



Local Water Done Well Modelling

Manawatū – Whanganui water CCO

February 2025

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Introduction

In late 2024 Morrison Low provided support and advice to Palmerston North City and Manawatū, Horowhenua and Kāpiti Coast district councils (referred to as the “Group of Four”) relating to Local Water Done Well. As a result of that, Morrison Low was asked to model the Manawatū – Whanganui CCO using the same approach and assumptions. This provided a consistent data set for Palmerston North City Council (PNCC).

This report summarises the information relevant to the Group of Seven CCO (Manawatū – Whanganui CCO). This came directly from the financial modelling produced for the Group of Four to update and review the data collected and analysed in previous studies.

This report sets out the results of that in the following structure:

- The average household charges of the Group of Four council CCO against the Manawatū – Whanganui CCO.
- Corporate information showing capital programmes and debt profile for Manawatū – Whanganui.
- Detailed financial modelling assumptions are outlined in **Appendix One**.
- Comparison of modelling approaches between Morrison Low and the Department of Internal Affairs is set out in **Appendix Two**.

As part of that process Morrison Low engaged with all seven councils to check key inputs to the modelling e.g., capital expenditure, forecasts, debt positions.

The Manawatū – Whanganui CCO

Manawatū – Whanganui CCO includes the following seven councils: Palmerston North City (PNCC) and Horowhenua (HDC), Manawatū (MDC), Whanganui (WDC), Rangitikei, Ruapehu and Tararua (TDC) district councils.

The change of approach when Morrison Low has modelled this group using the same assumptions and approach as used for the Group of Four CCO, has resulted in a changed forecast of household cost over the longer term than was previously advised.

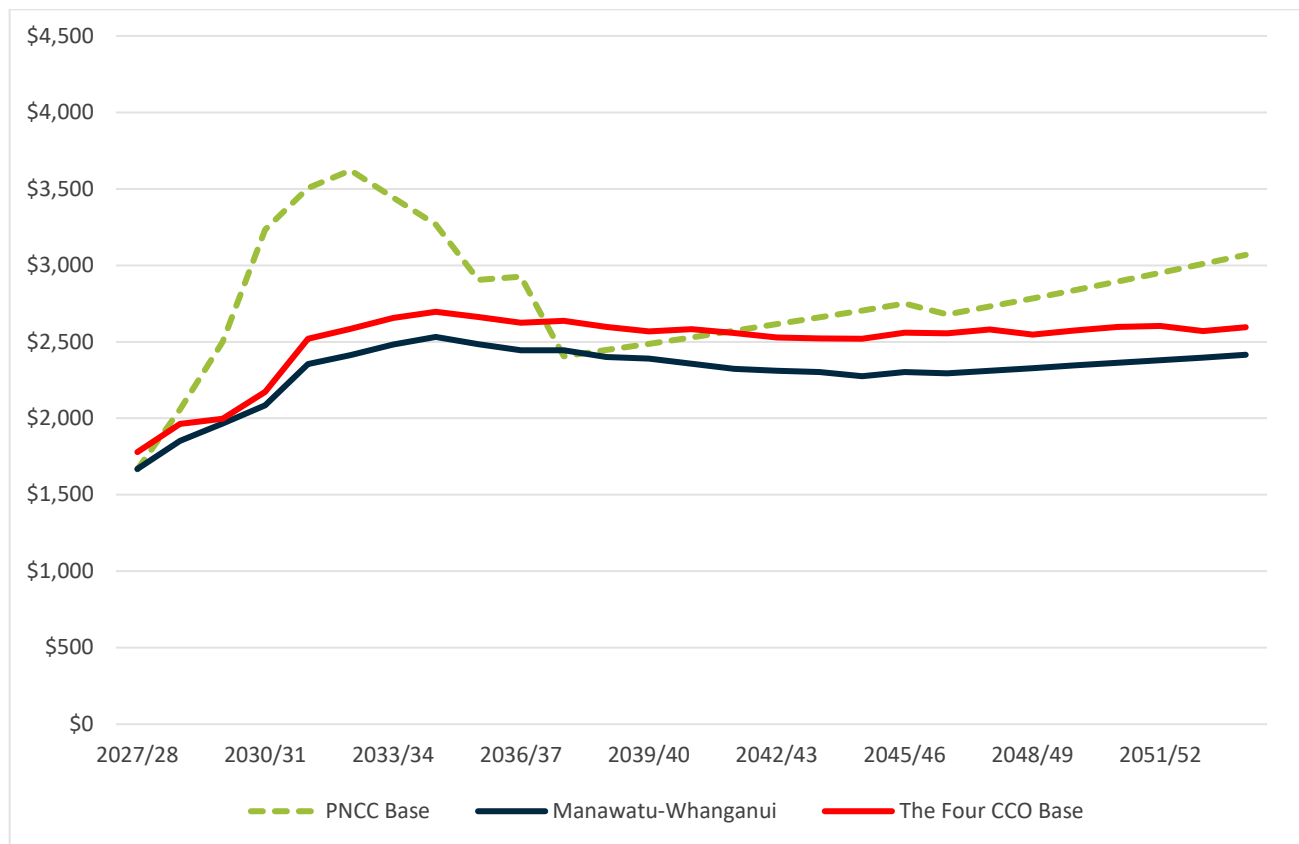
There are many factors creating the different projections including how debt is treated, the investment scenarios used, household costs versus connections but a significant amount of the difference is how the financial modelling has been undertaken.

The chart below in Figure 1 was part of a scenario requested by PNCC and contains their base case and is also compared against the group of four council and the Manawatū – Whanganui CCO.

As a result of this change in approach, household costs are now projected to be lower under the Manawatū-Whanganui CCO than under the four council CCO.

Note that we not currently have sufficient data from Rangitikei, Ruapehu, Tararua and Whanganui to chart their base cases.

Figure 1: Manawātū-Whanganui CCO compared with base case scenarios (household costs)



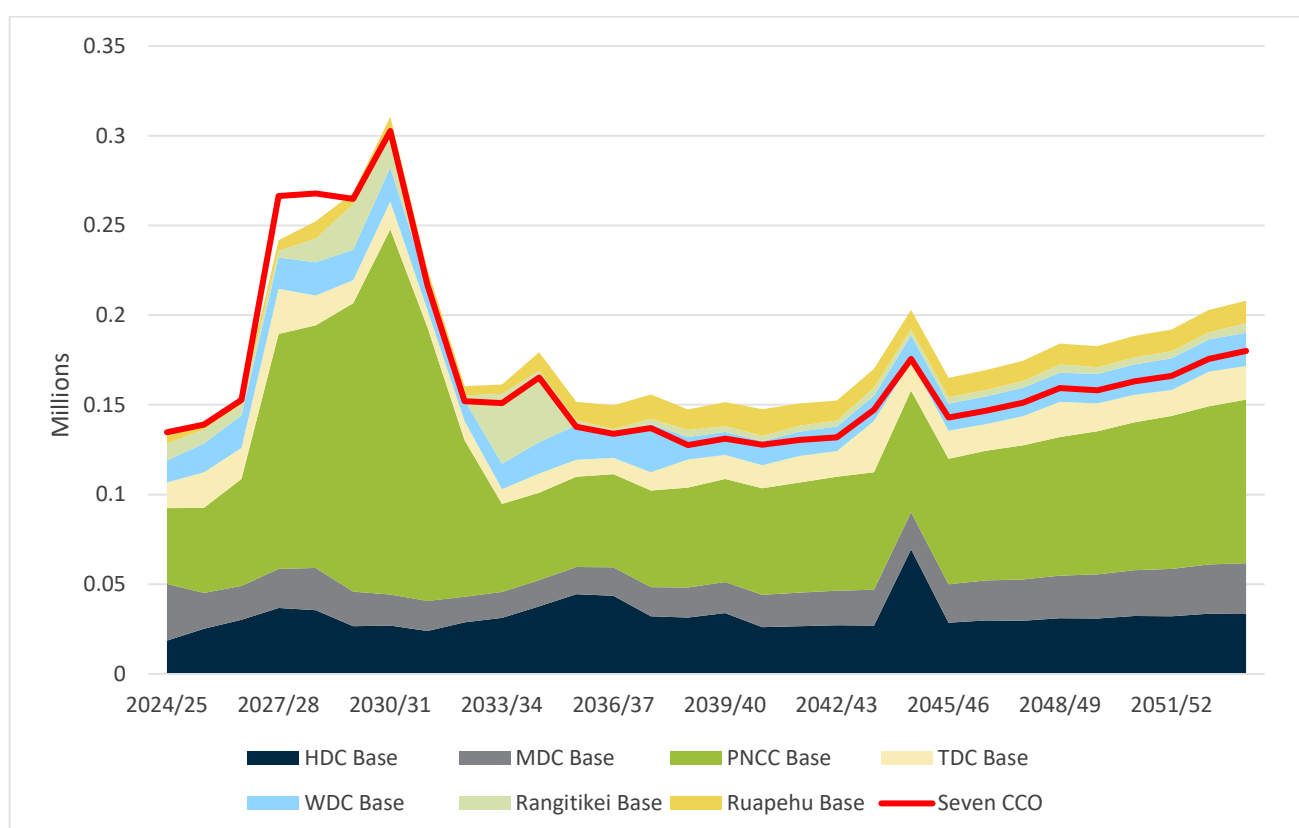
Corporate information

Capital expenditure

The chart below shows each council’s capital expenditure under the base case compared to the Manawatū – Whanganui CCO. In the short term the capital expenditure is higher as a result of initial establishment costs but over time the capital efficiencies reduce the value of the programme.

The large peak of investment in the initial ten years is largely driven by the PNCC Nature Calls project.

Figure 2: Total capex - Manawatū – Whanganui CCO versus council’s base cases



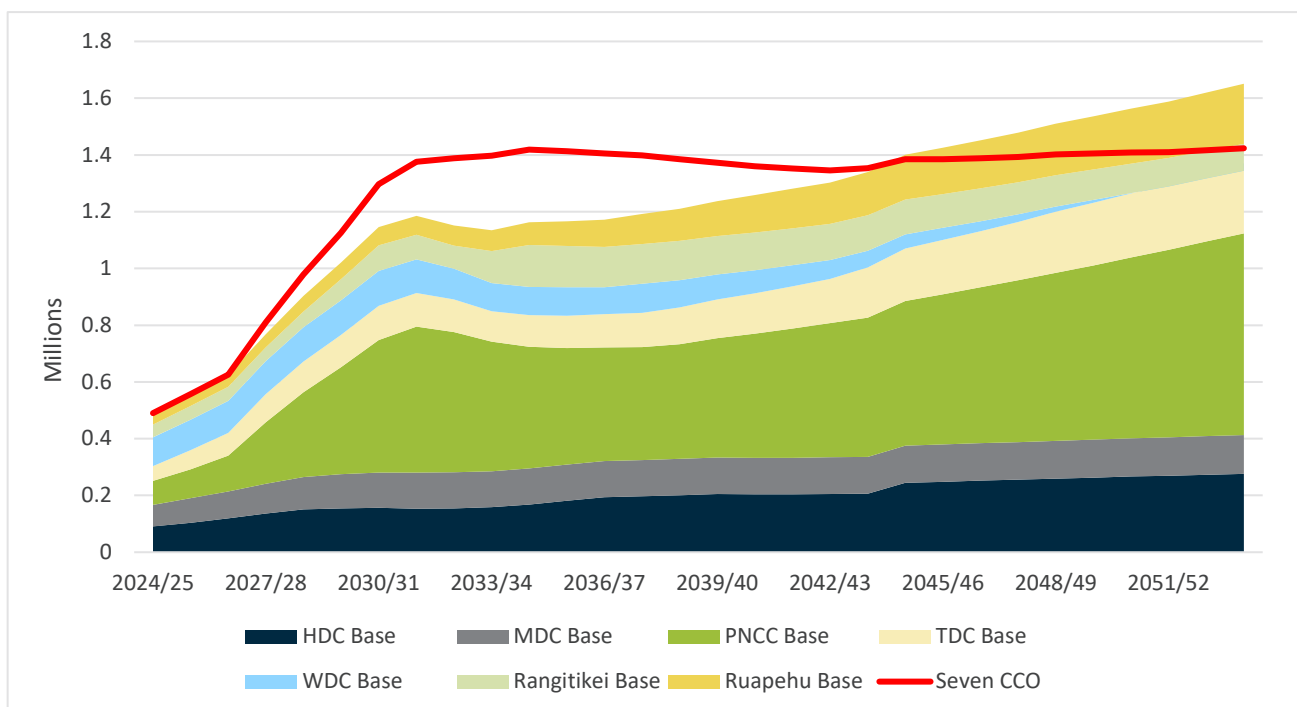
The chart shows some large peaks of expenditure for PNCC and HDC in particular over this period. These represent significant renewal, replacement and/or upgrade projects:

- Horowhenua District Council – Growth related upgrades to the Levin Wastewater Treatment Plant and renewals for the Shannon, Foxton and Waitarere Beach Wastewater Treatment Plants in 2044/2045.
- Palmerston North City Council – The ‘Nature Calls’ project to upgrade the Palmerston North City wastewater treatment system.

Debt

The chart below shows each councils' debt under the base case compared to the Manawatū-Whanganui CCO. In the short term the debt is higher as a result of initial establishment costs and the CCO being more highly leveraged but over time the debt under the CCO is lower as a result of both capital efficiencies and lower borrowing costs.

Figure 3: Total debt - Manawatū – Whanganui CCO versus councils' base cases



Debt is assumed to be used to fund capital projects not otherwise funded by depreciation or development contributions as well as CCO establishment costs.

All models are based on fully funding the depreciation charge and a break-even accounting surplus. Cash flow from operations (effectively depreciation) is applied first to capital expenditure requirements and secondly to debt repayment. No specific rate is levied for debt repayment. If operating cash flows are insufficient to fund capital expenditure, borrowings are increased. Debt is managed against debt to revenue or FFO ratios as relevant

Appendix One: Modelling assumptions

Assumptions applied to 'Base Case' scenarios

In order to enable a like for like comparison between regional delivery options and the existing delivery model, we have made adjustments to financial and capital investment programmes provided by each council as the 'status quo'. These adjustments ensure that differences between regional delivery models are not purely the result of a different approach to managing revenue, debt and expenditure, or differences to underlying assumptions across the individual models.

It is also important to note that this also means that the comparator scenarios presented in our modelling may not mirror an individual councils' current long term plan projections and some changes in household costs may be solely the result of the changes we have made to standardise the models.

We have endeavoured to ensure that our approach aligns with the requirements of a water services delivery plan. This means that some councils may wish to use the comparator case from this modelling as a starting point for a water services delivery plan (WSDP) for in-house delivery. This is however a "best endeavours" approach, and councils may further refine capital programmes before preparing their WSDP.

Where councils are undertaking detailed asset and investment planning work this should then be used to inform their WSDP.

To assist councils in understanding the alignment of our comparator case with their own WSDP or LTP work, we have outlined the key adjustments and changes we have made below.

Operating expenditure

Our modelling of the comparator case scenarios for operating expenditure predominantly relies on each council's own operating budgets, as provided through our information request. Adjustments have been made to:

- Reverse the impact of any internal transfers or overhead activities that occur between water, wastewater and stormwater activities. We have retained overhead allocations from other council activities to/from each of the waters activities.
- Recalculate interest costs based on any amendments made to the capital works programme (refer below) and any additional revenue generated in order to stay within borrowing limits.
- Recalculate interest rates using a common interest rate across all councils. The rate used will be the weighted average interest rate across the councils currently. We have applied an interest rate of 5% in our modelling. Interest is calculated off the previous year's closing balance, meaning the effective interest rate is slightly lower than this when current year movements are considered.
- Recalculate depreciation based on any amendments made to the capital works programme. The depreciation rate applied to the recalculation is based on each council's average depreciation rate. Depreciation rates are set at 1.48% for water supply, 1.62% for wastewater, and 1.32% for stormwater.
- Assets are revalued at 2% per annum and depreciation recalculated based off revalued asset base (including additions).
- Inflation is modelled at 2% per annum for years 11 – 30.

Capital expenditure

Our modelling of the base case scenarios for capital expenditure focuses on ensuring that each council's comparator case is able to meet the requirements of a water services delivery plan, being:

- The requirement to meet all relevant regulatory quality standards for its water services.
- The requirement to meet all drinking water quality standards.
- Supports the territorial authority's housing growth and urban development, as specified in the territorial authority's long-term plan.
- The need to demonstrate financial sustainability through:
 - generating sufficient revenue to ensure long term investment in delivering water services.
 - being financially able to meet all regulatory standards and requirements for the delivery of water services.

All Councils have reviewed the capital programmes and made adjustments from the initial LTP and Infrastructure Strategy programmes.

Renewals

Water Services Delivery Plan templates indicate some of the key measures that DIA expect to be reported in relation to these tests, and therefore what may be expected by the Department. In particular:

- The need to report on combined capital expenditure versus depreciation, indicating a desire from the Department for capex to exceed depreciation. We don't anticipate this being an issue for any councils over the ten year period.
- The need to report on an "asset sustainability index" which compares renewals expenditure with depreciation, and notably, where renewals expenditure is not equal to depreciation, why that approach is appropriate.
- The need to report on an asset consumption ratio, and note why that ratio may deteriorate over time (if it does). This is unlikely to be a problem for councils that are spending more than their depreciation on capital investment each year. This ratio again is intended to ensure their adequacy of a renewals programme.

All Councils have reviewed the renewal programmes and confirmed them as appropriate.

No other changes have been made to renewals programmes in our base case other than changes applied through sensitivity testing.

Upgrades

Councils are also required to demonstrate and assert that their WSDPs contain sufficient investment to meet regulatory requirements and respond to growth.

For all Councils our approach to reviewing this and making revisions to the status quo was to check with each council that:

- Investment is provided for any drinking water treatment plants that are not currently compliant with Drinking water standards. We did not identify any significant missing expenditure through this process.

- Investment is provided for any wastewater treatment plants that have consents expiring during the period. We did not identify any significant missing expenditure through this process.
- Any upgrade projects that have been deferred beyond the 10 year LTP period. Where these are identified, we will confirm whether these should be moved back into the 10 year planning period.
- In the case of KCDC additional upgrades were identified through a capex workshop that also identified additional opex that was added into the modelling.

Growth

For all Councils:

- We sought confirmation that the growth investment proposed in the LTP responds to the WSDP requirements, and for any significant projects to be identified if they are not already identified in AMPs/LTPs.
- We have not included any sensitivity testing on increased/decreased growth rates, however our model does allow for this to be completed if needed. In our model, sensitivity testing of growth assumes planned capex scales proportionally to the change in the number of new properties being connected.
- Scaling is applied to original growth capital expenditure forecasts at the same rate as the uplift or decrease in connections on an annual basis. The cumulative impact of this is that if sensitivity testing results in 20% more properties over 10 years, the total capital expenditure will have been increased by 10%.
- It is recognised that growth projects do not neatly scale in real life. The scaling recognises that there is likely to be some uplift, or advancement of timing, and that, at the least, increased or decreased rates of growth impact the capacity life of infrastructure.

Revenue

Water Services Delivery Plan templates indicate some of the key measures that DIA expect to be reported in relation to these tests, and therefore what may be expected by the Department. In particular:

- A chart demonstrating projected revenue versus projected costs including depreciation, and net operating surplus or loss. We anticipate that DIA are expecting revenue to at least equal total expenditure including depreciation based on the examples provided.
- An operating surplus ratio. DIA guidance notes that “Where this ratio percentage is negative, this represents the percentage increase required for revenues to cover costs”. Costs in this ratio include depreciation.

Based on these questions, and additional commentary within the WSDP templates, we intend to model status quo arrangements to be fully funding depreciation from the 2028 financial year onwards. Councils that are not currently fully funding depreciation will be modelled to move to a fully funded scenario evenly over the remaining years.

In addition, from 2028 and beyond:

- Revenue has been modelled to “break even” before accounting for development contributions, vested assets and grants and subsidies.

- Additional revenue has been calculated to ensure that the council remains in borrowing limits. This revenue line is recovered through water/wastewater/stormwater charges and is calculated to be no more than the amount needed to remain within agreed debt caps.
- The additional debt repayment/control revenue is modelled to ensure that debt caps are not breached over the life of the modelling period, however the additional revenue is modelled over the entire modelling period, meaning revenue is collected in anticipation of debt otherwise exceeding limits. This will impact price paths, where councils may have otherwise deferred increases in revenue to a later year than our modelling. Our modelling smooths the impact of this increase.
- Development contribution revenue has been modelled to scale proportionally with changes in growth capital expenditure. Scaling is completed annually.

Debt and borrowing costs

Revisions to capital works programmes, revenue, and expenditure all impact the amount of debt required by councils to fund their three waters activity. Our modelling recalculates three waters debt under the base case scenarios to ensure comparability with regional delivery models.

To calculate debt, we have:

- Assumed each councils' starting debt position is correct.
- Identified the cash surplus available from operations, development contribution receipts, and capital and operating subsidies.
- Subtracted the cost of capital works from the cash surplus.
- Identified ongoing working capital requirements and any shortfalls in cash balances to meet those requirements.
- Where this value is negative, we have increased borrowings to fund the difference.
- Where this value is positive, we have modelled a debt repayment.

We have not assumed any “regular” debt repayments under a table loan facility. Councils typically borrow through bond issues that are repaid on maturity date. Our modelling effectively assumes that these bonds are renewed if needed. Our modelling also assumes that in any given year there will be sufficient bonds expiring that council will have the opportunity to repay debt if it holds surplus cash.

Assumptions applied to base data

We've also made the following minor additional assumptions to base data provided by Councils. These adjustments impact projections in the “status quo” modelling.

- The percentage of water, wastewater and stormwater revenue received from residential customers is assumed to be consistent with the percentage split across these activities as provided to WICS in their RFI of 2021.
- Where specific projections of the number of connections has not been provided, we've assumed connection growth continues at the rate of growth in rateable units.
- We've assumed the proportion of residential to non-residential customers is consistent with WICS RFI where detailed breakdown of these projections has not been provided.
- In all models, we have assumed that council revenue and debt relating to non-three waters activities is unchanged under all investment scenarios. That is, even where three waters investment, charges,

or debt increase, we have assumed that there is no consequential or offsetting reduction in the corresponding expenditure/charge for non-three waters activities.

- In 30 years modelling, we have relied on capital programmes from infrastructure strategies or long term capital works plans provided to us by participating councils as the initial base. Each Council has reviewed and adjusted those based on changes since those estimates were made or confirmed them as still valid. In the case of HDC the 30 year projections showed a considerable drop off in investment beyond year 10. Years 11 – 20 contain a total investment of 20% less than the first 10, and years 21 -30 represented a further 30% drop. To mitigate this we have modelled HDC annual capital investment over years 11 – 30 based on the mid-point between the original projections (low) and the average annual investment over years 1 – 10 (high).
- Corporate costs, as provided, have been retained in the base case. Some of these costs may represent “stranded overhead” in individual councils, however we note that the amount of cost allocated varies greatly across councils, and assessment of the amount of stranded overhead in each council would not be possible without a detailed assessment of the cost allocation and apportionment approaches used by each council.

CCO assumptions

To create the CCO Options we have modelled transitional and organisational costs based on a ground up approach. The full details of costs included in our model are outlined below.

Operating and capital efficiencies

Efficiencies have been modelled using the efficiency data produced by the Water Industry Commission of Scotland (WICS) for the Department of Internal Affairs (DIA) as a base case, noting the following adjustments:

- The total achievable efficiency identified by WICS were scaled back by 75% and this was compared to our bottom-up estimates of potential efficiencies for multiple council CCOs. These two approaches produced similar outcomes. Using that, Morrison Low then developed a population-based scale for efficiencies using the logarithmic scale of connections approach of WICs, but not based on their estimated efficiencies. This allows for cost effective and efficient estimates for indicative modelling such as that used in this report¹.
 - For the Manawatū – Whanganui CCO: 14 % capital and 14 % operating efficiencies and establishment costs of \$22.7 million
- We’ve assumed that these efficiencies are achievable over a 10 year period, commencing two years after the establishment of the entity.
- Efficiencies are assumed to arise from:
 - Ability to employ specialists that are otherwise contracted out at an individual level
 - Limited opportunities to combine networks
 - Spend to save investment due to increased borrowing capacity and improved asset management focus

¹ These are rounded in the description below

- Bundled procurement and panel arrangements. We have examples of where this approach has resulted in significant reduction of costs
- Decreased competition for resources between councils
- Increased market attractiveness
- Reduction of duplicated systems, processes and roles
- Streamlined investment decision making due to dedicated focus on three waters services
- Efficiencies are less than the rate of inflation. Inflation (2%) is applied to all costs before any efficiencies are applied in the modelling. Efficiencies are applied at a compounding 1.27 capex and 1.34 opex until they reach 14% and 14% respectively.

Borrowing

The Government and the Local Government Funding Agency (LGFA) jointly announced that water entities would be able to borrow up to a 500% debt to revenue ratio. The fine print of that announcement noted that entities will actually be measured based on an FFO to debt ratio, with the intention that lending covenants would be set at such a level that the entity could maintain an “investor grade” credit rating.

Our modelling adopts the Moody’s credit rating approach, with non-financial components being set based on Moody’s assessment of water entities in the United Kingdom, and based on their published guidance.

The result of the credit rating approach is that it is likely that the CCOs considered would be able to maintain an investment grade credit rating with an FFO to debt ratio of 10% or higher. Our modelling assumes a 10% minimum threshold and includes additional modelled revenue, where necessary, to support that.

Sensitivity testing has been undertaken using an 8% ratio as well.

Costs of change

Corporate overhead from each council has been replaced with costs for the CCO, and transition costs have been included as set out in the tables that follow:

- Transitional costs to establish the CCO (assumed to be borne by the CCO).
- Increased compliance costs associated with regulatory reforms (recognising the role and requirements to report to both a service and economic regulator) has been applied to base cases and any options modelled.
- Any change is assumed for modelling purposes to take place on 1 July 2026/7.

Costs have been indexed using BERL inflation rates for water services through 2034, and 2% per annum thereafter.

Appendix Two: Data outputs

Entity	Metric	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Inflated											
Manawatu-Whanganui	consol (ex GST)	#N/A	#N/A	#N/A	\$ 1,669	\$ 1,852	\$ 1,966	\$ 2,086	\$ 2,355	\$ 2,415	\$ 2,482
Deflated											
Manawatu-Whanganui	consl (ex GST)	#N/A	#N/A	#N/A	\$ 1,545	\$ 1,673	\$ 1,736	\$ 1,800	\$ 1,989	\$ 1,997	\$ 2,011

Entity	Metric	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44
Inflated											
Manawatu-Whanganui	consol (ex GST)	\$ 2,510	\$ 2,449	\$ 2,410	\$ 2,410	\$ 2,367	\$ 2,356	\$ 2,324	\$ 2,291	\$ 2,281	\$ 2,271
Deflated											
Manawatu-Whanganui	consl (ex GST)	\$ 1,993	\$ 1,907	\$ 1,840	\$ 1,804	\$ 1,737	\$ 1,695	\$ 1,639	\$ 1,584	\$ 1,546	\$ 1,510

Entity	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	2052/53	2053/54
Inflated										
Manawatu-Whanganui	\$ 2,245	\$ 2,273	\$ 2,265	\$ 2,282	\$ 2,300	\$ 2,318	\$ 2,336	\$ 2,353	\$ 2,371	\$ 2,391
Deflated										
Manawatu-Whanganui	\$ 1,463	\$ 1,452	\$ 1,419	\$ 1,401	\$ 1,384	\$ 1,368	\$ 1,351	\$ 1,335	\$ 1,319	\$ 1,304

Appendix Three: Comparison of modelling approach with DIA

Comparison of the approach used between Morrison Low and Department of Internal Affairs.

The following table compares key aspects of the modelling undertaken by Morrison Low and the Department of Internal Affairs for the four councils. It is intended to be an objective comparison and not a critique. Both provide useful information for the Councils but the extent of the differences in what they are intended to show, the approach used and what they represent means the results are not directly comparable but nor should they be read as being inconsistent with each other.

Aspect of Model	Morrison Low	Department of Internal Affairs	Impact of Difference	Materiality
Timeframe	30 Years	10 Years	ML model uses 30 years as there is often investment beyond the LTP period that should be considered.	Minor - Moderate
Base Data	LTPs as adjusted by each Council & infrastructure strategies	Council LTPs	ML model includes additional capital investment for all Councils over both the initial 10 year period and years 11 – 30.	Major - Significant
Approach to debt in the base case IBU option	250% of total Council debt/revenue	FFO ring fenced for three waters – variable	As most of the borrowing for Councils is in three waters, ring fencing the debt like this will increase the revenue required to support existing and projected debt and therefore costs to consumers. This approach makes the IBU option more comparable to the individual Council CCO. The current advice from LGFA is that under the IBU option Councils will continue to be able to borrow as a consolidated Council using current borrowing covenants based on total council debt/revenue.	Significant

Aspect of Model	Morrison Low	Department of Internal Affairs	Impact of Difference	Materiality
Approach to debt in the CCO Options	FFO ring fenced for three waters – 10%	FFO ring fenced for three waters - variable	Same approach is used, except to note that DIA adjust the FFO ration depending on the size of the CCO. ML produces sensitivity analysis to show this impact.	Minor
Basis of projected costs/charges	Average three waters household charge. (inflated, excl GST)	Cost per connection (inflated, excl GST)	ML figure excludes both commercial revenue and commercial customers to focus on impact on households. Including both commercial revenue and customers is likely to show a higher cost as there is a small number of commercial customers who typically pay a much higher charge than a residential property.	Minor
What is the basis of the Regional CCO	All three waters services of all Councils combined together into consolidated programme, standardised and adjusted for costs and benefits of change.	Each council three waters services as per the base case IBU options recalculated using a lower FFO ratio achievable with a regional CCO.	Means that the projections are very different and are intended to be different. DIA projections are intended to show the financing efficiency available under a CCO, which they do. ML projections are intended to show the estimated impact on customers of a change in delivery model and all that that entails – costs and benefits.	Significant
Harmonisation of charges of regional CCO	Base case harmonises on Day 1 with sensitivity analysis to shows impact of harmonising over 3 year period starting in Year 3 and year 7 respectively.	None	Means that the projections are very different and are intended to be different. DIA projections are intended to show the financing efficiency available under a CCO, which they do. ML projections show the impact of harmonising charges should the CCO (and the Council owners) choose to do that. Noting that there is no requirement to, but historically within Councils and following mergers the trend is for that to occur over time.	Significant

Aspect of Model	Morrison Low	Department of Internal Affairs	Impact of Difference	Materiality
Costs of change	Additional costs are estimated for transition and for operation of new CCOs including levies for regulators.	Not included	ML model does include costs (\$22.7M for establishment) and additional ongoing costs associated with CCO. These costs are however minor in comparison to the capital investment programmes and associated debt, and the impact they have on cost projections.	Minor – Moderate (has more impact for smaller CCOs and in particular individual council CCOs)
Efficiencies/Benefits	Efficiencies and cost savings are estimated for CCOs and introduced progressively.	Not included	ML model does include cost savings from the commercial model and from regionalisation of the service. However, these costs are modest in comparison to the capital investment programmes and associated debt, and the impact they have on cost projections.	Minor
Reconciliation of different approaches and assumptions in each Council e.g. depreciation, renewals, opex	Standardised in all options	Assumptions remain as set out in Council LTPs	ML standardises these so that any differences between the base case IBU option and the CCO are not the result of different assumptions about how the CCO would operate.	Moderate
Nature calls	Costs includes as per LTP, funded in each case by debt and costs met by customers of the Council or CCO.	Costs includes as per LTP, funded by IFF	Means the costs of servicing the debt for Nature Calls are show in the ML model (both for PNCC ratepayers in the base case IBU option and all households in the CCOs) but are not shown in the DIA model.	Significant
Changes in assumptions	Sensitivity testing for different <ul style="list-style-type: none"> • Interest rates • FFO ratio • Investment scenarios • Efficiencies 	Assumptions remain as set out in Council LTPs	The DIA model is not intended to use the LTP base data and apply as few assumptions as possible whereas ML is approach intended to highlight which assumptions have the greatest impact the projected outcomes and therefore areas of risk.	Minor