Matatā Wastewater Options and Wastewater Strategy

Subject:	**MATATĀ WASTEWATER OPTIONS AND WASTEWATER STRATEGY**
To:	**EXTRAORDINARY COUNCIL**
Meeting Date:	**THURSDAY, 8 OCTOBER 2015**
Written by:	**MANAGER STRATEGIC PROJECTS**
File Reference:	**A544184**

1 REASON FOR THE REPORT

The Project and Services Committee, at its meeting on 2nd July 2015, received a report on the Matatā wastewater project. That report proposed a programme of work to investigate other options for the supply of a Matatā community wastewater system including consideration of any opportunities identified through the preliminary work in the District Wastewater Strategy review project. The Committee resolved:

1. **THAT** the report "Matatā Wastewater Scheme – Environment Court Decision Project Options" be received;
2. **THAT** the Council approves the Project Plan in Appendix 1 on pages 34-37 of the agenda to carry out further investigations of alternative sites and/or options for Matatā wastewater following the Environment Court Decision and approves the further expenditure, estimated at $200,000, to undertake these investigations; and
3. **THAT** the Council supports a higher level of engagement with the Matatā community in regard to the future options for Matatā wastewater.

The Committee also agreed to review other options and solutions for Matatā Wastewater in three months' time and to investigate with funding agencies the possibility of increased financial commitment to the Matatā wastewater scheme costs.

This report provides an update on the investigations of other options. It is supported by the following reports: AECOM, *Matatā Standalone Wastewater Scheme* (22 September 2015) (Appendix 1) and MWH, *Wastewater Review and Options Study for Edgecumbe and Matatā* (22 September 2015).

This report proposes a pathway forward involving consultation and funding partner engagement.

Approval is sought to:

1. Engage with key stakeholders;
2. Enter into formal dialogue with external funding partners around security of external funding streams and quantum; and
3. Develop the preferred integrated solution for formal consultation;

2 EXECUTIVE SUMMARY

The Matatā community, through efforts by the Matatā Residents Association, have registered a strong show of support for a reticulated wastewater scheme over a maintenance zone.

The project has involved 2 major workstreams. The first focused on a Matatā standalone wastewater scheme, the second on a range of options including Kawerau, Edgecumbe and Whakatāne through inclusion of the Wastewater Strategic Review programme.

The National Policy Statement on Freshwater Management 2014 (NPS-FM), and the BOPRC's Regional Plan for the Tarawera River Catchment (RPTRC) are subsidiary planning documents with a high degree of influence over wastewater disposal options for Matatā (and Edgecumbe). The NPS-FM is due for review in 2016 and the RPTRC in 2018. Increases in performance standards are anticipated.

Disposal of Matatā sewage to surface water within the Tarawera catchment is a Prohibited Activity under the RPTRC. Due to high ground water tables and extensive surface and ground water drainage networks on the Rangitāiki Plains that eventually discharge into the Tarawera River, this rule is also a significant barrier to the establishment of a new land application field for disposal of treated wastewater within close proximity to Matatā.

The existing waste water discharge consents for Whakatāne and Edgecumbe held by the Council all expire in 2026. The BPORC has expressed concerns over repeated non-compliance with the Edgecumbe facility.

The land application field component of the previously appealed resource consent for the Matatā wastewater scheme remains available subject to enhanced attenuation of nutrients.

Key strategic considerations include:

- Maximising the value of wastewater infrastructural assets already in place wherever possible
- Operational and consenting efficiencies can be realised through centralisation of wastewater treatment and/or disposal facilities
- At least 70% of treated wastewater in New Zealand is discharged to a marine environment
- Council ownership of land for community wastewater systems is an important consideration

A maintenance zone is the default position for the Matatā community if a reticulated solution is not provided, and will result in significant costs for many property owners. The plan change process required to implement a maintenance zone requires the BOPRC to consult with the community

The Project Team has evaluated a range of treatment and disposal options for Matatā. In total, 94 sites and 23 options have been reduced to a short list of 7 options through constraints and comparative analyses.

The Project Team's strategic preference is option WO5 (Matatā raw sewage to Edgecumbe oxidation ponds for mixing with Edgecumbe sewage and treatment. Treated wastewater pumped to the outlet of the Whakatāne oxidation ponds). This solution provides a reticulated wastewater system to the Matatā township without incurring consenting, construction and operating costs of a new wastewater treatment plant and disposal field. It addresses the BOPRC concerns with the Edgecumbe wastewater discharges by completely eliminating discharges to the Omeheu Canal thereby enabling the Council to surrender that resource consent. Despite requiring some upgrading works at Edgecumbe and Whakatāne, it maximises the use of existing infrastructural assets already in place and consented. Also, financially, the capital costs are mid-range but the operational costs are considerably less than all other options.

Having refined the options to a manageable number, it is appropriate to include stakeholder input to test the work of the Project Team and help inform further analysis. It is also essential that external funding agencies commit to the project.

3 BACKGROUND

3.1 Scope of investigation

The initial scope of the investigations since July 2015 was to:

1. Identify a potential site for a new wastewater treatment plant with treated effluent being disposed to the land application field to the east of the Tarawera River outlet that the Environment Court had left open subject to enhanced attenuation of nutrients;
2. Identify a potential site for a combined new wastewater treatment plant and land application field;
3. Investigate the pumping of raw sewage to Kawerau for treatment and disposal by the Kawerau District Council;
4. Investigate any options for Matatā wastewater treatment and disposal identified in the Whakatāne District Wastewater Strategic Review;
5. Evaluate all of the identified options through a constraints analysis;
6. Undertake a comparative analysis of the options that ranked highly in the constraints analyses;
7. Identify and recommend a preferred option of wastewater disposal for the Matatā community.

3.2 Matatā Residents Association meeting and petition

The Matatā Residents Association has demonstrated strong community leadership around this project. The Association organised a public meeting on 9 August 2015 and ran a petition amongst Matatā residents and property owners. The purpose of the public meeting was to inform the community of the 2 July 2015 Policy Committee resolutions, to assess the level of support for the project amongst those attending the meeting, and to inform the community of the proposed process moving forward subject to the community wanting it to proceed. The meeting was attended by 60 residents, a number of whom openly expressed concerns over their or their neighbour's defective septic tank disposal fields. Presentations from the Bay of Plenty Regional Council, Toi Te Ora Public Health, and Council staff were supported by the presence of the Mayor, Deputy Mayor, Chairs of the Projects and Services Committee, Hearings Committee and Policy Committee, and several councillors.

The purpose of the petition was to assess the level of support for the project amongst the Matatā community. The Residents Association followed up the public meeting with door-to-door visits collecting signatures from residents that didn't attend the meeting. On behalf of the Association, the Council posted petition forms to absentee owners. Figure 1 below represents the results of a community petition organised by the Matatā Residents Association with a survey period starting in late August and running through to September 2015. Out of 279 properties, owners and tenants of 223 are in favour of a reticulated scheme (176 owners, 42 tenants and 5 properties owned by WDC and DOC) (80% of properties in Matatā). Signatures were not collected from 55 properties (20%). One signature was collected in opposition to the scheme.

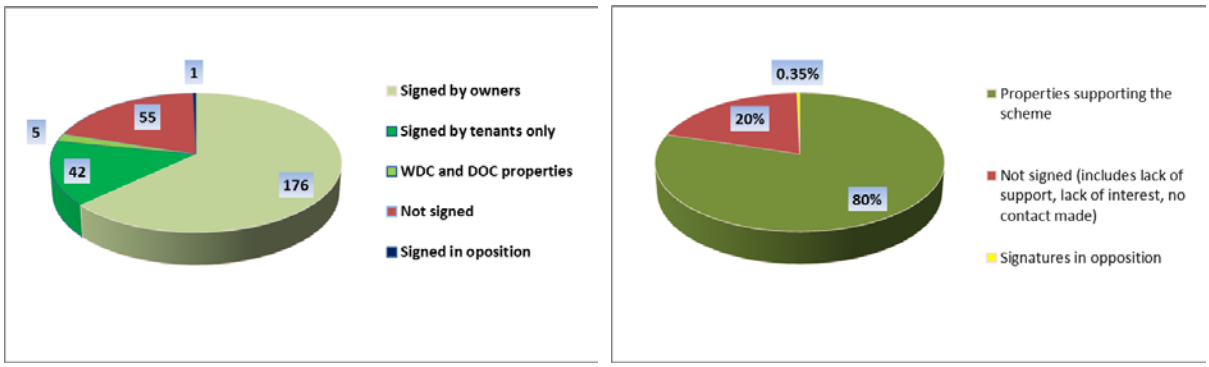


Figure 1 Matatā Residents Association Community Survey

The message from the Matatā Residents Association's initiative is a strong community preference for a reticulated wastewater system rather than individual on-site effluent treatment systems managed under a Bay of Plenty Regional Council maintenance zone.

3.3 Planning considerations

3.3.1 Planning Framework

Although the Resource Management Act 1991 provides an overarching legislative framework, the National Policy Statement on Freshwater Management 2014 (NPS-FM), and the BOPRC's Regional Plan for the Tarawera River Catchment (RPTRC) are subsidiary planning documents with a high degree of influence over wastewater disposal options for Matatā (and Edgecumbe).

The NPS-FM 2014 provides a National Objectives Framework to assist regional councils and communities to more consistently and transparently plan for freshwater objectives. The national policy statement is intended to underpin community discussions about the desired state of fresh water relative to the current state1. Regional councils are required to give effect to the NPS-FM in their planning documents, report on their progress, and implement it no later than 31 December 2025.

Until such time as a regional council has implemented the NPS-FM, the Environment Court has discretion to interpret the policy intent in the way it sees fit when considering any matter before it that has NPS-FM relevance. Despite the Ministry for the Environment endorsement of an "unders and overs" NPS-FM policy intent to overall regional water quality management thereby enabling degradation of some waterways to be compensated by improvements in others, two recent Environment Court decisions, Ngāti Kahungunu v Hawkes Bay Regional Council and Sustainable Matatā v Whakatāne District Council have challenged the "unders and overs" intent of the policymakers. The potential impact of these Environment Court decisions is wide ranging and has raised uncertainty within the sector about renewal of existing consents and consent applications for new discharges to land and water where fresh waterways may be impacted. In effect, these new case law examples represent a substantive business risk to holders of resource consents for discharges directly to freshwater and to land where freshwater may be impacted.

Additionally, the Parliamentary Commissioner for the Environment (PCE) has recently released a report on the NPS-FM reinforcing the decision logic of the Environment Court2. A review of the NPS-FM has been signalled by the Government as part of its 2016 Freshwater Programme. In order to

[1] National Policy Statement for Freshwater Management 2014, p.3

[2] Managing water quality: Examining the 2014 National Policy Statement, Parliamentary Commissioner for the Environment, June 2015

influence the 2016 review outcomes, local authorities and other consent holders will need to aggressively present a strong case if the original policy intent of the NPS-FM is to remain unchanged.

The RPTRC is due for review in 2018. The RPTRC incorporates receiving water quality criteria and also includes a provision around the need for future discharges to maintain or enhance the quality of the water body. In Sustainable Matatā v Whakatāne District Council, the Environment Court determined that although a discharge of additional nutrients may meet the water quality criteria specified in the RPTRC, any increase in nutrient discharge meant it did not satisfy the test of "maintain or enhance" the quality of the water body as required in the RPTRC (and the NPS-FM).

Of special import for Matatā property owners is Rule 15.8.4(r) of the RPTRC which makes any new discharge of human sewage or contaminants derived from human sewage into surface water within the Tarawera River catchment a Prohibited Activity. This means that pumping of raw sewage or treated wastewater from Matatā to Kawerau is specifically prohibited by the RPTRC. Due to high ground water tables and extensive surface and ground water drainage networks on the Rangitāiki Plains that eventually discharge into the Tarawera River, this rule is also a significant barrier to the establishment of a new land application field for disposal of treated wastewater within close proximity to Matatā.

3.3.2 Existing consents

The Council holds a number of resource consents relating to its wastewater management functions. Those relevant to this project are summarised in Table 1.

Table 1 Whakatāne District Council Wastewater Resource Consents

Consent #	Scheme	Purpose	Expiry Date
20368	Whakatāne oxidation ponds	Discharging effluent from oxidation ponds serving the Whakatāne urban area	1/10/2026
62659	Whakatāne oxidation ponds	Discharging contaminants to air (odour)	30/10/2026
20702	Edgecumbe aeration ponds	Discharging oxidation ponds effluent	1/10/2026
62657	Edgecumbe aeration ponds	Discharging contaminants to air (odour)	30/09/2026

Although the Council does not have a resource consent for the land application field to the east of the Tarawera River outlet, it was part of the resource consent appealed to the Environment Court and the Court has kept open this disposal option subject to enhanced attenuation of nutrients.

The Kawerau District Council has a resource consent (65081) for its mechanical and chemical wastewater treatment plant and disposal to land through rapid infiltration beds and discharge of odours to air. The scope of the consent is restricted to treating municipal discharge from Kawerau and the discharge volume is not to exceed 22,000m3 over any seven day period. Expiry date for the consent is 31 October 2032.

3.4 Key Strategic Considerations

The primary objective of the project is to identify a cost effective and sustainable wastewater reticulation system for the township of Matatā.

The Whakatāne Wastewater Strategic Review enabled additional options for Matatā to be considered.

To satisfy the financial prudence tests of section 101 of the LGA 2002, it was considered appropriate to maximise the value of wastewater infrastructural assets already in place wherever possible. This

meant that abandonment of the current Whakatāne wastewater treatment facilities and replacement with a new facility in a different location was excluded from consideration. Based on the financial estimates of the various options for Edgecumbe and Matatā combined, relocation of the Whakatāne WWTP and discharge arrangements, including obtaining of resource consents, is likely to be in the order of a 3 year, $50M-$100M project in its own right with no certainty that an alternative acceptable solution will be realised.

Operational and consenting efficiencies can be realised through centralisation of wastewater treatment and/or disposal facilities. The concept is not uncommon within New Zealand with recent examples being Waimakariri District and Timaru District.

At least 70% of treated wastewater in New Zealand is discharged to a marine environment[3]. A summary of consented NZ ocean discharge outfalls is provided in Appendix 3. The number of recent consents for ocean discharges provides some confidence that other consent authorities and the Environment Court have determined that ocean discharge of wastewater can satisfy the overall sustainability test of section 5 of the RMA. It also provides confidence that renewal of the Council's current Whakatāne discharge consent to the ocean, albeit with enhanced consent conditions, is not an unrealistic expectation. It does not mean that a full alternatives assessment would not be needed or other options, or mix of them, may not be adopted and included in the re-consenting investigations prior to the consent expiry in 2026. However there is a clear history within New Zealand that ocean outfalls have considerable merit. Additionally, renewal of an existing consent with a good track record carries weight in a consenting process in comparison to a greenfields proposal. Section 104(2)A of the Resource Management Act requires that the value of the investment of the existing consent holder be considered in the decision-making process.

Council ownership of land for community wastewater systems is another key strategic consideration. The recent example of Rotorua District Council having to abandon their wastewater land application area in adjoining forests in the near future reinforces the importance of certainty of land tenure for the location of long term community infrastructural assets.

The BOPRC has signalled concerns over the existing Edgecumbe waste water treatment and disposal arrangements to the Omeheu Canal not consistently meeting the discharge consent conditions for the activity. The Omeheu Canal discharges into the Tarawera River therefore comments about the RPTRC in section 3.3.1 apply equally to the current Edgecumbe wastewater arrangements.

4 DISCUSSION AND OPTIONS SECTIONS

4.1 Maintenance Zone

For the Matatā community, the status quo is not an option. Water sampling has shown that some ground weeps and drains within the community are contaminated with septic tank effluent. The Medical Officer of Health has recently requested the BOPRC investigate zoning Matatā as a Maintenance Zone. A maintenance zone requires existing on-site effluent treatment systems (typically septic tanks at Matatā) to comply with the Operative On-Site Effluent Treatment Regional Plan. For many Matatā property owners this will require upgrades to existing systems. Upgrade work will range from increasing tank size, installation of an outlet bio-filter, installing a ground level access chamber, through to replacement of complete systems. The variation in costs is from a few hundred dollars to several thousand dollars. If an aerated wastewater system is required due to site constraints, the cost will be in the range of $17,000 to $30,000. A random sample of 16 septic tanks inspected against the Regional Plan requirements by the Council and BOPRC staff in Matatā in 2012 identified a 70% failure rate. BOPRC staff have also advised that some Matatā properties have

[3] Personal communication J Bradley, MWH, 16 September 2015

insufficient area to meet the requirements of the Regional Plan which may result in some people having to relocate. In such situations, the vacated land could be made available to adjoining property owners for wastewater disposal.

A maintenance zone is the default position for the Matatā community if a reticulated solution is not provided. To create a maintenance zone will require the BOPRC to undertake a plan change to its Operative On-Site Effluent Treatment Regional Plan. The plan change process requires BOPRC to consult with the community as prescribed in the RMA.

4.2 Project process overview for reticulated options

The alternative site investigation work has benefited from the inclusion of a broader perspective. In accordance with provisions in the Council's Long Term Plan, a contract had been let to review the Whakatāne Wastewater Infrastructure Strategy and investigate wastewater reticulation, treatment and disposal options for Edgecumbe.

An additional workstream was added to the Whakatāne Wastewater Infrastructure Strategic Review contract to explore the opportunities a combined Edgecumbe and Matatā option could offer the residents of Matatā. Broadening the scope to look at an integrated solution also aligns well with the Council's equalisation strategy for wastewater rates across the sewered communities within the District[4]. The inter-relationship between the Matatā wastewater project and the Strategic Review is outlined in Figure 2.

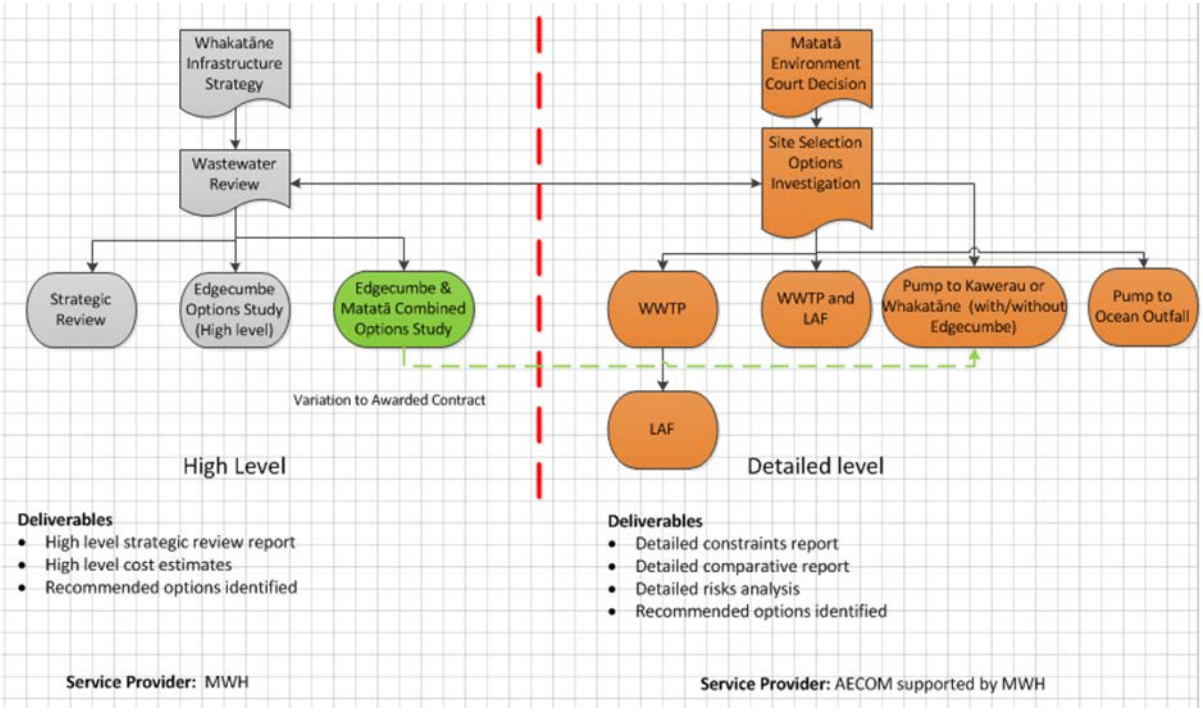


Figure 2 Matatā/Strategic Review Relationship

A similar analysis process was followed for all workstreams, and workstreams were worked on in parallel. The process commenced with a high level desktop constraints analysis that generated a large number of sites.

For the Matatā workstreams, landowners of each identified site were contacted and asked if they would be prepared to enter into a discussion about potential sale or lease of their land for the purposes of a wastewater treatment plant, or a wastewater treatment plant and land application field. A more detailed constraints analysis was then undertaken of those properties with landowner

[44] With the exception of Murupara

support. The results of this analysis were fed into a multi-criteria analysis together with the options identified in the Strategic Review workstream.

For the Strategic Review, sites identified through the high level desktop analysis for Edgecumbe standalone were combined with conveyance options for further shortlisting before being brought forward to the multi-criteria analysis process. The same process was adopted for conveyance options combining Matatā and Edgecumbe.

Sensitivity analyses (30% and 50% financial weighting) were undertaken of the preferred options.

The site/option selection process and proposed process moving forward is portrayed in Figure 3. The red border diamond ('preferred options for consultation') in the centre of Figure 3 represents where we currently are in the process.

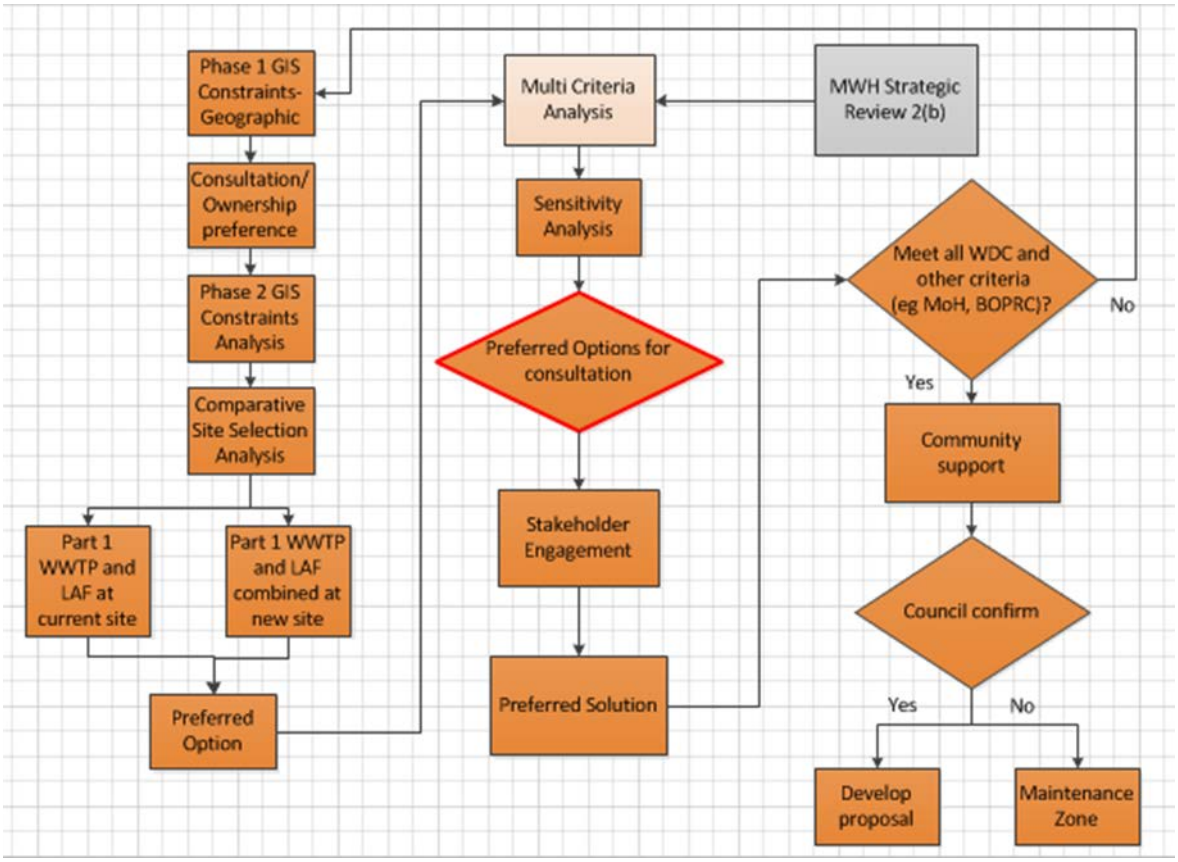


Figure 3 Project Overview

The details of the various analyses are fully set out in the consultants' reports which form Appendices 1 and 2 of this report.

It is important to note that there has been no external input (other than from the two consulting firms) into the analyses to date. Productive stakeholder engagement is essential to the project moving forward. A Stakeholder Engagement and Communication Plan is currently being developed. The Plan will identify key stakeholders and a range of communication tools to disseminate information and receive feedback throughout the project.

A summary of the analyses undertaken to date is provided in sections 4.3 and 4.4.

4.3 Matatā Standalone

For a Matatā standalone system, two option groups were considered for potential Wastewater Treatment Plant (WWTP) and Land Application Field (LAF) sites:

- Option A - assumes the LAF will remain at the currently proposed site at the WDC recreational reserve east of the Tarawera River with a new site required for the WWTP.

- Option B - assumes that both the WWTP and LAF will be located on a new site.

4.3.1 Option A - New WWTP and existing LAF

Utilising the current LAF location, any alternative sites for a WWTP have to be located generally between Matatā and the LAF to optimise hydraulic design and operational and financial efficiencies.

35 potential sites were initially identified within 7.5kms of Matatā and the LAF, proximity to Thornton Road, and satisfaction of land area, land slope, land elevation and distance from marae criteria. Following engagement with property owners of the identified sites, and more detailed GIS criteria analysis, **7** sites were shortlisted and carried through to multiple criteria analysis evaluation and ranking.

4.3.2 Option B - New combined WWTP and LAF

This workstream looked at identifying an area of land larger than Option A, to provide for a new WWTP and LAF on the same land parcel. A wider geographical area was able to be considered as the location of the existing LAF constraint was removed.

59 potential sites were identified based on distance from Matatā, land area, land slope, land elevation and distance from marae. 12 sites were subsequently eliminated based on knowledge of historical cultural issues, property owner feedback on land drainage or flooding issues, and distance to high voltage supply.

Following engagement with property owners of the identified sites, and more detailed GIS criteria analysis, **8** sites were shortlisted and carried through to multiple criteria analysis evaluation and ranking.

4.4 Integrated Options

As a consequence of aligning the Matatā wastewater alternative site investigations with the review of the Whakatāne Long Term Infrastructure Strategy, a broader perspective identified additional opportunities for wastewater treatment and disposal for the Matatā community over the standalone options. These are described below with pumping of raw sewage discussed first followed by options involving a combination of raw sewage and treated wastewater.

4.4.1 Matatā or Matatā and Edgecumbe combined raw sewage to Kawerau

The option of pumping raw sewage from Matatā to Kawerau had been analysed in a number of earlier studies and rejected on the basis of long conveyance of raw sewage, high costs of long distance pumping (35 km) up hill (25m) and accompanying issues of septicity, corrosion and odour.

The long conveyance line would require a booster pumping station. It was assumed that a pumping station could be located in Edgecumbe and Edgecumbe sewage could be pumped as well.

Despite these constraints, this option was again analysed due to the largesse of the Mayor of Kawerau offering Kawerau District Council's wastewater treatment system and disposal fields to help the Matatā community implement a reticulated wastewater solution.

4.4.2 Matatā raw sewage to Whakatāne

As for the pumping to Kawerau option, pumping of raw sewage to the Whakatāne oxidation ponds for treatment was considered in a number of earlier studies and similarly rejected on the basis of long conveyance of raw sewage, high costs of long distance pumping and accompanying issues of

septicity, corrosion and odour. Nevertheless, when consideration was given to a range of options for Edgecumbe, it became obvious that further consideration of a Matatā to Whakatāne option was warranted.

4.4.3 Matatā and Edgecumbe combined raw sewage to Whakatāne

This proposal involves pumping of raw sewage from Matatā to Thornton, pumping of raw sewage from Edgecumbe to Thornton, and pumping combined raw sewage from Thornton to the Whakatāne oxidation ponds for treatment.

4.4.4 Matatā raw sewage to Edgecumbe

A number of options propose pumping of raw sewage from Matatā to Edgecumbe for treatment in upgraded oxidation ponds prior to disposal. Although some upgrading of the Edgecumbe oxidation ponds is required irrespective of which option is selected, the scale of the upgrade work varies between options.

Use of the Edgecumbe oxidation ponds provides a cost effective treatment solution and negates the need (and associated costs) for a separate WWTP at Matatā.

Shortlisted combined Matatā and Edgecumbe options utilising the Edgecumbe oxidation ponds include:

4.4.5 Matatā raw sewage to Edgecumbe, combined treated wastewater to Thornton

During the option development process, WDC coastal reserve land at Thornton was identified as a potential site for the application of treated wastewater. A further GIS screening process was undertaken for this land to inform the assessment of options. The area considered for the LAF is located west of the sand mining area on grazed recreation reserve. There are some Biodiversity A Sites (avoidance required) and B Sites (mitigation required) but approximately 14.8ha is available for land application of treated wastewater.

4.4.6 Matatā raw sewage to Edgecumbe, combined treated wastewater to Whakatāne outfall

In this option, the treated wastewater from upgraded Edgecumbe oxidation ponds is pumped to the outlet of the Whakatāne oxidation ponds for ocean discharge. The Whakatāne discharge consent provides for a daily discharge volume of 8000m^3. The combined Whakatāne, Edgecumbe and Matatā total daily volume will be within the consented volume.

A legal opinion has been obtained confirming a variation to the scope of the consent will be required to accommodate the additional wastewater from the Matatā and Edgecumbe communities. This option optimises use of existing community wastewater infrastructure for which consents are in existence. It also recognises that ultra violet light treatment is likely to be required through the consenting process.

4.4.7 Matatā raw sewage to Edgecumbe, combined treated wastewater to land application at Whakatāne airport site

During the evaluation process, the 226 hectares Whakatāne Airport site was identified as a possible land application area for Edgecumbe and Matatā wastewater treated at Edgecumbe. This site also potentially offers an option for land-based disposal of a portion of Whakatāne wastewater in the future. Utilisation of the airport site would complement the existing aerodrome use through subsurface irrigation of land prone to erosion by wind that currently has sparse vegetation cover, particularly in summer.

A legal opinion has confirmed the site is zoned for aerodrome purposes and remains with the Council until cessation of airport activities at which time the land reverts to Ngāti Awa ownership through provisions within the Ngāti Awa Settlement Act.

4.4.8 Edgecumbe Standalone Options

13 potential Edgecumbe standalone options were identified broadly arranged around: conveyance; treatment at Edgecumbe and land application at Edgecumbe; treatment at Edgecumbe and land application at Thornton; treatment at Edgecumbe and discharge to the Tarawera River catchment; and treatment at Edgecumbe and discharge to the Rangitāiki River. These options were then reduced to a short list of **7** following an assessment based on qualitative environmental, social, economic, risk factors, and key advantages and disadvantages.

4.5 Multi-criteria analysis - summary of results and financial estimates

The shortlists from the two Matatā workstreams and the Strategic Review workstreams were subject to multi-criteria analyses (MCA). Two financial sensitivity analyses were applied – 30% and 50%. MCA criteria, criteria descriptors, guidance notes on application, and scores are detailed in the consultants' reports attached as Appendices 1 and 2 to this report. The outcome of the MCA process is a comparative ranking between options.

A summary of the results for the Matatā standalone options is outlined in Table 16 of the AECOM report (ibid) reproduced below. Locations of the individual sites can be found in Appendices B1 and B2 of the AECOM report which forms Appendix A of this report.

Table 16 → MCA Non-Cost and Cost Criteria Options Scoring and Ranking¶

		Assessment Criteria			Scores and Ranking							
		Cost Based Criteria										
#	Option	Capital Cost	Operating Cost	NPV	Overall Score of Analysis Criteria Excluding Cost	Rank	Cost Based Score	Cost Rank	Overall Score including Cost 30%	Overall Rank 30%	Overall Score including Cost 50%	Overall Rank 50%
1	Option A - Site R	$ 14,694,136	$ 246,622	$ 18,130,936	2.98	6	1.39	14	2.50	7	2.21	10
2	Option A - Site Z	$ 12,516,486	$ 320,220	$ 16,815,563	3.42	2	1.37	16	2.81	3	2.50	5
3	Option A - Site Y	$ 12,890,086	$ 263,956	$ 16,617,884	2.77	9	1.58	9	2.41	9	2.28	8
4	Option A - Site S	$ 14,760,086	$ 247,281	$ 18,206,070	2.98	6	1.38	15	2.50	8	2.20	11
5	Option A - Site A	$ 14,211,086	$ 247,166	$ 17,655,471	1.85	16	1.46	12	1.73	16	1.70	16
6	Option A - Site B	$ 13,911,586	$ 244,171	$ 17,314,231	2.50	12	1.53	10	2.21	13	2.08	12
7	Option A - Site Z1	$ 14,348,486	$ 248,540	$ 18,238,019	2.67	10	1.40	13	2.29	11	2.07	13
1	Option B - Site 26	$ 13,301,774	$ 231,163	$ 16,523,145	3.54	1	1.69	6	2.98	1	2.71	1
2	Option B - Site 30	$ 13,318,274	$ 231,328	$ 16,115,946	2.63	11	1.72	5	2.36	10	2.28	9
3	Option B - Site 9	$ 12,261,640	$ 225,022	$ 16,488,278	3.02	5	1.81	4	2.66	4	2.53	4
4	Option B - Site 10	$ 12,366,857	$ 316,074	$ 15,517,311	3.06	4	1.49	11	2.59	6	2.41	6
5	Option B - Site 5	$ 11,706,140	$ 219,467	$ 14,764,523	2.35	13	2.01	2	2.24	12	2.34	7
6	Option B - Site 7	$ 12,477,586	$ 227,181	$ 15,643,468	2.98	8	1.84	3	2.64	5	2.54	3
7	Option B - Site 17	$ 13,693,941	$ 233,970	$ 16,954,427	2.17	14	1.62	7	2.01	14	1.97	14
8	Option B - Site 18	$ 13,702,191	$ 234,052	$ 16,963,824	2.17	14	1.61	8	2.01	15	1.97	15
9	MW1 - Matatā to Whakatāne	$ 15,590,000	$ 85,000	$ 16,915,000	3.29	3	2.08	1	2.92	2	2.71	2

¶

*Note: Costs are GST exclusive and do not include: site validation [approximately $100,000 per site]; allowances for resource consent preparation, hearing and appeal; stakeholder

engagement and community consultation; purchase or lease of land (where applicable); the use of existing infrastructure for combined schemes [costs are allowed for new plant items]; any work associated with de-establishment of existing WWTP plant and/or other wastewater infrastructure no longer required under each option or rehabilitation of the site; council officers time; and operational cost of Matatā wastewater reticulation.

The top four MCA ranked options for a Matatā standalone wastewater system are:

1. Option B (new WWTP and new LAF on the same site) - Site 26 which is located in the Awakaponga area;
2. MW1 – pumping of raw sewage to Whakatāne;
3. Option A (new WWTP, existing enhanced LAF) – Site Z which is located in the Thornton area;
4. Option B (new WWTP and new LAF on the same site) – Site 7 which is the existing LAF site east of the Tarawera River outlet.

A summary of the results for Edgecumbe standalone and Matatā and Edgecumbe combined is outlined in Table 6-11 of the MWH report (ibid) reproduced below.

Table 6-11: Combined Matatā/Edgecumbe Shortlisted Options – MCA Summary Results

		Assessment Criteria			Scores and Ranking							
#	Scenario	Capital Cost	Operating Cost	NPV	Overall Score of Analysis Criteria Excluding Cost	Rank	Cost Based Score	Cost Rank	Overall Score including Cost 30%	Overall Rank 30%	Overall Score including cost 50%	Overall Rank 50%
1	KL1 - Raw Sewage to Kawerau WWTP	$ 25,255,000	$ 460,000	$ 32,085,000	2.31	8.00	1.33	7.00	2.01	8.00	1.82	8.00
2	ER3 - Upgraded Edgecumbe Oxidation Ponds and Discharge to Rangitaiki River	$ 20,920,000	$ 360,000	$ 28,495,000	2.58	7.00	1.95	3.00	2.39	7.00	2.26	7.00
3	TL2 - Upgraded Edgecumbe Oxidation Pond and Discharge at Thornton Dunes. Matata standalone WWTP and discharge at Thornton Dunes.	$ 25,475,000	$ 410,000	$ 33,810,000	3.40	5.00	1.40	5.00	2.80	6.00	2.40	6.00
4	TL3 - Matata to Upgraded Edgecumbe Oxidation Pond and Discharge at Thornton Dunes	$ 25,850,000	$ 365,000	$ 33,515,000	3.50	4.00	1.53	4.00	2.91	5.00	2.51	4.00
5	WO1 - Raw Sewage to Whakatane WWTP	$ 22,865,000	$ 175,000	$ 25,705,000	3.29	6.00	2.50	2.00	3.05	3.00	2.89	2.00
6	WO5 - Oxidation Pond Treated Wastewater to Whakatane WWTP	$ 23,825,000	$ 115,000	$ 25,760,000	3.92	1.00	2.63	1.00	3.53	1.00	3.27	1.00
7	TL2A - Upgraded Edgecumbe Oxidation Pond and Discharge at Whakatane Airport. Matata standalone WWTP and discharge at Whakatane Airport.	$ 28,570,000	$ 415,000	$ 36,945,000	3.81	2.00	1.13	8.00	3.00	4.00	2.47	5.00
8	TL3A - Matata to Upgraded Edgecumbe Oxidation Pond and Discharge at Whakatane Airport	$ 27,375,000	$ 365,000	$ 35,045,000	3.81	2.00	1.40	6.00	3.09	2.00	2.60	3.00

*Note: Costs are GST exclusive and do not include: allowances for resource consent preparation, hearing and appeal; stakeholder engagement and community consultation; purchase or lease of land (where applicable); the use of existing infrastructure for combined schemes [costs are allowed for new plant items]; any work associated with de-establishment of existing WWTP plant and/or other wastewater infrastructure no longer required under each option or rehabilitation of the site; council officers time; and operational cost of Matatā wastewater reticulation.

The top three MCA ranked strategic options are:

1. WO5 - Matatā raw sewage to Edgecumbe oxidation ponds for mixing with Edgecumbe sewage and treatment. Treated wastewater pumped to the outlet of the Whakatāne oxidation ponds.

2. WO1 – Pumping of combined Matatā and Edgecumbe raw sewage to Whakatāne for treatment at the Whakatāne oxidation ponds and ocean disposal.

3. TL3A - Matatā raw sewage to Edgecumbe oxidation ponds for mixing with Edgecumbe sewage and treatment. Treated wastewater pumped to a land application field at Whakatāne airport.

4.6 Strategic Preference

The Project Team's strategic preference is integrated solution WO5. This solution provides a reticulated wastewater system to the Matatā township without incurring consenting risks and costs, and construction and operating costs of a new wastewater treatment plant and disposal field. It addresses the BOPRC concerns with the Edgecumbe wastewater discharges by completely eliminating discharges to the Omeheu Canal thereby enabling the Council to surrender that resource consent. Despite requiring some upgrading works at Edgecumbe and Whakatāne, it maximises the use of existing infrastructural assets already in place and consented. Also, financially, the capital costs are mid-range but the operational costs are considerably less than all other options.

The NPS-FM and case law influence on current consenting decisions encourage wastewater disposal options that have no impact upon freshwater bodies. A similar trend is likely to apply to estuaries. Pressure for improved discharge quality of wastewater from Tāneatua and Murupara wastewater systems can be anticipated when their current consents expire in 2026. Tāneatua may also benefit from a centralised approach to Whakatāne district wastewater disposal.

The main risks to WO5 are retention of the Ministry of Health subsidy and BOPRC grant (refer section 7.3), and variation/renewal of the ocean discharge consent from the Whakatāne wastewater treatment plant (refer section 3.4).

Due to the absence of stakeholder input into the process to date, the Project Team wish to test their analyses through engagement with key stakeholders. A proposed pathway forward is outlined in section 6.

5 ASSESSMENT OF SIGNIFICANCE

The decisions of this report are not significant but are part of a process to arrive at a decision that may be significant in accordance with section 3.3 of the Council's Significance and Engagement Policy:

- 3.3 c) - The financial implications of the decision on the Council's overall resources are substantial.
- 3.3 e) - The proposal or decision is likely to generate a high degree of controversy in the community.

Section2.2 of the Council's Significance and Engagement Policy states that a matter shall be determined to be significant if/when:

- a) - Unbudgeted capital expenditure decisions, where the total cost would exceed 5% of the Council's total annual capital expenditure for the relevant financial year, being **$1,606,750**.
- b) - Unbudgeted operating expenditure decisions, where the total cost would exceed 1% of the Council's total annual operating expenditure for the relevant financial year, being **$428,950**.

The Matatā Wastewater standalone Scheme is included in the LTP with capex of $12,200,000 and opex of $210,000. It should be noted that preferred options have higher capital expenditure.

6 COMMUNITY INPUT AND PUBLICITY

6.1 Consultation Process and Options

The analysis of options to date has been an exclusive process due to the three month time constraint combined with the sheer volume of work that was required to be covered. Although this process was accepted by attendees at the public meeting organised by the Matatā Residents Association, the preferred WO5 solution has broader impact than just the Matatā community. Recognising that there is a high probability the preferred integrated option will not have universal support, it is important that the work of the project team be validated through targeted stakeholder engagement.

The Communication and Stakeholder Engagement Plan will be completed over the next two to three weeks and will be immediately followed with targeted stakeholder meetings.

Assuming stakeholder support and agreeable funding arrangements finalised, the Council should be in a position in late November to consider a decision on whether or not, and when, to proceed to formal consultation using the statutory procedure under the Local Government Act 2002.

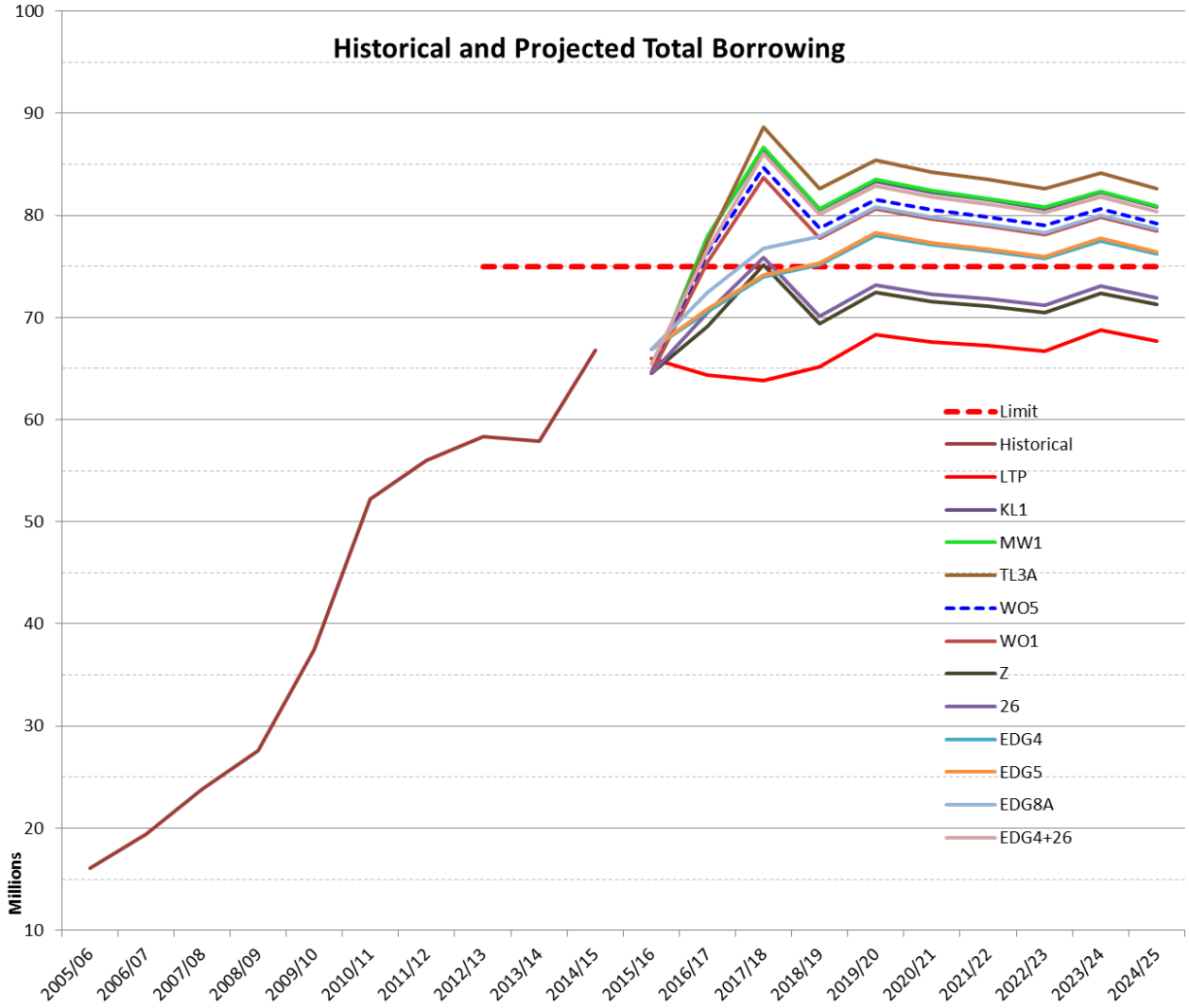
7 CONSIDERATIONS

7.1 Financial Strategy

The Council adopted a Financial Strategy with the adoption of the 2015-25 Long Term Plan (LTP). The Financial Strategy supports the delivery of Council activities and services in a manner which addresses rates affordability and ensures that the Council remains in a long-term stable financial position. The Financial Strategy includes limits on rates, rates increases, interest expense and debt. The following sections model how each of the proposed options affects the limits set through the Financial Strategy.

7.2 Debt Profile, Debt Limits and Interest Expense Limits

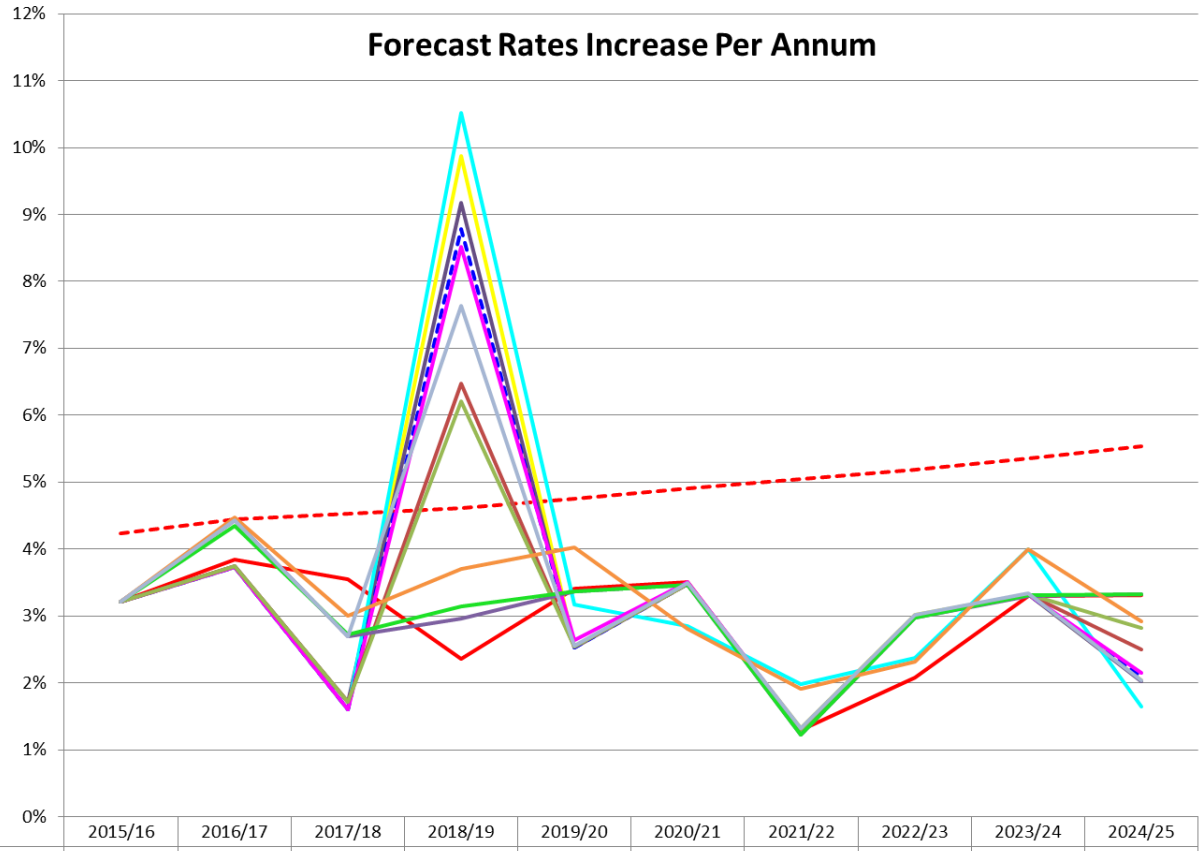
The strategy adopted through the LTP was to maintain debt at around current levels and as such, the total debt limit of $75 million set through the 2012-22 LTP was retained. Each of the proposed options breaches the $75 million debt limit with all but two of the options (Matatā standalone schemes (option Site 26 – LAF and WWTP located at new Awakaponga location and option Site Z – new location of WWTP and current location of LAF at the reserve east of Tarawera River) through to at least the 2025 financial year.



Limits on the amount of rates revenue used to meet interest expense were set, as debt repayments rather than the overall level of borrowing affects ratepayers from year to year. Interest expense is limited to 12% of total rates income. The current borrowing profile for the 2015-25 LTP sits very close to this interest expense limit (between 9% and 11.5%). The additional interest expense proposed for each of the options would breach the limit set on interest expense as a proportion of rates revenue.

7.3 Rating Profile and Rating Limits

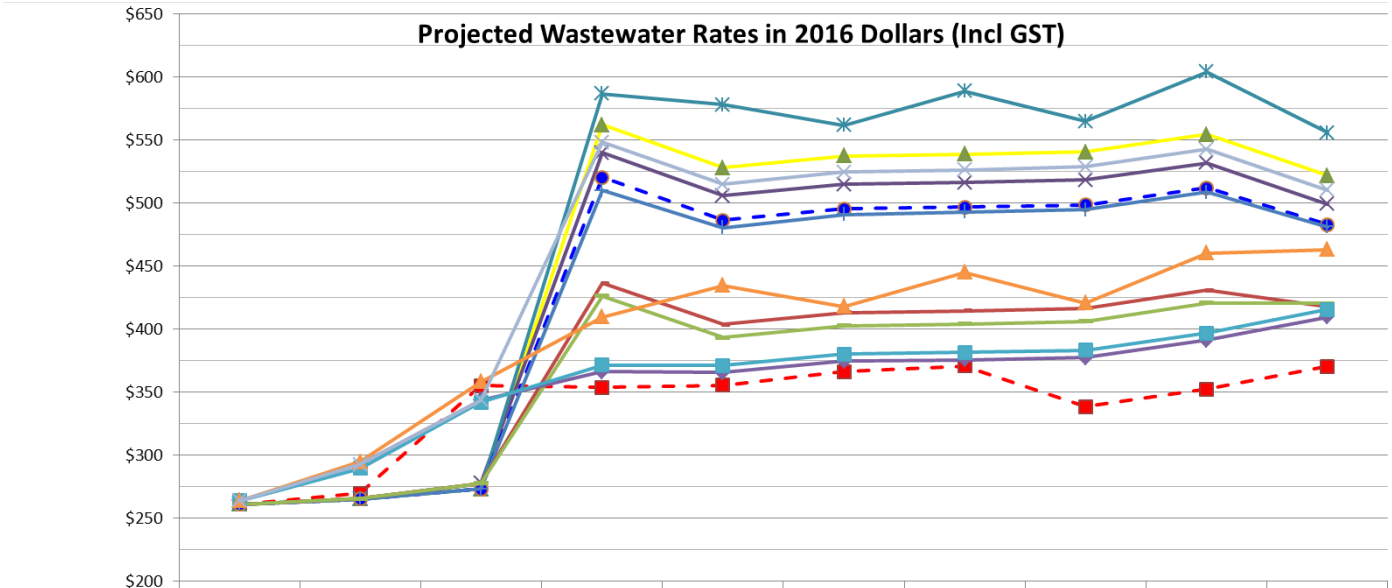
The strategy adopted through the LTP was to maintain rates increases to an affordable level and as such, the limit of Local Government Cost Index (LGCI) plus 2% set through the 2012-22 LTP was retained. The 2015-25 LTP proposed rates increases of no more than 3.84% through the life of the LTP (Including inflation). Each of the proposed options breaches the LGCI plus 2% limit in the 2018/19 financial year, with the exception of Edgecumbe standalone options: EDG8A, EDG5 and EDG4, along with the 2015-25 LTP. Although the EDG options do not breach the limit, they do not address the existing Matatā Wastewater spend of approximately $2.6 million which is currently allocated to a reserve account. Addressing this balance through rates repayments, would also likely challenge the rates increase limit in the short to medium term for each of these options.



	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Limit (LGCI plus 2%)	4.24%	4.45%	4.53%	4.61%	4.75%	4.90%	5.04%	5.19%	5.36%	5.53%
LTP	3.21%	3.84%	3.55%	2.36%	3.41%	3.51%	1.30%	2.07%	3.30%	3.31%
KL1	3.21%	3.73%	1.61%	9.88%	2.54%	3.48%	1.33%	3.02%	3.33%	2.04%
MW1	3.21%	3.74%	1.71%	9.18%	2.53%	3.48%	1.31%	3.01%	3.32%	2.02%
TL3A	3.21%	3.73%	1.61%	10.52%	3.17%	2.84%	1.98%	2.37%	3.99%	1.65%
WO5	3.21%	3.73%	1.61%	8.79%	2.53%	3.47%	1.30%	3.00%	3.32%	2.10%
WO1	3.21%	3.73%	1.61%	8.51%	2.64%	3.50%	1.31%	3.00%	3.32%	2.15%
Z	3.21%	3.74%	1.71%	6.47%	2.54%	3.47%	1.25%	2.99%	3.32%	2.50%
26	3.21%	3.74%	1.71%	6.21%	2.54%	3.47%	1.25%	2.99%	3.32%	2.83%
EDG4	3.21%	4.43%	2.69%	2.95%	3.36%	3.46%	1.22%	2.97%	3.30%	3.33%
EDG5	3.21%	4.35%	2.72%	3.14%	3.36%	3.47%	1.22%	2.98%	3.30%	3.33%
EDG8A	3.21%	4.48%	3.00%	3.71%	4.02%	2.81%	1.91%	2.31%	3.99%	2.92%
EDG4+26	3.21%	4.43%	2.69%	7.64%	2.55%	3.49%	1.33%	3.02%	3.34%	2.03%

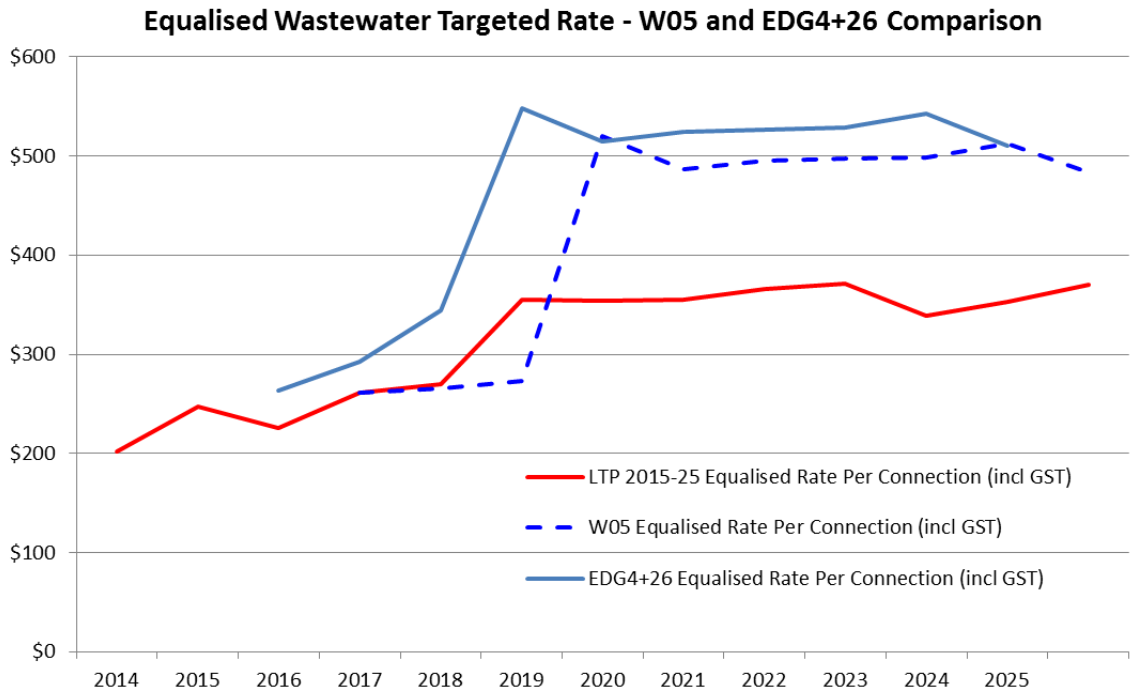
7.4 Wastewater Rates

Wastewater rates for the equalised schemes for the 2015-16 financial year are set at $261 including GST. Each of the proposed options is modelled below and reflects the per connection charge including GST. For each additional $1 million of subsidy received (over and above the BOPRC and MOH contributions stated in the assumptions), a reduction in rates of approximately $82,000 (0.2%) per annum or $8.20 (including GST) per connection could be expected for a period of 25 years.



	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
LTP 2015-25	$261	$270	$355	$354	$355	$366	$371	$339	$352	$371
KL1	$261	$265	$273	$562	$528	$537	$539	$541	$554	$522
MW1	$261	$266	$278	$540	$506	$515	$516	$518	$532	$499
TL3A	$261	$265	$273	$587	$578	$562	$589	$565	$604	$556
WO5	$261	$265	$273	$520	$486	$496	$497	$499	$512	$483
WO1	$261	$265	$273	$510	$481	$491	$493	$495	$509	$481
Z	$261	$266	$278	$436	$404	$413	$414	$416	$431	$418
26	$261	$266	$278	$426	$393	$403	$404	$406	$421	$420
EDG4	$264	$293	$344	$366	$366	$375	$376	$377	$391	$410
EDG5	$264	$290	$342	$372	$371	$380	$381	$383	$397	$416
EDG8A	$264	$295	$358	$410	$435	$418	$445	$421	$460	$463
EDG4+26	$264	$293	$344	$548	$515	$525	$526	$529	$543	$510

The following graph gives a clearer indication of the impact on the equalised wastewater rate for the preferred option W05 (raw sewage from Matatā to Edgecumbe for treatment and treated Edgecumbe and Matatā to Whakatāne ocean outfall) as compared to the current LTP rate and EDG4+26 (Matatā Standalone and Edgecumbe Standalone) option.



7.5 Financial Summary

The financial information presented above clearly indicates that for the preferred option W05, each of the limits set through the 2015-25 LTP will be breached. This could be mitigated through reviewing other work streams and levels of service to reduce levels of debt and the rating requirement in other activities. However, in doing so it is likely those levels of service would be compromised resulting in the need for consultation with the community. There would be an opportunity to re-consider the financial strategy, and limits, during the development of the 2017-2027 Long Term Plan. , Whilst there are no direct consequences for breaching rates increase and debt limits, any breaches will need to be reported to the community through the Annual Report and the Pre-Election Report. While we do not need to proactively advise the Department of Internal Affairs, the breach would likely be included in the report on sector performance, prepared by the Department.

Perhaps the more important financial issue is the long term affordability of each of the options proposed. Rates affordability was one of the fundamental principles of the 2015-25 Financial Strategy. The rate increase proposed would affect almost three quarters of the rating base including communities such as Te Mahoe and Taneatua, and where assessments are made on a per pan basis (such as schools, Marae and commercial/industrial properties) the impact would be multiplied.

7.6 Policy and planning implications

The decision to progress the site/option selection process is consistent with the resolutions of the Project and Services Committee, at its meeting on 2nd July 2015.

The Financial Strategy adopted with the 2015-2025 LTP includes limits on rates, rates increases, interest expense and debt that are likely to be exceeded. This report is part of a decision making process that may significant as considered under section 5, and a community engagement process is outlined within this report.

In terms of alignment with the LTP, section 97 of the Local Government Act allows for certain decisions only to be taken if they are provided for in the LTP. In 2010, requirements under this section were reduced to only include decisions include the transfer of ownership of a strategic asset, or a decision to alter significantly the intended level of service for a significant activity. Sewerage

treatment and disposal is included as a significant activity. The commencement of a wastewater scheme for Matatā and the need for upgrade works in Edgecumbe were included in the 2015 LTP and WO5 is not expected to change the level of service for Whakatāne. Therefore an amendment to the LTP is not required.

7.7 Risks

Risks for each option were identified and recorded during the site/option assessment evaluations.

Section 8 of the MWH report includes a project risk register and assessment of risks using AS/NZS ISO 31000: 2009 Standard on Risk Management. The majority of the risks developed by MWH for the Edgecumbe and Matatā/Edgecumbe options apply similarly to the Matatā standalone options. Further work is required to flesh out the risk register. This further work will be informed through targeted stakeholder engagement.

The biggest risk to the project is access to adequate levels of external funding. At the time of writing this report, the Ministry of Health subsidy of $6.7M and the BOPRC grant of $1.88M remain available. Both organisations have been kept informed of the recent project work. The BOPRC have indicated a strong preference towards a strategic integrated approach that could attract additional funding.

Reducing uncertainty around the availability and quantum of external funding is, and will remain, a key priority for the Project Team.

7.8 Authority

The Council has the authority to make the decisions requested in this report.

8 Conclusion

The Project Team has evaluated a range of treatment and disposal options for Matatā. In total, 94 sites and 23 options have been reduced to a short list of 7 options through constraints and comparative analyses.

The preferred option provides a reticulated wastewater system for Matatā and addresses an ongoing consent compliance matter for Edgecumbe. Financial modelling using the existing levels of subsidy and grant identifies significant rate increases for property owners throughout the life of the LTP. Rates increases could be reduced (but very unlikely to be offset) through reviewing other workstreams, and limits in the financial strategy could be reviewed as part of the development of the 2017-2027 LTP.

As the viability of the project relies heavily on external funding contributions, it is essential that contributing partners be engaged now to clarify the possibility of enhanced funding parameters. Subject to the outcome of these funding discussions, and those with key stakeholders, the Council would then make a decision on whether to formally consult with the community about the preferred option.

RECOMMENDATIONS:

1. **THAT** the report “Matatā Wastewater Project Update” be received; and
2. **THAT** the Council determines that the integrated WO5 proposal provides the best wastewater solution for Matatā and Edgecumbe and be the preferred solution to progress; and
3. **THAT** the Project Team proceed with targeted stakeholder engagement; and

4. **THAT** the Ministry of Health and the Bay of Plenty Regional Council (BOPRC) be engaged to discuss the affordability aspects of this option and to reduce the level of uncertainty around the security and quantum of external funding streams.

Attached to this report:

- Appendix 1 - AECOM, *Matatā Standalone Wastewater Scheme* (22 September 2015)
- Appendix 2 - MWH, Wastewater Review and Options Study for Edgecumbe and Matatā (22 September 2015)
- Appendix 3 - Summary of Consented Ocean Outfalls
- Appendix 4 – Financial Modelling Assumptions

Report Authorisation

Report writer:	Jeff Farrell	Manager Strategic Projects
First Approval:	Tomasz Krawczyk	General Manager Infrastructure
Final Approval:	Marty Grenfell	Chief Executive