsibility	Signature
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Prepared by:	Peter Hill	
Reviewed by:	Hamish Lowe	
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Ref: F_T_P2R14-Best_Practicable_Option

Job No.: 10098

Date: March 2015

Revision Status			
Version	Date	Reviewer	What Changed & Why
2	05/03/15	MF	Corrections of detail, figures.
1	20/02/15	HL	Original client draft

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1 EXECUTIVE SUMMARY

The purpose of this report is to describe the rationale for arriving at a “Best Practicable Option” for the Bulls municipal wastewater treatment plant (“WWTP”) discharge.

The Bulls WWTP requires re-consenting, and this had been considered likely to require an upgrade. A preferred option for the discharge from the WWTP is to be identified based on system performance, community preference, technical viability and community affordability.

The principal party involved is the Rangitikei District Council (“RDC”), as operator of the Bulls WWTP. Horizons Regional Council (“HRC”) is the regulatory body that sets the conditions for the WWTP discharges, and is therefore also a key party to this project. Manawatu District Council as manager of the Sanson wastewater system, and New Zealand Defence Forces as manager of the Ohakea wastewater system, have been considered potentially involved as they consider whether there may be advantages in piping their wastewater to Bulls for treatment and/or discharge.

The Bulls WWTP receives municipal wastewater from a community of about 1,500 people, by way of a screen, to a 2-pond system. Outflow is from an overflow weir to a grass-covered drain running through a paddock towards the Rangitikei River. The effect of the existing discharge from the Bulls WWTP on the receiving waters of the Rangitikei River has been shown to be not greater than minor. With Ohakea and Sanson wastewater system managers having decided to pursue other options, for the foreseeable future the Bulls plant will only need to accommodate the wastewater from the Bulls community.

To completely remove the discharge from the river would require a large capacity storage facility, new infrastructure, and a land access arrangement that would likely involve purchase. Significant capital costs would be involved, which would not be required for a continued river discharge. However, with the effects of the existing discharge meeting plan requirements, and with increases in wastewater volumes considered unlikely, there is no imperative to make significant changes to the existing wastewater system.

Iwi Maori have expressed concern that a river discharge of human wastes is culturally offensive, and to mitigate this effect some adjustments to the discharge mechanism are proposed, as well as an investigation into a summer seasonal land discharge. This partial land discharge could potentially avoid the river discharge at times of low river flow, and may be able to be achieved without the expense of land purchase. The two figures attached to this report as Appendix A show the general site location, and the two most significant changes from the status quo that are proposed, being the land passage facility and the rapid infiltration facility.

Indicative costings for three main options are provided; total land discharge has a capital cost of \$4.8M, summer seasonal land discharge has a capital cost of \$855,000, and total river discharge has a capital cost of \$200,000.

There are 3 recommendations arising from this report; Rangitikei District Council should undertake the following:

- Investigate the practicality of a Rapid Infiltration system adjacent to the existing Bulls WWTP to reduce the extent of direct discharge to the Rangitikei River;
- Pursue the opportunities for a summer seasonal land discharge of wastewater from the Bulls WWTP; and



- Pursue the consenting of the entire Bulls WWTP discharge to the Rangitikei River, to ensure that the WWTP can remain functional irrespective of any summer seasonal discharge arrangement being successful.



2 INTRODUCTION

2.1 Purpose

The identification of the best practicable option for the Bulls Wastewater Upgrade.

2.2 Background

The discharges from the Bulls wastewater treatment system require re-consenting, and in order to achieve this some aspects of the treatment and/or discharge systems may require an upgrade. A preferred option is to be identified based on system performance, community preference, technical viability and community affordability.

A series of investigations and reports on aspects of the Bulls municipal wastewater management system was defined and proposed in the report titled "Forward Strategy and Project Scopes for Upgrade Investigation and Consenting" (FSPSUIC) in October 2013, and revised several times since then. FSPSUIC laid out the framework of investigations and reports which would assist to determine what works may be required to enable the re-consenting of the Bulls WWTP discharge, and would ultimately produce the resource consent application.

2.3 Scope

This report is to provide the identification and description of the selected BPO. The reasons for the selection are to be explained, with reference to the relevant Phase 1 reports.

The report is not intended as a works proposal nor a consent application. It is limited to defining and briefly describing the BPO and how/why it has been selected.

This report is Report P2:R14 of the FSPSUIC.



3 BACKGROUND ISSUES

3.1 Consenting Background

RDC was granted consent number 6406 by HRC on 7 October 1996, authorising the daily discharge of no more than 515 m³/day of treated sewage effluent into the Rangitikei River. This consent expired on 7 October 2006.

An application for a replacement resource consent was lodged with HRC prior to this expiry date. HRC placed the processing of this application on hold pending an investigation into whether the Ohakea and/or Sanson communities should also be connected to the Bulls WWTP. HRC also indicated that land treatment options should be considered as an alternative to continued discharge to the Rangitikei River.

Because the application for a replacement consent was lodged within the statutory timeframe, HRC has authorised RDC to continue the Bulls municipal wastewater discharge as regulated by consent 6406, as provided by s124 of the Resource Management Act 1991 ("RMA"), until such time as the new consent application is determined.

There have been significant changes in the regulatory environment since the replacement consent application was lodged with HRC in 2006, including the following:

- Amendments to the RMA have made procedural changes;
- National Environmental Standards with a bearing on discharges to rivers have been established;
- HRC now has its One Plan operative, which sets more specific limits on environmental effects; and
- HRC, operating in line with its One Plan, now sets much more specific conditions on resource consents than were normal practice when consent 6406 was granted.

Because of these changes in the regulatory environment, a new resource consent application will be lodged with HRC to replace the re-consenting application lodged in 2006. The new application will address matters in terms of current statutes and plans.

3.2 Wider Project Background

The Bulls WWTP and its discharge are fully described in Report "*Existing Bulls Treatment Plant Design Summary & Limitations*" which is P1:R2 of FSPSUIIC. A reticulated sewer located within the road reserve within the Bulls township delivers raw wastewater from a residential population of about 1,500 people, as well as a few commercial and industrial premises, to a two-pond WWTP on the southern outskirts of the town. The discharge from the WWTP exits by way of an overflow weir, discharging into an open, grassy ditch which runs about 200 m to the edge of the Rangitikei River. Figure 1 in Appendix A shows the general location of the Bulls WWTP in the context of its environs.

As encouraged by HRC, RDC investigated the implications of making its WWTP and/or discharge facility available to the operators of the Ohakea and Sanson wastewater systems. This recognised that both those other systems were also due for the re-consenting of their respective wastewater discharges in the near future. It also recognised that there were aspects of the operation of their existing discharges that made re-consenting of the existing infrastructure unlikely, and that upgraded discharge systems would likely be required.



It had been presumed that Bulls, like Sanson and Ohakea, may need to upgrade its treatment and/or discharge systems, in order to meet One Plan requirements. It was considered reasonable that an upgrade to the Bulls WWTP and discharge system would add the capacity required for the two additional wastewater inflows, as well as meet more stringent environmental requirements, and that an equitable cost sharing arrangement would be negotiated.

However, as the investigations proceeded it became clear that the effect of the current Bulls WWTP discharge on the Rangitikei River was minor. That the effect was minor introduced the possibility of re-consenting the existing discharge without significant change. The addition of Sanson and Ohakea wastewater, however, was considered likely to introduce a requirement for larger pond capacity, as well as for a more sophisticated treatment methodology. If the residents and ratepayers of Bulls (in Rangitikei district) did not need to meet the expense of upgrading their wastewater system in order to meet One Plan requirements, then it became clear that all costs of upgrading the plant to accommodate Sanson and Ohakea wastewater (in Manawatu district) would need to be met by those other communities.

The operators of the Sanson and Ohakea wastewater systems have opted to investigate other options to upgrade their respective discharges. Accordingly, the Bulls WWTP and its discharge are now planned to go forward without inflows from any other community.

3.3 Local Government Obligations

RDC has duties and responsibilities in relation to wastewater infrastructure that are specified in statutes as follows:

- s130 of the Local Government Act 2002 requires Council to continue to provide and maintain wastewater services;
- s25 of the Health Act 1956 obliges Council to provide 'sanitary works', including 'works for the disposal of sewage', if required to do so by the Minister of Health.
- s10 of the Local Government Act 2002 states that a purpose of local government is to *"meet the current and future needs of communities for good-quality local infrastructure, local public services, and performance of regulatory functions in a way that is most cost-effective for households and businesses."* 'Good quality' is defined as 'efficient', 'effective' and 'appropriate to present and anticipated future circumstances'.

The "so what" of this is that it is RDC's job to provide a wastewater system for Bulls that meets a variety of central government, local government and community requirements.

3.4 Decision Drivers

The key drivers for making decisions on the future configuration of the Bulls WWTP and its discharge facility are briefly summarised below.

3.4.1 Suitability and Location of Existing Infrastructure

The reticulated sewer network within Bulls town may be presumed to be satisfactory in terms of location, condition, and performance, subject only to ongoing and scheduled maintenance.

The WWTP is located on land owned by RDC, but within the Rangitikei River flood channel. It is located conveniently close to the town, avoiding neighbourhood effects but close enough to town to minimise costs of any sewer main maintenance that may be required from time to time. The likelihood of the WWTP being over-topped by a greater than 1:40 year flood event has been



described in "*Flooding Implications for Bulls WWTP*", (Report P1:R5). While this is an issue that will need to be managed, the likelihood of significant and expensive flood damage to the WWTP has been considered to be sufficiently low to out-weigh any consideration of re-location of the plant.

The discharge from the WWTP is by an open, grassed ditch from the WWTP outlet to the bank of the Rangitikei River. While there is room to improve amenity and cultural aspects of the discharge facility, its location may be considered to be suitable, and as suitable as any other location, as far as continued discharge to the river is involved.

3.4.2 One Plan Requirements

One Plan drives consideration and decisions on the environmental effects of the WWTP's discharges. One Plan not only defines aspects of consenting procedure, but also specifies Objectives, Policies and Rules that are required to be met. Effects on water are a key focus of One Plan. The discharges from the Bulls WWTP will need to meet the provisions of One Plan.

3.4.3 Cultural Acceptability

Iwi whose rohe includes the Rangitikei River and its margins prefer human wastewater not to be discharged into the river. If it must be discharged to the river, then a provision of land passage is much preferred to a straight pipe discharge into the water. Even if most of the wastewater must be discharged to the river, Iwi would prefer a summer seasonal discharge to land in order to avoid discharging to the river in times of summer low flow when adverse environmental effects and community uses of the river have the highest likelihood of occurring at the same time.

3.4.4 Affordability

Wastewater treatment and discharge could technically be upgraded to remove adverse effects on both Rangitikei River and Iwi cultural expectations, but at a price. In common with many towns of equivalent size, and with many rural districts, the residents of Bulls and the wider Rangitikei district have limited enthusiasm for funding public works beyond the level of necessity. Decisions on the future configuration of the Bulls WWTP and discharge facility will be strongly influenced by cost, and very good reasons would be needed to support any decision to deviate from the least cost option consistent with meeting statutory requirements.



4 DISCHARGE ENVIRONMENTS

Wastewater needs to be discharged into the environment; it cannot simply be stored indefinitely. This section of this report briefly summarises the discharge options that may be considered. As well as wastewater (liquid phase,) discharges from WWTPs also involve solids and gases, also briefly described below.

4.1 River Discharge

Wastewater may be discharged, after appropriate treatment, to a river. At Bulls the most convenient option is the Rangitikei River, at a point close to the WWTP, and this is the present situation. Other options include discharge to the Rangitikei River at another location (either upstream or downstream from the present discharge, or even on the opposite bank) or the use of another river.

The main issues to be addressed with a river discharge are the effect of the discharge on the river environment, both as measured effects on ecological values and as perceived effects on the cultural values of the river.

4.2 Ocean Outfall

Wastewater could be piped from the Bulls WWTP down to the coast, to an ocean outfall that could be established on the ocean floor some distance off the coast. The distance from the coast to the actual discharge point would be to ensure that the discharge structure remains secure from wave action and turbulence, and that the discharged wastewater would remain away from the foreshore area.

The main issues to be addressed with an ocean outfall would be the large cost of a 20 km pipeline from Bulls to the coast, the large cost of designing, installing and maintaining a physically secure discharge structure on the ocean floor, and the significant cost and complexity of consenting for such a discharge into the marine environment.

4.3 Land Discharge

Wastewater could be piped from the Bulls WWTP to an appropriate area of land. It could then be irrigated onto that land at a rate that balances the rate of wastewater production with the rate at which the land can safely receive wastewater without adverse effects of surface ponding, run-off, or through-flow.

The main issues to be addressed with land discharge are making a secure access arrangement for the land to be used (which may involve ultimately the purchase of the land) and the large storage capacity that would be essential to accommodate freshly generated wastewater at times when land application is not possible for any one of a variety of reasons.

4.4 Combined Land and Water Discharge (CLAWD)

A CLAWD enables discharge of treated wastewater to land at times when river flow is low and river water quality is more susceptible to adverse effects, and the discharge of wastewater to a river at times when the land is too wet to safely receive irrigation (and when the river flow is high enough to provide adequate dilution of any discharge.)



A CLAUD has the ability to provide protection of a river environment by discharging to land when the river is most sensitive to the effects of a wastewater discharge, and to reduce both the land area and storage capacity requirements of a straight land discharge system by utilising a river discharge at times when the land cannot safely receive applied wastewater. In particular, a CLAUD offers the possibility of a summer seasonal discharge to land, which would keep the discharge out of the river during times of low river flow.

Issues to be addressed with a CLAUD system are a requirement for comparatively more sophisticated system management than for a straight river discharge, and costs and security of access to the land component.

4.5 Rapid Infiltration

An alternative to discharging wastewater to a river, to the ocean, or to the surface of the land is Rapid Infiltration. Soakage of wastewater from specially managed pits into the groundwater can avoid several of the environmental and cultural effects of a discharge to any other environment. There is, of course, an environmental effect on the groundwater that receives the discharge, where the groundwater can recharge a river or is used as a water source for a variety of uses including domestic supply, irrigation, and stock water.

Issues to be addressed with Rapid Infiltration are the establishment and maintenance of sufficiently high rates of infiltration to accommodate the wastewater flow in question, and whether the environmental effects of this system are more, or less, desirable than those of alternative discharge options.

4.6 Solids Discharge from a WWTP

Wastewater treatment plants such as that at Bulls generate two types of solid material that need to be managed appropriately.

The first is the gross solids that are screened out from the sewage inflow to the WWTP. This material does not enter the treatment ponds, but is screened from the sewage inflow as it arrives at the WWTP, loaded into a skip bin and transported to a sanitary landfill for appropriate disposal. Gross solids accumulate daily at the Bulls WWTP, and the disposal arrangement is to a landfill with separate and on-going consenting provision.

The second solids issue is the sludge that accumulates slowly in the bottom of the treatment ponds. This sludge comprises mostly the remains of the organisms that break down the wastewater in the ponds, and needs to be excavated from the ponds periodically in order to maintain the ponds' operating capacity. The Bulls ponds have not been de-sludged for many years, and de-sludging will be needed in the near future. Options for the management of the sludge once it has been removed from the pond include disposal to landfill (as with gross solids) or drying to produce a biosolid which may be beneficially applied to land as fertiliser or soil conditioner.

4.7 Discharges to Air from a WWTP and Discharge System

Wastewater treatment ponds rely on interaction between the contained wastewater and the atmosphere to deliver the required treatment, including changes to nitrogen species and reduction in pathogens. If the treatment plant includes mechanical aerators, then aerosols as well as evaporation and odour release will be generated at the pond surface.



Any land discharge of treated wastewater that involves spray irrigation has the likelihood of generating aerosols and facilitating odour release. More passive discharges such as those to a river, the ocean, or rapid infiltration will be less likely to generate aerosols, and odour release will be more readily managed.



5 WASTEWATER TREATMENT AND STORAGE CONSIDERATIONS

5.1 Wastewater Flows and Quality

The flow rates and quality of wastewater at Bulls have been investigated and reported in "WWTP Preliminary Design Parameters," P1:R6, which in turn summarises the information in the following reports:

- "Compliance and Monitoring Summary, Bulls" (P1:R3;)
- "Updated Monitoring Summary," (P1:R3A;) and
- "Wastewater Flow Normalisation Assessment," (P1:R6A.)

The key measures of wastewater flow rate through the **existing Bulls WWTP**, and of the quality of wastewater discharged from the **existing Bulls WWTP**, are as shown in Tables 5.1 (flow) and 5.2 (quality) below, which are repeated here from P1:R6.

Table 5.1: Bulls WWTP Flow Rates (all m³/d)

Total Flows			Dry Weather Flows			Wet Weather Flows		
Range	Mean	95P	Range	Mean	95P	Range	Mean	95P
150-3,123	441	808	150-688	345	473	252-3,123	562	1,000

Table 5.2: Bulls WWTP Effluent Parameters

Effluent Parameter	Range (min-max, g/m ³)	Mean g/m ³	Mean kg/d
CBOD ₅	3 – 38	13	5.5
Dissolved CBOD ₅	0.5 – 47	4.4	1.9
sBOD ₅	1.0 - 43	13.8	6.1
Suspended solids (TSS)	2 – 277	50	22
Particulate organic matter (POM)	2 – 277	50	22
Nitrate-nitrogen	0.005 – 6.3	0.83	0.37
Ammoniacal nitrogen	0.02 – 28	8.1	3.6
Total Kjeldahl nitrogen (TKN)	6.3 – 33.6	14.5	6.4
Soluble inorganic nitrogen (SIN)	0.01 – 13.4	1.3	0.55
Total nitrogen (TN)	5.6 – 33	14	6.2
Dissolved reactive phosphorus (DRP)	1.1 - 24	5.4	2.4
Total phosphorus (TP)	1.1 – 17	5.4	2.4
Enterococci (cfu/100mL)	8 – 12,000	446	N/A
<i>E. coli</i> (cfu/100mL)	2 – 6,600	865	N/A
pH	7.1 – 9.8	8.1	N/A
Dissolved oxygen (DO)	0.6 – 18.5	8.8	N/A

The data in Tables 5.1 and 5.2 above have been measured from the present discharge. These data are therefore a representation of what happens now, with the existing population of Bulls (about 1,500 people,) the existing treatment system, and the existing discharge arrangement.

It should be noted that the Bulls population is forecast to decline over the next 35 years but for the purpose of applying for the new consent it has been assumed that it will remain static.



5.2 Wastewater Treatment

The existing WWTP treats the received influent to achieve an effluent quality that is summarised in Table 5.2 above. The effect of the discharge of this effluent on the water quality of the Rangitikei River is examined in "Summary of Current Surface Water Receiving Environment" (P1:R4) and "Assimilative Capacity of Water" (P1:R8). The effect of the existing discharge is shown to be less than minor, indicating that the existing wastewater treatment facility is fit for purpose, that it produces a wastewater quality that is capable of being assimilated in the Rangitikei River without demonstrated adverse effects.

The quality of the discharge could be improved by additional or alternative treatment, changing nitrogen species or reducing pathogens. However, such treatment changes have not been shown to be warranted by the assessment of effects on the receiving environment. Accordingly, the substantial costs to ratepayers of making such changes to the existing treatment system could not reasonably be justified.

5.3 Storage Considerations

Under a continuation of the present discharge system, with a weir overflow to a river discharge facility, there is **no operational storage** requirement beyond the capacity of the WWTP to hold sewage inflows for long enough to meet the design treatment requirement.

For a full land discharge scheme with no river discharge, the storage would need to be sized sufficiently to ensure that **under no circumstance** would the storage capacity available be exceeded by sewage inflows. This storage capacity would be required if there was to be no discharge of treated wastewater to the river. It should be noted that a 100% compliance requirement (for no river discharge) results in a significantly larger storage capacity requirement than if a 95 or even 99%ile compliance philosophy were adopted.

A CLAWD system (see Section 4.4 above) could be operated in such a way that there would be no discharge to the Rangitikei River during low flow conditions. During these low river flow conditions the treated wastewater must be either discharged to land or stored for subsequent discharge. With a combination of river and land discharges there would be times when the wastewater cannot be discharged to either land or water. Typically this would be in the autumn and spring shoulder seasons when river flow drops off, yet soil moisture remains high.

5.4 Design Codes

The relevant design code here is the Building Act, and its subsidiary Building Code. Under the Building Act 2004, as amended by the Building Amendment Act 2013, a "Large Dam" *"means a dam that has a height of 4 or more metres and holds 20 000 or more cubic metres volume of water or other fluid"*, and requires a Building Consent. The height of a dam is defined as *"the vertical distance from the crest of the dam and must be measured,—*

- (a) in the case of a dam across a stream, from the natural bed of the stream at the lowest downstream outside limit of the dam; and*
- (b) in the case of a dam not across a stream, from the lowest elevation at the outside limit of the dam;.."*

The existing Bulls WWTP consists of two ponds contained by earthen walls about 2 m high, and with volumes of 35,415 m³ and 29,000 m³ respectively. As such they fall **outside** the definition of a large dam by virtue of having a depth of less than 4 m. This means that the pond walls **do not** need a Building Consent, but must still comply with the requirements of the Building Code.



New regulations under this Act are due to come into effect in July 2015; these regulations can be expected to specify safety management requirements.

Any new storage facility that may be constructed to enable full or partial wastewater discharge to land would need to be considered against the provisions of the Act and the regulations.

5.5 Storage Risk

There are risks of failure associated with wastewater storage facilities; the most likely types of pond failure are as follows:

- Embankment rupture or subsidence resulting in release of stored volume as a deluge; or
- Differential settlement resulting in liner rupture or embankment overtopping and scour.

Consequences of a pond failure could include the following:

- Health and safety of people in the vicinity of the flow path;
- Environmental damage;
- Damage to neighbouring property;
- Cost of remedial works; and
- Duration of loss of service.

Due to the floodplain location of the existing Bulls WWTP, the potential to cause harm to people or property in the event of a pond breach is low. The entire WWTP volume of 65,000 m³ would infiltrate into the gravelly floodplain soils and/or be swept away by the Rangitikei River relatively quickly, and hence it would be unlikely that any neighbouring properties would be damaged. Wastewater entering the Rangitikei River from a one-off event would be unlikely to have more than a minor effect due to the high dilution factor and the modest total volume of accidentally discharged material.

For any new additional storage pond, a more detailed breach assessment of potential flooding effects on nearby environments would need to be undertaken to confirm the Low Potential Impact Category status of the pond.

5.6 Treatment Plant Location

The location of the existing Bulls WWTP is as close to Bulls township as is practicable, minimising the cost of any maintenance or future upgrading of the sewer main from the town to the WWTP. The plant does not unreasonably intrude upon amenity values of the locality, and has not generated a trail of complaints from residents or visitors.

The site of the WWTP is on land owned by RDC. There are flood hazards at the site, and the likelihood of the WWTP being over-topped by a greater than 1:40 year flood event has been described in "*Flooding Implications for Bulls WWTP*", (Report P1:R5.) While this is an issue that will need to be managed, the likelihood of expensive flood damage to the WWTP, even in an over-topping flood event, has been considered to be sufficiently low to not warrant consideration of re-location of the plant.

The plant in its existing location, with its existing inflow loads and discharge system, may be considered to function in a satisfactory manner. Neither amenity nor flood hazard management considerations give any strong indication of a need to re-consider the location of the plant. The very high cost of purchasing alternative land and establishing a new WWTP with better amenity



and flood hazard attributes are a strong disincentive for any change in the location of the existing plant.



6 LAND CONSIDERATIONS

6.1 Suitability of Land Nearby

The suitability of soils within a 10 km radius of the Bulls WWTP to receive wastewater irrigation was the subject of preliminary assessment as reported in "*Assimilative Capacity of Land*" (P1:R7) and "*Land Prioritisation Report*" (P1:R9). Soils with characteristics suitable to receive wastewater irrigation are in plentiful supply. While the compatibility of existing and proposed land uses with municipal wastewater irrigation will warrant further consideration, there is no shortage of soils that would meet a requirement to irrigate significant application rates onto a modest land area.

6.2 Potential Areas and Characteristics

Potential land areas that could be considered for a land discharge of treated wastewater include the following:

- The floodplain terrace that is the site of the existing WWTP. The characteristics of this area that are of advantage are rapid infiltration capacity through gravelly recent soils, and proximity to the WWTP. A disadvantage is the flood hazard which would limit its suitability for irrigation at times of flood.
- The high terrace on the south bank of the Rangitikei River, adjoining Ohakea air base. The characteristics of this area that are of advantage are absence of flood hazard, and loess-derived soils of moderate infiltration capacity that could benefit from irrigation. A disadvantage is the expensive requirement to route a rising main pipeline across (or beneath) the river from the WWTP to service this locality.
- The high terrace on the north bank of the Rangitikei River, downstream from Bulls township. The characteristics of this area that are of advantage are absence of flood hazard, and loess-derived soils of moderate infiltration capacity that could benefit from irrigation. Slightly further afield are sand-derived soils with higher infiltration capacities. Proximity to the WWTP is potentially a further advantage.
- Suitable land has been identified at greater distances from the WWTP, but the substantial cost of piping wastewater to such locations is a strong disincentive for their further consideration.

6.3 Area Requirements

The area of land required to provide a wastewater irrigation facility for Bulls depends directly on the extent to which a wastewater discharge to the Rangitikei River is to be continued.

For a summer seasonal discharge to land, a land area of about 7 ha would safely receive a mean dry-weather flow of 345 m³/d, applying a depth of 5 mm/d for a 90 day summer season.

For any CLAWD system involving more than a 90 day summer season of land discharge, storage becomes an additional requirement, with costs in proportion to the volume required.

For a total land discharge requirement, an area of more than 50 ha would be required (depending on soil type and land use), along with a reserve storage capacity of some 50,000 m³ or more.



6.4 Management and Land Tenure

An issue to be considered in respect of the use of land for wastewater irrigation is security of access. If RDC is to commit itself to a package of land discharge of wastewater, either in total or as a greater or smaller part of a CLAWD system, it needs to be assured of the security of its access to the discharge site in order to be sure that its sewerage system as a whole can remain functional.

For any one of a variety of reasons a land owner may decide to terminate his agreement with RDC to irrigate wastewater onto his land. To the extent that the wastewater discharge is dependent on that land being available for this purpose, a terminated agreement would jeopardise the ability of the wastewater management system to function; RDC cannot afford to expose its wastewater management system to land owner decisions that it (RDC) cannot control.

While discharge of wastewater to waste is an option, and is implicit in discharges to the Rangitikei River or by Rapid Infiltration to groundwater, one of the attractions of discharge to land is that it enables beneficial re-use of the water and nutrients to be discharged. The beneficial re-use involves enhancement of the productivity of the land involved beyond what would be achieved without irrigation. In order to realise this beneficial re-use, the land and the irrigation need to be managed diligently towards that end. It is important that the irrigation and the farm management are properly coordinated, to ensure that one activity does not compromise the other. For that reason, "Management Responsibility" refers to both irrigation (how much to apply, where, and when) and farm management (stock movement, crop harvest activities, cultivation).

There is a range of combinations of land management and land tenure options that could be applied to a land discharge of wastewater, summarised in Table 6.1 below. In this table, "yes" means the combination of ownership and management responsibility is workable, and "no" means that it may not be.

Table 6.1: Land Management and Tenure Options

Land Tenure	Management Responsibility		
	Farmer Manages	RDC Contractor Manages	RDC Manages
RDC Owns	No	Yes	Yes
RDC Leases from farmer	No	Yes	Yes
Farmer Owns	Yes	No	No

Brief descriptions of each combination in Table 6.1 and their implications for Bulls municipal wastewater discharge are given below.

6.4.1 RDC Owns Land

Under this scenario, RDC either uses land which it already owns or administers, or purchases the area of land required. RDC either manages the farm and the irrigation directly using its own resources, or engages a contractor to undertake this work.

Advantages of this option are that RDC is assured of long-term access to the land, and may plan for land discharge of treated wastewater on an effectively permanent basis. Irrigated farming, involving the production and sale of "cut-and-carry" stock fodder, may be presumed to be a profitable exercise, with net income eventually recovering the cost of land purchase. Council owning and managing the land avoids (or at least internalises) any potential conflict between farm management requirements, irrigation operation, and WWTP discharge operation.



Disadvantages of this option are the size of capital investment required to purchase the land, and to a lesser extent a public perception that Councils should not be directly involved in farming but should leave that to farmers. This latter concern can be resolved if Council takes the view that farming the land is an essential part of its wastewater management system, and that adequate security of land access is not achievable any other way.

6.4.2 RDC Leases Land from Farmer

Under this scenario, RDC makes an arrangement to lease the area of land required. RDC either manages the farm and the irrigation directly using its own resources, or engages a contractor to undertake this work. That contractor could possibly be the farmer from whom the land is leased.

Advantages of this option are that RDC is assured of access to the land for the term of the lease, and may plan for land discharge of treated wastewater on that basis. Irrigated farming, involving the production and sale of "cut-and-carry" stock fodder, may be presumed to be a profitable exercise, with net income at least covering lease rental. Council managing the land avoids (or at least internalises) any potential conflict between farm management requirements, irrigation operation, and WWTP discharge operation. The greatest advantage may be that the significant capital cost of purchasing the land is avoided.

Disadvantages of this option include the fact that the lease will expire, without any certainty as to where or whether land discharge will be able to continue after lease expiry. If the lease is not renewed, Council will probably have redundant irrigation infrastructure, either to re-deploy elsewhere, or to write off.

6.4.3 Farmer Owns Land

Under this scenario, RDC makes an arrangement with a farmer to use the area of land required for the irrigation of treated wastewater. The farmer manages both the farm and the irrigation system. RDC would own and operate a pump and rising main from the WWTP to the property to be used, and irrigation infrastructure could be purchased/owned by either the farmer or Council according to the nature of the agreement entered into.

Advantages of this option are that RDC avoids both the capital purchase cost and, in the alternative, the lease cost, of the land. This option leaves both the farm management and the irrigation in the hands of the farmer, which in most instances is preferable to Council managing those things.

The main disadvantage of this option is the uncertainty as to the farmer's willingness to continue with the arrangement. This issue is capable of management by RDC negotiating a suitable term for its arrangement, but there will remain uncertainty as to what happens when the arrangement expires.

6.4.4 Discussion and Implications of Land Tenure Options

In any scenario that builds a land discharge component into the overall Bulls wastewater system design, the requirement for security of access will demand at least a long term commitment by Council and/or the land owner. While the "Farmer Owns Land" option in 6.4.3 above is the least expensive of the options addressed, the security of access issue must be resolved for it to be a workable option.

It may be possible to negotiate an agreement with one or more farmers within a short distance of the WWTP to take wastewater for irrigation for a specified term (10 or 15 years?) and to use this facility to enable a summer seasonal discharge to land for as long as suitable agreements with farmers are in place. This would have the advantage of enabling avoidance of river discharge of wastewater during the summer river low-flow period, when it may be presumed that the river



will be most susceptible to adverse effects from a wastewater discharge. This will generally coincide with dry weather conditions when the availability of irrigation will be an advantage to the farmer.

The disadvantage of this approach would be the lack of longer-term security for the land discharge. This insecurity means that long term consenting for the Bulls discharge would need to enable the full discharge to the Rangitikei River, in case the land discharge becomes for any reason unable to be continued. However, a flexible arrangement with one or more farmers could still enable the avoidance of the river discharge at times, and this is understood to be an attractive option for Iwi with whom consultation has been continuing.

6.5 Potential for Expansion

The issue to be addressed here is the ability to expand the capacity of the Bulls WWTP and associated discharge facility, in order to accommodate any increase in wastewater generation, whether by increase in population or by new industrial/commercial developments.

As noted in the report *"WWTP Preliminary Design Parameters,"* (P1:R6,) *the "Actual population is recorded as 1,515 as determined by the most recent (2013) NZ census, and future population growth is recommended to be assumed to be 0% (i.e. no change) until at least 2038."* A forward projection of census figures indicates a likelihood of a continued decline in Bulls' population, so the assumption of 0% growth already carries a conservative reserve capacity for population change.

On a straight change-in-population basis, a 10% population increase could be expected to lead to a 10% increase in wastewater flow parameters, with a consequent 10% increase in the land area requirement for any land discharge. For the summer seasonal land discharge scenario considered in Section 6.3 above, this would lift the land area requirement from 7 ha to 7.7 ha. While prudence dictates that the ability to add to the land discharge area should be a consideration when planning any land discharge system, in reality the implication of adding up to 10% to the land area and the irrigation infrastructure should be easily accommodated.

6.6 Soil Hydraulics

An important consideration for a land treatment system is the ability to get the wastewater into the ground. Wastewater should not run off, and hence the amount applied should reflect the soil properties. Coarser textured soils, such as dune sands, can tolerate higher application rates than finer textured soils, such as loess. Therefore the area that needs to be used will be dependent on the soil type and the amount of water that can be applied, with larger areas used on finer textured soils.

6.7 Drainage

In addition and related to soil hydraulics, is the ability of the soil to drain. Despite being able to accept a given wastewater application, the soil needs to allow drainage to occur. If this is not possible, then even coarse textured soils, such as sands, can become wet as a result of poor drainage. This can then limit the amount of wastewater applied to the soil. Fine textured soils, such as loess soils on the higher terraces surrounding Bulls have drainage limitations also, typically as a result of the amount of water applied exceeding the ability of the soils to drain the water away. These soils can become very wet and have significant drainage limitations.



Both scenarios that result in drainage limitations mean that at some times of the year water will not be able to be drained, and as a result irrigation will need to cease, with the daily flow going either to storage or to alternative discharge environments.

Another drainage consideration is excessive irrigation. Coarse textured soils, or some clay like soils that suffer from cracking, can allow water applied to rapidly infiltrate to groundwater. In these cases consideration is needed as to the extent of acceptable drainage and the resulting nutrient load to groundwater.

6.8 Buffers and Setbacks

For a land discharge of treated wastewater (or any other effluent) in Horizons' region, One Plan Operative Version ("OPOV") provides guidance as to the exclusion margins to be provided around the periphery of application areas, in order to protect neighbouring environments from various potential adverse effects arising from the consented activity (i.e. the irrigation of treated municipal wastewater.)

As noted in the report *"Bulls Wastewater – Land Holdings Suitable,"* (P2:R12B), *"buffer margins or exclusion margins adopted are those used by Horizons Regional Council in OPOV for piggery effluent, Grade A and B biosolids, and wastewater treatment facilities. OPOV does not make specific provision for municipal wastewater irrigation to land, but the stated margins are mutually consistent and are considered to be those that would be applied to any consent for wastewater irrigation. The exclusion margins are as follows:*

- *150 m from residences, public places and amenity areas, education facilities, and roads;*
- *50 m from property boundaries, rare habitats, and historic heritage; and*
- *20 m from drains, bores, and waterbodies."*

In planning the use of any area of land for wastewater irrigation, it will be necessary to factor in an allowance for these buffer margins. The land area required including the buffers will be somewhat larger than the calculated area required just to receive the wastewater.



7 RIVER DISCHARGE CONSIDERATIONS

7.1 Flow Conditions

Rangitikei River flows are monitored by HRC, and flow parameters are provided in the report *"Bulls WWTP discharge to the Rangitikei River: current effects on freshwater quality,"* (P1:R4,) and are summarised in Table 7.1 below:

Table 7.1: Summary of flow statistics used in this report (Based on July 1993 to July 2010 data, provided by Horizons Regional Council). All flows in m³/s.

Site	Mean flow	Median flow (50th exceedance %ile)	Half median flow	20th exceedance %ile flow
Onepuhi	66.292	45.553	22.777	92.522
McKelvie	70.924	48.064	24.032	100.158

7.2 River Water Quality Considerations

The quality of the receiving waters of the Rangitikei River, into which the Bulls municipal wastewater is discharged, is regularly monitored, and is described in the report *"Bulls WWTP discharge to the Rangitikei River: current effects on freshwater quality,"* (P1:R4,) and is summarised in Table 7.2 below:

Table 7.2: Summary of Compliance with Water Quality Targets.

Determinand	Statistic	Target	Measured		% Compliance	
			Onepuhi	McKelvie	Onepuhi	McKelvie
DO Saturation (%)	5th percentile	70	87.6	88.9	98%	95%
Total ammonia-N (mg/L)	Average	0.400	0.009	0.011	100%	100%
Clarity (m)	20th percentile at flows below median flow	2.5	1.5	0.6	53%	29%
E. coli (/100mL)	90th percentile at flows below the 20th FEP	550	630	1,150	89%	83%
E. coli (/100mL)	90th percentile at flows below median flow (November to April)	260	361	226	82%	94%
SIN (mg/L)	Average at flows below the 20th FEP	0.110	0.080	0.136	68%	57%
DRP (mg/L)	Average at flows below the 20th FEP	0.010	0.008	0.011	76%	62%
MCI	Average	100	110	97	80%	20%
Periphyton biomass (mg Chlo a /m2)	95th percentile	120	19.6	77.5	100%	98%
Filamentous algae (% cover)	95th percentile	30	19.6	72.3	100%	63%
Cyanobacteria/diatom mats (% cover)	95th percentile	60	(19.1)	(76.3)	(100%)	(87)%

In Table 7.2, the Horizons One Plan water quality targets for the Rangitikei River at the Onepuhi and McKelvie monitoring sites are listed. The Onepuhi site is upstream from Bulls and roughly adjacent to Marton, while the McKelvie site is downstream from Bulls, closer to the river mouth. Average actual measures of each water quality parameter are tabulated, and the "% Compliance" is calculated on the basis of comparing individual samples to the specified water quality target.



The key message from this water quality data tabulation is that several (but not all) water quality indicators show a deterioration between Onepuhi and McKelvies. The extent to which this deterioration is caused by the current Bulls municipal wastewater discharge is described in P1:R4 in the following terms:

"The Bulls WWTP discharge was found to contribute 0.2% of the annual SIN load increase estimated to occur within the Coastal Rangitikei Water Management zone (0.6% when considering river flows below the 20th FEP), and 2% of the DRP load increase (12% when considering river flows below the 20th FEP), noting that these are likely to be over-estimates. When considering all point-source discharges to the Coastal Rangitikei WMZ cumulatively, the Bulls WWTP was estimated to contribute less than 2% of the DRP and less than 5% of the total SIN loads from point source discharges."

7.3 Discharge Location

The existing river discharge point is located at the edge of the Rangitikei River, directly adjacent to the WWTP. This discharge could potentially be re-located to some other site, either upstream of the existing site, or downstream, or on the other side of the river, or even into another river. However, re-location to some other location along or across the Rangitikei River would involve capital and potentially operational costs, but **without making any material difference to the effect** of the discharge on the river. A suitable pipeline to transfer treated wastewater to another discharge site could be expected to cost about \$150,000 per kilometre to supply and install, or \$1 Million for every 6.7 km.

The nearest alternative rivers for a discharge from the Bulls WWTP are the Turakina River (21 km to the north-west, about \$3M) and the Oroua River (17 km to the south-east, about \$2.5M.) Both of these alternative rivers have substantially lower flows than does the Rangitikei River, and both would show a greater adverse effect from the addition of the Bulls discharge than occurs in the Rangitikei at present. Both alternative rivers already have their own water quality issues to deal with, and their respective communities would be unlikely to welcome any proposal to pipe Bulls wastewater into their rivers.

7.4 Discharge Rate

The discharge rate for treated wastewater from the Bulls WWTP is described in Section 5.1 above, and it repeated in Table 7.3 below.

Table 7.3: Bulls WWTP Flow Rates (all m³/d)

Total Flows			Dry Weather Flows			Wet Weather Flows		
Range	Mean	95P	Range	Mean	95P	Range	Mean	95P
150-3,123	441	808	150-688	345	473	252-3,123	562	1,000

The annual mean rate of discharge is calculated to be 441 m³/d, equivalent to an instantaneous rate of 5.1 L/s. This flow rate can drop in a drawn-out period of dry weather to as low as 150 m³/d, or 1.7 L/s. It can also rise to well in excess of 1,000 m³/d (11.6 L/s) in wet conditions that can prevail for up to 5% of the time.

The existing discharge facility operates as an overflow weir, discharging more or less wastewater according to the elevation of the wastewater surface in the pond system. This system has the



advantage of being automatic and involving no moving parts, and therefore costing very little to operate.

Its disadvantage is that it does not enable the discharge flow to be increased beyond its overflow rate when the river is high, nor does it enable the discharge to be turned off to prevent any discharge when the river is low. While installation and ongoing operation of a system to allow the discharge rate to be deliberately altered could provide some environmental benefit, it would also add an item of cost to the scheme which it does not currently need to meet.

7.5 Cultural Considerations

People of Ngati Apa and Ngati Raukawa have the Lower Rangitikei River as their Awa, a source of both kai and cultural well-being. Iwi representatives with whom consultation on the Bulls Wastewater Upgrade project has been ongoing have made it abundantly clear that a discharge of human effluent into this river runs directly counter to Maori expectations.

It would be greatly preferred by Iwi Maori if there were to be no discharge of wastewater to the river at all. However, recognising that the cost of replacing the present river discharge system with an entire land discharge system would cost Bulls ratepayers (many of whom are Iwi Maori), more than most will be able or prepared to pay, three suggested improvements to the existing discharge system have been put forward for consideration by RDC to local Iwi.

The first is the incorporation of a land passage component into the discharge facility, to ensure that there is as much contact of the wastewater with the earth as possible before it reaches the river. This proposal has been incorporated into upgrade design considerations.

The second is the use of a Rapid Infiltration system, by which wastewater discharged from the Bulls pond system would be run from the land passage facility to large excavated basins and allowed/encouraged to filter through the underlying gravels, reaching the river only after this passage through the subsoil, and allowing a further measure of protection to the Mauri of the river. This proposal has also been incorporated into design considerations.

The third is the inclusion of a summer seasonal land discharge into the discharge package. This would involve irrigating treated wastewater to land at times when the land is dry (and can therefore accommodate the application of wastewater) and when the river is low, and most susceptible to the potential adverse effects of the river discharge of wastewater. RDC has agreed to examine this proposal further.

It is acknowledged that Iwi Maori would prefer the elimination of wastewater discharges from the Rangitikei River, and that the continuation of the existing discharge will be unlikely to meet complete community approval. However, the three discharge system improvements proposed by Iwi are considered likely to provide a significant improvement to the cultural character of the river beyond its present character, and have the potential to be achieved at a cost that may be considered to be acceptable.

7.6 Recreational Use

The Lower Rangitikei River provides a significant recreational resource for both the immediate district and the wider region. It provides some trout fishing, gamebird hunting in season, various boating opportunities, and a fresh and healthy outdoor experience for those prepared to get a little off the beaten track. The estuary in particular provides a range of fishing and contact recreational opportunities, reflected in the presence of Tangimoana and Scott's Ferry as holiday settlements on either side of the river mouth.



The potential impact of the Bulls wastewater discharge on these recreational activities relates to water quality effects. The Bulls municipal discharge is by no means the only, or even a major, contributor of contaminants to the Rangitikei River. As noted in Section 7.2 above, the Bulls discharge contributes less than 2% of the total Dissolved Reactive Phosphorus (DRP) and less than 5% of the total Soluble Inorganic Nitrogen (SIN) derived from point source discharges in the Rangitikei River. The total removal of the Bulls discharge from the river would only make those percentage points of improvement in river water quality, a difference which would be within the margin of error of several of the analytical methods involved in determining those figures in the first place.

The key requirement will be to continue to keep the effects of the Bulls discharge below the level where they have a deleterious impact on the several recreational values and uses of the Rangitikei River, at and downstream from the discharge point.

7.7 Discharge Effects

The effects of the discharge on the quality of the waters of the Rangitikei River are considered to be not greater than minor, as far as those effects are able to be measured and compared between upstream and downstream from the discharge point. Report P1:R4 concludes with the following statement:

"... although differences in biotic index scores and periphyton biomass have occurred between years, there are no consistent trends across all indices or years suggesting that the discharge from the Bulls WWTP does not appear to be having adverse effects on this stretch of the Rangitikei River."

In addition to the measurable effect of the discharge, it is acknowledged that there are also cultural, perceptive and emotional effects that are not so easy to measure or quantify; the additional measures proposed by Iwi Maori and described in Section 7.5 above are considered to provide some mitigation of those effects.

7.8 Summary

The present discharge of treated wastewater from the Bulls municipal WWTP to the Rangitikei River has been assessed as having minor or less than minor effects on receiving water quality. There are adverse cultural effects on the well-being of the river from a Maori perspective, and three initiatives are proposed to be added into the discharge system to mitigate these cultural effects.

The future discharge, being of equivalent quality and quantity to the present discharge, is therefore considered to be capable of being undertaken without significant adverse effects on the river.



8 CONSULTATION

8.1 Strategy

Early in the Bulls Wastewater Upgrade project it was agreed that a Consultation Strategy would be needed to plan a coherent approach to improving and refining the upgrade proposal in the light of the opinions and preferences of the people most affected. The Consultation Strategy (report P2:R13A) laid out the approach that was to be taken.

8.2 Historic

The Bulls WWTP discharge does not have a history of complaints from residents or visitors, and its operation has had a generally low public profile. Last time the discharge was consented in 1996, there was limited public interest in the discharge or its effects, and only three submissions on the consent application were received. These were from the Department of Conservation, Good Health Wanganui, and Bullocks Concrete and Gravel Limited. The submissions neither supported nor opposed the consent application, but requested that certain conditions apply in the granting of any consent.

8.3 Recent

RDC in its capacity as operator of the Bulls municipal WWTP has two suites of Consultation responsibility; that under the Resource Management Act (RMA), and that under the Local Government Act (LGA.)

Under the RMA, there is no absolute obligation for a consent applicant to consult with any other party. However, if an applicant wishes to avoid surprises in the way of opposing submissions, it is good prudent practice to consult with those likely to be affected by, or to have a potential interest in, the proposed activity. With this in mind, RDC undertook a program of consultation with Iwi Maori and with a Focus Group, as described in the sub-sections below.

Under the LGA, Councils are obliged to make public both their immediate and their longer term expenditure proposals, and to invite public input to the firming up of those proposals. RDC's long term plan has included financial provision for an upgrade to the Bulls WWTP for some years now, and there has been plenty of opportunity for the involved public (i.e. the ratepayers) to have its say on that financial provision and what it has been intended to procure.

8.4 Iwi Engagement

Ngati Apa and Ngati Raukawa were identified as Iwi having a Kaitiaki role in the reach of the Rangitikei River at and downstream from the Bulls WWTP discharge. Spokespersons for the two Iwi were approached and invited to participate in high level considerations of the present and future management of wastewater discharges at Bulls.

A series of meetings was held with Chris Shenton of Ngati Apa, and Peter Richardson of Ngati Raukawa, where the findings of various investigations were described and Iwi responses to issues arising were invited. At the meeting on 9 December 2014, Iwi representatives asked for some real numbers on the costs of options involving a land discharge. They indicated that while Iwi may be prepared to accept the currently proposed river discharge if the land discharge option was going to be seriously expensive or impracticable, Iwi would much prefer the inclusion of a summer land discharge if that could be achieved at a cost that RDC and ratepayers could afford.



At the 9 December meeting, Iwi representatives agreed that the river discharge system should include a wetland, feeding into a rapid infiltration facility, with any surface discharge from these being conducted to the river. It was agreed that an actual river discharge structure could potentially be avoided, since it did not seem to fulfil any particular purpose or achieve any particular objective.

Iwi engagement on the future configuration and operation of the Bulls WWTP is intended to continue.

8.5 Focus Group

As identified in the Consultation Strategy, a Focus Group was considered to be a helpful means of tapping into local community opinion on what the requirements for the Bulls wastewater discharge might be. At the early stage of the project when the desirability of Focus Group consultation was mooted, open consideration was being given to the inclusion of the Sanson and/or Ohakea wastewater streams into the Bulls WWTP facility. The potential inclusion of either or both of these Manawatu district wastewater flows into the Bulls facility brought with it the prospect of lively public debate on how costs and responsibilities might be shared among the people and communities involved. At that time it also seemed likely that a significant upgrade cost may prove to be necessary.

However, Sanson and Ohakea then withdrew from consideration of the transfer of their wastewater to Bulls for treatment and discharge. Investigations showed that the existing Bulls discharge was not having a significant effect on receiving water quality, and in the absence of any additional inflows from other communities it became apparent that the Bulls discharge could meet the requirements of Horizons' One Plan without an expensive upgrade.

In this context, Focus Group meetings were brief and lightly attended, with the feedback to RDC being supportive of fixing what needed to be fixed, but not committing expenditure where it was not essential.

8.6 Other Consultation

In terms of the environmental results of the future Bulls wastewater discharge, there should still be consultation with Mid-Central District Health Board, the Department of Conservation and the Wellington Fish & Game Council, because of their statutory duties and entitlements to be involved in decisions on such activities as river discharges of wastewater. The meeting of One Plan water quality targets is expected to be a key objective for these organisations, and this is expected to be able to be met.

Under the LGA, RDC receives responses from its ratepayers to its expenditure proposals. While there are normally a number of individuals and organisations requesting that some particular facility or activity receive more funding than has been allocated, there are generally no submissions or representations received from people wishing to see their rates increased. There has to date been no representation made to RDC in opposition to the proposed upgrade of the Bulls WWTP.



9 OPTION IDENTIFICATION AND ANALYSIS

9.1 Process

This process involves the identification (listing) of the options for the management of each stage of the Bulls wastewater process in an ordered and structured manner, and for each of the several stages considered reasons are given for favouring, or not favouring, the options identified.

9.2 Options Considered for Each Process Stage

9.2.1 Private Connections and Community Reticulation

This first stage of the transfer of wastewater from residences and other properties is considered to be generally satisfactory, and upgrades in this stage of the wastewater process are not proposed here. Stormwater Ingress and Infiltration ("I&I") adds significant volume to wastewater flows in wet weather, and if significant components of land discharge and storage were to be required then steps to reduce the impact of I&I would need to be considered.

However, if the present river discharge system is to be continued for all or most of the wastewater, then there is no change that needs to be made to the private connections and community reticulation. The reticulation and private connections could be upgraded, and at a substantial cost, but with the present type of discharge arrangement there is no benefit that would accrue from such an upgrade.

9.2.2 Pond Treatment System

The existing WWTP pond system has been shown in Reports P1:R2 (Existing Bulls Treatment Plant Design Summary and Limitations), P1:R3 (Compliance and Monitoring Summary, Bulls), and P1:R8 (Assimilative Capacity of Water) to deliver a quality and quantity of discharge to the Rangitikei River that does not have a significant impact on receiving water quality, and is capable of meeting Horizons One Plan water quality targets.

If wastewater flows were to be introduced from other communities, such as Ohakea or Sanson, then the effects of the augmented discharge to the river may be such that enhanced treatment would be necessary in order to meet One Plan water quality targets. However, in the absence of additional sources of wastewater, the existing pond treatment system is considered fit for purpose and no treatment upgrade is warranted. The treatment pond system could be upgraded, at a substantial cost, to improve the quality of the discharge, but with the present type of discharge arrangement there is no benefit that would accrue from such an upgrade.

9.2.3 Treatment Pond Location

The existing WWTP is located close to Bulls township, on the Rangitikei River floodplain. In terms of its proximity to wastewater sources, and the unobtrusiveness of its impact on local amenity values, its location could justifiably be called ideal.

The WWTP is exposed to a flood hazard, and as described in Report P1:R5 (Flooding Implications for Bulls WWTP), the ponds should be expected to be overtopped by a greater than 1:40 year return period flood event in the Rangitikei River. The February 2004 flood got very close to going into the ponds, and there must be considered a likelihood that sometime during the next 50 years a flood will enter the ponds.



The flood questions are whether overtopping will cause severe environmental damage or be expensive to repair, and whether the bunds that contain the ponds have sufficient mechanical integrity to withstand scour from passing floodwaters.

The recommendations of P1:R5 and a subsequent letter on the subject from consultant John Philpott indicate that overtopping is unlikely to cause expensive or damaging effects, and the integrity of the bunds is considered comparable with that of scores of kilometres of stopbanks in the Manawatu, that have successfully withstood most flood events.

The existing pond location, while exposed to a flood hazard, may not be at such a state of risk as to warrant the considerable expense of land purchase at a flood-free site and construction of a new WWTP. As advised by Philpott, modest additional works could improve the security of the plant against flood damage. The benefit of a site free of flood risk, in terms of the repair costs avoided compared with continuing with the existing facility, is not considered to be warranted in terms of the cost of achieving it.

9.2.4 River Discharge

There are three options for a river discharge; all wastewater discharged to the river, some of the wastewater discharged to the river, and no discharge to the river.

For all wastewater to be discharged to the river, the implications are as follows:

- Continuation of the status quo, with minor improvements;
- No need for financial commitment to storage capacity, land purchase, or land application infrastructure; overall, by far the least expensive option;
- Continuation of no greater than minor environmental effects on the receiving waters, as detailed in Reports P1:R4 and P1:R8; and
- Concern by Iwi Maori about cultural effects of the discharge.

For some of the wastewater to be discharged to the river, the implications are as follows:

- The wastewater that does not go to the river needs to go somewhere else instead;
- A land discharge is the only practicable alternative to a river discharge;
- Arrangements would need to be made for access to suitable land near the WWTP;
- Pump, rising main, and irrigation infrastructure would need to be purchased and installed, with the necessary ongoing operational and maintenance costs; and
- A partial discharge to land, such as a summer seasonal discharge, would enable river discharge to be stopped during times of river low flow. While the measured environmental effects of this are considered not to be significant, the effect on the cultural values of the river may be significant.

For no wastewater discharge to the river, the implications are as follows:

- A secure, long term arrangement for access to suitable land near the WWTP would be required, probably involving land purchase by RDC, involving capital costs;
- A new, large capacity storage facility would be required, probably also requiring land purchase, with both construction and land purchase involving capital costs; and
- There would be no discharge to the Rangitikei River, which would lead to insignificant changes to measured environmental effects, but would satisfy Iwi Maori aspirations.



9.2.5 Land Discharge

There are three options for a land discharge of Bulls wastewater; all wastewater discharged to land, some of the wastewater discharged to land, and no discharge to land.

For all wastewater to be discharged to land, the implications are as follows:

- A secure, long term arrangement for access to suitable land near the WWTP would be required, probably involving land purchase by RDC, involving capital costs;
- A new, large capacity storage facility would be required, probably also requiring land purchase, with both construction and land purchase involving capital costs;
- Pump, rising main, and irrigation infrastructure would need to be purchased and installed, with the necessary ongoing operational and maintenance costs; and
- There would be no discharge to the Rangitikei River, which would lead to insignificant changes to measured environmental effects, but would satisfy Iwi Maori aspirations.

For some of the wastewater to be discharged to land, the implications are as follows:

- Arrangements would need to be made for access to suitable land near the WWTP;
- Pump, rising main, and irrigation infrastructure would need to be purchased and installed, with the necessary ongoing operational and maintenance costs; and
- A partial discharge to land, such as a summer seasonal discharge, would enable river discharge to be stopped during times of river low flow; while the measured environmental effects of this are considered not to be significant, the effect on the cultural values of the river may be significant.

For no wastewater to be discharged to land, the implications are as follows:

- Continuation of the status quo river discharge, with minor improvements;
- No need for financial commitment to storage capacity, land purchase, or land application infrastructure;
- Continuation of less than minor environmental effects on the receiving waters, as detailed in Reports P1:R4 and P1:R8; and
- Concern by Iwi Maori about cultural effects of the discharge to the river.

9.2.6 Summer Seasonal Land Discharge

Of the combinations of options addressed above, one that addresses matters of concern without necessarily pushing costs beyond affordability is the summer seasonal land discharge. Features of such a system would be as follows:

- RDC would try to reach agreement with a farmer within a reasonably short distance (say 2.5 km) of the WWTP, for the supply of treated wastewater to be irrigated onto the farm.
- This arrangement would avoid a requirement for RDC to purchase any additional land beyond its present holding.
- RDC would try to reach agreement with a farmer for as long a term as is reasonable in the circumstances, in order to provide some security for both the cost of installed infrastructure and the ability to continue to avoid a river discharge of wastewater during the summer low flow period.
- Irrigation would take most or all of the discharged wastewater over a 90 day summer season (1 December to 28 February) when irrigation of the land is productively desirable, and when the Rangitikei River is at low flow. The intention of this operation is that there would be no requirement for a river discharge during that 3 month period.



- A pump, rising main, and on-farm irrigation infrastructure would be purchased and installed, with operational cost sharing to be as agreed between RDC and the farmer involved.
- Responsibilities for resource consenting for the land discharge, including ongoing compliance and monitoring, would also be as agreed between RDC and the farmer involved.
- Because it is not expected that any such agreement between RDC and a farmer could be permanent, there will remain the possibility of the farmer terminating or withdrawing from the agreement. Unless that agreement could be renewed, or a mutually acceptable new agreement with another farmer entered into, that would leave the summer seasonal land discharge unable to continue. The only way RDC can ensure that a land discharge facility remains available would be to purchase the land, with the costs entailed. An agreement with a farmer as proposed here avoids the cost of land purchase, but carries with it an insecurity of the land access arrangement in the longer term. For this reason, the summer seasonal land discharge **should not** be built into the river discharge resource consent, because the termination of the land access agreement would render the ongoing river discharge regime unworkable.

9.2.7 Land Passage

If there is to be a discharge of wastewater to the Rangitikei River, passage of the discharged wastewater across land could be included as a new component of the discharge system.

The advantage of land passage is that it is preferred by Iwi Maori over any direct pipe discharge to surface water. A disadvantage may be that without intensive management for nutrient harvesting, such a system may provide no measureable improvement to the quality of the discharge or its effects on receiving waters. A conceptual representation of the land passage facility that has been discussed with and supported by Iwi Maori is shown in Figure 2 in Appendix A. (The figure is labelled Figure 6 as it has been taken from another report).

9.2.8 Discharge to Groundwater

At least part of the wastewater could potentially be discharged into Rapid Infiltration beds, to be located on the gravel floodplain near the WWTP. These would enable discharged wastewater to flow through the gravels to groundwater, which would eventually mix with the surface waters of the Rangitikei River.

An advantage of this approach over a direct discharge to the waters of the river would be a reduction of the time during which a surface discharge to the river takes place. Passage of wastewater through the gravels and dilution in the groundwater may be expected to reduce the impact of the discharge on the surface waters of the river. While the measured effects of the present discharge on water quality in the river are not greater than minor, Iwi Maori may consider the passage to groundwater preferable to a surface discharge from a cultural perspective.

A disadvantage of Rapid Infiltration is that ongoing work should be expected, in order to maintain the infiltration rate in the beds; without such maintenance, sludge would eventually seal the pits in the same manner as has happened with the WWTP ponds themselves. A conceptual representation of the rapid infiltration facility that has been discussed with and supported by Iwi Maori is shown in Figure 2 in Appendix A.



9.3 Summary of Options

The existing Bulls township sewer reticulation and private connections are not considered to warrant investigation or upgrade beyond normal operational and maintenance requirements.

The existing pond treatment system is identified as fit for purpose, albeit with the desirability of enhancements to wave bands, pond separation bund, and sludge load as detailed in the report "Existing Bulls Treatment Plant Design Summary and Limitations" (P1:R2).

The existing WWTP location is identified as satisfactory from a convenience and amenity perspective. There is a risk of flood damage at the site, but measures to manage that risk have been identified involving a much smaller cost than would be involved in re-locating the plant to a site with a reduced flood hazard.

A continuation of the existing river discharge has been shown to have no greater than minor effects on the quality of the receiving waters, although Iwi Maori have expressed concern about the cultural effects of this discharge. Incorporation of land passage and discharge to groundwater components to a river discharge could partly mitigate these cultural concerns.

Land discharge is a feasible alternative to a continuing discharge to the river, but a system that would completely replace the present river discharge would involve new requirements for storage, land access and irrigation infrastructure at significant cost.

A partial discharge to land, as a summer seasonal discharge, could be added to the main river discharge system. This would enable avoidance of the river discharge during summer low river flow conditions for as long as the agreement with the farmer involved remains in effect. Secure permanent access to land for wastewater irrigation could only be achieved by land purchase. As an alternative, less secure land access may be able to be achieved by agreement with a farmer, with the risk that land discharge may not be guaranteed for the long term, but with the advantage that the cost of land purchase will be avoided.



10 ISSUES FOR CONSIDERATION

10.1 Land Application

Land application of Bulls wastewater, in full or in part, is technically feasible. Suitable soils and landscapes to receive wastewater irrigation are locally widespread, and such irrigation would enable beneficial re-use to be made of water and nutrients that would otherwise be discharged to waste.

However, for any land discharge scenario other than the summer seasonal discharge, the land for both the application site and the required storage facility should be purchased in order to achieve security of access, and the costs of this would be significant.

10.2 Water Quality

Rangitikei River water quality has been shown to be affected by the present Bulls WWTP discharge only to an extent that is not greater than minor. With the decision that the Sanson and Ohakea WWTP discharges will remain independently managed, and with a negative population growth rate expected for Bulls, the existing river discharge can be expected to continue without significant adverse effects, while meeting almost all of the Horizons One Plan water quality targets. An issue here is that while the Bulls WWTP discharge lifts Dissolved Reactive Phosphorus (DRP) above the One Plan target concentration in the receiving water, this has been shown not to lead to any statistically significant ecological effect.

With the effects of the river discharge being not greater than minor, measurable river water quality is not a driver for change to the existing discharge system.

10.3 Cultural Values

Ngati Apa and Ngati Raukawa are Iwi whose respective rohe includes Bulls township and the Lower Rangitikei River. Consultation with representatives of these two Iwi has indicated a cultural aversion to the direct discharge of human wastes into the river. Three proposals presented to Iwi representatives to mitigate the culture effects of a continuation of the existing discharge are as follows:

- Incorporation of a land passage component into any discharge to the Rangitikei River;
- Use of Rapid Infiltration of discharged wastewater to reduce the effect of the discharge on the river; and
- Investigation of summer seasonal land discharge of wastewater as a means of avoiding discharge to the river at times of river low flow.

10.4 Recreational Values

The river, and especially the estuary and river mouth at the ocean are widely used for a range of recreational pursuits. However, mixing of the discharge and a high rate of dilution by the river ensures that effects of the discharge on river water quality are not greater than minor.

10.5 Environmental Impacts

The environmental impacts of the present discharge regime have been assessed as not greater than minor on the receiving waters of the Rangitikei River. Because no new sources of wastewater



are being recruited to the Bulls WWTP, and because the population of Bulls is not forecast to increase, it is expected that the effect of the continuing discharge will continue to be not greater than minor.

10.6 Use of Existing Infrastructure

The continuation of the existing Bulls WWTP and its river discharge facility, albeit with some enhancements, will enable full use to continue to be made of the existing wastewater infrastructure. The avoidance of unnecessary extra costs, especially where the need for those costs has not been demonstrated, is considered to be strongly in the public interest.

It may be noted here that Horizons One Plan makes particular provision in Chapter 3 (Infrastructure, Energy, Waste, Hazardous Substances and Contaminated Land) for the following:

- *Objective 3-1: Have regard to the benefits of infrastructure and other physical resources of regional or national importance by recognising and providing for their establishment, operation, maintenance and upgrading.*
- *Policy 3-1: The Regional Council and Territorial Authorities must recognise the following infrastructure as being physical resources of regional or national importance:*
 - (viii) public or community sewage treatment plants and associated reticulation and disposal systems.*
- *Policy 3-3: In managing any adverse environmental effects arising from the establishment, operation, maintenance and upgrading of infrastructure or other physical resources of regional or national importance, the Regional Council and Territorial Authorities must:*
 - (a) recognise and provide for the operation, maintenance and upgrading of all such activities once they have been established.*

10.7 Affordability

A case cannot be made to spend public funds up to some “affordable” level unless there is a need to achieve some specified result from that expenditure. Aside from some enhancements to the existing plant, including re-fencing, repair to wave bands and the pond separation bund, and the provision of land passage and Rapid Infiltration facilities, there are no changes to the existing system identified as needing to occur in order to meet measurable environmental effect targets.

Iwi Maori in consultation have identified the desirability of a summer seasonal land discharge to help mitigate cultural effects on the river, and if this is pursued without a requirement to purchase the land involved then this cultural mitigation may be able to be achieved at a cost that RDC and its ratepayers may consider affordable.

A preliminary assessment of costs for comparative purposes is presented in Table 10.1 below. Excluded from these cost estimates are upgrade work required on the existing ponds, including wave band repair, pond separator bund reinstatement, flood protection measures and re-fencing. This pond system enhancement will be required whichever discharge option is selected.



Table 10.1: Capital Costs of Bulls WWTP Discharge Options (\$)

Item	Full Land Discharge	Summer Seasonal Land Discharge	Full River Discharge
Purchase 50 ha land application area	1,500,000	0	0
Purchase 7 ha for storage facility	280,000	0	0
Construct 50,000 m ³ storage pond	1,500,000	0	0
Pump at pond outlet	150,000	75,000	0
Power connection to pump	100,000	50,000	0
Pipeline from pump to land (2.5 km @ \$150)	375,000	375,000	0
On-farm irrigation infrastructure (@ \$15,000/ha)	750,000	105,000	0
Land discharge resource consent	150,000	50,000	0
Wetland/Rapid Infiltration Facilities	0	200,000	200,000
Total Capital Cost	\$4,805,000	\$855,000	\$200,000

In addition to these “up-front” capital costs, there will be ongoing operational costs for the following items, where applicable;

- Interest on borrowed capital to fund the above capital costs;
- Depreciation on capital plant items, required to be funded;
- Power to run pumps;
- Maintenance of capital plant items;
- Maintenance and occasional refurbishment of Rapid Infiltration facility;
- Management of irrigation; and
- Compliance costs, including monitoring, reporting, inspections, and annual consent fees.

Against these costs, it could be expected that the farming of the full land discharge area would produce an income for RDC, by sale of cut-and-carry stock fodder and perhaps some livestock. This annual income has not been assessed due to the range of variables involved.

10.8 Risks

Key risks to be considered are as follows:

- The risk that Bulls population may expand beyond the present level, or that there may be an increase in industrial processing, driving an increase in the quantity of wastewater.
- The risk that the WWTP may be damaged by a flood in the Rangitikei River.
- The risk that a commitment to incorporation of a land discharge component into the system may be confounded if agreement cannot be reached, or is terminated without renewal, with a farmer for the use of his land for wastewater irrigation.
- The risk that a resource consent requirement to incorporate a component of land discharge may similarly be confounded by the potential inability to sustain agreement outside any requirement for land purchase.

The expansion of the wastewater generation of the Bulls community is considered unlikely, but any increase would bring with it a commensurate increase in rate income, to assist to fund any required increments to existing infrastructure.



The flood hazard has been addressed in Report P1:R5 and in a letter from Consultant John Philpott. A risk of damage remains, but in comparison with the region's stopbank structures it is considered that the cost of re-siting the WWTP away from flood risks is difficult to justify against the likelihood that the ponds should survive most flood events.

If a secure land discharge arrangement was to be pursued, then incorporation of some or all of the discharge to land rather than to the river would be included in the necessary resource consenting. However, this secure arrangement would almost certainly involve land purchase for the discharge area, and further land purchase for a storage facility, involving substantial capital costs. If the costs of land purchase are to be avoided, then land discharge can still be pursued, but on the basis of contractual agreements that may not have long terms. Without a long term land access agreement, there will remain the risk that land access may be terminated, potentially confounding any resource consent requirement to split the discharge between the river and the land. The management of this risk is considered best addressed by separating any summer seasonal land discharge from the river discharge consent. The river discharge consent needs to provide for the full discharge of the wastewater from Bulls. RDC needs to use its best endeavours, considering both costs and cultural expectations, to strive to achieve and maintain suitable land access agreements to enable the summer seasonal land discharge to commence, and to continue.



11 CONCLUSIONS

Rangitikei District Council has the statutory responsibility to its communities to deliver municipal wastewater management systems. The discharges from the Bulls Wastewater Treatment Plant are due for re-consenting, and those discharges and their circumstances have been reviewed to enable consideration to be given to a “Best Practicable Option” for the WWTP and its discharges.

Reasons have not been found to propose changes to the sewer reticulation in Bulls township, or to the WWTP itself, beyond normal operation and maintenance. The existing WWTP has been shown to deliver a wastewater discharge to the Rangitikei River that has measurable environmental effects that are not greater than minor.

Consideration has been given to the inclusion of wastewater from Ohakea and Sanson communities for treatment and/or discharge at Bulls. If these options were to be pursued then either an upgrade of the Bulls WWTP would be necessary to deliver a quality of wastewater to the river discharge that would meet Horizons One Plan water quality targets, or an alternative discharge system would be required. However, with the respective managers of both the Ohakea and Sanson wastewater systems both seeking other options for their wastewater management, the Bulls WWTP for the foreseeable future will have only wastewater generated within the Bulls community to cope with. With statistical indications of a likely continued decline in the total Bulls population, the performance and capacity of the existing WWTP has been shown to be fit for purpose.

Consideration has been given to the available options for the discharge from the Bulls WWTP. Besides the existing discharge directly to the Rangitikei River, there are potential options for the discharge to be re-located to some other site on the river, or to land. There does not appear to be any advantage to be gained by moving the discharge point to some other location on the Rangitikei River, but land discharge has been considered.

To completely remove the discharge from the river would require a large capacity storage facility, new infrastructure, and a land access arrangement that would likely involve purchase. Significant capital costs would be involved, which would not be required for a continued river discharge.

While measurable environmental effects of the existing discharge to the river are not greater than minor, it is acknowledged that Iwi Maori have a cultural relationship with the Rangitikei River that is compromised by any discharge of human wastes. Three measures have been identified to mitigate the effects of the continuing discharge on Iwi cultural values, as follows:

- An enhanced land passage structure is proposed to conduct wastewater from the WWTP to the river;
- Rapid Infiltration basins are to be investigated to provide a groundwater passage alternative to a direct river discharge; and
- A summer seasonal land discharge is to be investigated, to establish whether the river discharge can practically be avoided during periods of low river flow, at a cost that reflects the ability of the client community to pay.

While a summer seasonal land discharge is likely to reduce cultural effects of the river discharge, making a secure, permanent arrangement for land access for this purpose would likely involve land purchase, and would therefore be more expensive than is considered desirable. However, if term agreements with farmers can be reached to provide the benefits of irrigation with water and nutrients at low enough costs to both parties to be financially attractive, then this approach could achieve a useful conclusion. The insecurity of land access that will result from a low-cost approach being adopted will, however, dictate that RDC obtains consent for the discharge of the entire



Bulls wastewater discharge to the Rangitikei River, in order to be certain that the wastewater system can stay functional, even if land access arrangements cannot be sustained or are terminated.



12 RECOMMENDATIONS

That Rangitikei District Council undertake the following:

- Investigate the practicality of a Rapid Infiltration system adjacent to the existing Bulls WWTP to reduce the extent of direct discharge to the Rangitikei River;
- Pursue the opportunities for a summer seasonal land discharge of wastewater from the Bulls WWTP; and
- Pursue the consenting of the entire Bulls WWTP discharge to the Rangitikei River, to ensure that the WWTP can remain functional irrespective of any summer seasonal discharge arrangement being successful.



13APPENDICES

Appendix A Figures

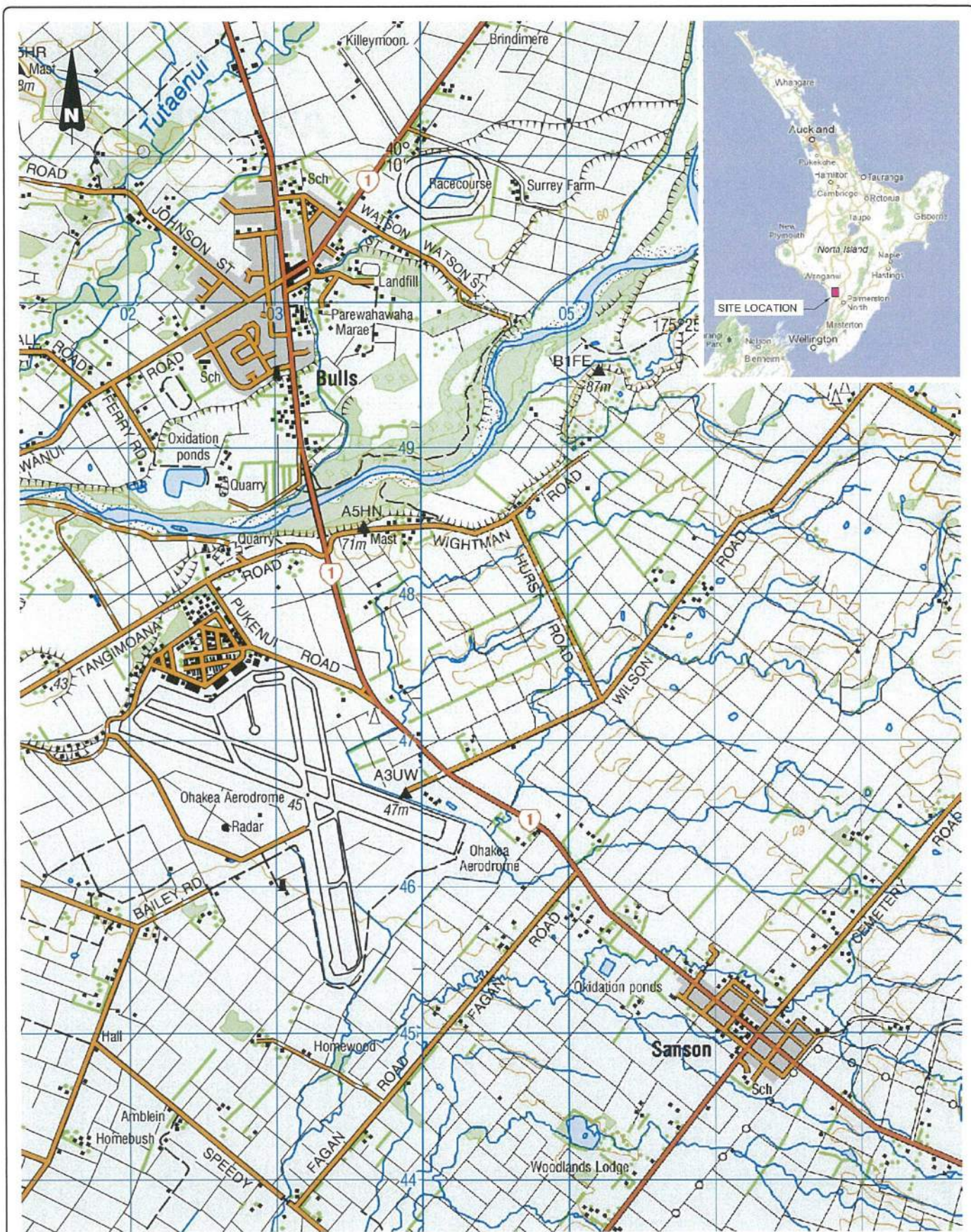


APPENDIX A

Figures

Figure 1.....Location

Figure 2Land Passage and Rapid Infiltration



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APPROVED	HL	09.11.13
CHECKED	—	—
DESIGNED	PH	09.11.13
DRAWN	PMJS	09.11.13

DRAWING TITLE

Figure 1 : Location

PROJECT

Bulls Wastewater Upgrade

SCALE
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0 100

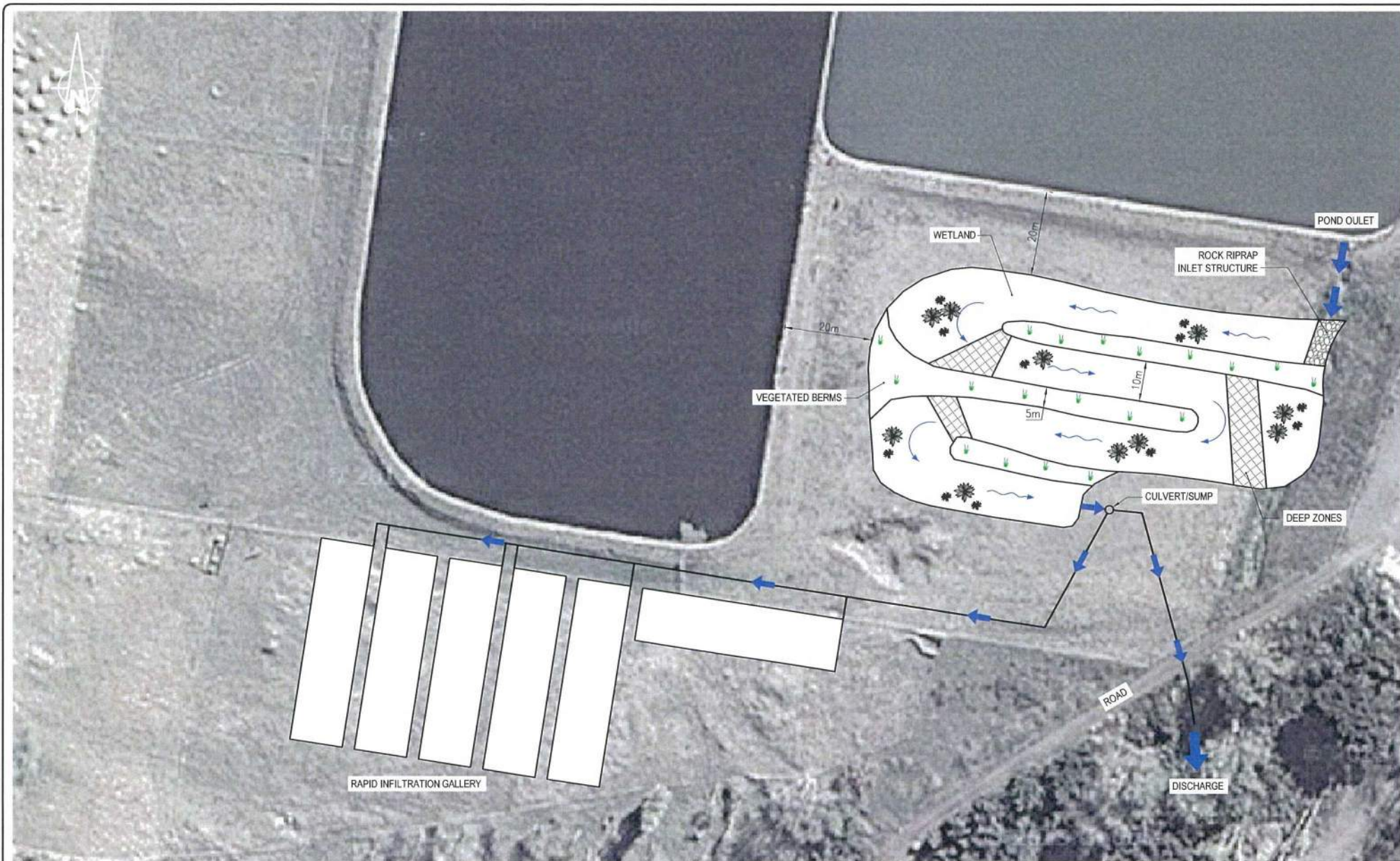
DATE
09/11/2013

DRAWING STATUS
CONSENTING

DRAWING No.
10098-01

REVISION
—

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APPROVED	HL	06.09.14
CHECKED	—	—
DESIGNED	CS	06.09.14
DRAWN	PMJS	06.09.14
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DRAWING TITLE
 Fig 6 : Land Passage and Rapid Infiltration
 PROJECT
 Bulls Wastewater Upgrade

SCALE 1:1,250 (A4)		0 5m 30m	
DATE	03 Mar 2015	DRAWING No.	10098-12
DRAWING STATUS	Consenting	REVISION	—



Attachment 5

REPORT

SUBJECT: **Mangaweka Camping Ground Ablution Block**

TO: Assets & Infrastructure Committee

FROM: Gaylene Prince, Community & Leisure Services Team Leader

DATE: 6 March 2015

FILE: 6-RF-1-1

1 Background

- 1.1 During the 2012/22 Long Term Plan submissions, Paul Eames, Lessee, Mangaweka Camping Ground asked that the on-site sewage disposal be upgraded immediately, and that the upgrade of the ablution block be programmed into the LTP.
- 1.2 Council resolved that \$100,000 for the sewage disposal upgrade was included in Year 3 of the 2012/22 Long Term Plan, but the ablution block upgrade was not included.
- 1.3 When the Infrastructure team investigated the project during the summer of 2014/15, they determined that the current system was sufficient to meet the demand based on the current ablution facilities usage, but recommended emptying the tank twice during the peak months. Some minor work was carried out at a cost of approximately \$5,000 plus staff time, leaving approximately \$90,000+ unspent.

2 Ablution Block

- 2.1 Further to Mr Eames submission to the 2012/22 LTP, he has suggested that the facilities could remain basic but be upgraded so that they were easier to clean, lighter and generally more attractive to use. There is one urinal and one pan in the men's facilities and two pans in the ladies, plus a basin and shower in each.
- 2.2 The facility is unhygienic e.g. rough concrete floor surface makes it hard to keep clean, and the building framing is untreated timber. Mr Eames also believes the pipework needs replacing.
- 2.3 Council staff agree that the ablution block definitely needs refreshing and some maintenance (the lessee's responsibility) would help with that. However, while campers seem to acknowledge and accept it is a very basic campground (in a very scenic spot) it is believed it would be a positive move to do a basic, practical upgrade, adding two additional pans and making the majority of the cubicles unisex (and one will also need to have disabled access), which would be much more practical for peak times (e.g. 350 people staying during the Christmas/New Year period).

- 2.4 It is also believed, from enquiries at the Taihape Information Centre, that more campers are utilising the Mangaweka Camping Ground due to the closure of the Taihape Camping Ground.
- 2.5 Mr Eames has said that he would be prepared to do as much of the work as possible for such a project.

3 Recommendations

- 3.1 That the 'Mangaweka Camping Ground Ablution Block' report be received.
- 3.2 That the Assets and Infrastructure Committee support redirecting the unspent portion of the funding allocated to upgrade the Mangaweka Camping Ground on-site sewage disposal system towards an ablution block upgrade at the camping ground, and that the proposed scope, scale and cost of the upgrade be approved by the Chief Executive within the budget available.

Gaylene Prince
Community & Leisure Services Team Leader

Attachment 6

REPORT

SUBJECT: **Consent Compliance – Jul 2014 to Feb 2015**

TO: Assets/Infrastructure Committee

FROM: David Rei Miller, Asset Engineer - Utilities

DATE: 6 March 2015

FILE: 5-EX-4

1 Introduction

- 1.1 This report is a summary of Rangitikei District Council's compliance with resource consent conditions from Horizons Regional Council, for the period July 2014 to February 2015. Information on compliance has been derived from communication's with Tracey Kirwan (water supply) and Robert Rose (wastewater), compliance monitoring officers at Horizons, as well as formal reports from them.
- 1.2 Council is in the process of implementing Water Outlook software that will enable live reporting of data to Horizons as well as internal staff. The plan is to have all sites set up by the end of March 2015. Work is progressing well, with some live data already coming into Water Outlook from water and wastewater treatment plants across the District.
- 1.3 Horizons require certain flow meters to be verified for accuracy. We are working through this process with them at the moment, to identify which meters need to be verified and how often they need verification, ahead of programming this work. This applies to both water supply and wastewater.

2 Water Supply

- 2.1 The table below shows the compliance of each water supply scheme against consent conditions. Only those schemes for which Rangitikei District Council is the consent holder have been shown.

Table 1: Consent Compliance – Water Supply

Scheme	Compliance	Comments	Actions
Marton	Compliant		

Scheme	Compliance	Comments	Actions
Taihape	Non-compliant for abstraction rate	Issue with pipeline. Flow meter needs to be verified.	Horizons have accepted proposal to discharge excess water take back to Hautapu Stream. Construction planned before summer 2015-2016. Winter flows have been within limits. Alf Downs Group has obtained "blue tick" certification so they can verify meters. Meters will be verified before end of June.
Bulls	Compliant		
Mangaweka	Compliant		
Ratana	Not assessed	Abstraction rate monitoring not in place at existing bore.	Consent to use new bore for production has been acquired; flow monitoring will be installed as part of work required on the new bore, treatment plant and reservoir.
Erewhon Rural	Compliant	Two more weir gaugings needed, plus further information on the eight already completed. Flow meter verification required.	Taihape Plumbing has been engaged to carry out weir gaugings and will do so once the river is at the specified level. Alf Downs Group has obtained "blue tick" certification so they can verify meters. Meters will be verified before end of June.
Hunterville Rural	Compliant		
Omatane Rural	Non-compliant	Non-compliance for abstraction at Omatane 3-11 Dec 2014 due to leak which has now been repaired. No other non-compliances within reporting period.	No further action required.

3 Wastewater

- 3.1 Compliance against consents is shown per wastewater treatment plant (WWTP) in the table below.

Table 2: Consent Compliance - Wastewater

Scheme	Compliance	Comments	Actions
Marton	Non-compliant	Ammoniacal nitrogen and short-circuiting. Leachate from Bonny Glen potentially very high in ammonia.	Preliminary report received from Opus on options for dealing with leachate. Options report expected shortly.
Taihape	Non-compliant	Non-compliant for flow. Flows to WWTP are in excess of capacity. Issues with Inflow & Infiltration (I&I), plus WWTP undersized. Potentially non-compliant for <i>E. coli</i> and suspended solids.	Upgrade works have been proposed and costed at \$450,000. This work will be planned for 2015-2016, and will be included in the 2015-2025 Long Term Plan.
Bulls	Consent expired		Consent renewal in progress. The draft application has been received back from Horizons with comments. Lowe Environmental is in the process of consulting with affected parties. Option of including wastewater from Sanson being considered.
Mangaweka	Compliant		
Hunternville	Non-compliant	Non-compliant for flow gauging. There are also issues with frequency of emergency discharges.	Hydrologist Mary-Anne Watson in negotiations with Horizons over design of gauging site. I&I work underway to reduce flows to WWTP. Upgrade to enable treatment during high flows being investigated. Data will be provided to Horizons on frequency of emergency discharges and options to address this issue.

Scheme	Compliance	Comments	Actions
Ratana	Compliant	Proposed Waipu Trust subdivision will impact WWTP.	WWTP will be upgraded to improve effluent quality and cater for growth. Options currently being investigated by Opus.
Koitiata	Non-compliant	Irrigation field undersized. Inflow meter required.	Estimate for work to address effluent disposal issues is \$250,000. Koitiata Wastewater Reference Group to be formed to confirm selected option. Inflow meter to be installed by May.

4 Recommendation

- 4.1 That the report 'Consent Compliance – Jul 2014 to Feb 2015' to the Assets/Infrastructure Committee meeting on 12 March 2015 be received.

David Rei Miller
Asset Engineer - Utilities