Attachment E

Impacts assessment

Queenstown Lakes District Council

May 2021

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About this report

This report was written by Morrison Low and commissioned by the Otago Southland Three Waters Office on behalf of Otago and Southland councils. Each territorial authority in the area has received a similar report.

The report is the output of a wider review, the overall purpose of which is to provide Otago and Southland councils and their communities with the information they need to understand the impact of three waters reform.

The report assesses the impact of three potential future scenarios for three waters service delivery in Queenstown Lakes District. It also provides a recommended way forward. The recommendation is in the opinion of Morrison Low, and is based on its evaluation of the evidence and wider experience of the sector and the reform process.

Why undertake a review?

The New Zealand Government is reforming how drinking water, wastewater and stormwater (three waters) services are delivered across New Zealand. In a Cabinet paper released on 20 November 2018, the Government indicated that alongside regulatory changes there may be major structural reform of the water sector. It described a system facing significant issues where:

*"**the scale of the challenge indicates that the status quo is not sustainable in the long term**".*

Among the key issues identified were weak regulation, capability challenges (particularly for smaller councils) and funding and financing issues for upgrading infrastructure.

Since then the reform has continue at pace. A new regulatory authority to oversee, administer and enforce a revised three waters regulatory system, Taumata Arowai, has been created. The Water Services Bill has been introduced to the House and will reform the regulation of New Zealand's three waters networks. Over the last 12 months the government has further revitalised the three waters reform programme engaging with the sector on a timetable for change, developing a preferred delivery model and announcing funding for councils that enter into structural change.

It is in that context the councils of Otago and Southland commissioned a series of reports seeking to understand the impact of three waters reform on their communities and their organisations. This report provides each council with that information and in doing so draws upon aspects of previous reports provided to the councils by Morrison Low.

Change is inevitable

Significant changes will flow from the three waters reform that has already taken place and will take place regardless of whether Councils opt in or opt out of the proposed water entities. Legislative, regulatory and community expectations of standards are changing. There is therefore no status quo option. Three waters service delivery will change and every council in New Zealand must change in some way. The only means by which the future standards can be complied with is investment.

Investment to meet changing standards will be required in infrastructure, people, process and systems

The question for Queenstown Lakes District Council (QLDC) is whether that challenge is best met through the current service delivery model or through a dedicated three waters entity.

The reality is that the case for change is made more complex in that each council must make its own decision about whether to opt out of the government process to create regional water entities. Each council must make that decision based on what is best for its community. However, it is evident that the national and regional context still remains relevant to the local decision.

What did the review consider?

As a result of increasing clarity from the government the review ultimately focussed on two options. The current model and a regional water entity.

As part of the original scope for the Otago and Southland three waters collaboration efforts, the merits of a regional water entity was assessed. The case for an Otago and Southland entity was not compelling for all councils involved. As the review progressed it became apparent that the Governments preferred option is for an entity covering either the Ngāi Tahu Takiwā, or possibly the entire South Island. Further, as part of evolving discussions via LGNZ 'Zone' meetings across neighbouring regions, the Ngāi Tahu Takiwā option was identified as a preferred option should there be an opportunity to influence Government's proposal. As such, throughout this report, where possible consideration of the impacts of this option has been integrated.

The differences in delivery model between a three waters entity (irrespective of its size) and the status quo are outlined below:

Figure 1 Comparison of different delivery models

Status quo

- **Each council retains three waters:**
  - service delivery
  - asset ownership
  - resourcing (employees, consultants and contractors).
- *The approach would see no change to service delivery arrangements but require significant additional resource and investment in infrastructure to meet changes to three waters regulations.*

Three waters entity

- **The entity would:**
  - own the three waters assets.
  - be responsible for investment strategies and plans required for new infrastructure and meeting standards.
  - consolidate operational and infrastructure costs to develop economies of scale.
  - employ its own staff and provide its own support services.
  - deal directly with the public for three waters matters.
  - have regional strategic responsibility for network management and asset management strategies and deliver all capital and operational works for the region.
  - recover costs directly from each customer.
  - be overseen by a board of directors.
- *The Councils would collectively have an oversight role alongside Māori including appointment of Directors (through a sub-committee) and through shared strategic infrastructure planning*

How was the review carried out?

The eight territorial authorities of Otago and Southland (the Council's) jointly commissioned a review of three waters service delivery in December 2020. The review was in response to the government three waters reform programme and in commissioning the review, the Council's acknowledged the existing reform programme:

> *"Both central and local government acknowledge that there are broader challenges facing the delivery of water services and infrastructure, and the communities that fund and rely on these services. There has been regulatory failure, underinvestment in three waters infrastructure in parts of the country, and persistent affordability challenges, and additional investment is required to increase public confidence in the safety of drinking water and to improve freshwater outcomes [1]."*

Ultimately the purpose of the review was to provide the councils and their communities with the information they need to understand the impact of three waters reform. Over the course of the review the nature, direction and timeframe of reform became increasingly clear.

[1] Excerpt from Otago Southland three waters office RFP for three waters service delivery review

A series of workshops were held by DIA during March 2021 which provided some new information regarding the Government's proposed entity design and structure. The draft governance model for regional water entities includes input from constituent councils and iwi representatives within a Governance Representative Group. This group is responsible for appointing an independent selection panel (who are in turn responsible for appointing a board of directors), as well as for the development of strategic and performance expectations that are used as guiding documents for the entity.

While no official boundaries for an entity have been formally proposed, there have been suggestions that either a single three waters entity covering the entire South Island, or an entity covering the Ngāi Tahu Takiwā (with Nelson, Marlborough and Tasman being part of the lower North Island) is likely.

The review was structured with multiple concurrent workstreams:

- Work Stream 1 - Network and Service Delivery Analysis
- Work Stream 2 - Financial Assessment
- Work Stream 3 – People and Capability Assessment
- Work Stream 4 - Options Development and Evaluation
- Work Stream 5 - Shortlist Options Impact Assessment for each of the Member Participants

As the nature of the three waters reform became clearer some amendments were made to the process and scope. For example, there was little point progressing the "options development" work stream when the options were significantly reduced with the evolution of the government option. As the work and programme of reforms progressed it became evident for the Otago and Southland three waters collaboration that the options were essentially limited to opting in or opting out. Whilst opting out has the potential to involve a number of variants, including enhanced status quo, or an alternative unfunded entity design, ultimately the decision for each Council remains whether or not to opt in.

- Workstreams 1 – 3 were reported in the Regional Situational Analysis dated February 2021 and the Current State dated March 2021.
- Workstream 4 and 5 are set out in this report.

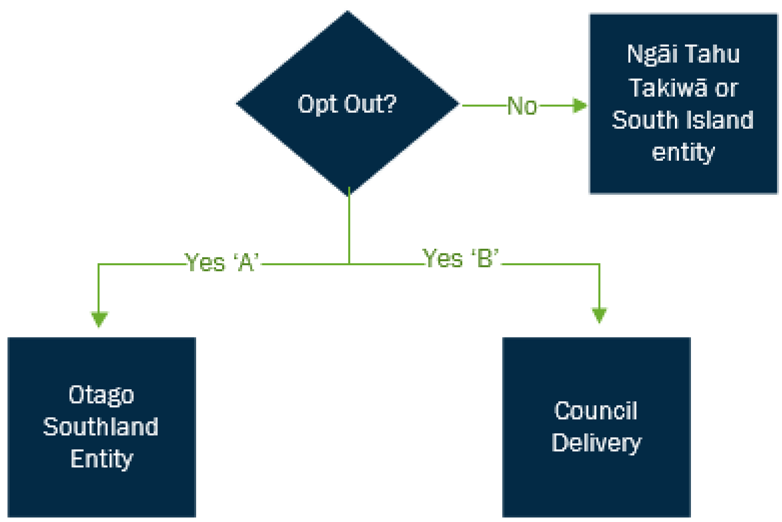
The decision to be made

In late 2021 councils are expected to be asked to either opt out of the three waters reform programme or by deciding not to opt out, opt in to the reform process. At this stage, we anticipate that by not opting out a council will be agreeing to transfer the ownership of its three waters assets, and the consequential transfer of its service delivery responsibilities, human resources, debt, and revenue relating to the three waters in 2023.

While the boundary maps for the proposed three waters entities have not yet been formally publicised, it is likely that as part of that decision process the councils in the Otago and Southland regions will be presented with an entity that covers either the entire South Island, or the Ngāi Tahu Takiwā.

The choices that are likely to be faced by councils in Otago and Southland are outlined in the below chart.

Figure 2 Council's decision point



Analysis within this report is predominantly focussed on the three option variants identified in the diagram above.

Three waters at Queenstown Lakes District Council

To usefully understand how the different options regarding opting into, or out of, the proposed reform programme may impact Queenstown Lakes District Council, it is necessary to first understand the existing and emerging challenges and opportunities for the delivery of three waters in the district.

Queenstown Lakes District Council manages the delivery of its three waters services through a Property and Infrastructure group that looks after all assets. There is a small three waters operations team within the Infrastructure Operations team. The Engineering Services and Capital Delivery teams are shared with other Council assets.

QLDC's levels of compliance and levels of service for wastewater are good when compared to other councils in the Otago-Southland region. A high proportion of wastewater receiving tertiary treatment and 100% of wastewater is being discharged to land.

However, QLDC has 11 water treatment plants, which all feature a low level of treatment. 94% of the district's water is treated only with simple disinfection, with the remaining water treated with filtration and simple disinfection. As a consequence, none of the treatment plants in QLDC meet the protozoal requirements of the Drinking Water Standards.

The required future investment for three waters services in QLDC will see three waters debt increase to $589 million by 2031, and total Council debt rising to $684 million. Council's debt to revenue ration rises to 190% by 2027 but remains well below the LGFA threshold. Council is therefore able to debt fund the required level of investment but at that level three waters will start to impact the extent to which other activities and services can use debt.

The investment requires an increase in the capital delivery programme of 290% to an average of $110 million per annum through to 2031. This will be a significant challenge.

Our forecasts anticipated that the increased investment requirements, and associated impact on annual operating expenditure may result in three waters charges being as high as $1,952 (uninflated) by 2031. Despite being an almost 244% increase on current charges, these are likely to be among the lowest three waters charges in the Otago and Southland region.

Comparing the options

A comparison of the benefits, risks, challenges, and opportunities for three waters service delivery for Queenstown Lakes District Council under each of the proposed options are presented in the table below.

The table highlights differences between each of the options around:

- Governance
- Compliance and levels of service
- Infrastructure investment
- Financial considerations
- Capability and capacity
- Risks of councils opting out
- Challenges with the transition process

	Council delivery model	Otago Southland	Ngāi Tahu Takiwā or South Island entity
Governance	**Governance of three waters generally** Governance of three waters in Queenstown is provided by elected members through the Planning and Strategy, and Infrastructure committees and in the case of the Wānaka ward, through the Wānaka Community Board. **Embedding of Te Tiriti o Waitangi and Te Ao Māori** Governance of three waters service delivery at Queenstown Lakes District Council currently does not involve any formal participation from Iwi or local Rūnanga. **Local representation** Water services are currently provided through a model with elected council representative and elected community boards. Residents of Queenstown Lakes can approach Council about any issues regarding the levels of service that they receive.	**Governance of three waters generally** Governance of three waters would be provided by a skills and merit-based board of directors who have a sole focus on the delivery of three waters services. **Embedding of Te Tiriti o Waitangi and Te Ao Māori** The model provides the opportunity to deliver on treaty principles and co-governance with Māori. The development of a co-governance model will require Councils and Māori to participate in what may be a resource intensive process and this needs to be supported by external funding. **Local representation** A potential loss of community influence over priorities and service levels by removing governance from the democratically elected Council into a board of professional directors. The relationship between the water 'customers' and the service provider as an Otago Southland water entity would essentially be similar to an electricity company.	**Governance of three waters generally** Governance of three waters would be provided by a skills and merit-based board of directors who have a sole focus on the delivery of three waters services. **Embedding of Te Tiriti o Waitangi and Te Ao Māori** Alignment of the entity with the Ngāi Tahu Takiwā provides a greater ability to embed Te Ao Māori within the governance of three waters services. The costs to develop a fit for purpose co-governance model are unlikely to be significantly higher with a larger entity. **Local representation** This issue will likely be magnified if the entity was responsible for the entire Ngāi Tahu Takiwā, as QLDC would be a smaller part of a much larger entity. Again, if the entity was responsible for the entire Ngāi Tahu Takiwā this perception of a lost connection and of lost community assets would likely be greater.

	Council delivery model	Otago Southland	Ngāi Tahu Takiwā or South Island entity
Compliance and Levels of service	**Regulatory compliance** QLDC's current levels of service for wastewater are typically good; with the majority of treated wastewater receiving tertiary level treatment and being discharged to land. However, none of QLDC's drinking water treatment plants currently meet the parasitic protozoa requirements of the Drinking Water Standards. Regulatory standards will increase in the near future, and in order to meet these standards in the future QLDC will need to make significant investments in its three waters assets. **Private schemes** QLDC is largely urban Council but has a number of disconnected and remote settlements that are not connected to a reticulated council drinking water network, and accordingly it may have a high level of risk of private supplies. Council is currently the supplier of last resort under the Water Services Bill. This means that Council may be obligated to ensure continued water supply if schemes fail. **Rural water schemes** We are not aware of any rural water schemes in QLDC.	**Regulatory compliance** A regional water entity is able to provide improved asset management, improved management of risk and will be better placed to meet any increased compliance requirements or increased environmental standards than the Councils can individually. It will allow for consistency between the levels of service provided to residents of neighbouring districts. **Private schemes** The transfer of responsibility for three waters services entity from Council reduces the future liability for and costs of addressing the private supplier risk. These risks transfer to the entire region rather than being concentrated on just QLDC. **Rural water schemes** There is limited guidance about whether the government is proposing to transfer ownership of private schemes to new entities or not, however from a risk perspective we would suggest that councils seek to also transfer such schemes. A new water entity will need to understand the nuances of providing water to such schemes however, including differences in charging regimes and potential price differentiation.	**Regulatory compliance** A larger entity covering all, or most, of the South Island will allow for a greater degree of consistency of levels of service between districts. **Private schemes** The transfer of responsibility for three waters services entity from Council reduces the future liability for and costs of addressing the private supplier risk. These risks transfer to the entire region rather than being concentrated on just QLDC. **Rural water schemes** There would be no substantial difference in the treatment of rural water schemes between a Ngāi Tahu Takiwā sized entity, a South Island entity, or indeed an Otago-Southland entity. The incidence of rural water schemes in the rest of the South Island is high enough that the schemes will require a similar level of attention in any entity model.

	Council delivery model	Otago Southland	Ngāi Tahu Takiwā or South Island entity
Infrastructure investment	**Scale** We have projected that QLDC will need to invest approximately $1.1 billion on three waters infrastructure over the next 10 years. **Delivery of capital works** QLDC delivered 51% of its capital works program in 2020. The forecast capital expenditure over the next 10 years for QLDC would require annual capital works delivery that is almost three times the amount it was able to deliver in 2020. Capital works delivery may be harder if QLDC is competing with a large water entity for contractors. **Renewals** QLDC's planned investment in the renewal of its network is low when compared to annual depreciation. However, QLDC's network is relatively young with many assets not yet at the end of their useful lives. **Growth** Growth is a significant driver of investment in QLDC with plans to add over 9,000 new connections (an increase of 38%) in the next ten years. The level of growth in QLDC is such that it is a topic of national interest, and is the primary driver of investment, and a primary focus of general council efforts, within the Queenstown Lakes District.	**Scale** Between $2.3 – 4.7 billion needs to be invested in three waters infrastructure in Otago and Southland over the next 10 years. **Delivery of capital works** Will still be challenging with the regions needing to increase capital delivery by over 130% compared to the amount delivered in 2020. However, an entity may have an improved ability to coordinate a long-term sustainable program of works which may enable the contractor market to confidently scale up its resources. **Renewals** Planned renewals investment across Otago and Southland is substantially lower than our estimates indicate it should be based on age alone. However, differing age profiles across the two regions mean that there may be opportunities to smooth the renewals programme better at a regional level. **Growth** There will be a need to ensure that the foundation documents and governance structures retain an appropriate balance between the individual priorities of each council with regional priorities including planning and supporting growth.	**Scale** Between $8 – 9 billion needs to be invested in three waters infrastructure in the Ngāi Tahu Takiwā. **Delivery of capital works** Delivery is still likely to be challenging until such time as the labour market is able to respond. Would have an enhanced ability to send strong market signals and long term, significant capital works programs that would provide contractors with sufficient certainty of work that they are able to scale up appropriately. **Renewals** Planned renewals investment across the Ngāi Tahu Takiwā is about equal to our estimates based on age, however there are shortfalls and surpluses at district level. A Ngāi Tahu Takiwā sized entity would have a large enough renewals budget to address the needs of each district. **Growth** The challenges of coordinating and managing competing growth and investment priorities across a larger number of councils may be increased. However, the entity will also have increased capacity to be able to address these issues and challenges.

	Council delivery model	Otago Southland	Ngāi Tahu Takiwā or South Island entity
Financial assessment	**Debt and borrowing capacity** QLDC is forecast to have three waters debt exceeding $589 million and total Council debt exceeding $684 million by 2031. QLDC's additional borrowing capacity in 2024 (the estimated year of transition) would be $334 million. **Estimated household three waters charge** QLDC has an estimated household three waters charge in 2031 of $1,952 (or a 244% increase). Water and wastewater charges would equate to approximately 1.6% of median household income in 2031. **Financial resilience** The forecast investment required in three waters across in all Councils in Otago and Southland has grown significantly since the 2018 LTPs and with the increasing focus brought by three waters reform there is considerable risk that these costs will continue to change and increase further.	**Debt and borrowing capacity** Without three waters debt in 2024 (the presumed year of transition) Councils total borrowing would reduce from $439 million to $15.6 million and its additional borrowing capacity would increase to $514 million. A three waters entity for Otago and Southland would have over $1.9 billion of total debt and a debt to revenue ratio of 465% (which exceeds the limits for a Baa/Ba credit rating). This would result in a credit downgrade leading to increased costs of borrowing. **Estimated household three waters charge** A three waters entity would have an estimated three waters charge of $2,001 in 2031. Water and wastewater charges would equate to approximately 1.6% of median household income in 2031.C **Financial resilience** This option addresses the very real risk that the scale of investment required to meet new standards and community expectations is greater than forecast	**Debt and borrowing capacity** Initial high-level estimates indicate a three waters entity covering the Ngāi Tahu Takiwā would have debt between $6 – 6.5 billion and would exceed the debt to revenue lending covenants that are required for a Baa/Ba credit rating. This would result in a credit downgrade leading to increased costs of borrowing. **Estimated household three waters charge** A three waters entity covering the Ngāi Tahu Takiwā would likely have an average three waters household charge between $1,700 and $1,900. **Financial resilience** A larger entity is better able to address the risk of future investment requirements being underestimated as it distributes costs over a larger customer base.
Capability and capacity	Queenstown Lakes District Council currently has 2 vacancies in its three waters group (10% of three waters roles).	13% of all three waters roles are currently vacant in the Otago and Southland regions.	Increasing size and scale creates greater opportunities for staff and improves its capacity to train and develop expertise. Larger entities are also further insulated from ebbs and flows in the size of the workforce.

	Council delivery model	Otago Southland	Ngāi Tahu Takiwā or South Island entity
	There is a shortage of specialist resources for three waters across New Zealand and internationally. As water reforms occur across New Zealand there is likely to be increased competition to attract and retain the specialist skills in water that are necessary to enhance delivery.	A three waters entity would have sufficient scale to create strategic capacity and capability across the region and support the areas where that is currently lacking. Scale, strategic capacity and capability gives a level of expertise and resilience in three waters that can be applied regionally, benefitting all ratepayers of the region rather than only some.	
Risk other councils opt out	The reverse of this problem applies in this situation. If QLDC "opts out", while other councils "opt in" to reform, QLDC is likely to be competing with a large water entity for contractors and internal resources and capability. A number of the challenges highlighted with the current and emerging service delivery will be exacerbated.	Without the critical mass of all councils there is a danger that the benefits of change will be substantially reduced or lost. That is particularly the case if the population centres of Dunedin, Invercargill and Queenstown were not involved. The risk here is significant as Councils must opt out of reform, and then subsequently engage in and commit to a voluntary reform process.	Would be more resilient to some councils opting out of the process. However, the absence of the population centres of Christchurch and Dunedin would still create some challenges.
Impact of transition	There would be no transition, however Council may lose resources to new water entities or transitional bodies in areas where councils have opted into the reform process.	Uncertainty created by the potential change can and will affect existing staff. Attraction, recruitment and retention of key staff is a particular concern for the councils. As this option entails opting out of reform, it is likely that any transition costs (which are likely to be significant) will need to be met by councils.	The issues regarding transition do not differ for a larger water entity. Enforcement of standards during the transition period will need to be carefully managed by Taumata Arowai if councils have a reduced workforce due to staff accepting roles with transition entities. It is anticipated that any costs of transition would be funded by the Government.

A Council without three waters

The removal of three waters from Council itself would clearly create some disruption to Council's current operating structure, which in some cases may be significant. Some of the key issues that may arise from the removal of three waters services from Council are outlined below:

- There would be a reduction in Council's resources of around 23 FTE including those that are dedicated to water but a number of those whose role is substantially related to three waters or supporting three waters. Due to the size and breadth of the three waters service there are likely to be minor impacts on staff involved indirectly in the delivery of the service.
- QLDC will in our view need to review its structure and service delivery model to most effectively be a local government organisation providing a wide range of services and activities to its communities. The full extent of the impact on Council will be more easily identified once the outcomes of the Resource Management Act and Future of Local Government reviews are complete.
- The formation of large well-resourced water entities across New Zealand may exacerbate the resourcing challenge for Council. While most engineers involved in three waters will transfer to a new entity, councils will still require skilled engineers to deliver roading, waste, and other major capital works. In many cases, engineers in councils are involved in many different projects and activities and if councils are no longer responsible for three waters, these staff may no longer find their roles are appealing or challenging.
- QLDC's three waters debt would disappear leaving the Council better able to borrow for investment into other activities or services.
- Total revenue from Council in 2024 without three waters revenue would reduce from $276 million to $189 million but again, due to growth QLDC would collect as much revenue by 2024 without three waters as it will in 2021.
- Stranded overheads for QLDC in 2020 are estimated to be around $71per property. This is almost 5% of current three waters rates so while it will be a cost for QLDC ratepayers, due to the rate of growth in QLDC and within Council itself it is likely that these stranded overheads would be re-absorbed over time.

Recommendation

Due to increasing standards and requirements a change to the way three waters services are delivered is inevitable. There are good strategic reasons for a change in the service delivery model.

While for QLDC there is no clear cut answer, in our view there are only two viable options:

- Opt in to reform; or
- Opt out of reform entirely and continue with a Council service delivery model.

The option to opt out of reform, but to pursue voluntary change into an Otago Southland three waters entity would seem ambitious and, in our view, has a very low chance of success.

That option requires a coordinated and consistent approach across all of the councils in Otago and Southland. All eight councils in the two regions must opt out of the Government's reform process but have a desire to aggregate three waters services at a more local level. They must then go through a detailed entity design process, fund the transition and entity design process themselves, consult with their communities on the same proposals and ultimately agree. There are limited examples of this being successful in New Zealand and none where asset owning has been part of the model.

Key considerations for the remaining two options are:

The case for opting in

- The delivery of three waters services will benefit from increased capability and capacity of three waters staff and increased organisational resilience to changes in staffing levels. However, QLDC may experience increased challenges to recruit engineering staff and asset managers into its remaining roles, due to increased competition with large three waters entities.
- A three waters entity would have a skills based board with a single focus on three waters issues and would have an enhanced ability to embed the principles of Te Tiriti o Waitangi and Te Ao Māori within its governance framework. However, there may be a loss of local representation, which would be worse with an entity covering the South Island or the Ngāi Tahu Takiwā.
- A three waters entity would have greater financial and technical resources to be able to address compliance issues and make the investment required to comply with new environmental, health, and cultural standards. A three waters entity would also assume most of the risk associated with rural water supplies and private water schemes.
- Delivering the required level of future investment in infrastructure will be a significant challenge for Council as it will require an increase in capital works delivery of over 290% and for that to be sustained through to 2031. However, delivery of the full capital works programme at an Otago Southland level, or even with a larger entity would also appear challenging.
- If QLDC opts out while other councils opt in, the ability to attract staff or deliver its capital works programme will be further diminished as it will be a small organisation competing with much larger entities. This may also impact on the cost of completing work in QLDC.

The case for opting out

- A three waters entity would not have the borrowing capacity to be able to deliver the full capital works programme for the areas that it covers without suffering a credit rating downgrade and higher costs of borrowing. In contrast, QLDC is currently projected to have sufficient financial headroom to be able to fund its forecast capital works programme.
- Average household charges for three waters services are lower under a Ngāi Tahu Takiwā water entity than council delivery. However when stranded costs are taken into account QLDC ratepayers are likely to face similar household charges (between 9% cheaper to 1% more expensive) under an entity covering the Ngāi Tahu Takiwā as they are under a council service delivery model. On there own, these savings may not be sufficient to make a compelling case to change.

- Growth is critical for Queenstown and any failure to install the growth infrastructure by the planned date may impact the development of new growth cells or have broader financial ramifications for the developer, the community and Council. The challenges of coordinating this investment may be larger when dealing with an entity covering a larger area such as the entire Ngāi Tahu Takiwā. Although we note that the addition of other high growth councils into a larger entity may increase the entity's capability to address the specific issues relating to growth.

There is no burning platform, at the local level, for QLDC to change. However, Council is making its opt out/opt in decision within the context that every other council in New Zealand is also making that decision. In many cases there is a strong and very strong case for change. The ratepayers of six of the eight councils in Otago Southland would, in our view, have lower water charges under a regional water entity, but this reduces to five when stranded costs are taken into account. The ratepayers of all eight would be better off in a Ngāi Tahu Takiwā.

There are also many good strategic benefits of a regional water entity and many risks Council would be faced with if it opted out and continued as a three waters service provider. These risks would be significantly increased if the other councils in Otago Southland and the South Island more generally opt into the reforms.

On balance, therefore, our recommendation is for Queenstown Lakes District Council to opt into the reform process.

Introduction

Background

The New Zealand Government is reforming how drinking water, wastewater, and stormwater (three waters) services are delivered across New Zealand. The reforms began in response to the issues identified following the Havelock North drinking water contamination in 2016 and culminated in a Cabinet paper released on 20 November 2018 where the Government indicated that alongside regulatory changes there may be major structural reform of the water sector. It described a system facing significant issues where:

> *"**the scale of the challenge indicates that the status quo is not sustainable in the long term**".*

Since that initial cabinet paper in November 2018, the Government has further progressed regulatory reform for the delivery of drinking water, including through the establishment of *Taumata Arowai- the Water Services Regulator* and the progression of the Water Services Bill to select committee in December 2020. A cabinet paper of December 2020 also confirmed the above reform objectives and the Government's desire to proceed. That cabinet paper also recommended that participation in further reform discussions be based on an "opt-out" decision process for councils with that decision to made in mid-late 2021.

Significant changes will flow from the three waters reform that has already taken place and will take place regardless of whether councils opt in or opt out of the proposed water entities. Legislative, regulatory and community expectations of standards are changing. There is therefore no status quo option. Three waters service delivery will change and every council in New Zealand must change in some way and the only means by which the future standards can be complied with is investment.

Investment to meet changing standards will be required in infrastructure, people, process and systems

The question for QLDC is whether that challenge is best met through the current service delivery model or some other solution.

- **Opting in** to the government process will include financial and other incentives (that are not currently defined) and agreeing to transfer responsibility for the service, assets, responsibilities, duties and liabilities for three waters to a dedicated water entity that is not currently defined but expected to cover the Ngāi Tahu Takiwā and look similar to the proposed structure that the Government has presented to local government over March and April 2020
- **Opting out** of the government process means that either Council retain responsibility for three water service delivery or some other arrangement.

Scope of this report

In late 2020 the Otago-Southland Three Waters office commissioned Morrison Low to undertake a review to examine the impacts and options for three waters reform for the combined Otago and Southland regions. The review has been carried out within the context of the Government's reform programme and has been designed to ensure that it is best able to respond to the recommendations from that programme. In order to ensure that the review focuses on providing decision-makers with the evidence and information that they need to actively participate in conversations with the Government and their communities, this review has:

- Relied primarily on the same information set as is being used by the Government to develop its own recommendations and analysis.
- Been dynamic and responsive to the Government's timeframes such that the agreed deliverables for the review have changed in order to provide decision-makers with relevant information as quickly as possible.
- Compares the status quo (i.e. continued three waters service delivery by territorial authorities) with the Government's preferred option (i.e. transfer of three waters service delivery and asset ownership to a new three waters entity) and a voluntary reform option covering the Otago and Southland regions (which requires councils to "opt out" of the current reform process).

This is the third report by Morrison Low as part of its work assisting the councils of the Otago and Southland regions to further understand the challenges and opportunities facing the local government sector in their regions for the continued delivery of three waters services. The previous reports included:

- Our regional situational analysis – which outlined the high-level challenges with continued service delivery at a regional level based on high-level analysis of each council's response to the Government's Request for Information (RFI).
- Our cross-regional current state assessment – which examined the challenges and opportunities for three waters service delivery at a disaggregated level across the two regions.

This report has been tailored for Queenstown Lakes District Council (QLDC) and examines the benefits and challenges of both retaining and transferring the service delivery of three waters as well as the impacts such a decision would have. It therefore provides the advice to QLDC to help determine whether it should opt in or opt out of the government three waters reform programme.

To do so, this report draws on findings of the earlier two reports, and insights gained from our onsite visits to QLDC and the other councils in the Otago and Southland regions (as relevant).

While the report attempts to assess the impact of the transfer of ownership and service delivery of three waters into an aggregated entity, we are unable to predict the extent to which the activities and services provided by local government may change (either statutorily or organically), and therefore only compare the immediate impact of the transfer of functions.

Approach

This is the third report as part of our review of three waters service delivery for the Otago-Southland regions. This report builds on analysis undertaken in our earlier *Regional situation analysis* and *Cross regional current state assessment* reports and has been developed based on:

- A review of asset, service performance, and financial information provided in each council's completed RFI responses and asset registers.
- A review of organisational charts provided by councils to assist with the identification of affected roles and functions.
- Our findings from onsite interviews and meetings held at QLDC.
- Detailed financial modelling of each council and an aggregated three waters entity.
- Consideration of impacts of community, governance and levels of service.

Differences between data

The financial analysis set out in this report may differ (but is directionally consistent) with our earlier financial analysis, as the analysis presented herein relies on the results of detailed financial modelling which includes the use of standardised assumptions across the councils, and debt and investment optimisation. The full set of assumptions used in the modelling are outlined in Appendix B, and high-level sensitivity analysis is included in Appendix A.

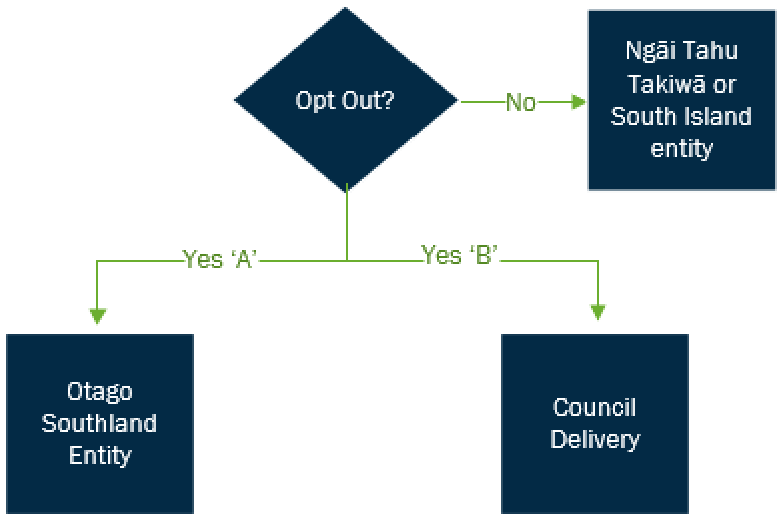
It is also consistent with our analysis in the *Cross regional current state assessment*, which highlighted significant differences in asset unit rates. In that report we highlighted Dunedin's unit rates as being substantially higher than the other councils, and that Dunedin had a valuation completed as recently as late 2020. The impact of this assumption is outlined in Appendix A.

Alignment of report with three waters reform

The key question facing QLDC is whether to opt out of the reform process or continue to opt in. There is a lot of uncertainty for Council. Chief of which is that the Government has yet to advise QLDC (or any council) exactly what the option they are faced with is.

This report has been structured to give the best possible information to Council to support that decision. The figure below sets out our assumption for how the options considered in this report match with a decision to opt out of the reform or opt in.

Figure 3 Council's decision point



Current situation – Queenstown Lakes District Council

Three waters services

The delivery of three waters services in the future will be in an environment with increased health, environmental, and economic regulation. These regulations will require changes in services and service delivery. Meeting these changes is likely to be challenging for any provider of three waters.

Queenstown Lakes District is situated in the Otago region of New Zealand and has an estimated population (as at June 2020) of 47,400 people. In addition to its usual resident population, Queenstown also experiences extremely high levels of tourism (pre Covid-19), with its 2018/19 annual report estimating that only 61% of its average daily population is usually resident in the district, and peak daily population is almost 3 times higher than the usually resident population. This high level of tourism drives infrastructure planning in the district, as this is representative of the demand being placed on the water and roading networks in the district. While tourism has decreased markedly following the border restrictions introduced to control the coronavirus pandemic, it is anticipated that this will recover once borders are reopened.

The district is divided into two wards, the Wakatipu ward (which includes Queenstown township) and the Wānaka ward (which includes the township of Wānaka). The wards, and the district at large, are geographically isolated and are situated in challenging mountainous topography. The topography of Queenstown also creates infrastructure challenges, with steep pressure gradients on water networks placing additional strain on pipes and requiring pressure reducers to be installed.

Table 1 Financial summary of three waters service delivery

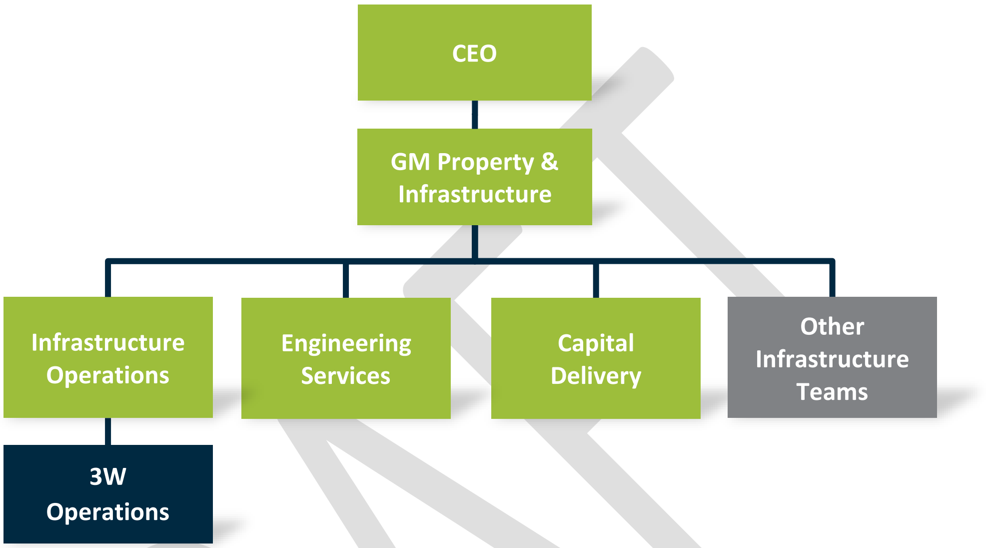
	Council total	Three waters	Net of three waters
Debt (2021)	$208 million	$139 million (67%)	$69 million
Operating Revenue (2021)	$190 million	$37 million (19%)	$153 million
Infrastructure assets (book value)	$1,677 million	$880 million	$797 million

According to its completed RFI, in 2021 QLDC is forecast to have $208 million of external borrowings, of which $139 million (or 67%) is related to the three waters infrastructure. As outlined in our *Cross regional current state assessment* QLDC is predicted to have more three waters debt in 2021 than any of the other councils in the Otago and Southland regions.

Structure and resourcing

Queenstown has a Property and Infrastructure group that looks after all assets. There is a small three waters operations team within the Infrastructure Operations team. The Engineering Services and Capital Delivery teams are shared with other council assets. There are 20-25 FTE working on water across the group depending on vacancies and workload from other council work.

Figure 4 Queenstown Lakes District Council three waters team structure



We have assumed that in the event that Council chooses to retain three waters services that it is unlikely to change its overall delivery structure.

Support for the three waters team is also currently provided by:

- Human Resources – who have one FTE allocated to the Property and Infrastructure Group, and additional support provided regarding learning and development.
- Finance – who have one FTE allocated to the Property and Infrastructure Group, and provide additional support regarding planning, budgeting and reporting.
- Knowledge Management who have up to 2 FTEs dedicated to supporting three waters.
- Communications and Engagement who provide a portion of the time of 1FTE to three waters for communications and media and up to 2 FTE from Customer Services responding to water queries.
- Planning and Development - who have one FTE allocated to the Property and Infrastructure Group to support engineering approvals for development and provide various inspection and infrastructure approval assistance.
- Legal and Regulatory services – up to one FTE as required.

We would not anticipate any significant growth in the level of resources provided by these areas of Council without any significant changes to levels of service provided to ratepayers.

QLDC operates out of four offices (plus a Wānaka office) within Queenstown itself, with only one of these offices (being the head office on Gorge Road) being owned.

Key issues

QLDC's levels of compliance and levels of service for wastewater are good when compared to other councils in the Otago-Southland region. A high proportion of wastewater receiving tertiary treatment and 100% of wastewater is being discharged to land.

However, QLDC has 11 water treatment plants, which all feature a low level of treatment. 94% of the district's water is treated only with simple disinfection, with the remaining water treated with filtration and simple disinfection. As a consequence, none of the treatment plants in QLDC meet the protozoal requirements of the Drinking Water Standards.

The required future investment for three waters services in QLDC will see three waters debt increase to $589 million by 2031, and total Council debt rising to $684 million. Council's debt to revenue ratio rises to 190% but remains well below the LGFA threshold. Council is therefore able to debt fund the required level of investment but at that level three waters will start to impact the extent to which other activities and services can use debt.

The investment requires an increase in the capital delivery programme of over 290% and an average of $110 million per annum through to 2031. This will be a significant challenge.

Our forecasts anticipated that the increased investment requirements, and associated impact on annual operating expenditure may result in three waters charges being as high as $1,952 (uninflated) by 2031. Despite being an almost 244% increase on current charges, these are likely to be among the lowest three waters charges in the Otago and Southland region.

Wider context

The nature, extent and pace of the three waters reform is now widely documented and understood. It will be far reaching and change service provision for three waters at a national level. This is relevant because Councill's opt out/opt in decision will not be made in isolation. The decision of all other councils in New Zealand and particularly Otago and Southland has flow on impacts for QLDC, its communities and the decision Council makes.

In July 2020 the government announced a $500M three waters stimulus package to encourage councils to be part of the reform programme. There is expected to be incentives for councils to remain in the three waters reform programme, although at this stage we do not know what those are.

Equally, the government through Taumata Arowai, Regional Councils and the new economic regulator that will be established is expected to increase relevant standards and requirements and with greater resource and focus on compliance, create a regime that will hold the service providers to account far more strongly than in the past.

A decision to opt out and remain as a three waters service provider will create risks and challenges for any individual council but opting out if a regional water entity is formed around a QLDC, leaving it alone or largely alone would create significant risks and challenges.

What options were considered?

Status Quo

Under this option Queenstown Lakes District Council would continue to retain responsibility, duties, obligations and liabilities for three waters:

- service delivery
- asset ownership
- resourcing (employees, consultants and contractors).

While this approach would see no change to service delivery arrangements, it will still require significant additional resource and investment in infrastructure to meet changes to three waters standards, regulations and the new regulatory framework where there is increased environmental, health, service and economic regulation of three waters.

Three water service delivery entities

The Government's three waters reform programme has a clear and open objective of transforming the delivery of three waters services through structural reform. This will involve the establishment of publicly owned, asset owning three waters service delivery entities and, should a council choose not to "opt out" of the process, the transfer of council's assets and liabilities into such entities.

If the delivery of three waters services and the consequential asset ownership is transferred to a new water entity, then any related funding, assets, resources, and liabilities are likely to be transferred with it. This would mean that Council would no longer be responsible for setting charges, managing investments, and borrowing or operating any of its current three waters services. The obvious, most immediate effects of this will be a reduction in revenue, operating expenses, assets, and debt.

Staff directly involved in the delivery of three waters services will also be transferred into a new entity, while some staff that support three waters may also transfer (predominantly those that are 100% supporting the delivery of three waters). Staff that spend only part of their time supporting three waters are likely to retain their roles within QLDC, and there is sufficient workload within the organisation to ensure a continued meaningful role for these staff in the absence of three waters.

The two dedicated water entity options considered are

- Otago Southland - would include the territorial authorities with Otago and Southland, and most likely would need to be the result of a voluntary process that would take place outside of the current government driven reform.
- Ngāi Tahu Takiwā would include the areas encompassed by all South Island territorial authorities except Nelson, Tasman and Marlborough. This option is considered to be the most likely option under the government driven reform and is the "opt in" option.

The table below sets out high level information comparing potential aggregated water entities for Otago and Southland and the Ngāi Tahu Takiwā.

Table 2 Comparison of options for three water entities (2021)

	Otago Southland	Ngāi Tahu Takiwā
Number of Territorial Authorities	8	21
Replacement cost of infrastructure assets	$11.2 billion	$28 – 30 billion
Debt	$1.93 billion	$6 – 7 billion
Annual revenue	$415 million	$0.9 – 1 billion
Annual operating expenditure	$383 million	$0.9 – 1 billion
Water connections/ratepayers	About 141,000	About 420,000
FTE	Around 240	Over 500

Assessment of the options

This section of the report presents an assessment of the options using a range of non-financial and financial criteria so that both the benefits and the challenges of each option in the future delivery of three waters services are considered. The section largely draws on analysis undertaken in our *Cross regional current state assessment* report, with additional information from our on-site visit of QLDC and detailed financial modelling included.

Its aim is to provide a comparison of the impacts of three waters service delivery under aggregated delivery models, and under the status quo, to allow decision-makers to assess the impacts of reform on their council, and for their ratepayers.

Due to time constraints and the later emergence of the option we have not analysed the Ngāi Tahu Takiwā option to the same extent. Where appropriate and relevant we have provided high level commentary on how the impacts of a larger entity would differ from that of one based around Otago and Southland.

Key outcomes achieved, and the impacts on councils, are discussed through both the qualitative and quantitative lens. While the financial performance of a new entity is not the only relevant consideration, it is an important one, with affordability and the ability to fund and deliver the potential required investment in three waters infrastructure being cited as two of the main investment drivers for the Government's three waters reform programme. We have focused on these details as they are typically easily understood and demonstrate the scale of the challenge for the Otago and Southland regions.

However, a three waters entity is also likely to deliver increased capability and capacity to the delivery of three waters in the two regions, as it will have sufficient scale, and dedicated focus on the delivery of three waters services. It is this scale, capability, and capacity benefit that will likely give rise to longer term efficiencies and improvements to customer levels of service.

Many of the local issues identified here are common to all of the councils in Otago and Southland as well as those across New Zealand. In many respects, it is that similarity that is driving the Government's reform programme and their proposed solution to aggregate services to address these common issues. Each council is however unique in the way the mix of different risks and opportunities arise and their impact on their community and where this is the case, we have highlighted those different considerations.

For example, Queenstown has a potential challenge relating to managing the investment and planning of growth in the district and ongoing compliance with drinking water standards. Dealing with these issues means that continued delivery of three waters services by QLDC is likely to be highly challenging, with investment needs driving high levels of potential borrowings, and the impacts of increased regulatory costs being passed on to ratepayers.

Capability and capacity

Council

Capacity and capability give an organisation an appropriate level of expertise and resilience. In relation to three waters an organisation needs strategic, technical, and operational capacity and capability. Strategic capacity is important to ensure good long-term asset investment decisions are made.

The entire three waters sector is facing capability constraints at a national level. 13% of all existing three waters roles in the Otago and Southland regions are currently vacant but QLDC only has one current vacancy in three waters.

Interviews with staff indicate that with the establishment of Taumata Arowai, and the associated increased levels of regulatory compliance and monitoring, and the possible establishment of an economic regulator, that further additional roles may be required. In many cases councils are also planning to increase the size of their three waters teams and will effectively be competing with each other to attract resource.

With the establishment of Taumata Arowai and a potential economic regulator for three waters, the competition for human resource will increase throughout the sector. This could be further exacerbated by the establishment of large, multi-regional three waters entities which will have the size and scale to attract a high level of talent and offer clear career progression pathways and a diverse range of challenges.

Through our conversations with Human Resources and the Property and Infrastructure teams in QLDC it was apparent that attracting talent into QLDC has been challenging. QLDC currently pays a premium above market rates to attract quality engineering talent, but this is not always sufficient. Recruitment in Queenstown faces unique challenges and opportunities, which include:

- Its relative remoteness of location, meaning attracting staff from outside of the district can be difficult.
- The high cost of living in Queenstown, and limited work opportunities, conversely make it difficult to attract talent. In some cases, candidates have backed out of job offers upon discovering the cost of living or have stated challenges in securing employment for the partners as reasons to decline job offers.

However, its natural appeal does make Queenstown an attractive destination for some candidates and may assist with retention of staff. We anticipate that if the ownership and management of three waters services and assets is retained by Council that these issues will continue. This is particularly likely to be the case if the establishment of three waters entities is successful in other parts of the country.

Regional water entity

If a single three waters entity covering either the Ngāi Tahu Takiwā or the Otago and Southland regions was created, then it would remove any competition between councils for resources. There is a shortage of specialist resources for three waters across New Zealand and internationally, and while a regional entity will not in and of itself create new resources, it will be able to make better use of the specific skills and expertise of its existing resources across the region in which it operates for the benefit of all areas within the region. So, unlike now, resource constraints would not disproportionately impact any individual district.

A larger entity and the staff, contractors and consultants involved in it would provide sufficient scale to create strategic capacity across the region and support the areas where there is currently a gap. Scale, capacity and capability give a level of expertise, depth of resources and resilience in three waters that can be applied regionally, benefitting all ratepayers of the region rather than only some as is the case now. Importantly the capacity and capability is shared across the region in an ongoing and sustainable way and the burden on smaller communities would be reduced.

A regional water entity would provide greater opportunities for carer development and progression than an individual council can offer.

These benefits would be expected to increase if the entity was across the Ngāi Tahu Takiwā compared to an Otago-Southland entity.

There are however challenges with the creation of regional water entities and the potential for resources to be centralised and pulled away from rural communities. In our view there is likely to be an overall increase in resources if a regional water entity was formed and there will always be a need for some roles to remain disbursed but until the Government model is finalised this is a risk that the Councils must continue to manage through ongoing engagement with Government.

Governance

Council

There are a number of committees that have responsibility alongside the overall governance provided the Council. These include:

- Wānaka Community Board – the Board does not have delegated decision making powers but has powers to recommend relating to rates and charges for water and sewerage in the Wānaka ward as well as borrowing to fund works in the Wānaka ward.
- Planning & Strategy Committee – Whose roles is to recommend strategies, plans and policies that advance the Council's vision and goals for the district and ensure integrated and sustainable management of the natural and physical resources of the district in accordance with the Resource Management Act 1991.
- Infrastructure committee – which has the main role for overseeing the three waters services.

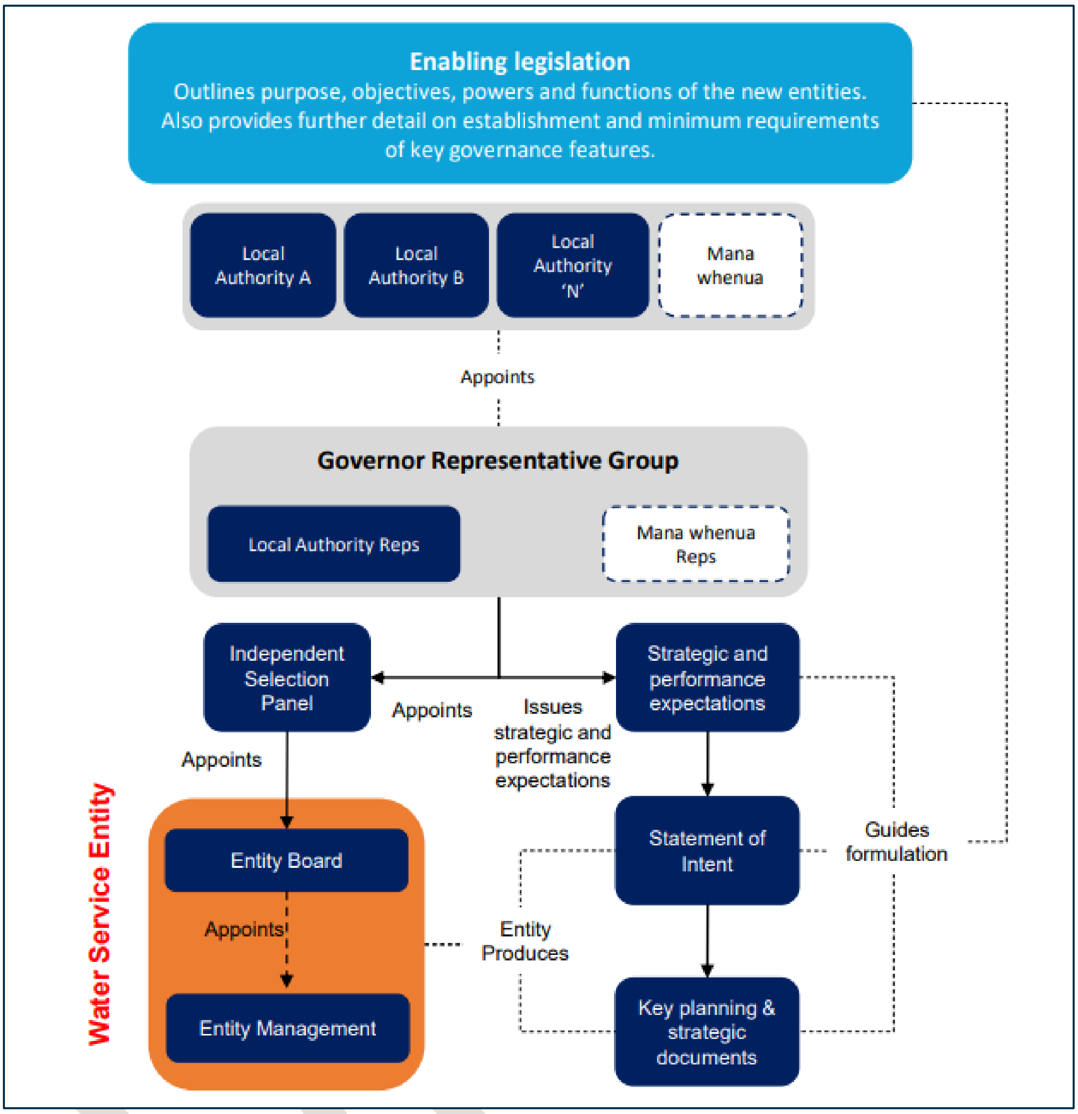
There is no formal representation of Iwi or Runanga on any of these committees in QLDC.

Regional water entity

We have assumed that the same governance model would exist in both the Otago Southland and Ngāi Tahu Takiwā options. We recognise that ultimately this may not be the case as the Government will dictate the option that is presented under this model.

A key goal of Government in the reform process is to provide mechanisms for enabling Iwi/Hapū input so that Māori rights and interests are considered in the new service delivery system. In December 2020, Cabinet agreed to a high-level principle of partnership with Iwi/Māori, which will be followed throughout the reform programme, and reflected in the new service delivery plan, and in the proposed model (shown below) and in particular the Governor Representative Group.

Figure 5 Governments "Emerging structure" for proposed three waters entities [2]



While the new model provides a better recognition of a partnership with Iwi/Māori than the current approach it increases the separation between the community and the service provider. Currently there is a direct democratic connection but the new model changes that, deliberately. The sense of separation from the community is only likely to increase the larger an entity was. The communities role and how they exercise it will fundamentally change.

[2] Source: "Department of Internal Affairs: Three waters reform programme – March 2021 Local Government and Iwi/Hapū engagement" retrieved from *https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/Three-Waters-Reform-Programme-March-Engagement-slides.pdf* on 3 May 2021

While the draft model proposed by the DIA as part of their consultation process is not a CCO, we note that it has become accepted practice that an integral element of creating effective service delivery entities is establishment of a new governance framework, including the appointment of independent competency-based boards. The Auditor General has reinforced that by saying that appointing elected members to Boards of CCOs should be the exception [3].

In our view there will be an improvement to risk management processes and practices that are driven by the Board because they will bear all the associated duties, obligations and liabilities of company directors (or equivalent) rather than having the current statutory protections of councillors.

Compliance and levels of service

Council

Investment in level of service enhancement is the second largest driver of infrastructure spend in QLDC, and a significant component of this spend is to increase compliance with new regulatory standards. Our *Cross regional current state assessment* highlighted the differing levels of service provided by each Council in the Otago and Southland regions.

No water treatment plants meet protozoal compliance

In general, QLDC's levels of compliance and levels of service are high compared to other councils within the Otago-Southland regions, with a high proportion of wastewater receiving tertiary level treatment, and 100% of treated wastewater being discharged to land (in varying capacities).

QLDC has the lowest incidence of wastewater pipe blockages and stormwater collapses in the Otago and Southland regions, though it has the third highest incidence of unplanned drinking water interruptions in the combined regions. Unplanned interruptions appear to be unrelated to the age of the water network, which, with 77% or remaining useful life remaining, is the youngest in the combined regions. Instead, based on our discussions with Council staff, we understand that the cause is more likely related to the steep pressure gradients in the network which are caused by the district's topography.

The largest compliances and level of service-related issue for QLDC is the level of treatment of its drinking water. QLDC has 11 water treatment plants, which all feature a low level of treatment. 94% of the district's water is treated only with simple disinfection, with the remaining water treated with filtration and simple disinfection. As a consequence, none of the treatment plants in QLDC meet the protozoal requirements of the Drinking Water Standards.

QLDC does however have high quality source water, with very low levels of intensive farming in the district, and most water sources being glacial fed. While the quality of the source water may have, in the past, meant minimal treatment has been required both the enforcement of compliance with drinking water standards and the level of legal liability placed on Council is set to increase when the Water Services Bill is passed.

3 *Governance and Accountability of council-controlled organisations*, Office of the Audit General, September 2015

If three waters service delivery remains with Council, then QLDC will need to continue to fund the required level of service investment directly (as it is forecast to within its Long-Term Plan). This will require a sustained period of investment that will require water charges to double over 10 years. Cost increases like this will come with community pressure and if Council deviates from that path it will need to accept the additional risk associated with continued non-compliance.

Private schemes

Under the draft Water Services Bill councils are considered to be the supplier of last resort for drinking water services provided within their territorial boundaries. This means that in the event that a private drinking water scheme fails or ceases to provide drinking water, Council may be responsible for ensuring continuity of supply to households serviced by that scheme.

The risk of this occurring is a significant concern for most councils that we spoke to during our on-site visits, particularly given the increased enforcement of drinking water standards that has been proposed and the increased levels of personal liability associated with non-compliance.

In the event that three waters reform proceeds, we understand that the Government would most likely transfer the obligation to act as the supplier of last resort to the new water entities. It is not yet clear whether this would extend to giving the new entities the powers to forcibly takeover the management of schemes, or to act as the supplier of last resort in districts where councils have not opted into the reform process.

While the number of private schemes in QLDC is unknown the proportion of population that is connected to a water supply scheme provides a proxy for the scale of the risk. Only 76% of QLDC's resident population is connected to a council owned drinking water scheme. QLDC has a number of recent developments which have private drinking water schemes, and a number of remote townships which are likely to also have private drinking water schemes.

Regional water entity

An aggregated water entity would have the ability to concentrate on three water challenges and prioritise investment decisions across the region, leading to improved environmental and community outcomes than the councils can individually achieve when considered regionally. An entity could prioritise investment into the areas where the greatest benefit could be achieved.

The organisation would have a single focus. It would not be faced with trade-offs as it the case now where councils must juggle multiple competing priorities for investment and resources. It would not be subject to the same political pressure over rate increases. Pricing will be regulated by the economic regulator, not through the annual planning process.

The particular risks for the Otago Southland region include:

- Compliance risks in the current system: thirty five percent (35%) of the regions drinking water (by volume) does not meet protozoa requirements of the Drinking Water Standards.
- Seventeen percent (17%) of the resource consents for wastewater treatment in the region have already expired, and a further twelve percent (12%) are due to expire within the next 5 years, this creates a legal, regulatory and financial risk for the region.

- Eighty two percent (82%) of the three waters pipe network across Otago and Southland is in an unknown condition and therefore there must be uncertainty about the future investment requirements and risks that these could be greater than estimated.
- Under a status quo approach the future cost of three waters services that comply with the increased standards could be unaffordable in some communities.
- A larger aggregated entity should be in a better position to undertake the actions required to address these risks through opportunities to realise economies of scale, improved asset management and management of risk enabling funding and delivery of larger scale investment programmes. This should allow an entity to better meet any increased compliance requirements or increased environmental standards than the councils can.

These increasing service levels and compliance requirements are driving investment into systems, processes, resources and infrastructure. Our view is that it is unlikely that all councils in the regions have sufficiently allowed for all of the increased operating costs that these will create. There is therefore a risk that the compliance cost increases currently projected by the councils (including QLDC) will be greater than forecast. A regional entity with greater depth of resources will be better placed to respond to system wide compliance requirements and the administrative workload of dealing with the regulators and regulatory regime.

Infrastructure assessment

Future investment requirements

The Government's three waters reform programme that is being managed by the Department of Internal Affairs conducted a series of workshops across the country in March 2021. These workshops presented some of the preliminary findings from analysis of the responses to its request for information to the local government sector. The workshops highlighted the national investment challenge as being one of the major drivers for reform.

The workshops noted:

- A total investment requirement over the next 30 – 40 years of between **$110 – $170 billion** across the country.
- Current national investment of only $1.5 billion per year across the country (equating to $45 billion over the same 30 year time frame).

Our assessment of the future three waters investment is that QLDC requires a total of **$1.1B** over 10 years with an average annual spend of approximately $110 million per year (real, 2021 uninflated). The primary driver for capital investment in QLDC is growth, followed by level of service enhancement and renewals.

$1.1 B of capital expenditure on three waters over 10 years

Our assessment includes an uplift in planned renewals investment for QLDC from the $108 million they had forecast to $226.8 million over the ten years based on a comparison with rates of deprecation and the remaining useful life of assets.

Our analysis of RFIs completed by the councils of Otago and Southland, as well as our review of information provided in asset registers, was presented in our earlier *Cross-regional current state assessment* report (March 2021) and identified between **$2.3 – 4.7 billion** of capital expenditure across the two regions over the next 10 years.

The issue is whether Council or a regional water entity is better able to plan, deliver and fund the requirement level of investment.

Delivery

Council

The ability to deliver on a capital works programme may have a significant impact on debt projections, rates and operational risk. As a sector, local government in New Zealand has historically been unable to deliver its full capital works budget.

Council needs to increase capital works delivery by 260%

QLDC has itself had challenges in doing that and in 2019/20 delivered 51% of the planned programme. In order to deliver the required investment then Council must increase its three water capital programme by 260% and sustain that throughout the period until 2031.

There is a risk around the councils, individually or collectively, being able to deliver the increased infrastructure investment required. The Otago and Southland councils, like most New Zealand councils, have generally struggled to deliver their capital programmes each year. Yet, the forecast investment required in three waters for the eight councils will more than double from $101M in 2020 to an average of $230M per annum each year over the next ten years.

Dedicated water entity

A larger aggregated entity should be better able to develop a coordinated programme and enable effective working relationships with service providers to ensure that the operation of three waters conforms to contracted services and performance levels across the region. This includes improving transparency and accountability for the delivery and costs of three waters services, including the ability to benchmark the performance of service suppliers.

However, the challenges with delivering the increased capital works programmes is likely to continue for some time until the industry prepares to increase its capacity, and long-term coordinated capital works programmes are developed and finalised.

There is also a risk around the ability of an individual council to meet the investment requirements if it was competing for scarce resources with a regional water entity (locally) and entities (nationally).

Providing for growth

Council

Under the current model QLDC has control over the growth in its district and largely dictates the timing of growth through the provision of three waters and other supporting infrastructure. This may be directly through construction or through vested assets built by developers in accordance with QLDC standards and passed over to Council. Development of these standards and ensuring compliance with them so that the quality of infrastructure is maintained is a key focus for Council.

9,160 new water connections in 10 years

Growth is the largest driver for investment in QLDC and makes up 40% of the total three waters capital spend between 2022 and 2031 under our projections. Over the ten year period between 2022 and 2031, QLDC is forecasting to connect an additional 9,160 properties to its water network - this equate to an increase of 38% compared to the current number of connections.

Funding this investment in growth has been a major challenge for most growth councils in New Zealand, and QLDC is no exception. Currently, investment in growth infrastructure is forward funded with debt, which is partly repaid over time with development contributions that are typically received before title is granted to developers. The current funding mechanisms have resulted in many of the highest growth councils in New Zealand nearing the upper end of their borrowing limits.

Without the development of additional subdivisions, or housing intensification which may also require infrastructure investment, high growth areas can experience issues with housing supply and affordability, which are major areas of national concern for this current government. This has manifest in the passing of the Infrastructure Funding and Financing Act 2020, which provides for special purpose entities to provide funding for and levy a charge on growth related infrastructure, and the recent announcement of the $2.8 billion Housing Acceleration Fund.

These initiatives may have a significant impact on the balance sheet of QLDC, as the use of either of these interventions will likely mean that QLDC will not carry debt relating to some of its growth-related infrastructure on its balance sheet. The analysis in this report assumes that QLDC, or any new water entity, will not access these interventions. However, for illustrative purposes, we note that if 50% of QLDC's projected growth capital expenditure is funded through these alternative interventions, then:

- Its three waters debt in 2031 would reduce from around $589 million to $343 million.
- Its three waters borrowing costs in 2031 would reduce from $15.3 million to $9.6 million.
- Its average household charge in 2031 for three waters would reduce from $1,952 to $1,624.

In some cases, we also understand that QLDC has sunset clauses within development agreements which require Council to install growth enabling infrastructure by a fixed date.

Failure to install the growth infrastructure by that date may impact the development of new growth cells or have broader financial ramifications for the developer and Council. This highlights the importance of any new three waters service delivery model having clear directions and investment plans that sustainably and effectively address the need to invest in infrastructure to support growth. The challenges of coordinating this investment may be larger when dealing with an entity covering the entire Ngāi Tahu Takiwā, although we note that the addition of other high growth councils into a larger entity may increase the entity's capability to address the specific issues relating to growth.

Regional water entity

Shared responsibility for growth infrastructure creates risks for individual councils

One of the most significant changes introduced through an aggregated water entity is the change from the current full council control over providing for growth and investment priorities into the broader regional mandate of the water entity. Councils have control over broader growth planning and infrastructure provision for their areas but for three waters that will largely transfer to the water entity. Growth planning and the provision of infrastructure will effectively be shared between councils and the water entity. Shared responsibility can create duplication, gaps and has potential risks.

There will be a need to balance regional priorities with local in order to achieve best overall outcome for the region. There is a risk that QLDC's priorities do not match the entities priorities for investment, either in timing or absolute terms. If the entity was covering the Ngāi Tahu Takiwā then the issues are only likely to be more complicated and balancing individual communities' priorities with the needs of the region more difficult. Given the extent of growth in QLDC then this is a greater risk for QLDC than any other council in Otago and Southland.

The Government's consultation programme has indicated the development of a regional spatial planning process to guide that, but without the detail of how that operates it is an important risk as there will be change. It is an area council's must work with government on in order for communities, councils and a water entity to be successful.

If considered regionally then the development of a single set of standards and a consistent approach to their application across the region will simplify things for developers and community.

Financial assessment

The financial analysis presented in this section builds on the previous work undertaken to support our *Cross regional current state assessment*, and our *Regional situation analysis* reports. The analysis uses our financial models to optimise debt and standardise forecasting assumption across each council and the proposed entity itself. These assumptions, which are outlined in Appendix Two, are based on our experience and understanding of the Government's reform objectives but are unlikely to match Council's own projections.

In this regard, the forecast should be considered to be directional only, noting that any change to underlying assumptions will impact both the entity and Council.

In our view, the most significant financial issues arising from meeting the total investment challenge are likely to be the impact on a council's debt, and the impact on ratepayers. These issues are covered below.

Impact on household charges

Council

We estimate that three waters charges for QLDC households may increase by almost 244% in real terms from approximately $799 per property in the 2021 financial year to around $1,952 in 2031 (in 2021 dollars). When an allowance for inflation is included (using BERL LGCI cost index) this figure is as high as $2,730.

Water charges increase 244% (before inflation)

Affordability of these water charges should not be measured in absolute terms and should also consider the costs that a community can bear. In the Water NZ 2017-18 National Performance Review it considered relative affordability of water and wastewater services. It referred to varying international water affordability metrics for water and wastewater services ranging from 2 - 5% of household income [4].

By this metric QLDC remains under the lower threshold right through to 2031. QLDC is the only council in Otago Southland to not exceed the low benchmark of affordability. We note that this is largely driven by the comparatively high levels of median household income in Queenstown, which are 45% higher than the next highest in the two regions.

An affordability metric that considers only the median household income in a district masks the impacts that increasing water and wastewater charges may have on the more vulnerable populations that are on fixed incomes. 2% of QLDC's population receives benefit support of some kind, and a further 11% receives a pension.

Projected water and wastewater charges in 2031 for QLDC reach:

- 7.5%, the jobseeker support for a sole parent.
- 6.6% of the pension rate for a single person living alone under the status quo.

We note that this analysis may not be fully representative of affordability for these groups however, as many pensioners will have the ability to draw on retirement savings or equity and may have additional income streams. Similarly, beneficiaries are less likely to be directly liable for paying these charges, and our analysis also excludes any additional allowance by way of the accommodation supplement.

Regional water entity

The Water Industry Commission of Scotland (WICS) noted, in their report to the New Zealand Government (the WICS report), that a three waters service delivery entity could be expected to achieve operating efficiencies of between 10 - 40% over a time period of 10 years (after adjusting for inflation and level of service improvements) [5]. It also indicated potential capital works savings in the order of 45% over a period of 30 years.

[4] 2018-18 National Performance Review, Page 7

[5] This assumes that an economic regulator is also established. WICS made no attempt to attribute benefits between regulation and aggregation.

Our own work has indicated savings of a similar (albeit slightly less ambitious) scale may be achievable (we estimated 11% operating savings in 10 years, and 10% capital savings in 10 years). In our experience, these savings typically relate to:

- efficiency – doing things right, with less inputs, e.g. a reduction in the costs of contracted services.
- effectiveness – doing the right thing, e.g. reduction in re-active maintenance from improved asset management practices.
- efficacy – setting the right objectives (as it relates to three waters, e.g. asset management).

It is important to note that establishment of a new entity will likely take considerable time to deliver benefits and will not necessarily solve all existing issues, for example, addressing capital investment backlog or affordability. An early Frontier Economics report commissioned by DIA concludes however, there is considerable international evidence to suggest that reform, when accompanied by a suite of other governance and regulatory reforms, has led to improvements in performance [6].

The impact of the modelled capital and operating savings are outlined in the table below with 2031 highlighted in the table as it is not until that point that a regional water entity begins to deliver savings through to the ratepayers.

Table 3 Potential savings

	Three waters entity	Saving
Capital expenditure 2024 – 2035	**$2.9 billion**	**4%**
Operating expenditure 2024 - 2031	**$2.86 billion**	**2.7%**
Annual operating expenditure 2031	**$383 million**	**6.6%**

We have not undertaken detailed modelling or analysis on a Ngāi Tahu Takiwā entity to complete the above table, however, we note that we would expect such an entity to have 2 – 3 times the level of capital and operating expenditure of an Otago-Southland entity. Similarly, we would expect savings within a larger entity to be larger, or more likely to be able to be achieved.

6 https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/$file/Frontier-Economics-review-of-experience-with-aggregation-in-the-water-sector.pdf

Our modelling focusses on the ten year period outlined in QLDC's responses to the Government's RFI and covered by QLDC's latest (draft) long-term plan. Our analysis shows that the potential operating and capital savings only begin to have an impact on household charges at the end of the modelling period. These efficiencies could be expected to have an increasing effect on household charges beyond that.

Three waters charges are likely to be lower under the status quo (Council delivery model) than under a regional water entity covering Otago Southland for ratepayers in Southland in most scenarios.

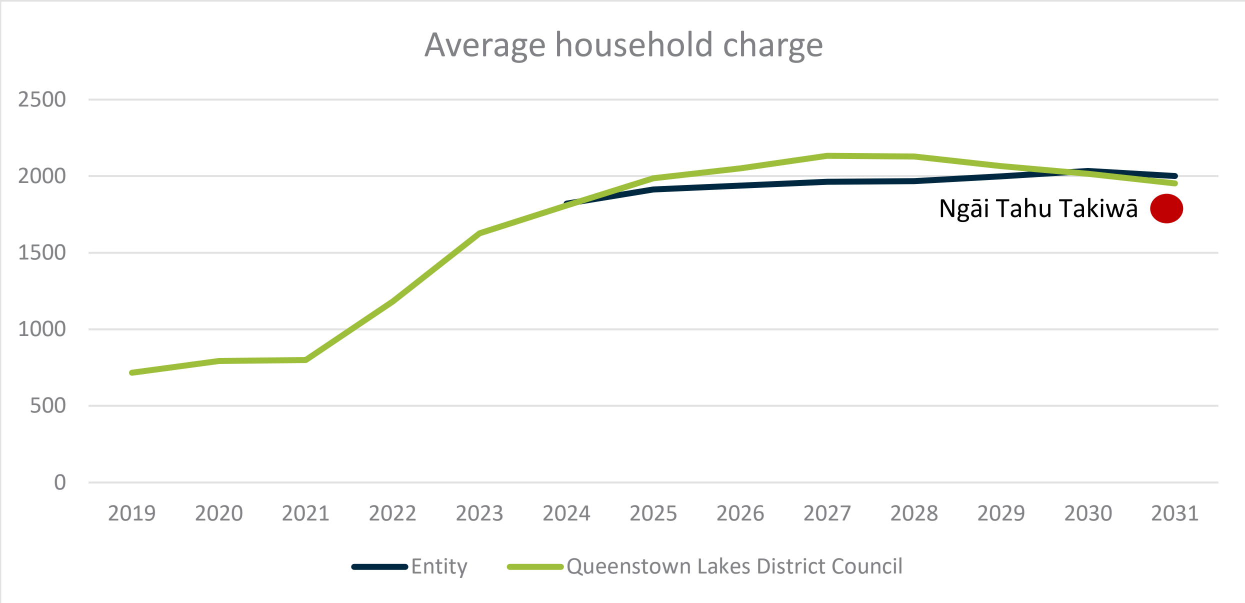
$2,001 – average household water charge in 2031 (uninflated)

Table 4 Comparison of three waters charges

	2021 Three Waters charge	2031 Three waters Estimated charge	Increase (%)	2031 range
QLDC	$799	$1,952	244%	$1,531 – 2,376
Otago Southland Water Entity	$799	$2,001	250%	$1,785 – 2,216
Ngāi Tahu Takiwā [7]	$799	$1,700 - $1,900	225% [8]	No sensitivity analysis completed

[7] The estimate of household three waters charges for the Ngāi Tahu Takiwā has been prepared based on limited information and contains a number of assumptions and high level estimates.
[8] Based on midpoint.

Figure 6 Average annual household charge



Similar to the council option, the comparatively high median household income in QLDC means that a regional three waters entity never breaches the 2% of household income threshold. Projected water and wastewater charges in 2031 for QLDC ratepayers under a regional water entity covering Otago Southland reach:

- 7.4% of the jobseeker support for a sole parent,
- or 6.5% of the pension rate for a single person living alone.

Given the likely reduction in three waters charges in a larger entity covering the Ngāi Tahu Takiwā we would expect household affordability for water and wastewater service to be further improved for QLDC ratepayers under such a model.

Table 5 Comparison of affordability of three waters charges

	Three waters Estimated charge (2031)	Two waters estimated charge (2031)	Two waters % of average household income (2031)
QLDC	$1,952	$1,735	1.6%
Otago Southland Water Entity	$2,001	$1,723	1.6%
Ngāi Tahu Takiwā Entity	$1,700 - $1,900	$1,400 - $1,700[9]	1.3% - 1.6%

[9] We have not assessed two waters charges for a Ngāi Tahu Takiwā entity, and this range assumes that two waters charges in such an entity would be similarly lower than three waters charges as we have observed in Otago and Southland.

Resilience

A key benefit of a regional water entity is the larger population base it serves. This provides the entity with more financial resilience. Potential future price shocks within the Otago and Southland may regions, include:

- The costs to meet increasing drinking water and wastewater standards.
- The valuation of assets, and in particular, the potential under-valuation of underground assets, and the consequential impact of that on planned capital investment.
- The significant level of investment in renewals that is required in the district and in the wider region.

Debt

The scale of the capital investment required will need to be funded by debt. This is an entirely appropriate funding mechanism for three waters infrastructure. However, debt is also a significant driver of cost, with financing costs accounting for an increasing proportion of total operating cost as investment requirements grow, and a need for the eventual repayment of that debt.

The question is whether there are differences with either a regional water entity or with Council and if so whether those are benefits or challenges.

Council

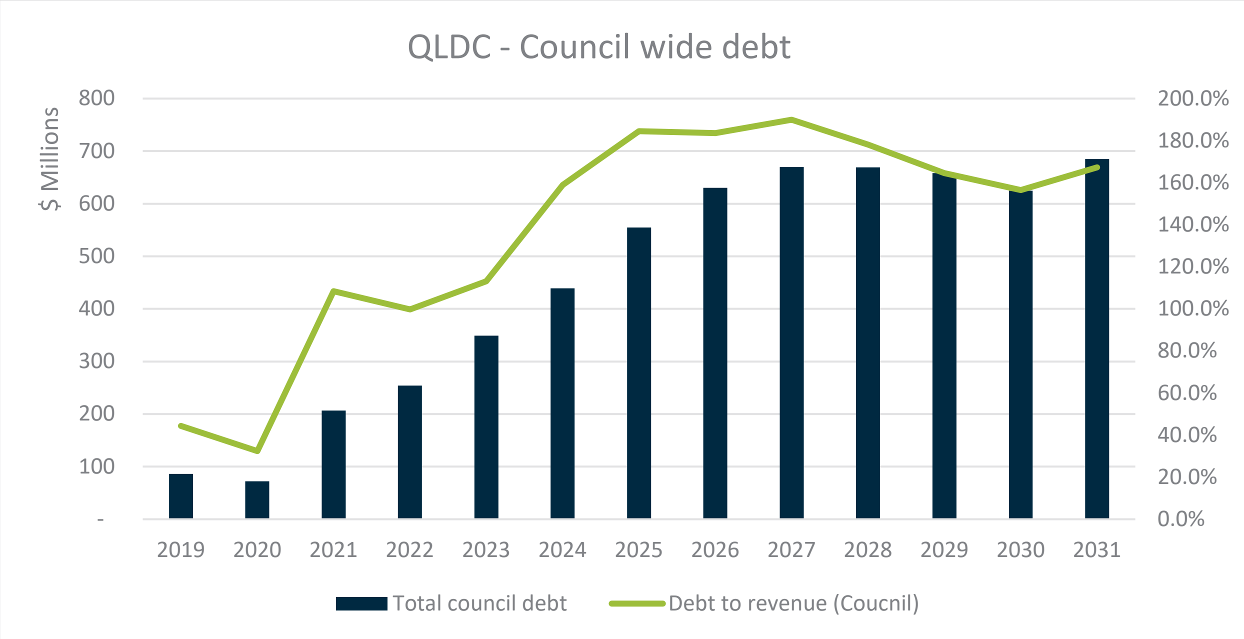
The forecast debt position and debt to revenue ratio for the three waters is for three waters debt to exceed $589 million (or 503% of three waters revenue) in 2031. Given the local government funding agency's borrowing covenant of 280% of revenue, the serviceability of three waters debt in QLDC will become dependent on revenues from other activities and start to constrain the ability of those other activities to borrow.

$589 million of three waters debt in 2031

While we are unable to predict what the impact of our increased investment programme would be on planned borrowing for other Council activities, we have attempted to predict total Council debt in the chart below. This assumes that Council does not alter the amount of debt, or revenue, that it requires to fund its other activities in response to the increasing funding requirements for three waters (although we would anticipate that such adjustments would be inevitable).

This shows an increase in debt, peaking at $684 million 2028, and a debt to revenue ratio that peaks at 190% in 2027 for QLDC as a whole. This shows that even with three waters service delivery Council will not become debt constrained.

Figure 7 Whole of Council debt and debt to revenue ratio



Regional water entity

By 2031 a three waters entity is forecast to have debt totalling:

- Between $6 – 6.5 billion, and exceeding 600% of its annual revenue, in a Ngāi Tahu Takiwā entity
- $1.9 billion, or 465% of its annual revenue, in an Otago Southland entity

This represents a small reduction compared to simple aggregation which is achieved through efficiency improvements.

Borrowing will exceed lending covenants or investment constrained

However, we estimate that a regional three waters entity covering the Otago and Southland region or at the Ngāi Tahu Takiwā will breach both the LGFA lending covenant, and the debt to revenue covenants that would likely be imposed by the credit agency Moody's if the agency was to seek a Baa/Ba credit rating. [10]

This means that either regional water entity would have to rely on Government subsidies or higher user charges to be able to afford the current investment programme.

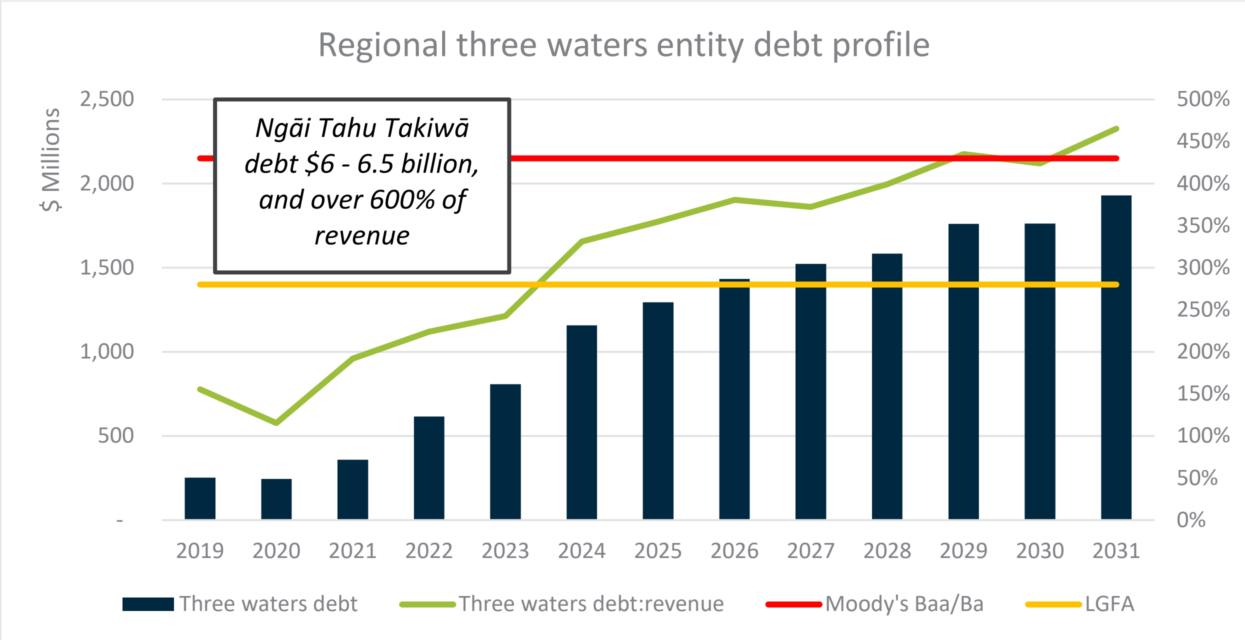
Sensitivity testing outlined in Appendix A shows that this is likely to be the case regardless of the assumptions adopted in our modelling.

Alternatively, the three waters entity could delay or stage investment to ensure that it remains within the borrowing limits, but delayed investment is one of the many potential causes of the current issues with three waters service delivery within the local government sector.

[10] Per the WICS report. Note that the LGFA currently has an AA+ rating for foreign currency lending from Standards and Poors – equivalent to an Aa1/Aa2 rating from Moody's. A Baa/Ba rating would likely result in higher borrowing costs than can be obtained through the LGFA.

The inability of an Otago Southland regional water entity or Ngāi Tahu Takiwā entity to be able to borrow sufficient funds to meet the required investment programme is considered a major impediment to the viability if an Otago Southland three waters entity. It appears from a recent newspaper article "Water reforms hit an expensive snag, as cost estimate rises to $185b" [11] that this situation may be replicated across the country which could provide for further incentives or changes.

Figure 8 Debt to revenue ratio versus LGFA and Moody's benchmarks – three waters entity



[11] https://www.stuff.co.nz/national/politics/300309952/water-reforms-hit-an-expensive-snag-as-cost-estimate-rises-to-185b

What would the impact of change be?

A change in role for Queenstown Lakes District Council

If three waters was transferred out of Council, then this would in our view, have a minor impact on the ability of Queenstown Lakes District Council to maintain the current level of service across the remaining Council functions. In fact, it should be considered an opportunity for advancement and job enrichment for staff already working in three waters and will provide new challenges for staff elsewhere in council.

Many Council teams have resources at or close to capacity. The removal of three waters services from Council will free up some of this capacity. The three waters team in Southland is relatively independent and provides only minimal support to other Council activities. This means that the removal of the three waters team from the organisation will not be overly disruptive to the continued operation of Council's other activities.

Transfer of responsibility for delivering water to a new entity will mean the Council (from the Councillors, through its leadership and operational staff), will have the opportunity to reassess the ways in which it can effectively deliver on other issues for its community with its remaining resource. For example, the removal of three waters roles may provide an opportunity to evolve the remaining organisation structure to respond to the wellbeing of their communities as detailed in The Local Government (Community Wellbeing) Amendment Act 2019.

The Frontier Economics report addresses the potential concerns with aggregation leading to loss of economies of scope with other council functions and concludes that such issues do not appear to have emerged in practice as a major problem in the jurisdictions examined in the study.

The true impact on Council, and the exact nature of its future role is, however, uncertain. In addition to three waters reform, reform of the Resource Management Act, which may alter the responsibilities and obligations of councils, and the recently announced "Future of Local Government" review, will also have a significant impact on the broader impacts for a council that cannot be ignored.

Impact on Council as an organisation

In QLDC's current organisation structure, the Property and Infrastructure group has 7 roles that are entirely dedicated to three waters with another 26 roles spending between 10-80% of their time on three waters or supporting service delivery. Many roles are already outsourced within the three waters function. As depicted in Figure 9, groups outside Property and Infrastructure provide some support to three waters but there is insufficient resourcing in these support functions for any other staff to realistically transfer. Some of these roles will stay at Council and additional capacity will be absorbed by growth. This additional capacity will not be funded by water revenue so may become a stranded cost (to the extent that it does not simply delay or defer otherwise planned recruitment). The organisation will need to manage this cost as well as the funding of senior positions within the Council whose roles would have in part been based on a span of responsibility that included water. Stranded costs are discussed and quantified in the following section.

The actual transfer of resources from Council to the water entity would be small. Our analysis shows only 6% of Council's FTEs are solely or significantly focussed on water related activities as most roles are already outsourced. Before and after functional structure charts of QLDC are set out on the following pages to demonstrate the extent of change within Council. In all cases vacancies have been included.

QLDC operates out of four offices (plus a Wānaka office) within Queenstown itself, with only one of these offices (being the head office on Gorge Road) being owned. This provides Council with the flexibility to reduce or increase office space as appropriate following any reform to the way that three waters, or any other local government, services are delivered.

Table 6 Pre and post change Council FTEs

Pre water entity FTE	Post water entity FTE
385 [12]	~ 362

12 As at 6 April 2021

Figure 9 Current Queenstown Lakes District Council functional chart showing functions impacted by water aggregation

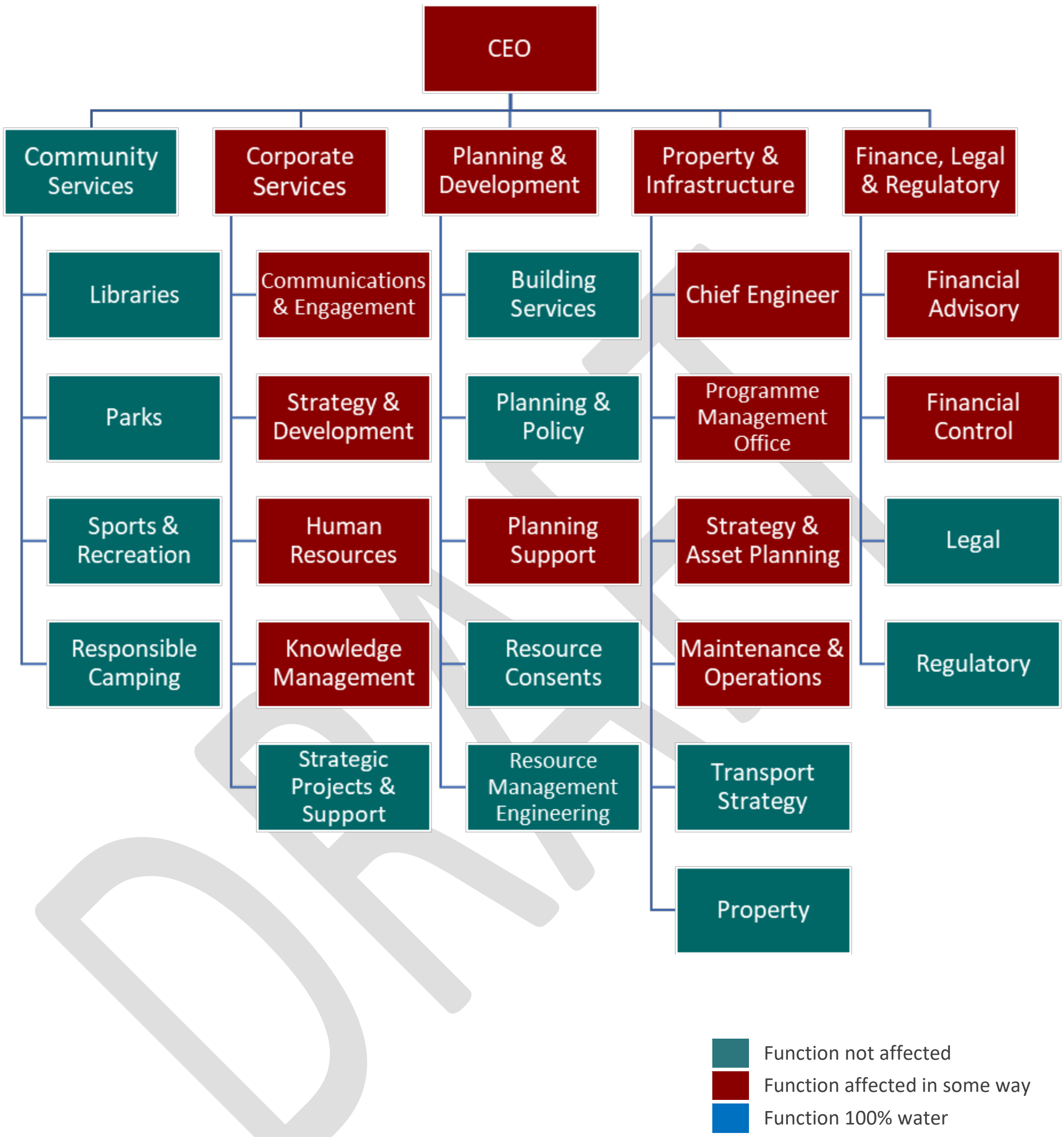
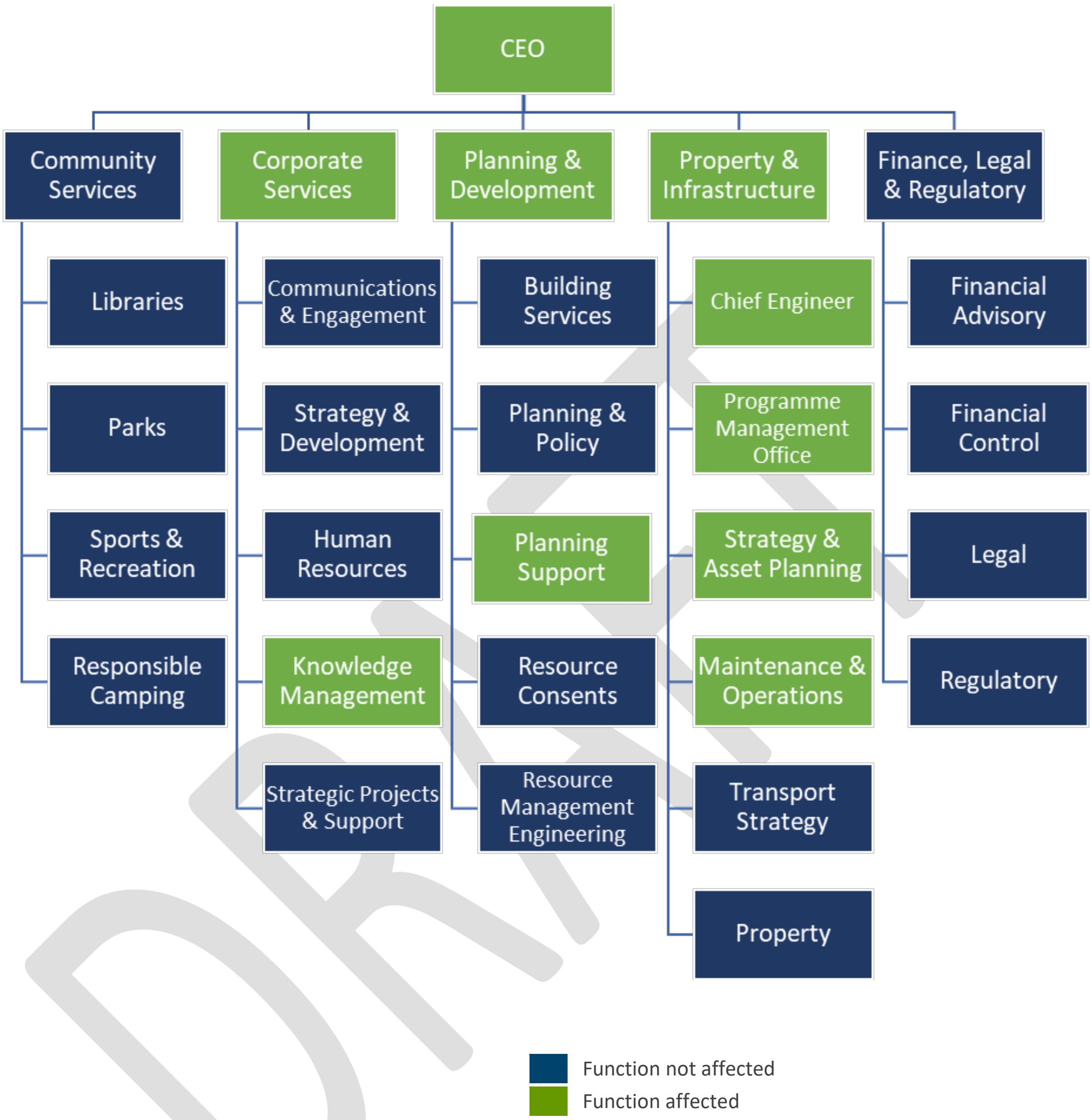


Figure 10 Indicative functional chart for Queenstown Lakes District Council post creation of water entity



Financial impacts

The transfer of three waters service delivery into a new three waters entity would give rise to a reduction in the overall revenue of Council.

Three waters accounted for an average of 17% of Council's total revenue between 2019 and 2021, and 21% of its total operating expenditure in the same period. The removal of both the revenue and expenditure would therefore likely have a positive impact on Council's financial performance.

The anticipated impact on Council's total revenue from the transfer of three waters service delivery is shown in the table below.

Table 7 Comparison of Council revenue after transfer of three waters service delivery

	With three waters (ML adjusted) (2021)	Without three waters (2024)
Council revenue	$190 million	$189 million

The net impact of the removal of three waters service delivery from QLDC is that Council will collect the same amount of revenue in 2024 as it is anticipated to collect in 2021. That is, the overall size of QLDC will not be substantially different than it is currently.

Balance sheet impacts

We have assumed that the transfer of three waters assets from councils to new three waters entities would be accompanied with an equivalent transfer of debt. The impacts on QLDC's balance sheet, assuming three waters debt is transferred in 2024 is shown below.

Table 8 Impacts on Queenstown Lakes District Council's balance sheet

	With three waters (ML adjusted) (2024)	Without three waters (2024)
Total Council debt	$439 million	$15.6 million
Debt to revenue ratio	159%	8.2%
Debt capacity ($)	$334 million	$514 million

The decrease in QLDC's debt to revenue ratio from 159.6% to 8.2% without three waters assets would create opportunities to leverage the increased borrowing capacity if it so desires. However, the extent to which this occurs, or does not, will be the result of a political decision-making process that is difficult to predict.

We have not attempted to predict QLDC's debt (without three waters) beyond 2024 as the impacts on Council's revenue and balance sheet would be of such a magnitude that they are likely to have a substantial impact on Council's decision-making processes.

Stranded overheads

$71 stranded overhead per property in 2020

The delivery of three waters services in QLDC is heavily supported by other areas of the business including the wider Property and Infrastructure team, and most corporate support functions. Most of this cost is charged to three waters activities through an allocation of corporate overhead, that uses an allocation system which broadly reflects the use of those services by the three waters team.

In many cases these costs reflect the cost of staff time (for example, it may include a portion of the employment costs for an accounts payable officer). Where this is the case, it is unlikely that the removal of three waters services will result in a reduction in these employment costs (as the role is still required within Council). These costs are therefore considered "stranded" as they remain with Council despite the loss of the activity which funds them.

Our estimate of the amount of corporate overhead charge that would be stranded in QLDC is between $1.6 – 2.1 million. This reflects information provided in the RFI but takes into account potential reductions in FTEs for some service areas, a reduction in leased office space, and a reduction in employment costs for staff whose time is unlikely to be able to be fully charged to projects. QLDC is a high growth council, which has in the past resulted in significant growth in the size and scale of the organisation. We would anticipate that any stranded overhead that does remain in Council would likely reduce over time, as the additional capacity remaining in Council is refocused to other activities.

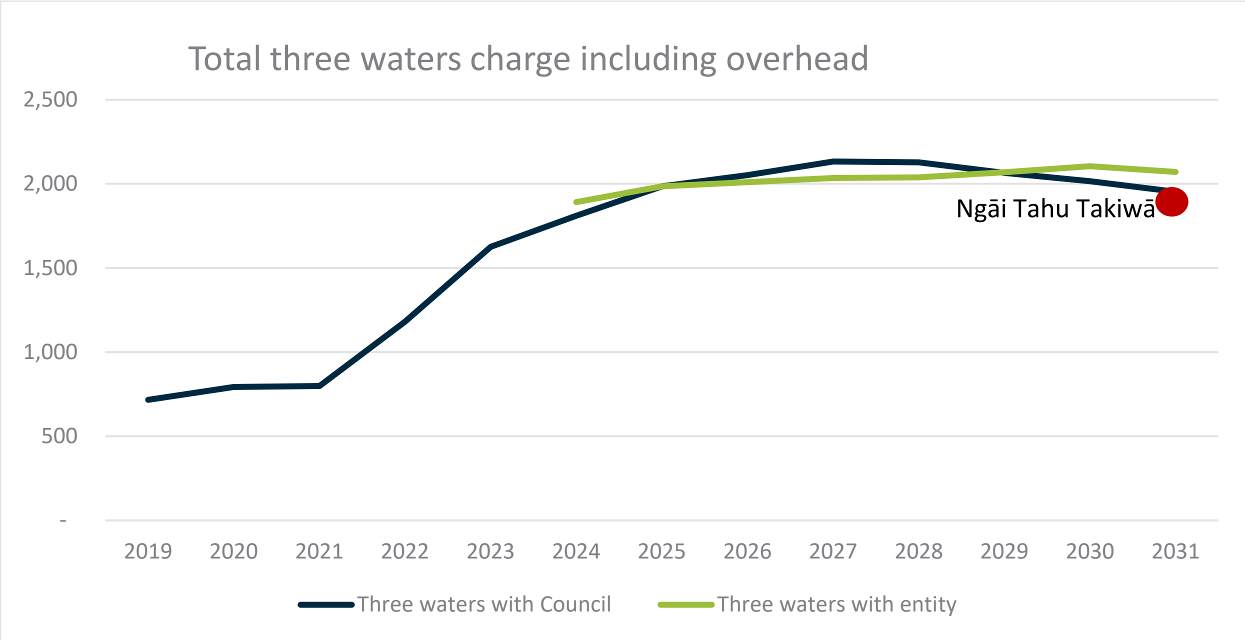
The stranded overhead equates to around $71 per rateable property in QLDC in 2020.

Total cost impacts for ratepayers

If three waters assets were transferred out of Council, the net impact on ratepayers would be the combined cost of the three waters charges imposed by the new entity and the additional component of QLDC rates that is required to fund the stranded overhead of Council.

To identify the potential impact on ratepayer from the transfer of three waters assets to a new entity, we have therefore compared the combined entity charge with the average household charge that would otherwise be paid if QLDC retained responsibility for the delivery of three waters services.

Figure 11 Comparison of total household cost for three waters services council versus three waters entity



This comparison shows that when the cost of stranded overheads is considered and passed on to ratepayers, the overall cost of three waters services for QLDC ratepayers will be:

- Between $1,771 and $1,971 by 2031 (or between 9% cheaper – 1% more expensive) with a Ngāi Tahu Takiwā entity.
- around 6% more expensive by 2031 with a three waters entity, although there will be periods where a three waters entity may be cheaper.

Conclusions

Due to increasing standards and requirements a change to the way three waters services are delivered is inevitable. There are good strategic reasons for a change in the service delivery model.

While for QLDC there is no clear cut answer, in our view there are only two viable options:

- Opt in to reform; or
- Opt out of reform entirely and continue with a Council service delivery model.

On balance, our recommendation is for QLDC to opt into the reform process

The option to opt out of reform, but to pursue voluntary change into an Otago Southland three waters entity would seem ambitious and, in our view, has a very low chance of success.

That option requires a coordinated and consistent approach across all of the councils in Otago and Southland. All eight councils in the two regions must opt out of the Government's reform process but have a desire to aggregate three waters services at a more local level. They must then go through a detailed entity design process, fund the transition and entity design process themselves, consult with their communities on the same proposals and ultimately agree. There are limited examples of this being successful in New Zealand and none where asset owning has been part of the model.

Key considerations for the remaining two options are:

The case for opting in

- The delivery of three waters services will benefit from increased capability and capacity of three waters staff and increased organisational resilience to changes in staffing levels. However, QLDC may experience increased challenges to recruit engineering staff and asset managers into its remaining roles, due to increased competition with large three waters entities.
- A three waters entity would have a skills based board with a single focus on three waters issues and would have an enhanced ability to embed the principles of Te Tiriti o Waitangi and Te Ao Māori within its governance framework. However, there may be a loss of local representation, which would be worse with an entity covering the South Island or the Ngāi Tahu Takiwā.
- A three waters entity would have greater financial and technical resources to be able to address compliance issues and make the investment required to comply with new environmental, health, and cultural standards. A three waters entity would also assume most of the risk associated with rural water supplies and private water schemes.
- Delivering the required level of future investment in infrastructure will be a significant challenge for Council as it will require an increase in capital works delivery of over 290% and for that to be sustained through to 2031. However, delivery of the full capital works programme at an Otago Southland level, or even with a larger entity would also appear challenging.

- If QLDC opts out while other councils opt in, the ability to attract staff or deliver its capital works programme will be further diminished as it will be a small organisation competing with much larger entities. This may also impact on the cost of completing work in QLDC.

The case for opting out

- A three waters entity would not have the borrowing capacity to be able to deliver the full capital works programme for the areas that it covers without suffering a credit rating downgrade and higher costs of borrowing. In contrast, QLDC is currently projected to have sufficient financial headroom to be able to fund its forecast capital works programme.
- Average household charges for three waters services are lower under a Ngāi Tahu Takiwā water entity than council delivery. However when stranded costs are taken into account QLDC ratepayers are likely to face similar household charges (between 9% cheaper to 1% more expensive) under an entity covering the Ngāi Tahu Takiwā as they are under a council service delivery model. On there own, these savings may not be sufficient to make a compelling case to change.
- Growth is critical for Queenstown and any failure to install the growth infrastructure by the planned date may impact the development of new growth cells or have broader financial ramifications for the developer, the community and Council. The challenges of coordinating this investment may be larger when dealing with an entity covering a larger area such as the entire Ngāi Tahu Takiwā. Although we note that the addition of other high growth councils into a larger entity may increase the entity's capability to address the specific issues relating to growth.

There is no burning platform, at the local level, for QLDC to change. However, Council is making its opt out/opt in decision within the context that every other council in New Zealand is also making that decision. In many cases there is a strong and very strong case for change. The ratepayers of six of the eight councils in Otago Southland would, in our view, have lower water charges under a regional water entity, but this reduces to five when stranded costs are taken into account. The ratepayers of all eight would be better off in a Ngāi Tahu Takiwā.

There are also many good strategic benefits of a regional water entity and many risks Council would be faced with if it opted out and continued as a three waters service provider. These risks would be significantly increased if the other councils in Otago Southland and the South Island more generally opt into the reforms.

Preparing for change

Challenges and opportunities

The transfer of three waters assets to a new three waters entity in Otago-Southland (or a larger geographical region to be determined) will not be without challenge for QLDC, or any of the other councils. Many of these challenges will be consistent across all of the existing councils, and these are outlined in the section on "common issues". These issues primarily relate to the need to establish new processes and relationships to ensure investment planning and Council's regulatory functions continue to operate smoothly.

QLDC also has some unique challenges which will likely need to be addressed prior to any transition. These primarily relate to growth, and the currently operating model for the delivery of infrastructure.

Growth

Growth is the primary driver for investment in the Queenstown area and creates unique challenges for the district. Dealing with the scale of growth faced by the district has been a focus area for QLDC for a number of years now, and QLDC has now developed the processes and expertise to help facilitate this growth.

The transfer of three waters service delivery to a new entity may create challenges in ensuring that infrastructure is developed in the right place and right time and is likely to create additional touch points for developers which may mean development approval is delayed. The transfer of staff from Council to a new three waters entity may assist with this, however the entity must ensure that it continues to provide an appropriate level of focus on addressing growth issues in the Queenstown region particularly.

The processes for reviewing development plans, granting resource consent and signing off the plans for vested assets are highlighted as common issues in this report, but are particularly pertinent for QLDC. Currently, where a developer intended on vesting water infrastructure in Council upon the completion of a new development, Council must review and approve the infrastructure to ensure that it is fit for purpose (in terms of material, size, etc).

Structure

The property and infrastructure team is currently structured to provide services across all types of infrastructure and is structured by function rather than activity. That is, QLDC do not typically operate separate groups or teams focussed on water or roads, but rather the focus is on capital projects, operations and maintenance, or programme/project management.

This ensures a diversity of work to keep staff engaged, a consistent approach is taken to all capital projects and infrastructure operations, and that there is clear visibility over all infrastructure projects.

Removal of three waters staff from this structure is likely to create some challenges due to the large number of staff that have partial roles in three waters. The duties carried out by those staff members will still need to be carried out in a new three waters entity, however in some cases it may be more appropriate for the resource to remain employed in Council than for it to transfer. A detailed process will need to be undertaken to identify the duties of staff that are partially involved in three waters and identify which roles would transfer, which are likely to remain, and where job descriptions may need to alter.

Additionally, further consideration will need to be given to whether the existing operating structure remains efficient and effective with the removal of three waters. For clarity, we have no opinion on the structure or its appropriateness in a post-three waters environment, and simply note the need to review it.

Common themes

Through our various onsite visits to councils to identify the impacts of water reform on each organisation, we have identified the emergence of a number of consistent themes that apply to all councils (although some may apply to QLDC more than others) which are listed herein.

Typically these are issues which we consider can, and should, be addressed as part of any transition process, but which are sufficiently large to warrant specific discussion herein.

Ensuring investment in small communities is maintained

One of the key concerns that emerged through our early conversations with stakeholders, and our subsequent site visits to councils in the Otago and Southland regions was the need to ensure that small communities continue to see a fair share of investment. This concern is particularly pertinent when considering an entity that encompasses a larger geographical area than the Otago and Southland regions on their own.

This is a key entity design consideration that we believe should be addressed before a council agrees on whether or not it wishes to opt into the wider reform. At the time of writing, the Government has not made it clear what specific mechanisms will be introduced to ensure that this occurs, however we understand that:

- Proposals include the establishment of a Governor Representative Group, which will include representatives from Iwi and Councils and will influence the overall governance of the entity and will set strategic and performance objectives for the entity.
- New planning regulations may be introduced to require a level of coordination between councils and the proposed entities in the planning process. These may address issues regarding the timing and quantum of investment in growth infrastructure, though it is unclear how these may relate to renewal or level of service investment.

Councils may wish to further investigate other potential mechanisms to ensure small communities get a fair share of investment. This may include the development of enforceable KPIs or investment quotas for regions, although care needs to be taken to ensure that the new entity is still empowered to make its own investment decisions and obtain efficiencies.

Operating model considerations

The operating model of any three waters entities established through the Government's reform programme will be determined by the Government after consultation with the sector, and accordingly, we have not suggested or proposed an operating model here. However, in engaging with the Government through this process, we consider it important that Council considers the following key features of any such proposed model.

- The governance structure and the mechanisms in place to ensure that councils have some say in the management and governance of the entity, and that planning and investment decisions are coordinated.

- The mechanisms in place to ensure investment is fairly distributed between small and large communities.
- How the entity may ensure that expertise remains local, whether through flexible workplaces, or district offices.
- How relationships between councils will be established to ensure that there is open sharing of information and to encourage collaboration and coordination of activities and investment.

It is clear from our discussions with councils in the Otago and Southland regions, as well as from the information released from the Government to date, that in addition to three waters technical expertise, a new three waters entity will need to establish functions or roles relating to:

- District and spatial planning to the extent that the new entity will most likely be involved in spatial planning within the regions in which it operates.
- Consents to the extent that the new entity would likely need to be involved in the process for issuing and granting resource and building consents, particularly in the case of residential development and connection to infrastructure, development agreements, and the potential vesting of assets.
- Council relationship managers or partners to ensure coordinated responses and ongoing working relationships are maintained.
- Customer services.
- Human resources.
- Property and fleet management.
- Legal and regulatory roles.
- Finance and business reporting.
- Health and safety and risk management.
- Communications, engagement, and marketing.
- OIA/LGOIMA responses.

Importantly, from our onsite interviews to date, we consider that it is unlikely that many of the roles discussed above will be able to be filled by existing council resources (that is they are predominantly new, rather than transferred, roles). However, the process for transferring the three waters service delivery functions, and everything that goes with that, will likely be protracted and will need to be carefully managed.

Competing with large water entities for resources

The Otago-Southland region, and New Zealand at large, is currently facing a shortage of skilled engineers, with most councils in the two regions having to offer a premium above market rates to attract skilled staff. The Otago-Southland regions currently have approximately 12.8% of positions in three waters vacant.

While most engineers involved in three waters will transfer to a new entity, councils will still require skilled engineers to deliver roading, waste, and other major capital works. In many cases, engineers in councils are involved in many different projects and activities. If councils are no longer responsible for three waters, these staff may no longer find their roles are appealing or challenging.

Large water entities may be able to offer more career opportunities, choices in work location, and more challenges for engineers. This additional competition may make recruiting and retaining skilled engineering staff harder for councils than it already is. However, larger entities are also more likely to be able to develop expertise within the sector, which may ease the longer term skills deficit.

Systems and processes that need replicating

The delivery of three waters services typically supports, or is supported by, a range of Council systems and processes that are likely to need to be replicated into a new three waters entity. The processes that we have identified to date have been listed below, however it is unlikely that this list is comprehensive.

- Building and resource consent applications where it is essential to identify where underground services exist in relation to the proposed development/construction. Currently it is common for developers or builders to meet with Council staff (which may include three waters engineers) to discuss applications.
- Building and resource consent applications where the installation of infrastructure is involved and needs to be consented to by Council typically draws on expertise from the three waters staff.
- Access to GIS data and asset information held by the engineering teams/three waters engineers by other parts of Council will need to be preserved. Planning and consents typically need to access this information from time to time and it is not uncommon for these teams to have direct access to this information.
- Customer services needs to be managed, including consideration of whether there can/should be a single point of contact for a ratepayer, and if not the development of a clear information campaign.
- Processes for obtaining LIM and PIM reports from councils and three waters entities will need to be developed, as councils may no longer hold up to date information (or institutional knowledge) about properties or may not have the expertise to be able to assess that information.
- If stormwater assets are transferred, there will be a need to develop relationships and processes for the roading and urban planning teams to work with the three waters entity in stormwater design and hydraulic modelling. These may also require the inclusion of other areas of Council such as parks and open spaces.

Approval for vested assets

When developers install infrastructure to service a new development area they will typically "vest" that infrastructure in the council once title has been granted for the development (and the development is complete).

As part of this process, resource consent applications, and some building consent applications require the proposed infrastructure to reviewed by Council's engineers to receive "engineering approval". This is a formal sign off to certify that the proposed infrastructure is of an appropriate size and standard to be connected to Council's network and to service the proposed development.

Once the infrastructure has been installed (and during its installation) councils will also typically carry out inspections to ensure that the infrastructure is consistent with the engineering approvals that were granted. These inspections may be carried out by at the same time, and by the same people, that are undertaking inspections of other infrastructure in the development.

In the event that a new water entity take ownership of any vested three waters assets, processes will need to be developed to transfer the responsibility to grant engineering approval for three waters asset to the new water entity. This may result in delays to the granting of resource consents or additional costs for developers.

Mixed use or strategic property

If three waters assets are transferred to a new service delivery entity, one of the key pieces of work that will need to occur as part of the transition will be the identification of which assets should transfer to the entity. Any such transfer will clearly involve the underground pipe network and above ground treatment assets that can be easily identified as being critical to the provision of three waters services.

However, in many cases councils may have assets that are designated as being used for three waters activities, but which have either a mixed use, or have little to no use in the delivery of three waters services. Such assets may include reserve land used for water catchment, or land upon which treatment plants (current, decommissioned, or earmarked for the future) are sited.

There may be strategic reasons why councils may wish to retain some of these assets even when the three waters activity is transferred. In some cases this may mean that land may need to be formally subdivided into separate titles or redesignated for an alternative use. In addition, councils may need to seek legal advice regarding the future use of land acquired under the Public Works Act or bequeathed.

Civil defence and emergency management

Councils are responsible for coordinating civil defence responses within their districts and communities. Engineers are typically heavily involved in the civil defence and emergency management teams within a council and are highly valued for their knowledge of the networks and potential areas of risk.

If the staff that are responsible for the delivery of three waters services are transferred to a new three waters entity, it will be essential that a level of expertise remains local to each district to maintain emergency response capability. While civil defence operates in a consistent manner nationally, and uses a common response framework, local knowledge of networks is critical in ensuring an efficient and effective response.

Joint training between the three waters entity and councils should also occur to facilitate closer relationships and a more coordinated response. We understand that territorial authorities already undertake joint regional civil defence training which includes regional councils and would anticipate that three waters entities would take part in this.

Council as a water user

In many cases councils can be high users of water in their districts. Councils often use large volumes of water to fill and operate swimming pools, or to irrigate sports fields or public parks. While some councils charge themselves for the consumption of this water (effectively through an internal transfer from a parks budget to a water budget) this charging usually involves no actual transfer of cash out of the council.

When a new water entity is established, councils will have to pay the new three waters entity for any water that they consume. This cost, particularly for the irrigation of fields and reserves, could be significant. Councils may therefore wish to consider other options for the supply of water to their parks and reserves (such as the installation of private bores).

Transition planning

We anticipate that the transition process to the Government proposed option will be through a centrally lead and prescribed process. We would expect that it would require resourcing from the councils and contain workstreams that are likely to include the following:

- Transition management
- Assets & Infrastructure
- Service Delivery
- Communications & Engagement
- Iwi/Māori
- Governance
- ICT
- Finance
- People & capability

There are however a number of actions that it would be useful to undertake in the event that Council (and its regional partners) wishes to "opt in" to the reform programme, or alternatively to "opt out" but move into an Otago-Southland entity that would benefit Council regardless of the Government programme. These include:

- Complete a strategic review of property held by the three waters team to identify property that should remain with the organisation and property that could transfer to a new entity. This may include subdivision of parcels of land.
- A review of long term plans to reprioritise projects both within and outside of the three waters space and consideration of whether any projects should be advanced or delayed to ensure that they get completed by a new entity.
- Developing processes and systems that will be needed to enable effective working relationships with a new water entity.
- Managing communications with staff and ensuring that staff have a clear understanding of the transition process and what it may mean for them.
- Consideration of short and long term resourcing, including a post three waters operating structure, and the resourcing of three waters during the transition to a new entity.
- Preparing an engagement and communications plan to communicate the impact of the change to the community.

Appendix A Sensitivity testing

Our financial modelling relies on a number of different assumptions which may alter the comparative performance of each entity. While we believe that the assumptions used are appropriate, this appendix examines the impact of these assumptions on the debt and household charge profiles for both QLDC and the three waters entity.

Asset values

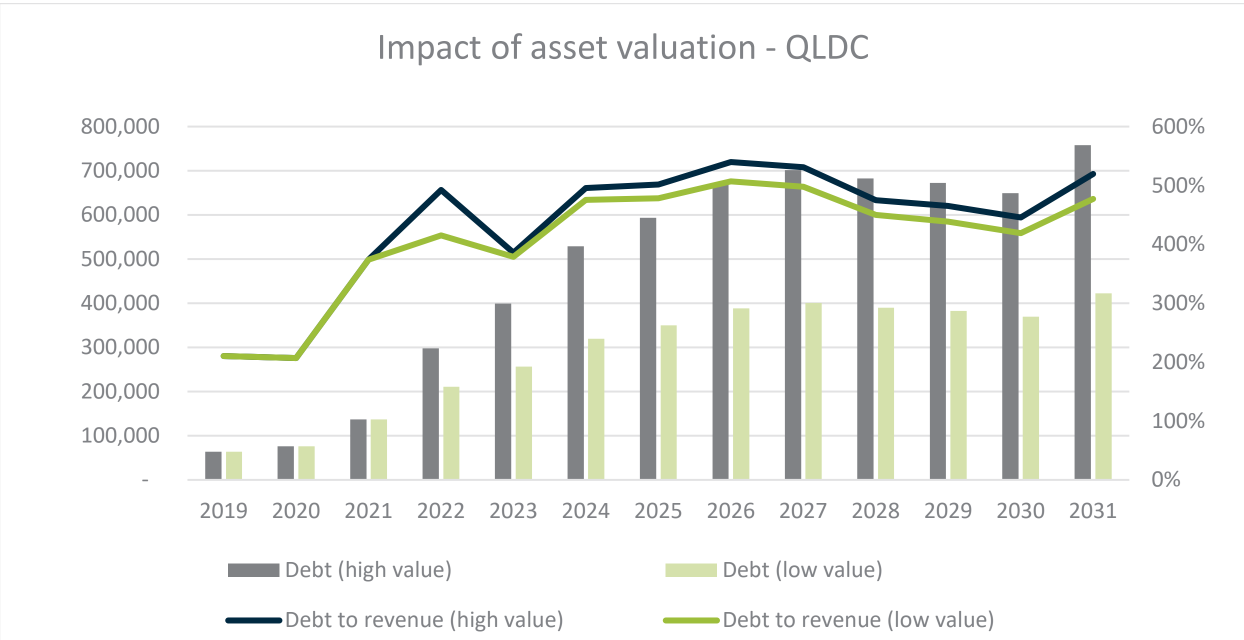
Significant impact

Our modelling adopts asset values at the mid-point of the valuation scale provided in completed RFIs. Our decision to use the high end valuations is based on:

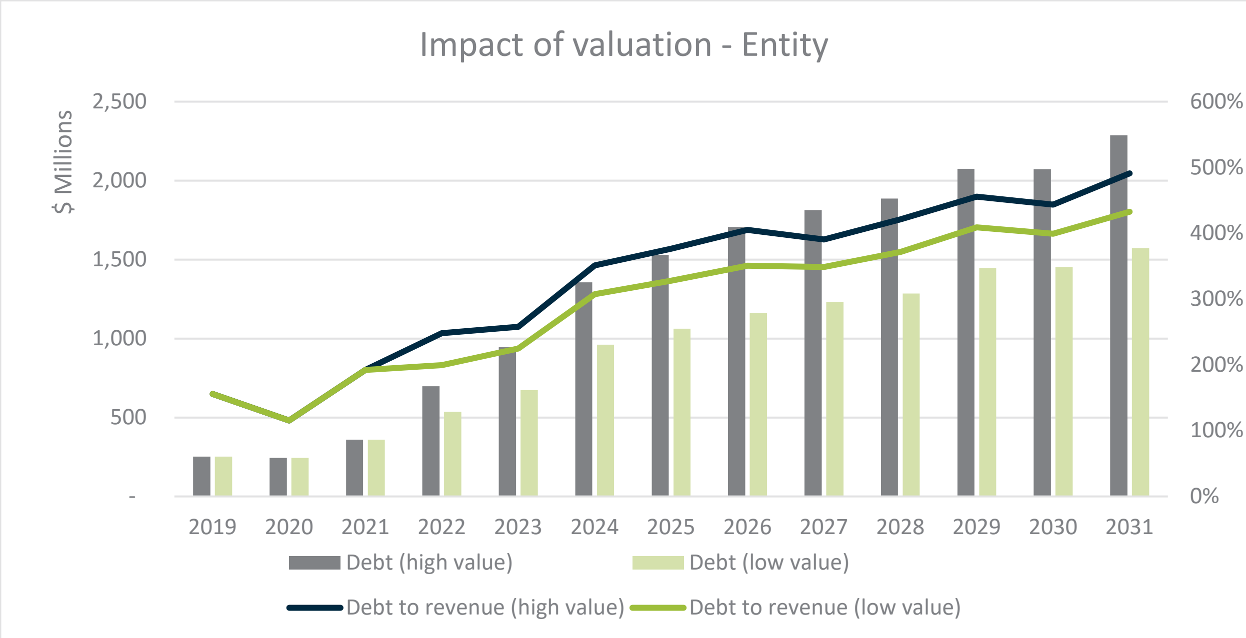
- Comments in the WICS report that New Zealand's assets are typically under-valued by international standards.
- Corroborating evidence based on the difference in Dunedin's unit rates for asset replacement values when compared to unit rates for the same assets elsewhere in Otago-Southland. Dunedin's asset valuation is the most recent in the group, and Dunedin City Council have suggested a high level of confidence in their asset valuations through the RFI process.

The sensitivity analysis compares the outcomes if valuations at the low end of the scale are used.

As shown in the figure below, QLDC's forecast three waters debt would range between $422 million to $758 million, and its three waters debt to revenue ratio would range between 477% to 520% if its asset valuations were incorrect. Under this scenario debt would still be a significant constraint for QLDC.

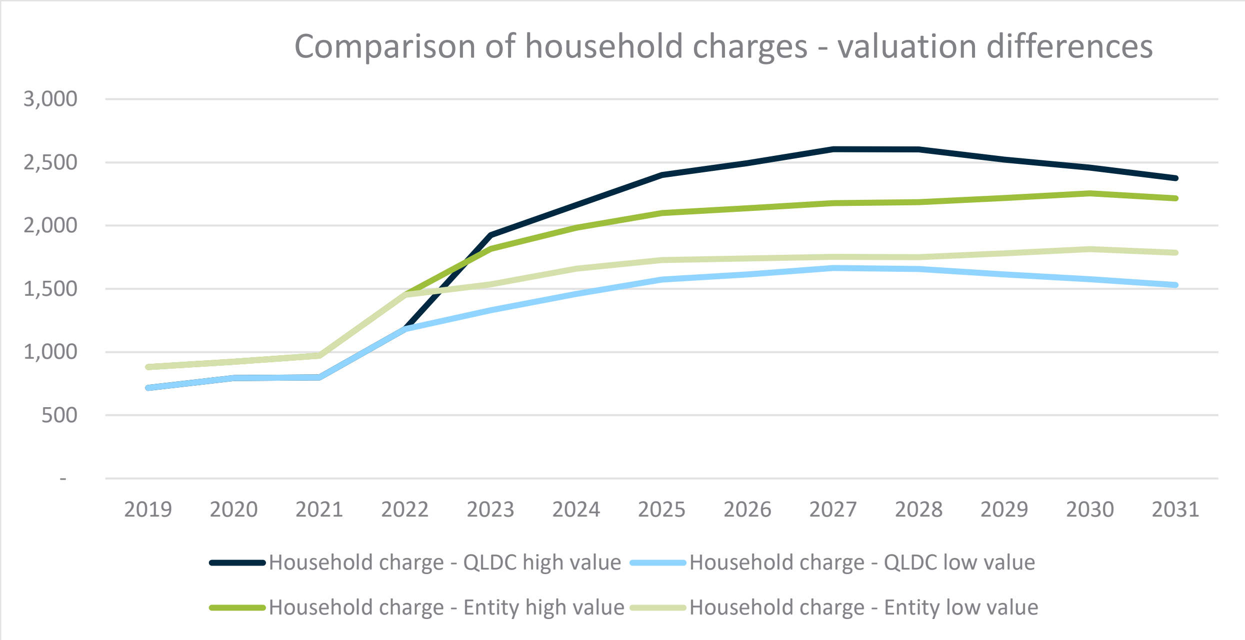


Similarly, a three waters entity's debt would fall between $1.57 billion and $2.3 billion, and its debt to revenue ratio between 491% to 433% if assets across the Otago and Southland councils should be more correctly valued at the low end of the scale. Debt still remains a constraint for a three waters entity under this scenario, with the debt to revenue ratio exceeding even the Moody's debt to revenue requirement of 430% (which would result in a credit downgrade from the current LGFA credit rating).



The difference in valuation used also has a significant impact on whether the three waters entity presents as the most affordable option or not for Queenstown. Where a low valuation is adopted, the three waters entity presents as being potentially less affordable for QLDC ratepayers than QLDC continuing to provide three waters services itself.

The difference in valuation also has a much smaller impact (in both real dollars and percentage terms) on the average household rates at the entity level, showing that uncertainty over future costs has a smaller impact on the outcome under an aggregated delivery model than it does when assets are retained by Council.



Renewals

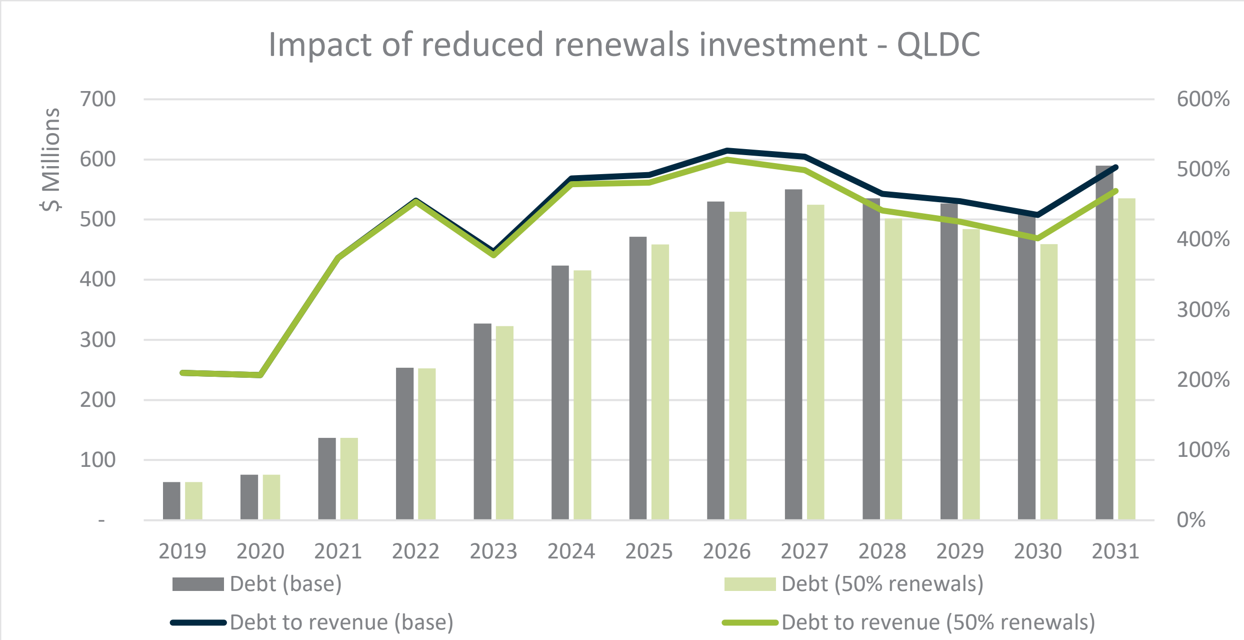
Minor impact

Our modelling assumes that a three waters entity and each council will invest in renewals at the higher of:

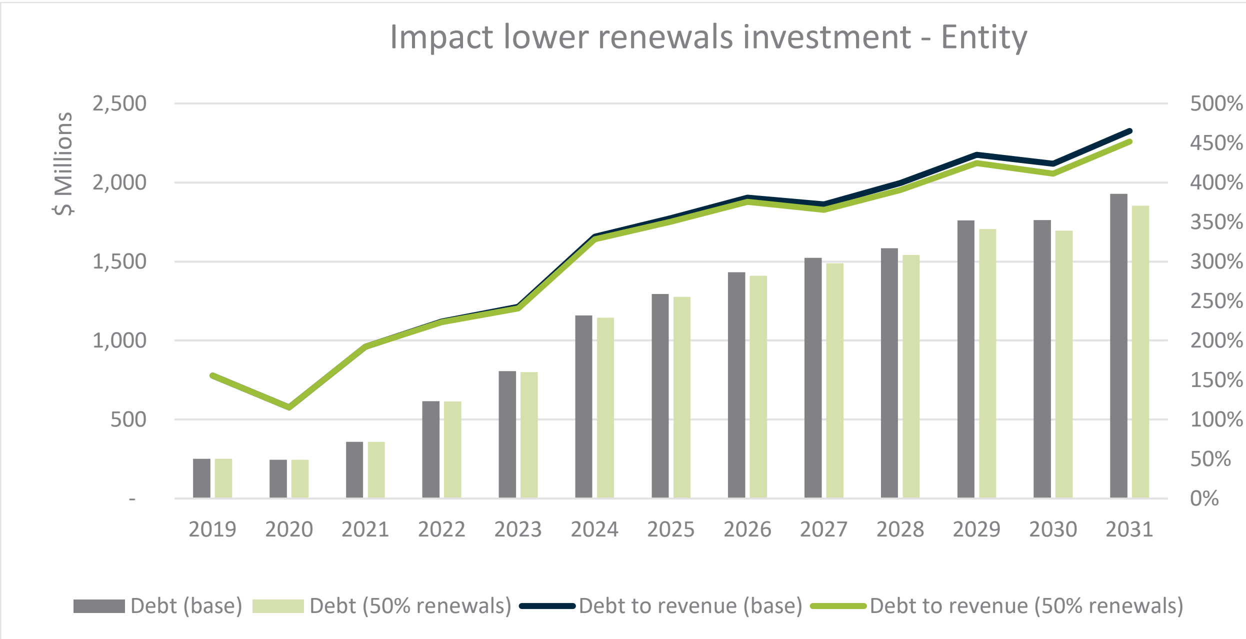
- 80% of their annual depreciation cost.
- Their forecast renewals per completed RFIs.
- Our predicted renewals requirement based on remaining useful life of pipe assets.

QLDC is at a different stage of asset maturity to other councils in the region, and accordingly, may not need to invest as much as 80% of its annual depreciation in renewals at this time. We have therefore also modelled the impact of reducing annual renewals spend to the higher of 50% of annual depreciation or the other two factors listed above, for all councils. Excess depreciation funding is applied toward debt reduction.

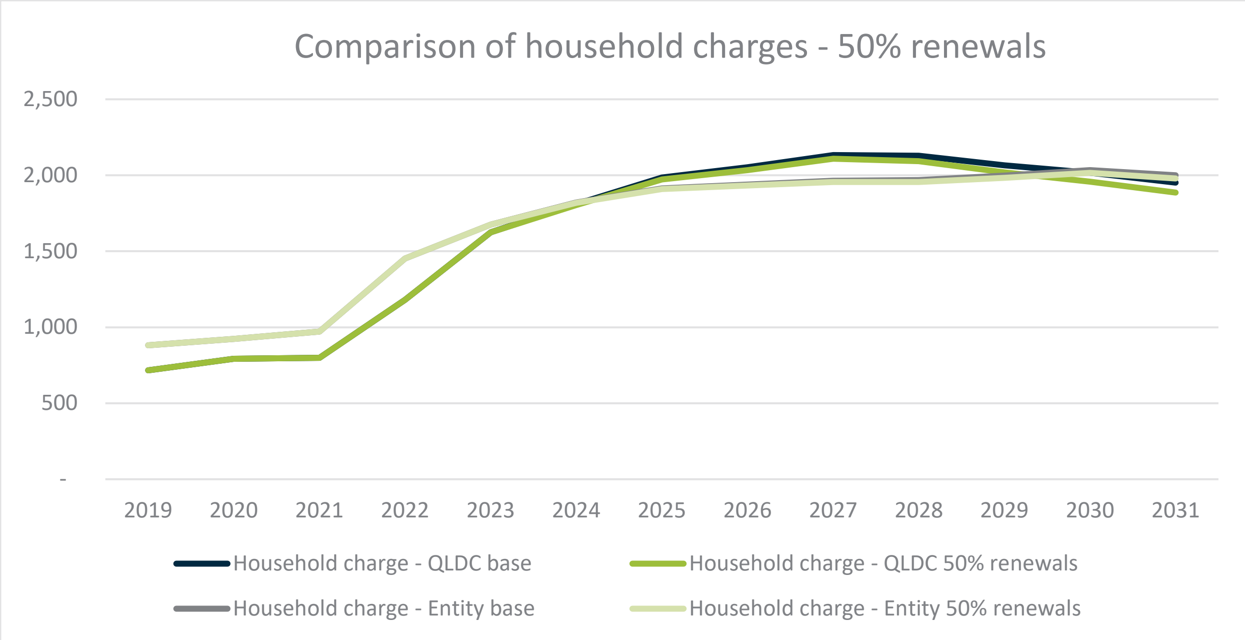
As shown in the figure below, QLDC's forecast three waters debt would decrease from $589 million to $535 million, and its three waters debt to revenue ratio would drop from 503% to 469% if its renewals investment was reduced to only 50% of depreciation. This impact is clearly minor for QLDC.



Similarly, the impact for a three waters entity is minor with debt dropping from $1.9 billion to $1.8 billion, and its debt to revenue ratio from 465% to 452%.



The difference in renewals investment also has an insignificant impact on whether the three waters entity presents as the most affordable option or not for Queenstown. In both the base case and the reduced renewals scenario, QLDC's household charges are lower than those provided by an entity (under either scenario).



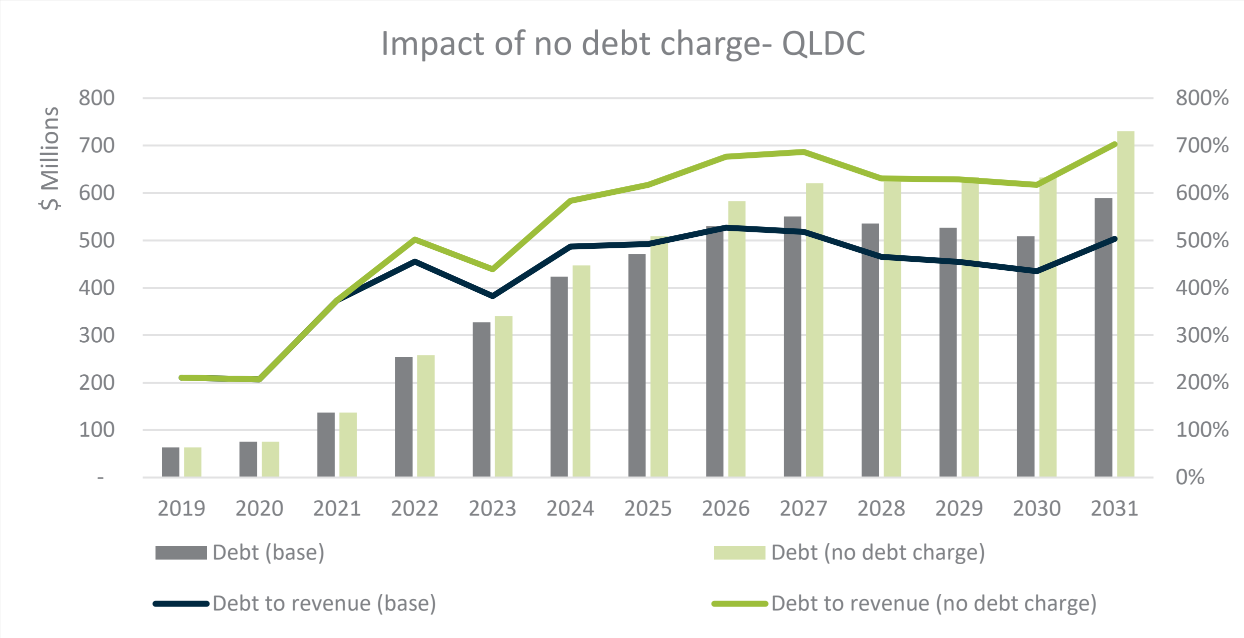
Debt repayment

Moderate impact

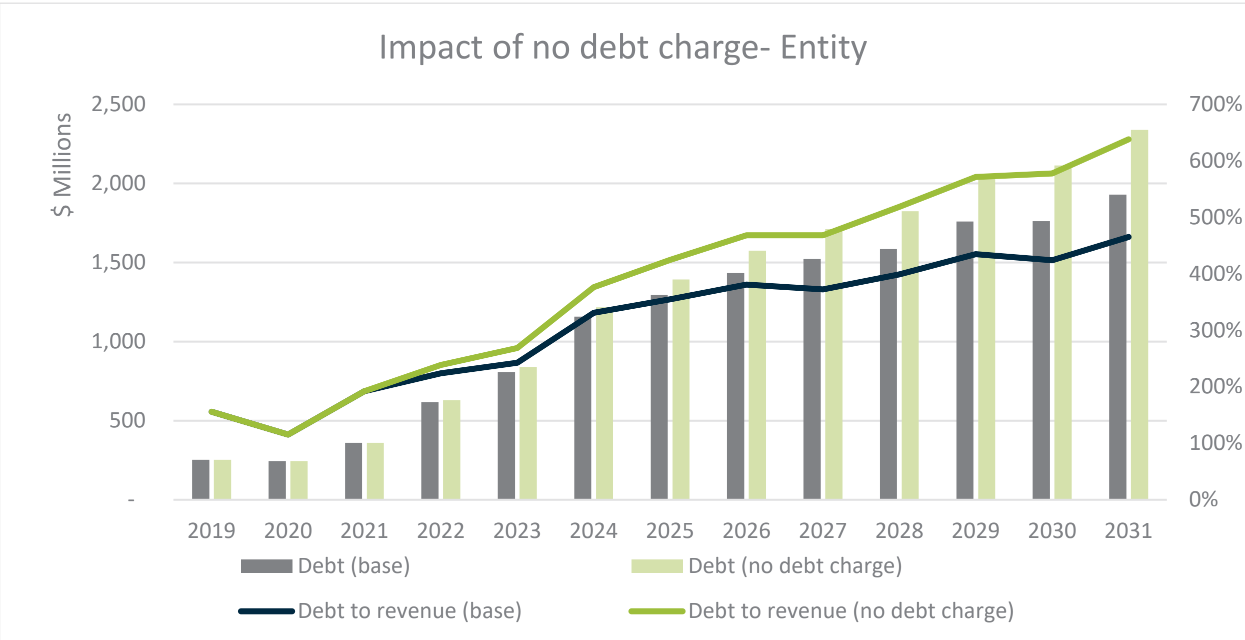
Our modelling includes an annual recovery from customers for the repayment of debt over a 30 year term. This is unusual in local government, particularly when depreciation is fully funded, however it has been adopted to try and ensure that a three waters entity (or indeed a council) continues to maintain a certain level of borrowing capacity.

This scenario tests the impacts on debt and household charges if the debt repayment charge is removed.

As shown in the figure below, QLDC's forecast three waters debt would increase from $589 million to $730 million, and its three waters debt to revenue ratio would rise from 503% to 703% if it did not introduce a debt repayment charge. This would create additional pressure on investment, and likely result in council breaching the LGFA debt to revenue covenants.

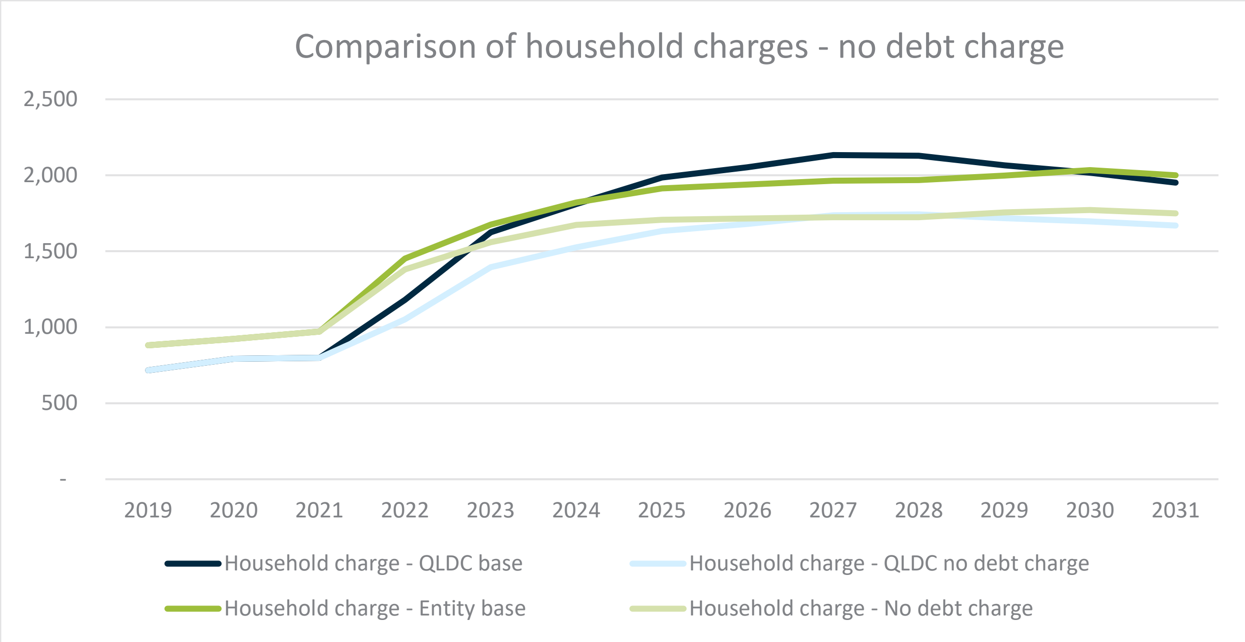


Similarly, a three waters entity's debt would increase from $1.9 billion to $2.3 billion, and its debt to revenue ratio from 465% to 638%. While our base case shows debt being a major constraint on the ability for a three waters entity to invest in infrastructure, without the introduction of a debt repayment charge of some description these problems would be further exaggerated.



The introduction of a debt repayment charge does have a significant impact on household three water charges. The introduction of such a charge will result in charges that are 17% higher for QLDC, or 14% higher in the three waters entity than they would otherwise be. Importantly though, over time this difference decreases as the debt repayment charge results in a reduction in interest costs.

Under all cases however, QLDC continuing to retain ownership of its three waters assets remains cheaper for ratepayers than transition to a three waters entity.



Comparison of household charges - no debt charge
2,500
2,000
1,500
1,000
500
-
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
Household charge - QLDC base
Household charge - QLDC no debt charge
Household charge - Entity base
Household charge - No debt charge

Appendix B Methodology

Review of RFIs and asset registers

As a consequence of signing the Government's Memorandum of Understanding in July 2020, all councils in the Otago and Southland regions were required to return a request for information regarding the delivery of three waters services. The completed responses were provided to the Government, and Morrison Low at the end of January 2021.

Morrison Low and WSP reviewed the content of the RFI responses to identify challenges and opportunities for service delivery in the regions.

The content of the RFIs was predominantly investment and financially driven, with additional information also provided about compliance to various regulatory standards and asset performance. Most information was quantitative in nature, with only limited qualitative data included.

Councils were asked to apply confidence grades to most of the information contained within their RFIs. These confidence grades ranged from A1 being extremely reliable, through to D5 which is effectively a guess. The level of confidence that councils expressed for different pieces of information varied widely between councils, and it was also clear that each council adopted a different approach to applying a confidence grade to information (this was an exercise in subjective judgement). Where we have relied on information from RFIs in our analysis, we have made no adjustments to reflect varying levels of confidence in the underlying data.

Asset registers were reviewed, standardised and cleansed to reduce errors. Data from asset registers was analysed and used on various reports and queries of the combined asset register database.

On site interviews

Morrison Low conducted on site interviews at each council in the Otago and Southland regions during the course of our three waters review. On site interviews were conducted at QLDC on 4 March 2021, with additional follow up video conferences taking place in April 2021. During the onsite visits and subsequent video-conferences, we interviewed:

- Mike Theelan (Chief Executive Officer)
- Stewart Burns (General Manager Finance, Legal and Regulatory Services)
- Meghan Pagey (Human Resource Manager) and Kieran (Human Resource Officer)
- Simon Mason (Infrastructure Operations Manager) and Jen McGirr (Environmental Manager)
- Meghan Miller (GM Corporate Services), Naell Crosby-Roe (Communications and Engagement Manager) and Angela Taylor (Manager Customer Services)
- Ulrich Glasner (Chief Engineer) and Simon Leary (Engineering Manager and 2IC to Chief Engineer)
- Steve Batstone (Strategy and Asset Planning Manager), Mark Baker (3 Waters Asset Manager) and Jesse Taylor (Infrastructure Business Advisor)
- Ryan Clements (Chief Information Officer)
- Tony Avery (GM Planning and Development) and Dave Wallace

During the onsite interviews we sought to understand what the qualitative impacts of three waters reform would be on Council. This included understanding where three waters roles provided services to, or received services from, other parts of the organisation, and what the major challenges and opportunities are for the district. We also sought to identify the processes and interaction points that may need to be replicated in the event that three waters services are provided by an aggregated delivery model.

Financial modelling

Our modelling has used the mid-point between the "low" and "high" estimates for asset replacement cost that were included in each council's RFI responses. This is consistent with commentary from the Water Industry Commission of Scotland, who in their report for the New Zealand Government (the WICS report) [13], indicated that they believed assets in New Zealand to be significantly under-valued.

Our financial model predicts the potential future household charge based on the total funding requirements under our standard modelling assumptions, and assumes that:

- The proportion of revenue collected from households, commercial businesses, fees and charges, or other revenue remains the same throughout the modelling period (i.e. if 75% of total water revenue is collected from households in 2019, then it is assumed that 75% of water revenue will be collected from households in 2031 as well).
- Any new connections to the water network will also connect to the stormwater and wastewater networks (or at least pay the same charge as a connected property).

Assumptions

- Asset values - we have applied the high-end replacement costs for asset values from each council's completed RFI. This reflects an uplift in values compared to those used in annual reports or asset management plans. This uplift has also been applied to the estimated cost of future capital expenditure, and depreciation charges.
- Savings – operating and capital savings derived by the entity are based on the WICS report which estimates potential capital expenditure efficiencies of 45% after 30 years, and between 10 – 40% operating efficiencies in 10 years (we use 20% over 10 years). This has been turned into annualised capital and operating efficiencies of 1.25% and 1.84% respectively.
- Compliance costs – we have included a 16% uplift in operating expenditure for the delivery of drinking water based on our previous experience and analysis of post-havelock north incident costs within Hawke's Bay.
- Renewals – we have assumed that all councils will have a renewals spend that is the greater of:
  - The estimated renewals spend from completed RFIs.
  - Our estimated required renewals based on remaining useful life of pipes.
  - 80% of annual depreciation expense.

  This helps provide a like for like comparison across options and between Councils, and also as we expect that an economic regulator would bring greater focus to areas such as depreciation and renewal expenditure.

[13] Water Industry Commission of Scotland, *Economic analysis of water services aggregation: Report prepared for the Department of Internal Affairs*. Retrieved from https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/Economic-analysis-of-water-services-aggregation-Stage-One-Report.pdf on 6 April 2021

- Depreciation – depreciation is calculated based on the average depreciation rate used across the councils of the Otago and Southland regions for each water type. Depreciation is fully funded in our model in order to provide a like for like comparison across options and between Councils, and also as we expect that an economic regulator would bring greater focus to areas such as depreciation and renewal expenditure.
- Timing – we have assumed that a new entity would take over operations from 1 July 2024. We have assumed that compliance upgrades will not commence before the earlier of:
  - 2024
  - Two years prior to the expiration of the resource consent for the underlying plant.
  - 2031
- Interest – we have assumed an interest rate of 3% in our modelling.
- Debt repayment – we have assumed that an additional charge will be levied for the repayment of debt, as the entities (or indeed councils) would otherwise reach debt limits rapidly. We have assumed that this charge is based on a 30 year repayment period for debt.
- Stranded costs have been estimated using Council's disclosed overheads charges to three waters activities and are based on our high-level estimates of costs which may be released if three waters activities are removed from councils. These estimates are based on discussions with councils and do not include detailed financial analysis of overhead allocations.

Ngāi Tahu Takiwā

In comparing the future household charges for the Ngāi Tahu Takiwā against the projections for Otago and Southland it should be noted that we have not undertaken detailed modelling of the costs and benefits of either Ngāi Tahu Takiwā model:

- The projections for Ngāi Tahu Takiwā do not include additional costs for compliance with increased enforcement of drinking water standards – in Otago Southland we allowed for 16% of existing drinking water operating costs as an additional cost.
- The projections for Ngāi Tahu Takiwā also do not include additional costs for the repayment of debt over time (without which a three waters entity was constrained in its ability to invest in Otago and Southland) – household charges in Otago Southland would be $1,750 if this debt charge was not imposed.
- The projections for Ngāi Tahu Takiwā do not include organisational costs or efficiencies from three waters aggregation. In Otago Southland, the net impact of this was a 6% reduction in operating costs by 2031 when compared to simple aggregation and we would expect the savings to be greater for a Ngāi Tahu Takiwā model

Our estimate is that the net impact of the above is that a Ngāi Tahu Takiwā model will have a lower average household charge than an Otago Southland entity by approximately the amount of savings that the entity could generate due to efficiencies.

Appendix C Assumptions regarding entity design

This report has adopted the following assumptions regarding entity design. These are based on communications from central government, along with the principles and objectives for reform from the Otago and Southland councils. In addition to outlining what the assumption is, we have also described below the impact on our modelling of that assumption being wrong, and the source of the assumption.

In some cases, we would anticipate that if the proposed entity does not address the key assumption, or the underlying problem that our assumption is seeking to address, then it would not be an acceptable model for the councils.

Issue	Assumption	Source for assumption
Ownership	The entities will be publicly owned. Any ownership in the entities by councils will be unlikely to have any beneficial rights associated with it.	Government information
Governance	Entities will be governed by professional, competency based boards. Mechanisms will be put in place to ensure that Council and mana whenua have a role in governance.	Government information
Assets	The entity will be asset owning, and three waters infrastructure currently owned by councils will be transferred to the new entity.	Government information
Debt	All existing three waters related debt will be transferred to the new entities.	Morrison Low assumption based on asset transfer. Would undermine proposals if this was left out.
Stormwater	The provision of stormwater services, and associated assets (other than roads or regional council flood protection assets) will be transferred to the new entity.	Latest advice from Government, also a clear desirable outcome based on conversations with councils
Revenue and charging	A single charging mechanism/approach to be applied to all customers of the water entities (e.g. a single rate).	Implied in latest Government communications “Cost sharing across communities”

Issue	Assumption	Source for assumption
Economic regulation	An economic regulator will be established (or set up within an existing agency) to regulate the water sector and seek operating and capital investment efficiencies. Based on similar organisations in other jurisdictions and industries in NZ it will not only regulate prices, but also investment and investment planning	Implied in latest Government guidance "Economic regulation"
Investment planning	Legislative mechanisms to require entities to work with councils. Required to invest in infrastructure that supports spatial plan. Entity will be empowered to make its own decisions regarding investment for compliance or renewal of infrastructure but may have to adopt LTP investment plans (particularly for growth) on establishment.	Morrison Low assumption
Investment returns (dividends, interest, or overhead reimbursement)	We have assumed that there will be no dividends to owners, or any other return to council owners (whether to compensate for stranded overheads or otherwise).	Morrison Low assumption
Borrowing	We have assumed that the entity would not be able to obtain borrowing at a rate that is any more favourable than the current rates afforded to councils that are members of the LGFA	Morrison Low assumption (note Government correspondence assumes a more favourable rate is available).
Taxation	We have assumed that the three water entities would have the same tax status as local authorities (i.e. they would be exempt from income tax)	