Infrastructure Funding and Financing

Implementation pilots

Hamilton to Auckland Corridor

December 2020

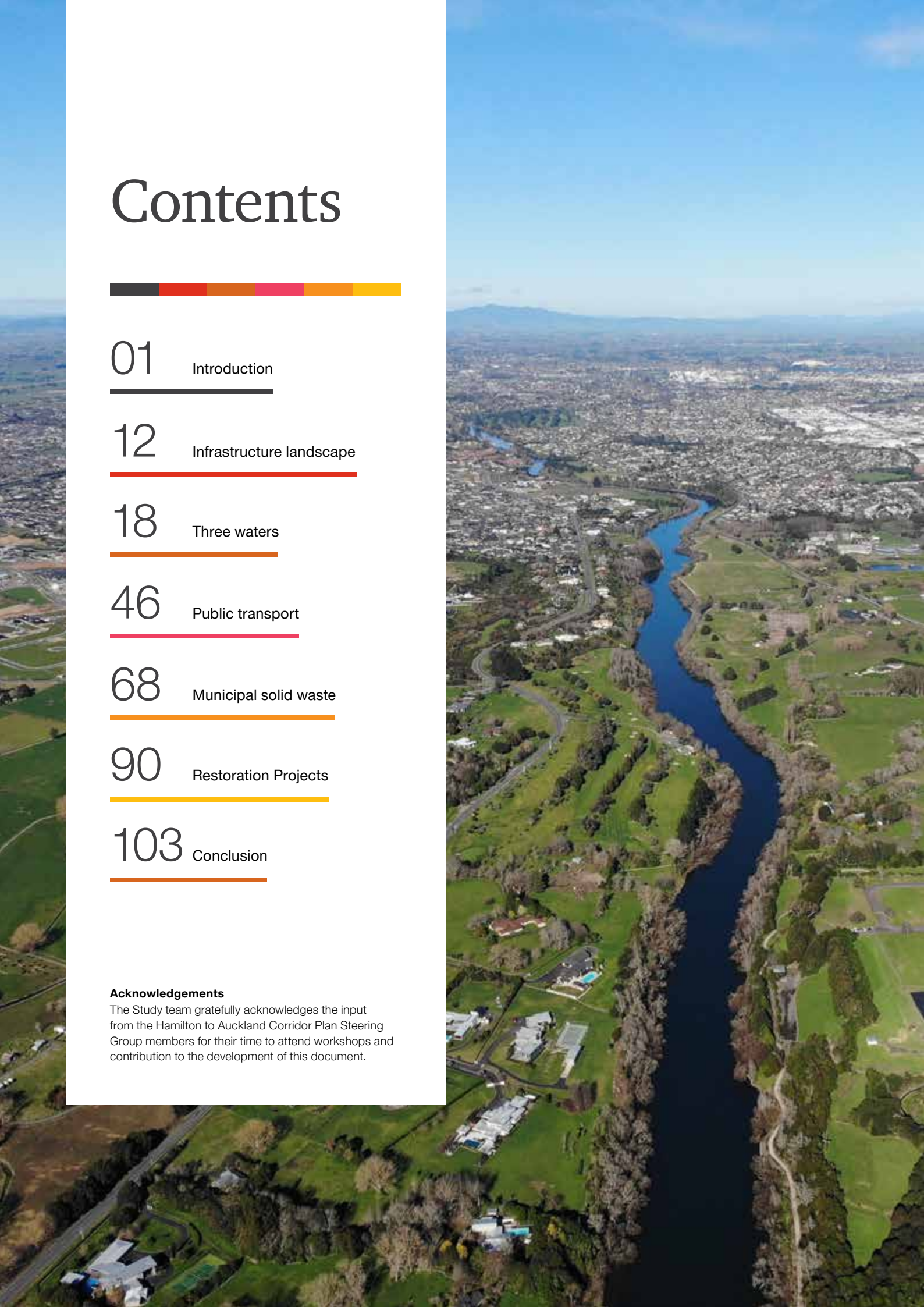
pwc

Te Tari Taiwhenua
Internal Affairs

Contents

Acknowledgements

The Study team gratefully acknowledges the input from the Hamilton to Auckland Corridor Plan Steering Group members for their time to attend workshops and contribution to the development of this document.



Introduction

This Implementation Pilots study (the Study) has been commissioned by the Department of Internal Affairs (DIA) to work through alternative funding, financing and delivery structures with local authorities, as well as iwi and central government stakeholders.

Its aim is to expand thinking on the 'toolbox' of structuring options available to local authorities in order to address the challenges that are currently preventing infrastructure from being developed.

Set between two fast growing metropolitan areas, the Hamilton to Auckland (H2A) Corridor consists of a number of communities that face significant infrastructure challenges.

For this reason it has been selected as a pilot area for the Study, with case study projects identified from within the H2A Corridor.

The selected case study projects should be viewed as hypothetical. The Study is not seeking to propose the way forward for these projects. Rather, the purpose of the Study is to outline the tools available to local authorities and demonstrate how they can be combined in innovative ways to fund, finance and deliver similar projects throughout New Zealand.

There are a wide range of ways in which the tools can be combined. The combinations selected in this Study represent just a few. Project specific attributes and stakeholder preferences will be required to develop the most appropriate way forward.

Infrastructure Funding and Financing

The Urban Growth Agenda (UGA) aims to improve housing affordability. The Infrastructure Funding and Financing (IFF) work programme – as part of the UGA – is designed to support the responsive provision of local infrastructure by overcoming local authorities' technical financing constraints to deliver local infrastructure. Overcoming these constraints will support timelier provision of housing and support competitive urban land markets.

A Bill to enable alternative financing models or Special Purpose Vehicles (SPVs) was introduced into parliament in December 2019 and enacted into legislation in August 2020. While an important new tool for local authorities, the IFF SPV model is primarily a financing tool and does not seek to address all challenges faced by the local government sector.

While considering IFF SPV models, this Study takes a broader view of new potential tools, in particular how local authorities work together to meet their infrastructure challenges.

Approach

In order to identify suitable candidate projects, a longlist of projects was generated and discussed with Study partners. The longlist was developed by drawing on Long Term Plans (LTPs) as well as projects provided directly by Study partners.

The selected projects have relevance as case studies because they:

- address sector[1] challenges experienced nationally by local authorities
- enable collaboration given the project benefits are felt regionwide
- support growth in the region
- are of a scale which would provide optionality of delivery (and procurement) models.

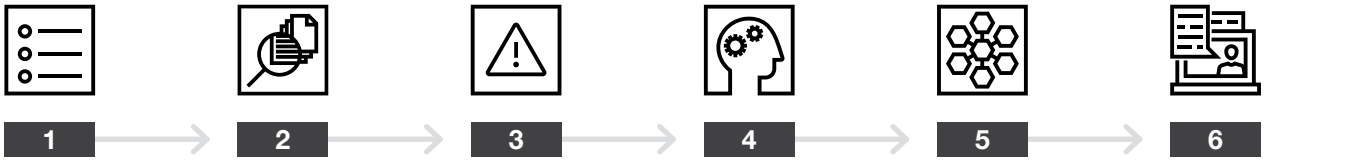
These factors form the basis of the selection criteria. Projects were selected to the extent they best meet this criteria. The selection criteria is discussed further on page 14.

Once projects were shortlisted, the next step was to identify and analyse the sector challenges faced, which prevented or slowed the progress of these projects (and other similar projects). These challenges were grouped into key areas that formed the underlying questions each model would need to address. The models were developed to demonstrate how the tools available to local authorities could be combined to address the questions identified. Where practical, different options were identified to highlight the trade-offs between models. The models do not seek to address challenges that require substantial legislative change (e.g. RMA reform).

An overview of the approach to identifying the models presented in this report is set out below.

The 'toolbox' of structuring tools available to local authorities (and considered in this Study) is set out in more detail on the following page.

Approach overview:



1 Project longlisting

Identification of a longlist of projects within the region which have regional or sub-regional qualities (the list draws on LTPs as well as other projects provided by Study partners).

2 Project selection

Selection of projects to consider as case studies for the Study based on their alignment with the selection criteria. Projects are in sectors of interest nationally. No more than one project from each sector was chosen in order to improve the applicability of the Study.

3 Identification of sector challenges

Identification and consideration of the challenges faced with delivering each infrastructure type (e.g. transport). It is important that these challenges (and how best to address them) inform the focus of each project model presented.

4 Key questions for the models to address

Translation of sector challenges and project specific issues into specific questions to be addressed by each model presented. Each sector has different challenges, and therefore also unique sets of questions to be addressed.

5 Proposed models that address these key questions

Development of project models by choosing structuring tools from the 'toolbox', that address the key questions for each project. Where practical a range of options (e.g. public and private delivery) were selected.

6 Testing of structures with study participants

Consultation with the Study partners to refine the models proposed before finalising these for consideration in this report.

1 Sector refers to the subset of infrastructure, such as three waters, transportation, solid waste and environmental restoration.

Māori engagement

This Study recognises the importance of Māori engagement and participation (as tangata whenua) in the delivery of New Zealand's infrastructure.

Due to the hypothetical nature of the case study projects, no direct Māori engagement has yet been undertaken in the development of this Study. Instead, a spectrum of options have been presented for how Māori could participate in the funding, financing and delivery structures investigated.

The spirit and intent of New Zealand's foundation document - Te Tiriti o Waitangi was to establish a partnership relationship between the Crown and Māori. In an infrastructure context, the Treaty articles and principles (outlined below) provide a framework for the important role Māori play with respect to infrastructure and its impact in our communities and the environment.

Article	Principle	Description
Article 1 **Kāwanatanga** **Governance** Infrastructure provides space for Māori to participate in decision making.	**Partnership**	Involves working together with iwi, hapū, whānau and Māori communities throughout the full project lifecycle. This could include governance and ownership roles in the delivery of projects.
	Active Protection	Acknowledges Māori rights, benefits and possession and ensures tikanga, taonga, te reo Māori are respected. This coulld include incorporating mātauranga Māori (as it relates to sustainability and environmental protection).
Article 2 **Tino Rangatiratanga** **Self-determination** Infrastructure empowers Māori aspirations and promote the right to determining Māori success.	**Tino Rangatiratanga**	Involves working with Māori to achive self-determination and mana motuhake, empahsising for Māori by Māori.
Article 3 **Ōritetanga** **Equity** Infrastructure acts to ensure Māori achieve equitable access to resources and services to improve Māori experiences and outcomes.	**Equity**	Commits to achieving equity for Māori as determined by Māori to ensure whānau live to their full potential.

Prior to taking this Study further, engagement with Māori should be sought to understand how and when they would like to be involved. Continued engagement with Māori through the business case phase of any of the case study projects is critical to the success of any of the projects.

The local authority ‘toolbox’

Alternative models for each project have been developed by drawing on the range of tools available to local authorities.

Each commercial structure has a different combination of tools to form a funding, financing and delivery model. Tools were selected based upon whether they addressed the key questions, and the extent to which the combination proposed is implementable. While a number of tools may be applicable to each structure, the Study has been designed to ensure a range of tools are represented across the different sectors.

The general tools available are set out below. When developing the models presented, specific tools available to certain sectors or projects were also considered (e.g. the use of specific water charges for water projects).

Delivery structure

The delivery structure is the ownership, governance and management framework for the project. There is a spectrum of involvement for participants, which has direct implications on control and balance sheet treatment for these participants.

Council delivery	New entity	Partnership	Joint procurement	Traditional delivery
Crown delivery	Stakeholder	Partnership	Shareholding	Crown delivery
Iwi involvement	Project sponsor	Partnership	Shareholding	Iwi delivery
Private delivery	Service provider	Partnership	New SPV entity	Full privatisation

Extent of involvement

Funding sources

Four categories of funding sources were considered, ranging from traditional council sources (e.g. general rates) to more complex value capture opportunities (e.g. integrated land development). Where appropriate, a ‘beneficiary pays’ approach was used to select funding tools. Beneficiary pays prioritises targeted funding on project beneficiaries and minimises the funding burden on general ratepayers (and taxpayers).

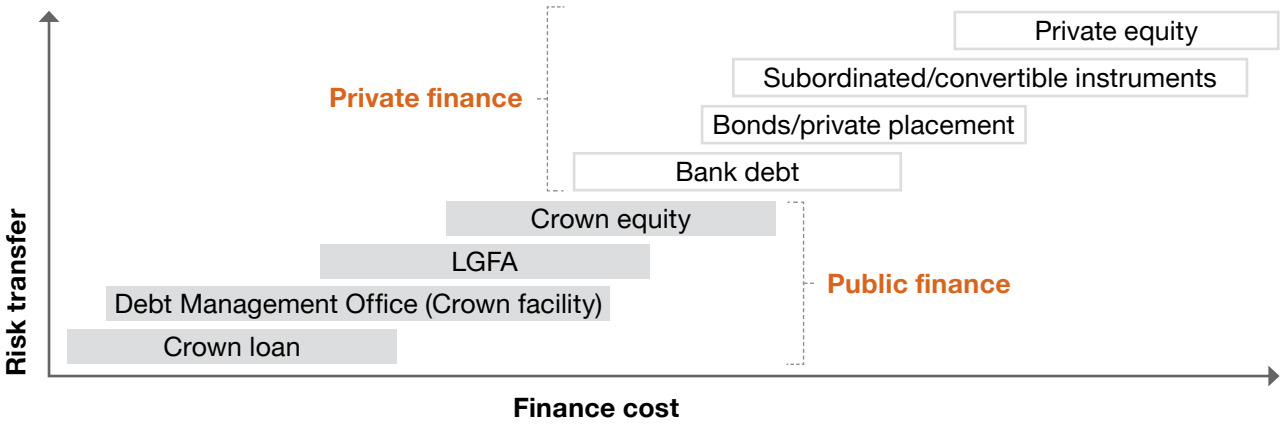
General **Targeted**

Crown funding	Council funding	Value capture	Direct
Crown grant	General rates	Negotiated contributions	Private capital
Seed capital	Targeted rates	Land intervention[1]	Commercial opportunity[2]
Specific Crown funds	Developer contributions	Property development	Tax/duty
		IFF Levy	User pays[3]

[1] Land intervention includes land purchase, sales, leases, etc.
[2] Commercial opportunities include advertising and sale of useful by-products (waste).
[3] User pays includes fees and charges, volumetric charging (water), gate fees (waste), ‘pay-as-you-throw’ (waste).

Financing sources

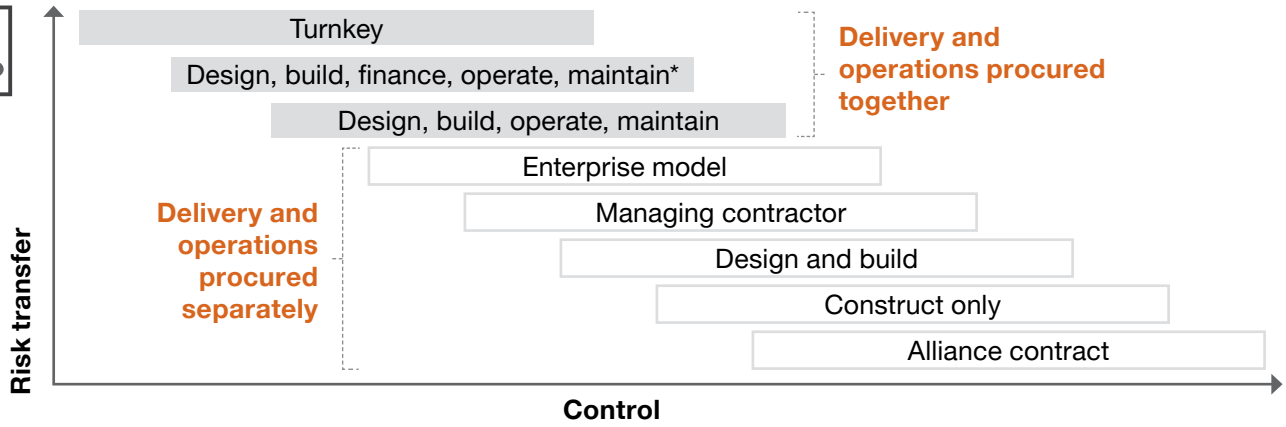
Finance costs are directly related to the level of risk associated with the capital being financed. For example, debt raised by a local authority will generally be cheaper than debt raised by a project SPV. To the extent local authorities are exposed to project risks (and debt holders have recourse to these authorities), local authority debt capacity will be impacted.



Capital and operations delivery

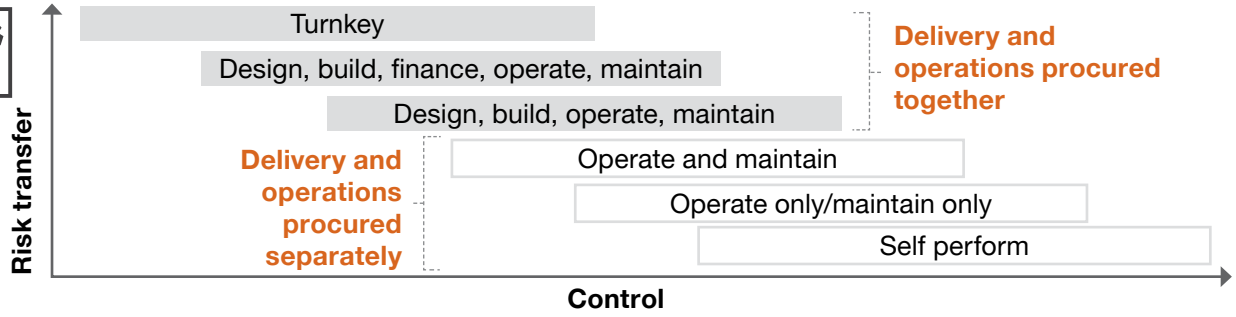
The key trade-off between risk transfer and retention of control was the focus for the capital and operations delivery models. Risk transfer incentivises whole of life pricing and investment in technology and innovation. However, the private sector generally requires a greater level of control and a higher price to accept the additional risk.

Capital



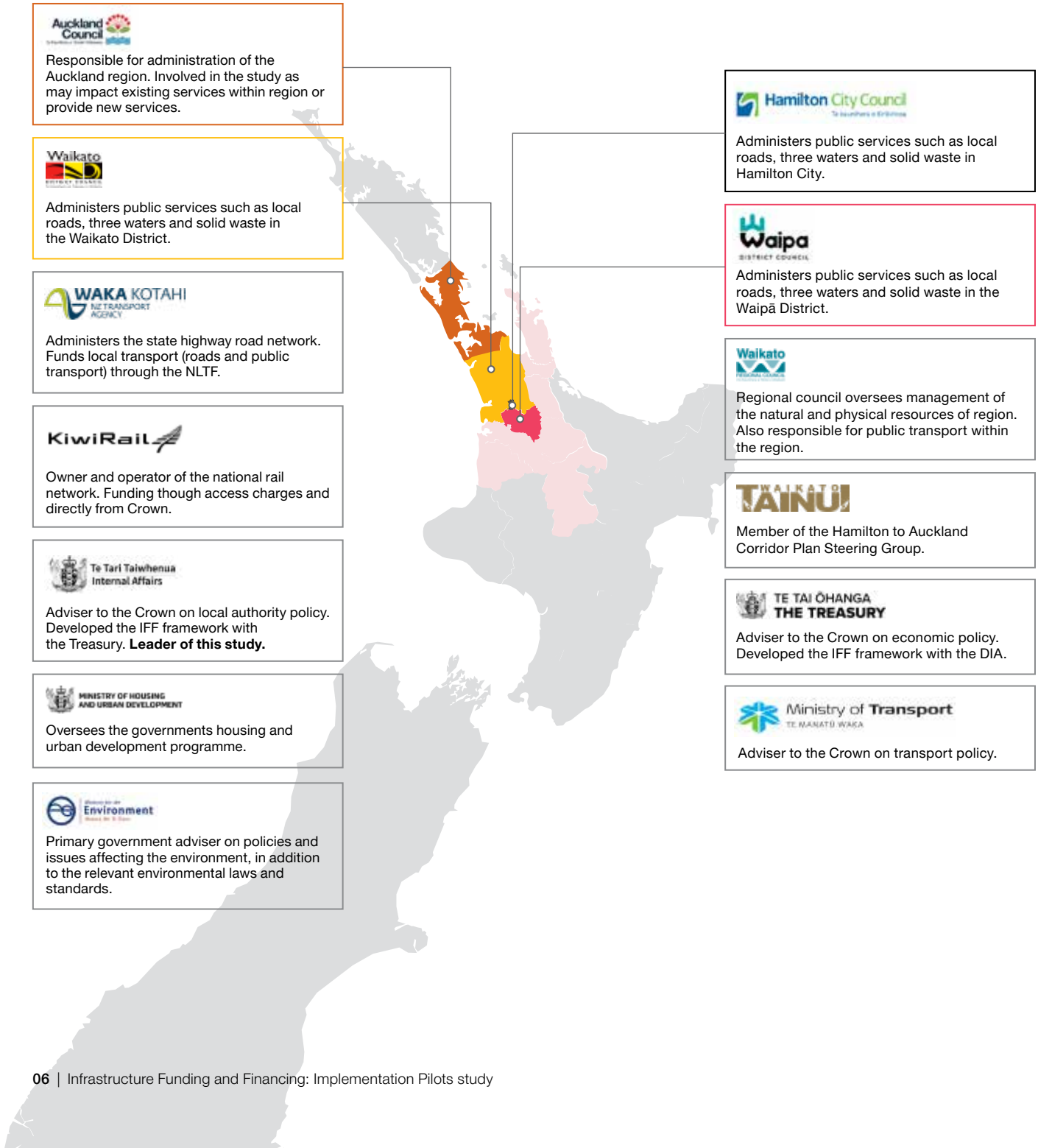
Other private finance variations may also be possible (e.g. build, own, operate, transfer), which have slightly different ownership arrangements and may facilitate additional risk transfer (e.g. demand risk for a toll road project).

Operations



Partners

The Study draws upon representatives from local authorities across the region, as well as local iwi and central government stakeholders. This diverse partner group is indicative of the Study's approach, which is to promote regional and sub-regional partnerships by ensuring key regional stakeholders have representation. There was collaboration with partners throughout the process, from identifying the most appropriate projects for the Study, to developing the models presented. The partners to this Study are presented below.



Auckland Council

Responsible for administration of the Auckland region. Involved in the study as may impact existing services within region or provide new services.

Waikato District Council

Administers public services such as local roads, three waters and solid waste in the Waikato District.

Waka Kotahi NZ Transport Agency

Administers the state highway road network. Funds local transport (roads and public transport) through the NLTF.

KiwiRail

Owner and operator of the national rail network. Funding though access charges and directly from Crown.

Te Tari Taiwhenua Internal Affairs

Adviser to the Crown on local authority policy. Developed the IFF framework with the Treasury. **Leader of this study.**

Ministry of Housing and Urban Development

Oversees the governments housing and urban development programme.

Environment

Primary government adviser on policies and issues affecting the environment, in addition to the relevant environmental laws and standards.

Hamilton City Council

Administers public services such as local roads, three waters and solid waste in Hamilton City.

Waipa District Council

Administers public services such as local roads, three waters and solid waste in the Waipā District.

Waikato Regional Council

Regional council oversees management of the natural and physical resources of region. Also responsible for public transport within the region.

Waikato Tainui

Member of the Hamilton to Auckland Corridor Plan Steering Group.

Te Tai Ōhanga The Treasury

Adviser to the Crown on economic policy. Developed the IFF framework with the DIA.

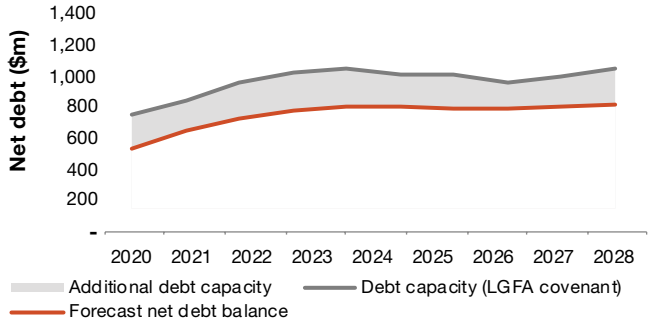
Ministry of Transport Te Manatū Waka

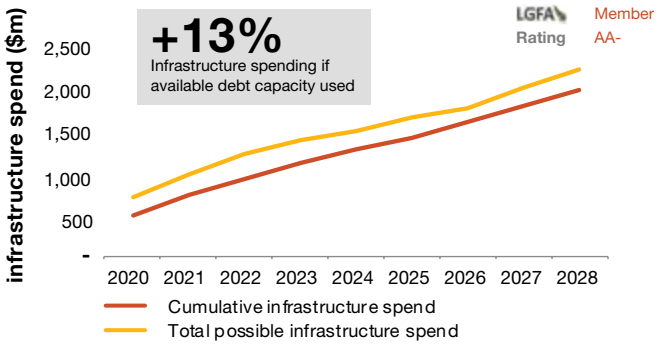
Adviser to the Crown on transport policy.

Financial snapshot

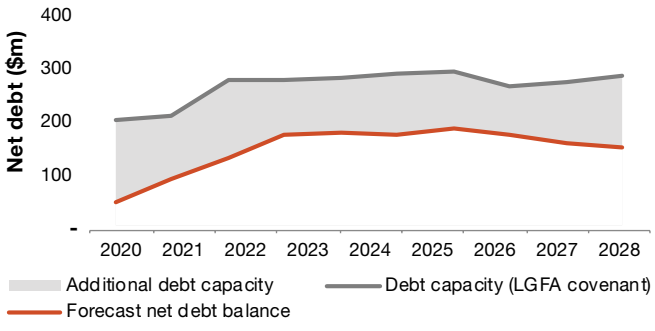
For a number of local authorities, limited balance sheet capacity and debt headroom (e.g. under LGFA covenants) are constraining investment in infrastructure. This problem has been exacerbated by COVID-19, along with conservative revenue estimates factoring into decision making. The figures below outline the indicative debt capacity for each of the assessed local authorities based upon the 2018 LTPs.

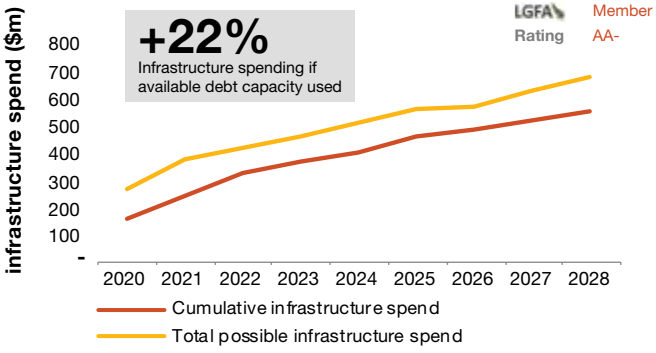
Hamilton City Council





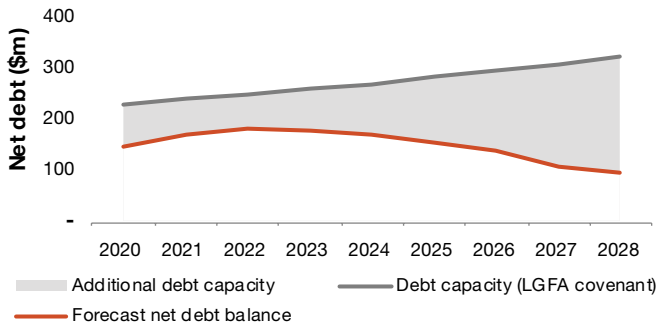
Waipā District Council

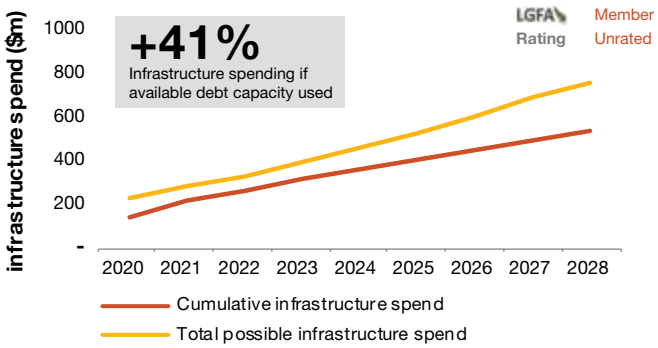




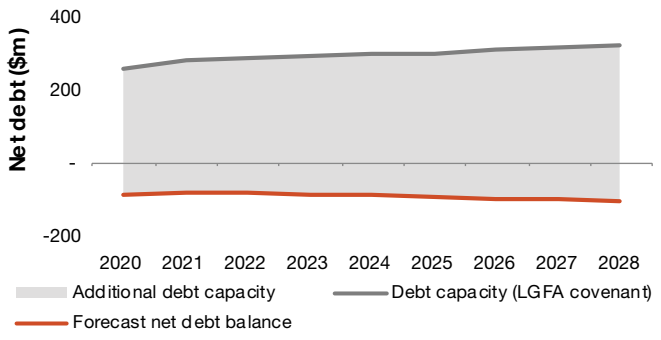
*Debt capacity calculations are based solely on the LGFA alternative net debt to total revenue foundation policy covenants and lending policy covenants, which were updated earlier this year.

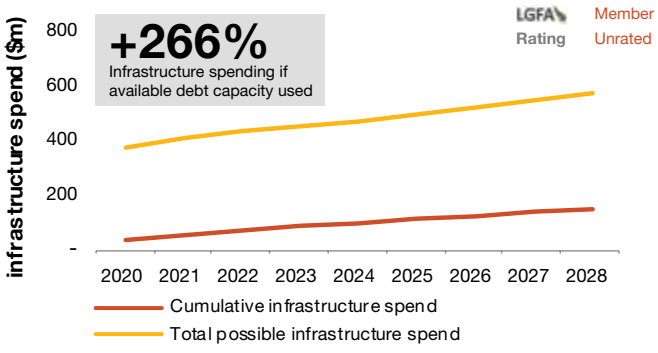
Waikato District Council





Waikato Regional Council





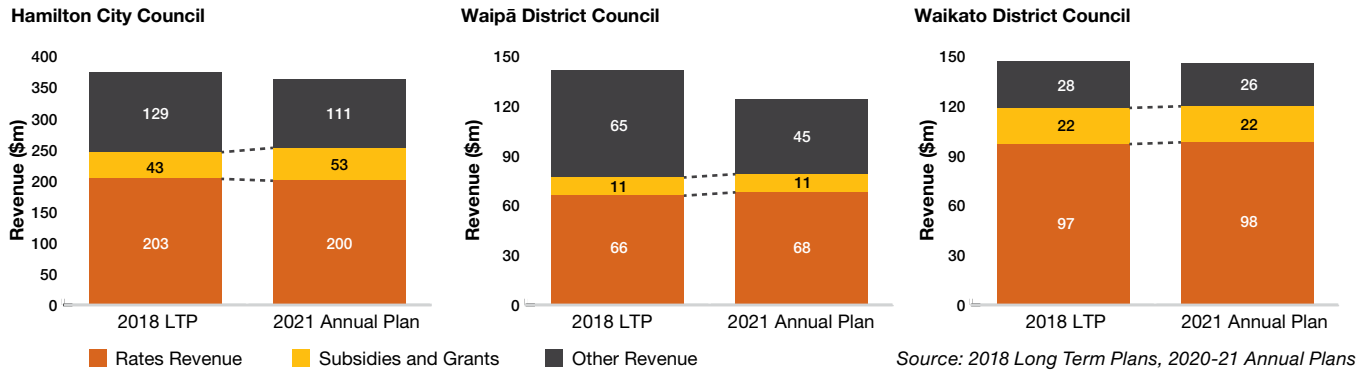
COVID-19 financial impact

Local authorities throughout the country are facing varied financial impacts as a result of COVID-19, in particular for councils more heavily reliant on non-rates revenue. The Central Government Response and Recovery Fund has been established with $3 billion set aside to fund a selection of 'shovel-ready' infrastructure projects across the country, with the majority putting money back into local authorities. In order to assess the impact of COVID-19 on the local authorities in this Study, revenue, capital expenditure and debt forecasts in FY21 Annual Plans have been compared to 2018-28 LTPs.

Revenue impact

Local authority revenues are expected to be slightly lower in FY21 when compared to LTP forecasts (average decline of ~6% for Study participants), with a decline in 'Other Revenue' (such as development contributions) the most significant contributor (average decline of ~14% for Study participants). Higher Crown support through subsidies and grants has partially offset this decline for HCC.

Revenue derived by local authority

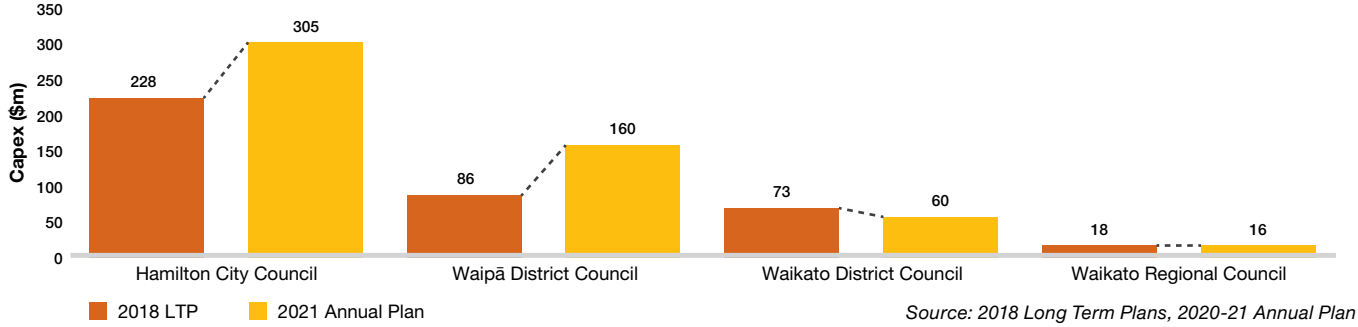


Source: 2018 Long Term Plans, 2020-21 Annual Plans

Impact on capital expenditure

Estimated capital expenditure during FY21 is significantly higher (~34% average increase for Study participants) in Annual Plans than in LTPs. This has been largely driven by the current environment, where there is a general focus on stimulating growth and economic recovery through capital spending.

Capex spend by local authority

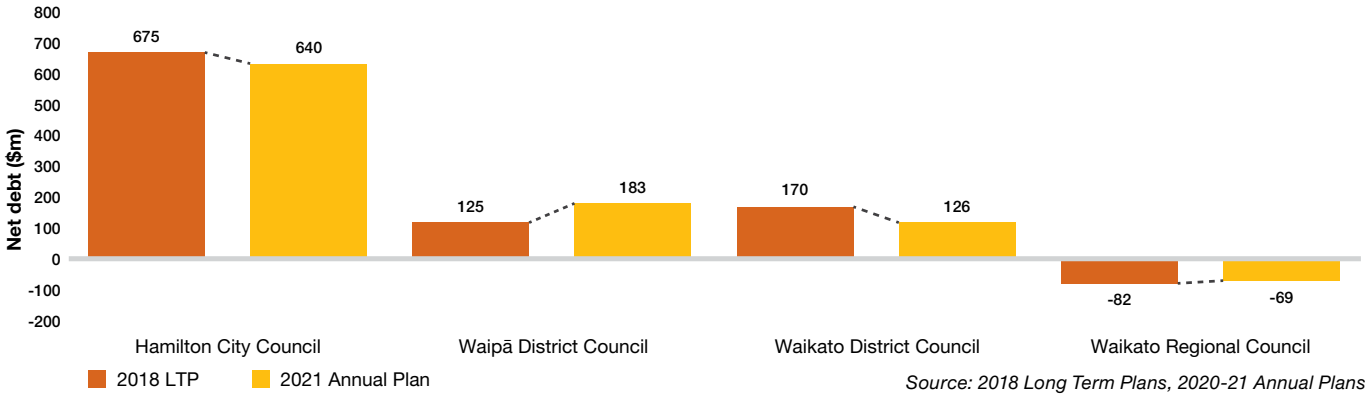


Source: 2018 Long Term Plans, 2020-21 Annual Plan

Impact on net debt

Impact on net debt is mixed, with both Hamilton City Council and Waikato District Council forecasting lower levels than in LTPs, while Waipā District Council and Waikato Regional Council are forecasting higher levels. Given the significant increase in forecast capital expenditure and slight decline in total revenue, an increase in net debt can be expected over the short to medium term, on the assumption that debt is required to fund a proportion of the increased capital expenditure.

Net debt by local authority



Source: 2018 Long Term Plans, 2020-21 Annual Plans

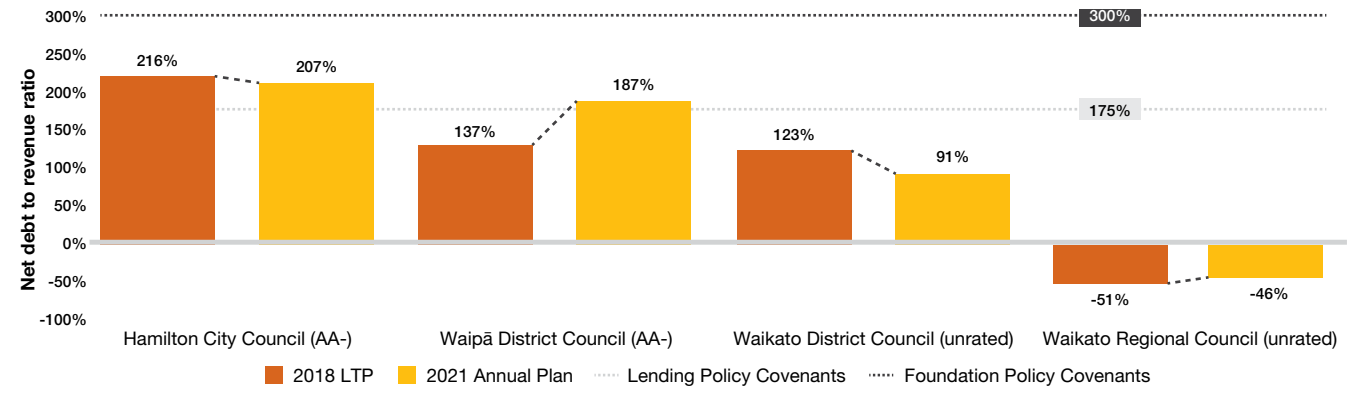
Net debt to revenue ratio

Local authorities borrowing through the LGFA are required to comply with a number of financial covenants. Typically, local authorities are most constrained by the net debt to revenue ratio, which is presented in the figure below. The LGFA has set two standard covenant levels for the net debt to revenue ratio:

- **Foundation Policy Covenant:** local authorities with a credit rating of 'A' or above (Hamilton City Council, Waipā District Council). Covenant set at 300% for 2021.
- **Lending Policy Covenant:** local authorities without a credit rating, or those that have a credit rating below 'A' (Waikato Regional Council, Waikato District Council). Covenant set at 175% for 2021.

As evident from the figure below, none of the local authorities assessed are currently near LGFA covenants. However, forecast expenditure on infrastructure over the next LTP period is expected to be significant, which may challenge debt constraints.

Indicative net debt to revenue ratios by local authority



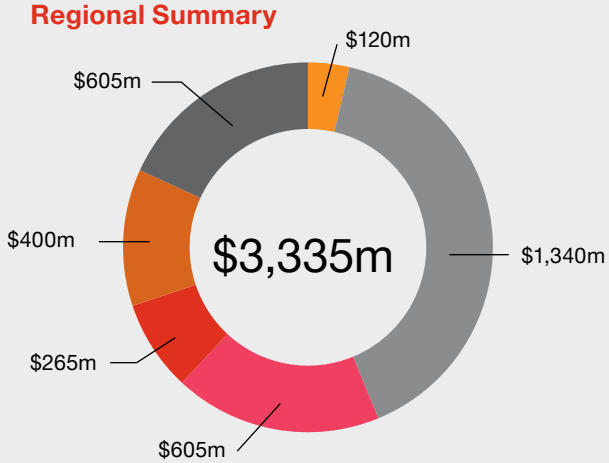
The indicative net debt to revenue ratios do not reflect LGFA adjustments, other than removing developer contributions from total revenue.
Source: 2018 Long Term Plans, 2020-21 Annual Plan, LGFA

Infrastructure landscape

Based on the 2018-28 LTPs, over $3bn of infrastructure investment is forecast across the region by 2028. Investment in transport (presented as roads and footpaths on the charts below) and three waters will form the majority of investment, forecast at ~$1.34bn and ~$1.27bn respectively. It is important to note that the 2018 LTP forecast investment in three waters may understate the true investment required, particularly given potential changes to the three waters regulatory environment.

All three territorial authorities have forecast significant investment in the transport and three waters sectors, which provides an opportunity to pursue a more regionalised approach to infrastructure delivery. Leveraging the scale that such an approach provides allows the funding burden to be shared across the region, which may reduce the burden on individual authorities and ratepayers.

Regional Summary

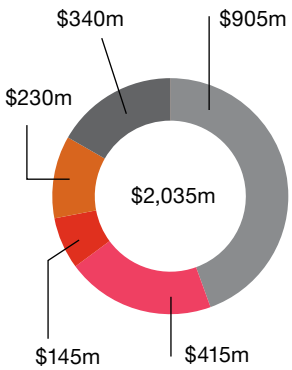


The regional summary is based on summarised data contained in the 2018-28 LTPs for the partner councils.

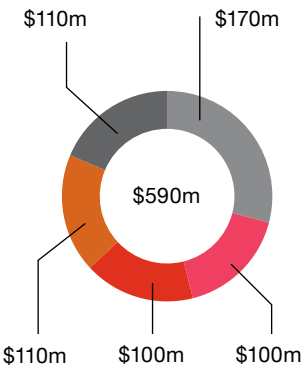
Legend

- Flood protection
- Roads and footpaths*
- Wastewater treatment
- Stormwater drainage
- Water supply
- Other

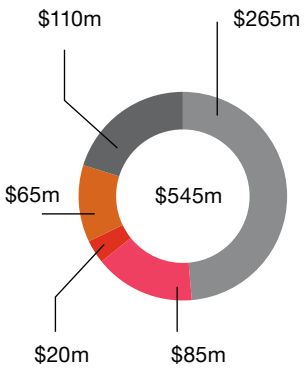
Hamilton City Council



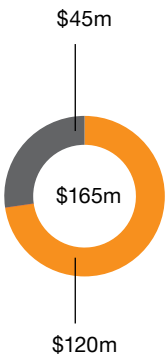
Waipā District Council



Waikato District Council



Waikato Regional Council

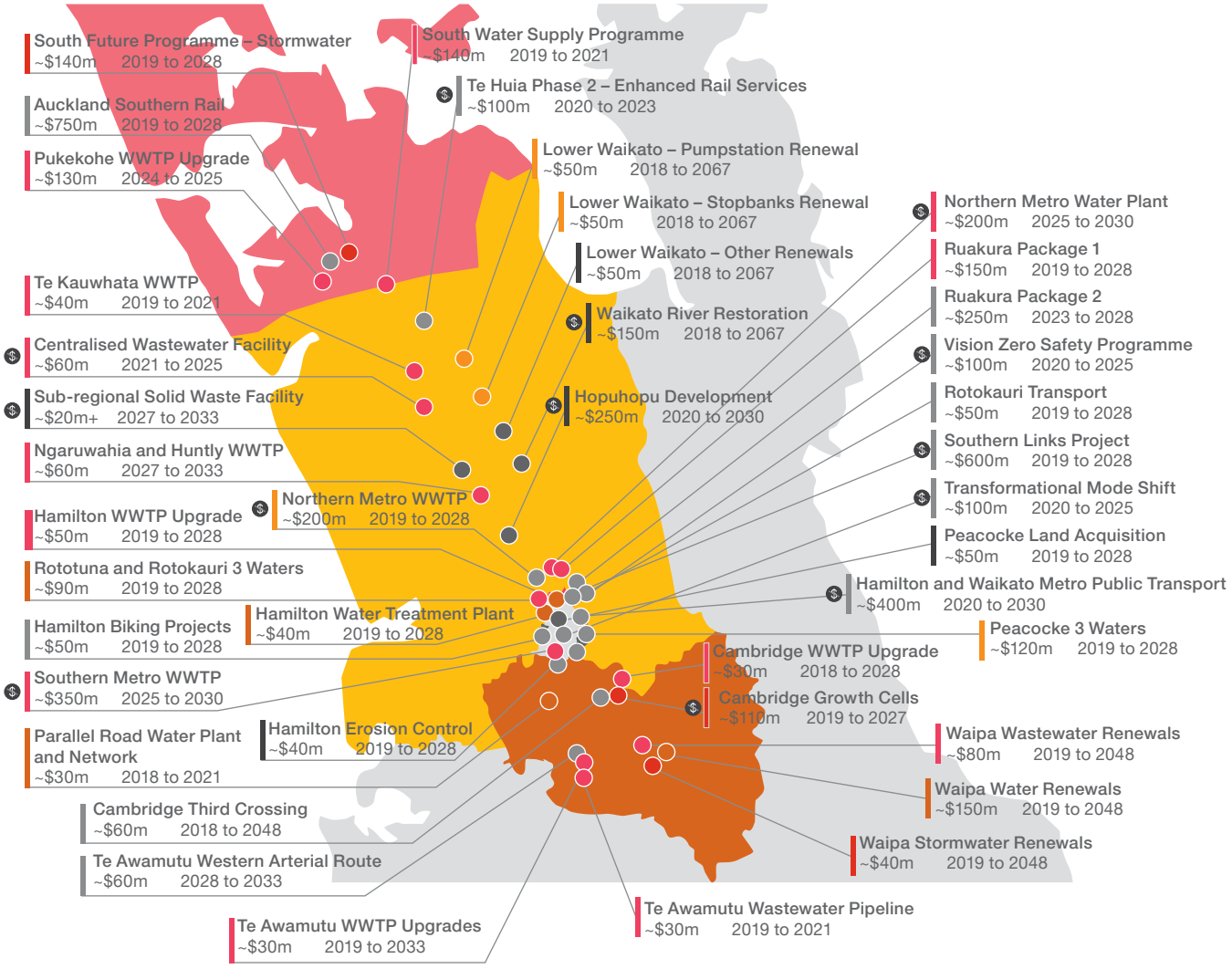


*Roads and footpaths based on DIA classification and includes all transport spending (including rail).

Longlist of projects

Based upon the information provided by the participating local authorities (shovel ready project applications, LTPs, etc), a longlist of projects was developed. To be considered on the longlist, projects needed to have regional or sub-regional significance. An overview of the longlist is provided in the figure below.

Regional map with selected capital projects



Activity Class

- Flood protection
- Roads and footpaths*
- Wastewater treatment
- Stormwater drainage
- Water supply
- Other

Legend

- Projects not fully funded in 2018-28 LTPs

*Roads and footpaths based on DIA classification and includes all transport spending (including rail).

Project selection criteria

Projects were selected as case studies for the study through application of the following selection criteria.

Regional or sub-regional

The project allows for regional or sub-regional solutions to be considered (e.g. solutions that cross local authority boundaries).

Not business as usual

Funding or resource for the project has not been fully committed and is likely to be difficult to secure through traditional means (e.g. due to size, scope or regional focus.

Opportunities for other regions

Similar challenges exist in other regions in New Zealand. The solution(s) identified could be applicable to other regions.

Supports demand and/or growth

The project provides an opportunity to address existing demand constraints across in the region and/or supports future growth.

Shortlisted projects

Based on the previously identified selection criteria the following projects were shortlisted. A brief summary of the projects and how they meet the selection criteria is presented below.

Shortlisted projects

Southern Metro Wastewater

$350m+
estimated capital delivery costs

A project to improve wastewater services in the Waikato-Hamilton-Waipā Metro areas through development of a new sub-regional wastewater treatment plant (WWTP). The WWTP will increase capacity and improve service levels across the region.

Alignment with selection criteria

Regional or sub-regional

Sub-regional solution rather than individual plants.

Not business as usual

First sub-regional plant in region.

Opportunities for other regions

Significant wastewater treatment investment required nationally.

Supports demand and/or growth

Increases wastewater capacity enabling growth.

Enhanced Hamilton to Auckland Rail

$100m+
estimated capital delivery costs

Enhancement of the Te Huia start-up passenger train service. This includes expansion of existing stations, new stations, increased service frequency and connectivity further into Auckland.

Alignment with selection criteria

Regional or sub-regional

Improves connectivity between Northern Waikato, Auckland and Hamilton.

Not business as usual

Project will form part of a new transport network into the region.

Opportunities for other regions

Limited integration of public transport networks between regions with urban centres.

Supports demand and/or growth

Increases regional access to education and economic opportunities.

Sub-regional Solid Waste Facility

$25m+
estimated capital delivery costs

Project to improve regional capacity and drive waste minimisation across the region through a new regional solid waste facility. Potential for anaerobic digestion and/or industrial composting services to be developed as a solution.

Alignment with selection criteria

Regional or sub-regional

Leveraging scale through a sub-regional solid waste facility.

Not business as usual

Innovation required to drive project outcomes and deal with waste differently.

Opportunities for other regions

Waste minimisation is a focus of local and central government.

Supports demand and/or growth

Improves waste management capacity and capability across the region.

Central/ lower Waikato catchment river restoration

$100m+
estimated capital delivery costs

Project to restore and renew the central and lower Waikato River catchment from the Karāpiro Dam in the south to Te Puuaha in the north based upon a centralised restoration strategy.

Alignment with selection criteria

Regional or sub-regional

Waikato river transverses multiple territorial boundaries, including Waikato, Hamilton and Waipā.

Not business as usual

Typically viewed on a project by project basis.

Opportunities for other regions

National policy issue (as per Freshwater NPS 2020 guidance).

Supports demand and/or growth

Supports social, educational and Mātauranga Māori outcomes.

Three waters

Sector overview

Overview

Under the current legislative framework, the regional council is responsible for managing water quality and quantity across the region, primarily through the RMA consent process. This involves managing how water quality is maintained or improved, how much water may be taken for use, rules and requirements around discharging into water, and activities that affect the beds of water bodies and surrounding ecosystems. Recent changes to freshwater regulations have imposed higher standards on local authorities generally, with regional councils responsible for overall management and monitoring against these new standards.

Under the current arrangements, territorial authorities are responsible for the provision of three waters services (water, wastewater and stormwater), which must be conducted in accordance with RMA consenting requirements. However, central and local government are currently working through the Three Waters Reform Programme, which may result in a change to the way three waters services are delivered (e.g. through a small number of multi-regional water entities). This Study does not presuppose any final positions under the reform programme, however maintaining flexibility for future changes to the delivery of water services was considered when developing the funding, financing and delivery structures. The specific roles currently undertaken by each territorial authority are provided below.

Water service responsibilities

	Current operating model
HCC	• Responsible for the delivery of three waters services and is the asset owner. • Currently self-performing delivery of these services.
Waikato DC	• Responsible for the delivery of three waters services and is the asset owner. • Watercare Services Limited contracted to operate and maintain the three water services network (but do not charge the public directly for services).
Waipā DC	• Responsible for the delivery of three waters services and is the asset owner • Currently self-performing delivery of these services.

Māori involvement

Iwi and hapū have an important role in water management, generally working in partnership with territorial authorities. The specific involvement for iwi and hapū varies depending on local circumstances, including through both formal (e.g. the Joint Management Agreement between Waikato Tainui and HCC) and informal arrangements.

Charging

The three territorial authorities all used a mixture of general and targeted rates, fees and charges and developer contributions to fund investment in three waters infrastructure and pay for water services. Metered water charges are also used in some areas.

Charging model

	HCC	Waikato DC	Waipā DC
General rates	💧💧	💧	💧
Targeted rates	💧	💧💧	💧💧
Fees and charges	💧	💧	💧
Developer contributions	💧	💧	💧

💧💧 Primary funding source 💧 Other funding source × Not used *Source: 2018 Long Term Plans*

Asset ownership and operating metrics

Water assets and operating metrics by district

Waikato District Council

Population
- ~70,000

Water
- ~$146m asset replacement value
- ~13,000 connections
- ~7 water treatment plants
- ~28 water reservoirs
- ~12 pump stations
- ~759km of pipelines

Wastewater
- ~$171m asset replacement value
- ~9 wastewater treatment plants
- ~83 wastewater pump stations
- ~292km of wastewater pipelines

Stormwater
- ~$66m asset replacement value
  10 ponds
- ~129km pipes

Source: 2018 Long Term Plan

Hamilton City Council

Population
- ~165,000

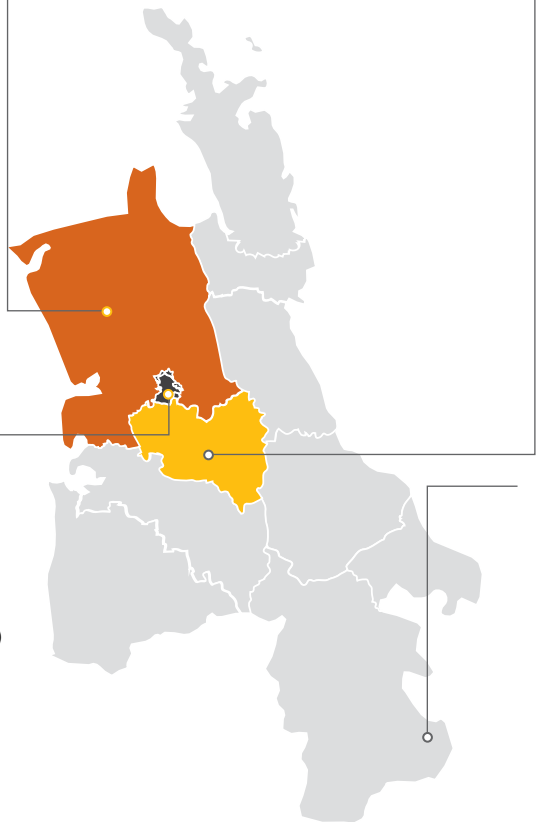
Water
- ~$462m asset replacement value
- ~50,039 service connections
- ~3,691 meters (commercial and industrial)
- ~1 water treatment plant
- ~8 water reservoirs
- ~1,100km of pipelines

Wastewater
- ~$586m asset replacement value
- ~55,485 connections
- ~1 wastewater treatment plants
- ~121 wastewater pump stations
- ~810km of wastewater pipelines

Stormwater
- ~$746m asset replacement value
- ~669km of stormwater main pipes

Source: 2018 Infrastructure Strategy

Commercial parties
- Heavy users of water services (e.g. Fonterra).
- Developers/large land holders (e.g. NZ Superfund).
- Service providers (e.g. Watercare).



Iwi
- Existing joint management agreements to facilitate iwi involvement (e.g. between Waikato-Tainui with Hamilton City Council and Waikato DC).
- Other interests in water and surrounding land through Treaty settlements.

Waipa District Council

Population
- ~50,000

Water
- ~$198m asset replacement value
- ~15,042 connections
- ~7 water treatment plants
- ~7 water reservoirs
- ~582km of water mains and pipes
- ~137 pump stations

Wastewater
- ~$155m asset replacement value
- ~12,048 connections
- ~2 wastewater treatment plants
- ~57 wastewater pump stations
- ~263km of wastewater pipelines

Stormwater
- ~$98m asset replacement value
- ~158km pipes

Source: 2018 Long Term Plan

Waikato Regional Council
- Regulator
- Rural land drainage

Southern Metro Wastewater

Project overview

The Southern Metro Wastewater project focuses on the delivery of a new sub-regional wastewater facility to service the Waikato-Hamilton-Waipā metro area. Where available, existing project information has been utilised, but the study is not based solely on this information given that the project serves only as a set of facts for the study.

Capital delivery

The Southern Metro project involves the delivery of a new wastewater treatment plant and conveyancing network to service the Waikato-Hamilton-Waipā metro area. The existing Cambridge Wastewater Treatment Plant site is one of the sites being considered for the new plant.

Operational delivery

The treatment plant will have an asset life of at least 50 years, providing long-term wastewater capacity to the region. The treatment plant is expected to include a membrane biological reactor, with a high quality of effluent discharge into the Waikato River.

Southern Metro Wastewater Facility

Capital cost
~$350m

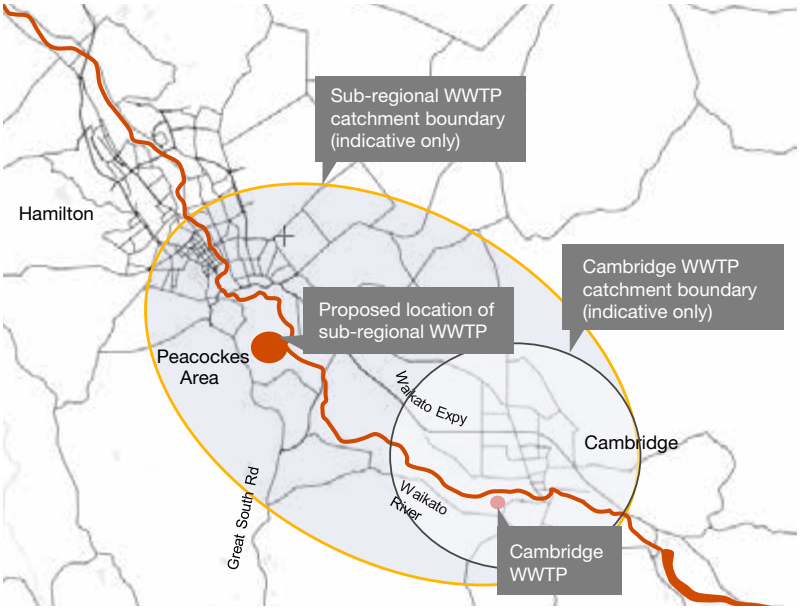
Operations and maintenance cost
~$30m per annum

Catchment Area
Depending on location, will service flows from Cambridge, Peacockes,and Hamilton

Construction period
>3 years

Asset life
50 years

Service connections
70,000 – 100,000



Project benefits

Support regional growth

Cross-regional facility will increase network capacity across the region and support development across the catchment ensuring that organic/unplanned growth is not restricted.

Environmental benefit

Potential for higher environmental performance outcomes through a reduction in the number of discharge points into the river and opportunity to reuse water for industrial purposes.

Co-funding opportunity

A sub-regional treatment plant provides an opportunity to leverage a co-funding agreement between the three territorial authorities to minimise the capital burden associated with delivery.

Support regional growth

Improve water quality across the region allowing all territorial authorities involved to meet proposed regulatory changes around water quality and treatment standards.

Addressing sector challenges

Sector challenges

Local authorities are facing a number of challenges to the delivery of Three Waters services.

Investment requirements

Significant investment required to address infrastructure deficits, growth pressures, demand for higher levels of service and changing regulatory standards.

Capacity and capability

Water services are predominantly delivered at a territorial authority level, which creates challenges around economies of scale and market attractiveness.

Funding and affordability

Territorial authorities are increasingly facing balance sheet and funding constraints while ratepayers are facing consistent yearly rates increases.

Southern Metro Wastewater – a model for future regional cooperation?

The Southern Metro Wastewater scheme seeks to address these challenges through a new type of delivery model. A new cross-regional facility is proposed to service an area of the Waikato-Hamilton-Waipā metro area. The modern plant will meet stringent environmental requirements and by leveraging its scale, cost efficiencies can be achieved and market leading expertise attracted.

Questions for this study

The sub-regional approach proposed for the Southern Metro Wastewater scheme is new and while creating a number of opportunities also brings challenges. It will require significant investment from, and cooperation between, the participating local authorities, the Waikato Regional Council (WRC), and wider iwi partners.

Given the purpose of this Study is to provide models for other similar projects, questions have focused on how funding, financing and delivery models can best address sector challenges and optimise the benefits from a sub-regional approach to three waters – specific considerations include:

Governance and control

How can co-governance and co-management of such a scheme be best implemented, while also ensuring that partners retain suitable control to respond to future regulatory changes and individual requirements?

Delivery and implementation

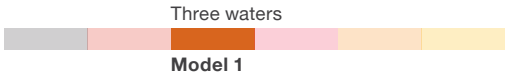
How can the benefits of scale be best leveraged to ensure that the project attracts market leading expertise, in particular around technology, operational efficiency and asset management.

Funding and affordability

How can the financial impact of such a large scheme on local authorities and individual ratepayers be minimised, and how can funding be structured to be as equitable as possible?

Commercial models

Two different commercial models were developed for the case study, a ‘public delivery model’ and a ‘private delivery model’, to demonstrate the trade-offs between risk transfer and control, and the use of public and private finance. Further detail on these models is provided on the following pages.



Model 1:

Public delivery model

A key focus for this model is optimising council control and flexibility, while minimising the balance sheet impact. This could be achieved by utilising public sector capital, procuring delivery and operations separately, and through the use of IFF levies.

Delivery structure

Council delivery	Crown delivery	Private delivery	Iwi involvement
New entity	**Stakeholder**	**Service provider**	Project sponsor
Partnership	Partnership	Partnership	**Partnership**
Joint procurement	Shareholding	New SPV entity	Shareholding
Traditional delivery	Crown delivery	Full privatisation	Iwi delivery

Funding sources

Council funding	Crown funding	Value capture	Direct
General rates	Crown grant	**Negotiated contribution**	Private capital
Targeted rates	Seed capital	Land intervention	**Commercial opportunity**
Developer contributions	**Specific Crown funds**	Property development	Tax/duty
		IFF levy	User pays

Financing sources

Public finance

- Crown loan
- DMO (Crown facility)
- **LGFA**
- Crown equity

Private finance

- Bank debt
- Bonds/private placement
- Subordinated/convertible instruments
- Private equity

Capital delivery

Commercial model

- **Alliance contract**
- Construct only
- Design and build
- Managing contractor
- Enterprise model
- Design, build, operate, maintain
- Design, build, finance, operate, maintain
- Turnkey

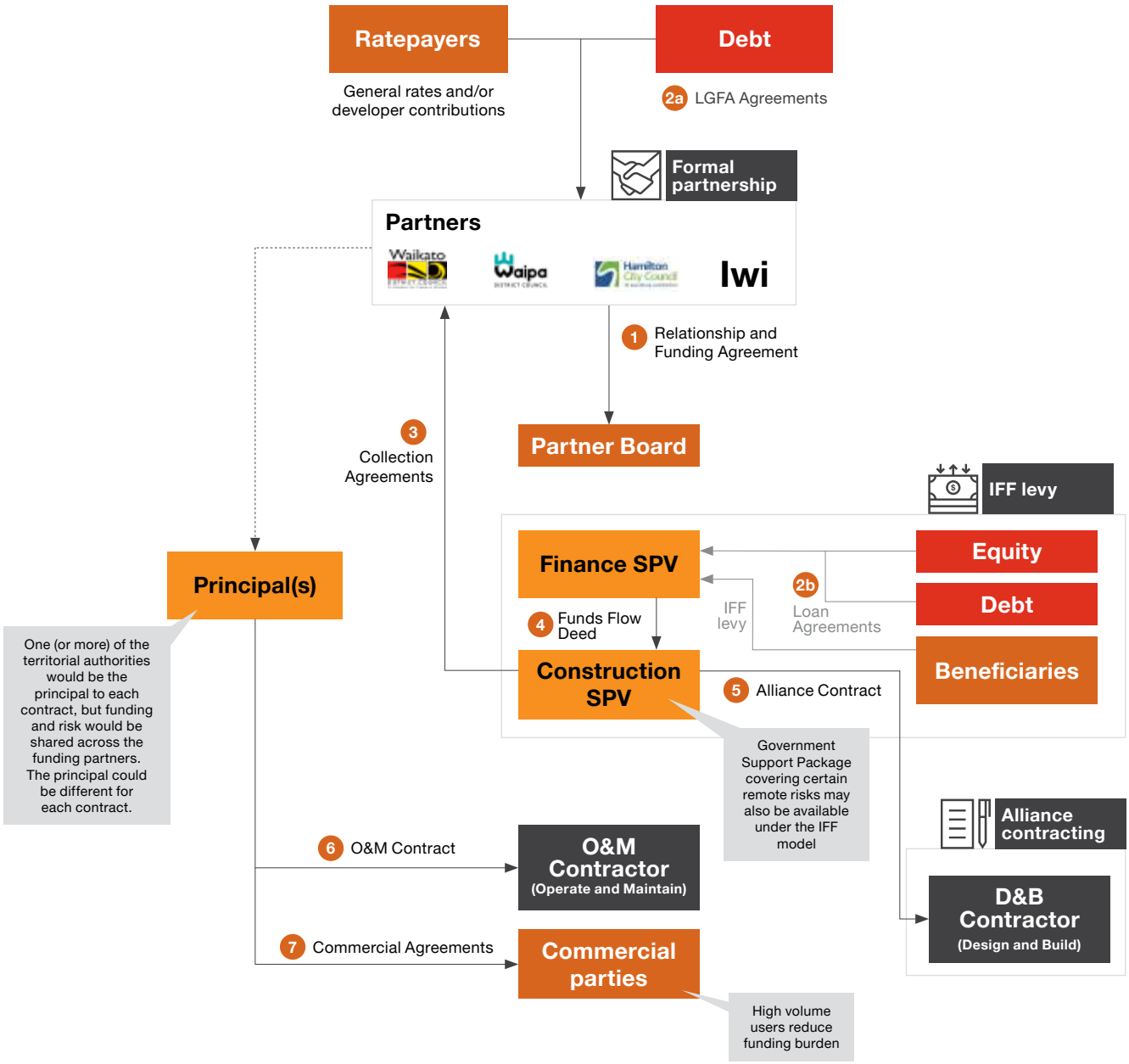
Operations delivery

Commercial model

- Self perform
- Operate only
- **Operate and maintain**
- Design, build, operate, maintain
- Design, build, finance, operate, maintain
- Turnkey

Commercial structure and contracts

Commercial structure diagram



Councils are not a party to contracts shaded grey.

Outline of core contracts

Contract	Parties	Description
1. Relationship and Funding Agreement	Hamilton City Council, Waikato District Council, Waipa District Council, Iwi	Agreement between the partner group, setting out: • How the partners will engage collaboratively with each other, including the business case framework for future/extension projects. • Governance, management and approvals frameworks for the project which could endure for future projects/works. • How funding and risk will be shared between the partners.
2a. LGFA borrowing 2b. IFF finance	Hamilton City Council, Waikato District Council, Waipa District Council, LGFA, Finance SPV, Banks, Wholesale investors	2a) Standard LGFA short-form financing agreement between the LGFA and territorial authorities, based upon cost apportionment between partners. 2b) Agreement between Finance SPV and respective borrowers (mixture of banks and/or wholesale investors (e.g. ACC)).
3. Collection Agreements	Hamilton City Council, Waikato District Council, Waipa District Council, Finance SPV	Agreement between Finance SPV and each territorial authority. Each territorial authority will collect the infrastructure levy payments to pass on to the Finance SPV (in return for a nominal collection fee).
4. Funds Flow Deed	Finance SPV, Construction SPV	Agreement between the Finance and Construction SPVs to release funds received by the Finance SPV during construction to the Construction SPV to cover construction payments.
5. Alliance Contract	Construction SPV, D&B Contractor	Delivery works (including both design and construction) procured under an alliance contract, subject to agreement of a suitable Government Support Package (GSP) with the New Zealand Treasury (the Treasury).
6 O&M Contract	Principal, O&M Contractor	Fixed price and term agreement for the operations and maintenance of the wastewater asset. Agreement will generally include fixed and variable charge components, and may include KPI/abatements.
7. Commercial Agreements	Principal, D&B Contractor	Agreement for the commercial supply of wastewater services between commercial parties and the principal(s).

Delivery, capital and operations structure

Partner Board

Governs the partnership and sets its strategic direction.

- Includes representatives from each member of the partnership group. Depending on the model taken forward, there could be potential for iwi to provide funding for the project.
- May also include commercial parties where they are a significant financial contributor to the project.

Principal(s)

Counterparty to the O&M contract and commercial agreements.

- One (or more) of the partners would be the principal to each contract.
- Responsible for managing the project (e.g. exercising rights under the contract).

Finance SPV

A **new delivery vehicle** ('Finance SPV') established to raise and manage finance.

- Established through an order-in-council.
- Owned by central government.
- Takes some residual risks (e.g. interest rate, refinancing).
- Receives IFF levy from local authorities through collection agreements.
- Distributes funds to the Construction SPV under the Funds Flow Deed.

Construction SPV

A **new delivery vehicle** ('Construction SPV') established to manage construction.

- Established through an order-in-council.
- Owned by central or local government.
- Thinly capitalised, receives funding from Finance SPV on an 'as incurred' basis under the Funds Flow Deed.
- The dual SPV structure inherent in the IFF model may add additional complexity, however supports more transparent risk allocation and may allow local authorities to own the construction SPV.

Construction SPV

D&B Contractor (Design and Build)

Alliance contract

- Agreement for the delivery works (design and construction).
- Collaborative model, where risks are shared between the partnership and contractor. As IFF is predicated on a fixed funding requirement and limited residual risks for local authorities, risk allocation between the contactor, partners and central government (via a GSP) would need to be carefully considered.
- Contractors selected on price (target outturn cost) and non-price factors.

Payment mechanism ('competitive' alliance)

- Reimbursable costs charged on a time and materials basis (uncapped).
- Profit margin paid, at a pre-agreed rate, above reimbursable costs up to the target outturn cost.

Principal(s)

O&M Contractor (Operate and Maintain)

Operate and maintain

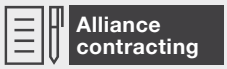
- Contract for the operations and maintenance of the wastewater treatment plant and reticulation network.
- Potential to extend contract scope to include other wastewater treatment plants in the region.

Payment mechanism (operations phase)

- The three primary proposed payment components are:
  - **Fixed charge** = fixed payment based upon the agreed base service provision.
  - **Variable charge** = variable payment based upon additional service provision and other shared risks such as wholesale energy costs.
  - **KPI payment/abatement** = a series of operating KPIs and minimum standards included in the performance regime, with a payment (or reduction in payment) made based upon performance against the standards.

Features of delivering water services regionally through a partnership and under the proposed capital and operations structure include:

- ✓ **Collective planning** – opportunity to optimise wastewater services across the sub-region/region through collectively planning wastewater infrastructure. This may include combining additional projects to deliver scale and leverage existing arrangements.
- ✓ **Iwi involvement** – iwi participation in the partnership to ensure Māori interests in the management of natural resources are appropriately considered.
- ✓ **Future collaboration** – enduring nature means the structure can easily be extended for future projects.
- ✓ **Flexibility** – partnership model does not preclude any funding, financing or procurement models or types of projects (e.g. capex or opex).
- ✓ **Leverage expertise** – expertise leveraged across the partnership.



- ✓ **Best for project** – project outcomes optimised through best for project incentives within contractual arrangements. Financial incentive more closely aligned with project outcomes (e.g. public sector sharing in time and cost overruns so contractor is not incentivised to 'cut corners').
- ✓ **No fault disputes** – focus is on mitigating and remedying any potential issues that may arise, rather than attributing blame between the parties.
- ✓ **Desirability to the market** – risk sharing mechanism is more attractive to the private sector, which can enhance competitive tension for the project.
- ✓ **Future pipeline** – opportunity to utilise an enterprise model (i.e. preferred suppliers) where a pipeline of work can be established, which delivers extra scale and allows future procurement to be accelerated.
- ✓ **Private sector innovation** – private sector partners may be incorporated into the early design and/or business case phases, where there is greater flexibility and opportunity for innovation.

Funding and Financing

Ratepayers	Levy set by the Finance SPV, rather than territorial authorities, and operates across the relevant territories. • Territorial authorities responsible for collecting the IFF levy from ratepayers and transferring proceeds to Finance SPV. • The IFF levy can be designed to allocate the costs of infrastructure to direct beneficiaries rather than other classes of landowners. This could be through excluding certain properties, or imposing a lower rate. Territorial authorities may also need to impose and collect general rates and/or developer contributions to fund their payments.
Commercial parties	Commercial parties will contract with the principal(s) for the provision of wastewater services. • By introducing commercial parties early in the design phase, economies of scale can be achieved, which may require collaboration during the business case phase. • Commercial party funding could be structured as a combination of upfront capital and/or ongoing operational payments.
Debt	Primarily raised through the Finance SPV against the long-term revenue stream generated through the IFF levy. Appropriately sized contingency would be required when sizing debt requirement, considering the proposed alliance form of contract and potential support available through a GSP.
Private Equity	Small quantum of private equity raised through the Finance SPV to take a number of residual risk (e.g. interest rate, refinancing).

Features of the funding and financing solution:

IFF levy

- ✓ Long-term IFF levy provides **sufficiently certain cashflows to raise long-term finance against**.
- ✓ Long-term nature of the IFF levy spreads the cost of infrastructure across the generations that benefit from it, promoting **intergenerational equity**.
- ✓ IFF levy imposed specifically on the beneficiary group, which **aligns the costs of the infrastructure to the beneficiaries**.
- ✓ IFF model may support **favourable balance sheet treatment.**

Formal partnership

- ✓ **Co-funding** between funding partners provided for under the RFA and partnership framework.

Other:

- ✓ User pays (e.g. fees and charges, volumetric charging) imposed to directly **align the costs of delivering wastewater services to the users of the infrastructure**.

Model 1:

Area of focus

Payment mechanism for alliance contracts

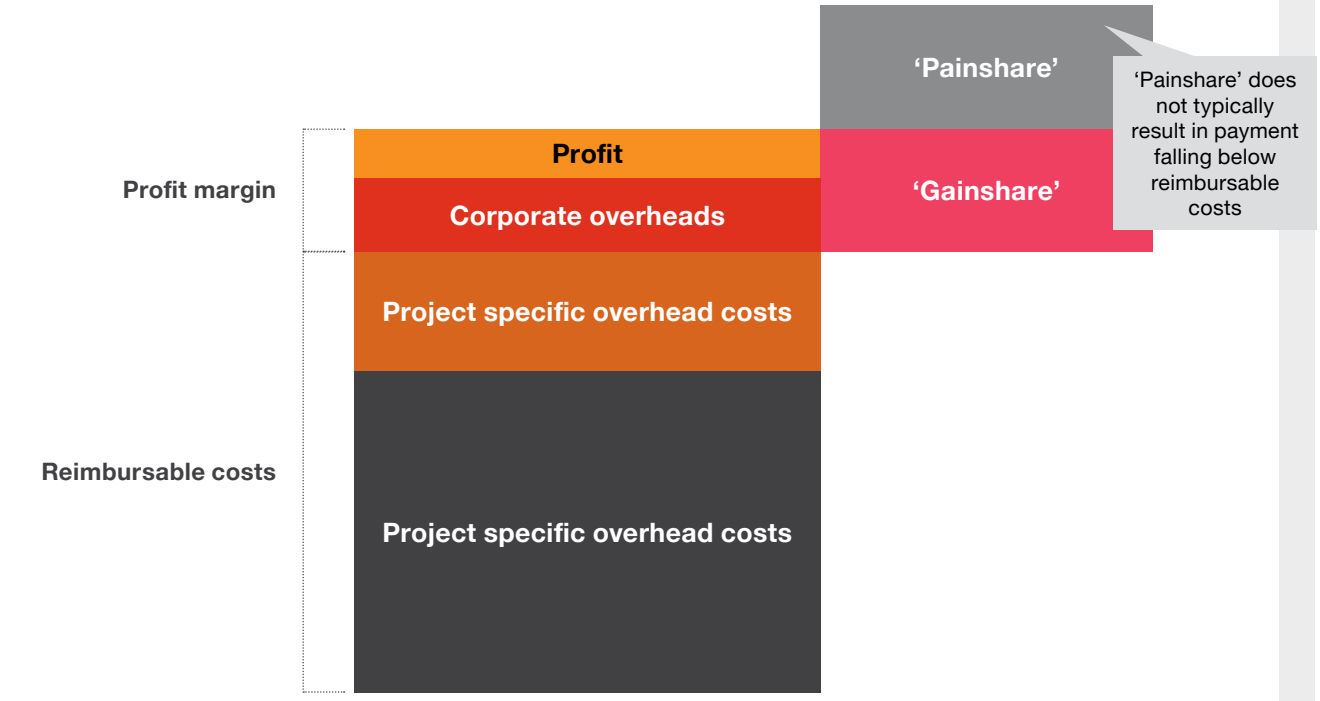
Time and cost risks are shared between the public and private sector, developing partnerships, incentivising 'best for project' thinking and promoting contractor solvency.

Payment mechanism

The payment mechanism for an alliance contract can be specifically designed to suit the needs of each individual project, however it will generally have three components:

- **Reimbursable costs** – all direct project costs and project specific overheads are reimbursable through the project.
- **Profit margin** – a fee to cover corporate overheads and normal profit may be charged, however this fee may be reduced under the 'painshare'/gainshare' regime.
- **'Painshare'/'gainshare' regime** – sharing of 'pain'/'gain' between alliance participants based upon performance against pre-agreed targets in cost (e.g. target outturn cost) and other non-cost key result areas. The upside and downside associated with this regime is a matter for negotiation and set contractually under the Alliance Contract.

Alliance Contract – payment mechanism



IFF model and alliance contracts – While alliance contracts provide benefits around accelerated procurement and incentivisation of a 'best for project' approach, the final outturn cost can be uncertain. IFF is predicated on a fixed funding requirement and limited residual risks for local authorities. Accordingly, an adequately sized contingency and a suitable GSP would be required to achieve the desired balance sheet outcomes.

Regional planning and collective procurement

Case study

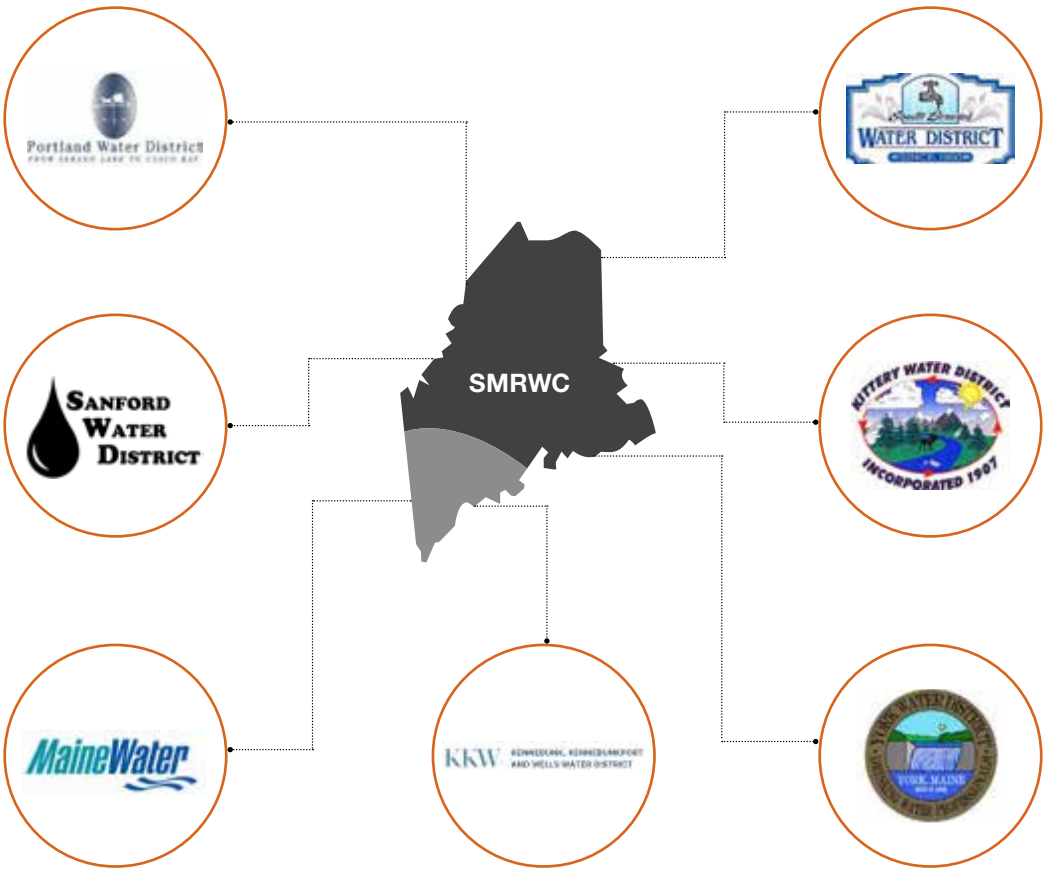
Southern Maine Regional Water Council

The Southern Maine Regional Water Council (SMRWC) was established in 2005 as an organisation of water and wastewater utilities. Seven councils are members of the Council, who collectively service approximately 300,000 people across 23 different communities.

The Council was established with the following objectives in mind:

- **Regional collaboration** – members collaborate on long-term water supply planning.
- **Collective procurement** – a number of Purchasing Groups operate under the Council (e.g. Treatment Chemical Purchasing Group), which co-ordinates collective procurement for Members.
- **Regional studies** – the SMRWC has pooled resources to fund regional studies on combined distribution and supply systems.
- **Community resilience** – the SMRWC is also involved in community resilience works and has an emergency response mutual aid plan.

The SMRWC has delivered significant cost savings through collectively procuring services, which has been especially material for smaller utilities in the area. The regional planning focus has improved the overall quality of water and wastewater services across the region. Further, the region has been able to navigate droughts and other community resilience issues through its emergency response mutual aid plan, where Members have shared water resources during drought conditions.



Model 2:

Private delivery model

This model focuses on optimising risk allocation between the public and private sector to incentivise whole of life pricing and reduce the upfront public capital required. This model achieves this through combining delivery with operations and maintenance, and the inclusion of private finance.

Delivery structure

Council delivery	Crown delivery	Private delivery	Iwi involvement
New entity	**Stakeholder**	Service provider	**Project sponsor**
Partnership	Partnership	Partnership	Partnership
Joint procurement	Shareholding	**New SPV entity**	Shareholding
Traditional delivery	Crown delivery	Full privatisation	Iwi delivery

Funding sources

Council funding	Crown funding	Value capture	Direct
General rates	Crown grant	**Negotiated contribution**	**Private capital**
Targeted rates	Seed capital	Land intervention	**Commercial opportunity**
Developer contributions	**Specific Crown funds**	Property development	Tax/duty
		IFF levy	**User pays**

Financing sources

Public finance

- Crown loan
- DMO (Crown facility)
- **LGFA**
- Crown equity

Private finance

- Bank debt
- Bonds/private placement
- Subordinated/convertible instruments
- **Private equity**

Capital delivery

Commercial model

- Alliance contract
- Construct only
- Design and build
- Managing contractor
- Enterprise model
- Design, build, operate, maintain
- **Design, build, finance, operate, maintain**
- Turnkey

Operations delivery

Commercial model

- Self perform
- Operate only
- Operate and maintain
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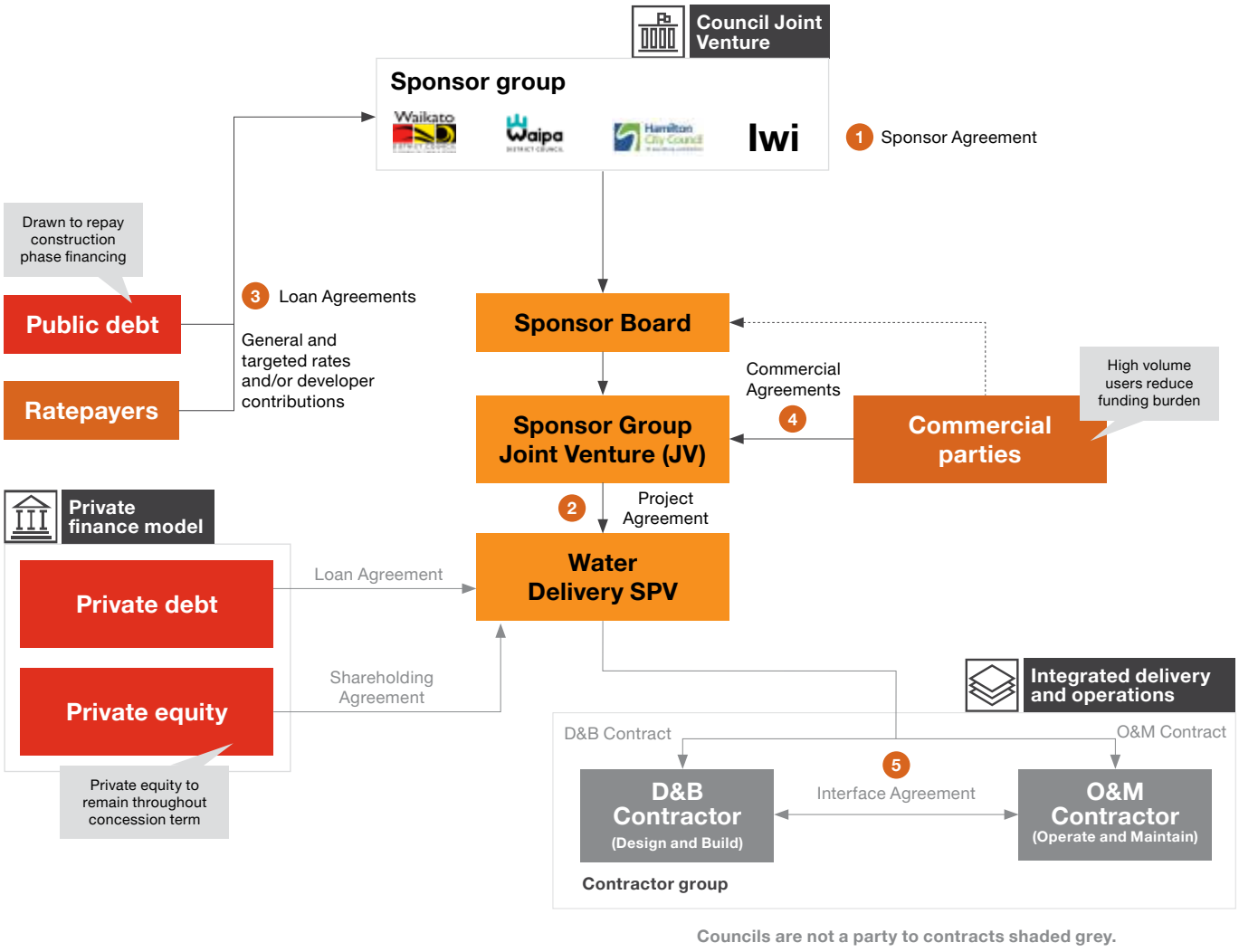
Commercial structure and contracts

Commercial structure diagram



Councils are not a party to contracts shaded grey.

Outline of core contracts

Contract	Parties	Description
1. Sponsor Agreement	Hamilton City Council, Waikato District Council, Waipa District Council, Commercial parties, Iwi	Agreement between the sponsor group which sets out the following: • Role for sponsors. • How the sponsor group will engage collaboratively with each other. • The governance, management and approval framework. • How funding will be shared between the sponsor group. • Vesting of assets.
2. Project Agreement	Sponsor Group JV Water Delivery SPV	The Project Agreement will provide for the following: • Design • Construction • Operations • Maintenance • Financing It will include the payment mechanism and performance obligations, which are linked to the achievement of project outcomes.
3. Loan Agreements	Hamilton City Council, Waikato District Council, Waipa District Council, LGFA	Standard LGFA short-form contracts when borrowing through the LGFA. Potential for LGFA to investigate the use of 'green bonds', which would align with environmental outcomes. The interest rate mechanism in the 'green bond' may reference environmental KPIs, which could vary the borrowing rate depending on the environmental performance.
4. Commercial Agreements	Sponsor Group JV Commercial parties	Agreement for the commercial supply of wastewater services. These agreements are being leveraged as a funding source to support the delivery of the infrastructure (e.g. agreement for providing wastewater services to an industrial user (such as dairy processing) in exchange for an upfront capital contribution or ongoing payments).
5. Interface agreement	D&B Contractor (Design and Build) O&M Contractor (Operate and Maintain)	Agreement between each of the D&B Contractor(s) and O&M Contractor(s), which governs how the contractors will interface with each other and how certain risks will be allocated (e.g. third party damage).

Explanation and evaluation

Delivery, capital and operations structure

Sponsor Group Joint Venture (JV)

A **new delivery vehicle** ('Sponsor Group JV') established to manage the delivery and operations of the Southern Metro Wastewater Treatment Plant.

- Owner of the wastewater assets.
- Contracts with the private sector delivery vehicle.

Sponsor Board

Governs the Sponsor Group JV and sets its strategic direction.

- Includes representatives from each member of the sponsor group.
- May also include commercial parties where they are a significant financial contributor to the project.

Water Delivery SPV

A **new delivery vehicle** ('Water Delivery SPV') established by **private sector** equity to contract with the Sponsor Group JV and deliver wastewater services.

- Designs builds, finances and operates the Southern Wastewater Treatment Plant, but does not own the underlying assets.

Water Delivery SPV

D&B Contractor (Design and Build)

O&M Contractor (Operate and Maintain)

Design, build, finance, operate, maintain

- A standard form contract utilised that contractors are already familiar with to minimise transaction costs.
- The Water Delivery SPV sub-contracts to provide wastewater services.

Payment mechanism (construction phase)

- No payments made to the Water Delivery SPV until construction is complete. Once this is achieved, a single lump sum payment would be made by the Sponsor Group JV.

Payment mechanism (operations phase)

- Includes a performance component to incentivise the achievement of project outcomes.
- The three primary proposed payment components are:

  Fixed Charge + Variable Charge +/- KPI Payment/Abatement

  Where
  - **Fixed charge** = fixed payment based upon the agreed base service provision.
  - **Variable charge** = variable payment based upon additional service provision and other shared risks such as wholesale energy costs.
  - **KPI payment/abatement** = a series of operating KPIs and minimum standards will be provided for under the performance regime, with a payment (or reduction in payment) made based upon performance against the standards.

Example KPIs: WATHBA*

- Effluent quality
- Sludge quality
- Odour
- Noise
- Power consumption
- Chemicals consumption

** The WATHBA Project related to the construction of the Wathba 2 Wastewater Treatment Plant, a Public Private Partnership Transaction. Strict KPIs were introduced to ensure all elements of the project (design, construction, operation) were undertaken to optimise project outcomes.*

Features of delivering water services regionally through a single entity include:

Council Joint Venture

- ✓ **Economies of scale** – delivering better value for money by reducing duplication of costs, opportunity for dedicated JV staff to monitor the project during construction and operations.
- ✓ **Regional decision making** – clear forum for decision making amongst the sponsor group.
- ✓ **Leverage expertise** – expertise leveraged across the sponsor group and accrued within the new delivery vehicle for future projects.
- ✓ **Co-funding** – supports a funding solution that shares the funding burden more easily across the sponsor group.
- ✓ **Active iwi involvement** is incentivised by inviting iwi groups to be sponsors, and to have representation in governance groups. Engagement with iwi prior to implementation of the delivery structure should be undertaken, to allow iwi to determine specifically what role they would like to have.

Integrated delivery and operations

- ✓ **Whole of life pricing** is incentivised because operations and maintenance risk is transferred to the contractor. Low quality assets typically result in high operating costs, therefore capital investment that delivers greater operating efficiency will be incentivised. By taking a long term holistic view the most optimal outcome can be achieved.
- ✓ A larger package is generally **more attractive to the market**, which should incentivise large providers bidding on the packages, who bring market expertise, intellectual property and technology.
- ✓ Larger packages can procure **better value for money**, as contractors are able to realise the benefits of economies of scale and synergies.

Funding and Financing

Ratepayers	Territorial authorities will be responsible for imposing and collecting general rates, targeted rates and/or developer contributions. • These will be collected by each territorial authority and transferred to the Sponsor Group JV on a proportional basis. The Sponsor Group JV uses funds to pay the concession payments to the Water Delivery SPV.
Commercial parties	Commercial parties will contract with the Sponsor Group JV for provision of wastewater services. • By introducing commercial parties early in the design phase, economies of scale can be achieved (e.g. sharing capital and operating costs). • Commercial party funding could be structured as a combination of upfront capital and/or ongoing operational payments.
Public debt	Private debt is repaid in the form of a fixed lump sum payment after completion (based on an agreed completion process ensuring the asset is operating as intended) and refinanced with public financing.
Private equity	Private equity brings delivery expertise and facilitates risk transfer to the private sector, for risks the private sector are best able to manage. • This includes design, construction and operating risks as well as interface risks between participants (e.g. between D&B and O&M Contractors). • Ensures the private sector are highly motivated to manage the operations and maintenance of the asset to achieve the project outcomes.
Private debt	Private debt is raised by the Water Delivery SPV during construction. • Private debt is repaid after an agreed completion process by the Sponsor Group JV (from the drawdown of public debt). • The construction phase typically has a high degree of risk associated with it, in particular for wastewater treatment assets that have complex technological processes. Private debt brings stringent due diligence and ongoing monitoring requirements that help ensure the asset is delivered on time and budget, while also meeting the necessary operational requirements.

Features of the funding and financing solution:

Private finance model

- ✓ The inclusion of private debt during the **construction phase provides upfront capital**, reducing the burden on the local authority group. Private sector due diligence and ongoing monitoring requirements ensures focus on managing cost and time.
- ✓ Public debt utilised during the operations phase, because it provides better value for money where the level of risk has reduced. Private equity is retained through the **operations phase** to **support the transfer of operating risks** to the private sector, ensuring the project continues to meet its operating objectives.

Other:

- ✓ The proposed funding arrangement leverages a number of different funding sources to reduce the burden on local authorities and ratepayers, and align the costs of the infrastructure to the beneficiaries.

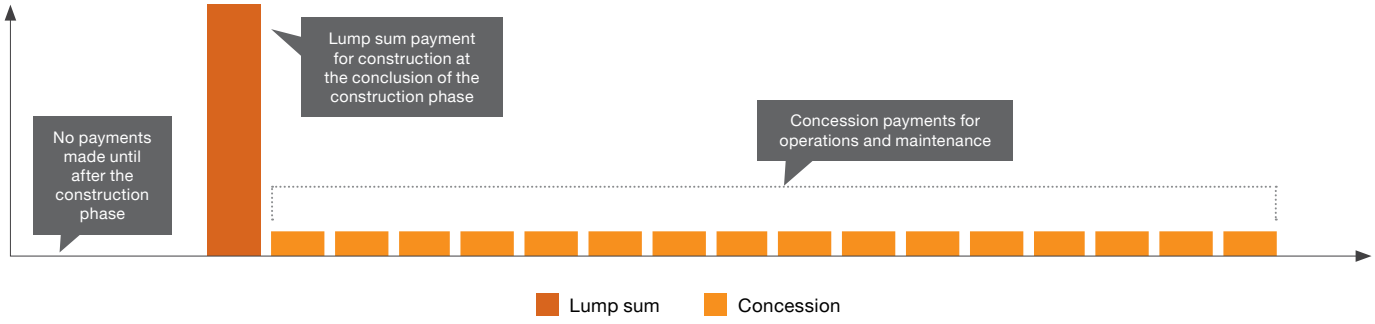
Model 2:

Areas of focus

Project cashflows

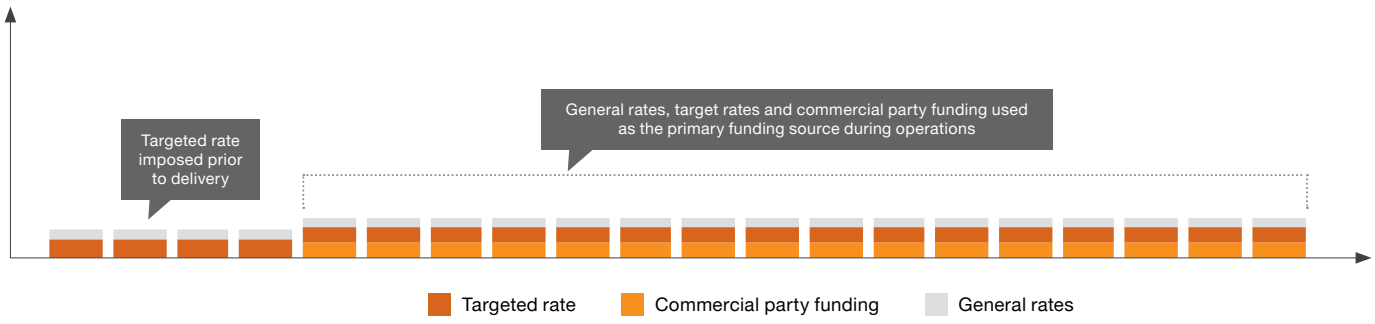
Payments to the Water Delivery SPV include a fixed lump sum payment following the construction phase and regular, ongoing concession payments for operations and maintenance. The lump sum payment will be due following the construction phase (as set out in the contract). The concession payment is primarily fixed across the operations phase, however a variable charge and KPI payment/abatement will be included within the payment mechanisms, which may cause the regular payment to vary.

Payment to Water Delivery SPV



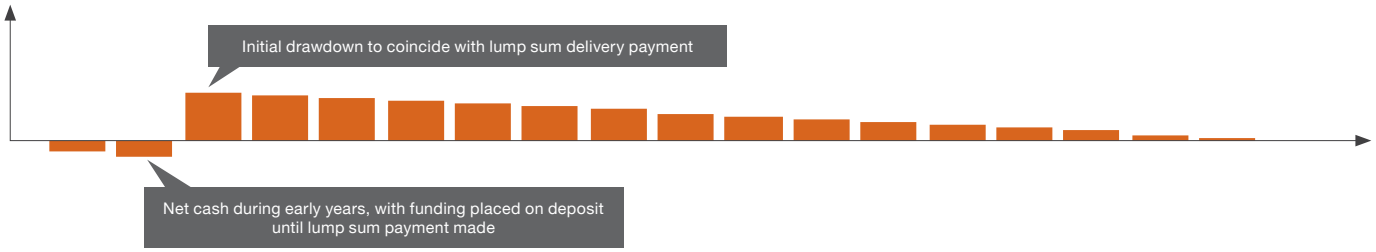
The sponsor group will primarily receive funding from targeted and general rates, and fees and charges applied to users.

Funding (received by sponsor group)



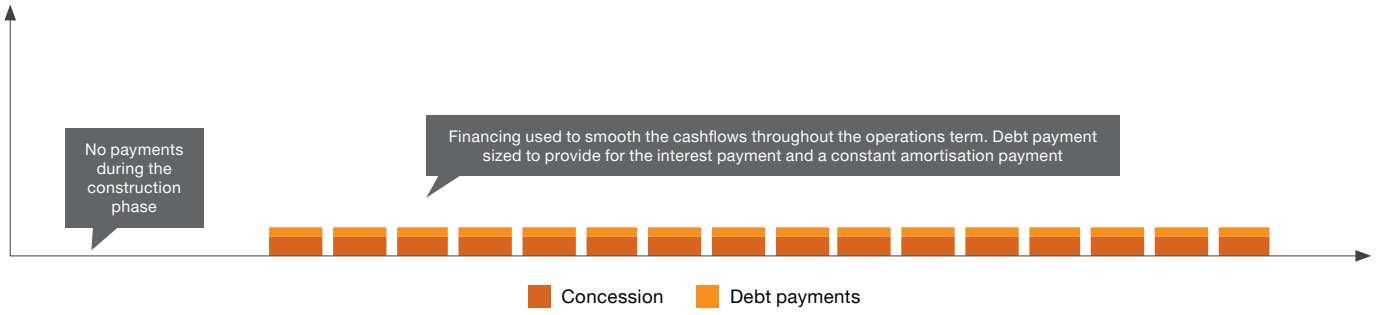
Financing will be required to bridge the gap between the funding available and the lump sum payment. An amortising debt profile is proposed, where funding is applied to the outstanding debt balance on a regular basis. Amortising debt profiles are equitable as the timing of funding will be more closely aligned to the timing of benefits produced by the asset, which promotes intergenerational equity.

Net debt profile (sponsor group)



Financing used to smooth the payment profile for the sponsor group. As the debt is amortised, the size of the interest payments will reduce and principal payments will increase.

Net cash outflows



Construction phase finance in a Design, Build, Finance, Operate and Maintain project

Case study

Seaview Wastewater Treatment Plant (Hutt Valley)

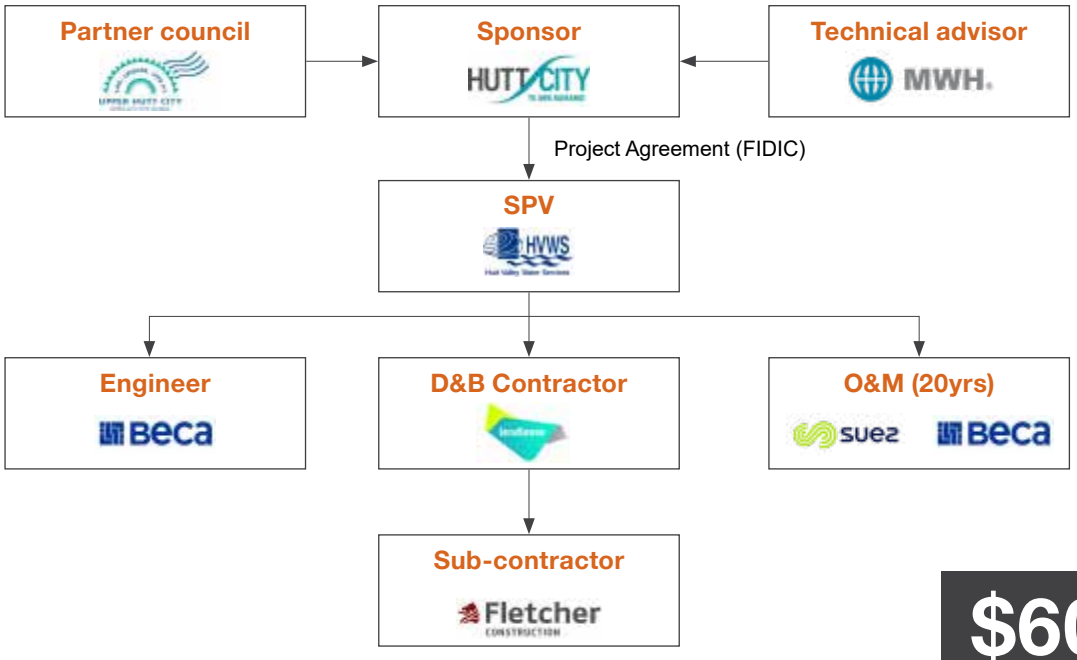
Project overview:

The Seaview Wastewater Treatment Plant (WWTP) project involved the design, construction and operation of a secondary treatment plant at Seaview in Petone, Wellington. This was supplemented by ultraviolet disinfection of treated effluent, sludge beneficial reuse and odour control, together with new pump stations and a pipeline to transfer sewage from Wainuiomata to Seaview. As a brownfield site, integration risk with existing assets formed part of the commercial principles (i.e. risk allocation), and impacted upon the technical design.

Challenges addressed/benefits

- **Interface with existing schemes** – structure facilitated the transfer of interface risk with the existing scheme to the private sector. Given the scale of the project, and complexity of the interface with existing schemes, the private sector taking on this risk was a considerable benefit.
- **Contractor comfort** – a standard FIDIC contract was utilised, which is an international standard form contract, to ensure that potential bidders were familiar and comfortable with the base contractual terms.
- **Outcomes** – strict KPIs, penalties and hand-back requirements were imposed under the contract to ensure social and environmental outcomes were achieved.
- **Private finance for delivery** – private capital during construction phase was used as a way to manage costs during delivery. Cheaper public financing was then leveraged during operations (i.e. once project risks had reduced) to reduce finance costs. The WWTP met project deadlines and was designed and constructed within the capital budget.

Commercial structure



$60m
delivery cost

Comparison of the Three Waters models

How can co-governance and co-management of such a scheme be best implemented, while also ensuring that partners retain suitable control to respond to future regulatory changes and individual requirements?

Governance and control:

Model 1: Public sector delivery	Model 2: Private sector delivery
• Greater ongoing partner control and flexibility compared to private sector delivery model. • Partnership model provides an enduring, collaborative framework for future planning and delivery of projects. • Flexibility of partnership model allows all funding, financing and procurement models to be leveraged. • Iwi participation is encouraged through the opportunity to be a partner. Additional flexibility for iwi to determine a different role if desired.	• Territorial authorities would have representation in the project governance group. • Contractual terms to include variable charges and KPI payment/abatement to incentivise the achievement of outcomes (incentives in place of control). • Iwi involvement at a sponsor level and within the governance framework to ensure appropriate engagement prior to (i.e. when setting outcomes) and throughout the project.

How can the benefits of scale be best leveraged to ensure that the project attracts market leading expertise, in particular around technology, operational efficiency and asset management.

Delivery and implementation:

Model 1: Public sector delivery	Model 2: Private sector delivery
• Reduced risk transfer but more ongoing control over the project. • Smaller procurement packages (opportunity to stage project to spread funding requirement). • Greater flexibility to integrate operator/ maintainer into existing territorial authority three waters services. • Opportunity to develop a pipeline of work to leverage an enterprise model. • 'Best for project' approach optimising non-cost project outcomes.	• Scale offers the private sector increased opportunity to invest in innovation but remain cost effective. • Whole of life pricing encouraged, and scale leveraged, through the procurement of the project in a single package. • No construction phase payments available until a period into the operations phase to ensure plant is operating as expected.

How can the financial impact of such a large scheme on local authorities and individual ratepayers be minimised, and how can funding be structured to be as equitable as possible?

Funding and affordability:

Model 1: Public sector delivery	Model 2: Private sector delivery
• Potentially favourable balance sheet treatment achieved through IFF structure. • Intergenerational equity promoted through leveraging long-term IFF revenue stream for delivery (which is more aligned to an asset's useful life). • GSP may assist with affordability by sharing risks with central government.	• Private capital leveraged during construction phase to reduce upfront capital burden. • Private debt refinanced with cheaper public finance post delivery once project has been de-risked. • Greater risk transfer to the private sector to incentivise detailed due diligence and ongoing contract management. The private sector well placed to perform these functions.

Extension

Northern Metro Wastewater Facility

A potential extension to the Southern Metro Wastewater project is to include the delivery, operations and maintenance of a new sub-regional wastewater treatment plant in the Northern Waikato, which may provide the following benefits:

- **Existing governance framework** – as the same territorial authorities would be involved in both projects, the same governance framework could be leveraged for both projects, preventing duplication of time and costs spent on developing and establishing a new governance framework.
- **Economies of scale** – the delivery of a second plant would significantly increase the size of the package, increasing market interest and providing economy of scale opportunities.
- **Procurement synergies** – procuring the packages together is more efficient as only a single procurement process would be required, avoiding the duplication of costs.

Model 1: Public sector delivery	Significant flexibility inherent in the public sector delivery model, which could incorporate the Northern Facility in the following ways: • **Procured together** – Northern and Southern Facilities procured in the same package. • **Extended scope** – flexibility for scope of the alliance contract to be extended to include the Northern Facility, which would avoid having to retender for the Northern Facility. • **Enterprise model** – facilities delivered as part of a pipeline of work under an enterprise model (e.g. preferred suppliers). • **Partnership framework** – the purpose of the enduring partnership framework is to provide a platform for future collaboration. Accordingly, the Northern Facility could be procured as a separate package, but under the same partnership framework and delivery structure.
Model 2: Private sector delivery	Limited flexibility to include the Northern Facility in the private sector delivery model given its fixed scope. Northern Facility could be included through the following (pre-contractual close) options: • **Procured together** – Northern and Southern Facilities procured in the same package. • **Pre-agreed variation** – pre-priced options could be agreed under the Project Agreement, which would allow the Sponsor Group JV to exercise an option to include the Northern Facility post contractual close. However, this would likely affect the cost of delivering the Southern Facility (e.g. some of the risks associated with Northern Facility may be priced in). Potentially higher transaction costs (e.g. through greater level of due diligence).

Public transport

Sector overview

Overview

Significant growth has been observed within the Hamilton to Auckland Corridor, which has placed increased pressure on the already limited travel options. To address this issue, the Te Huia Passenger Rail, a start-up rail connection between Auckland to the Waikato has been established, with services expected to commence in early 2021. This service will present a viable commuter alternative to the Northern Explorer (Auckland to Wellington rail service), which only runs in one direction six days a week (three trips each way) between Hamilton and Auckland.

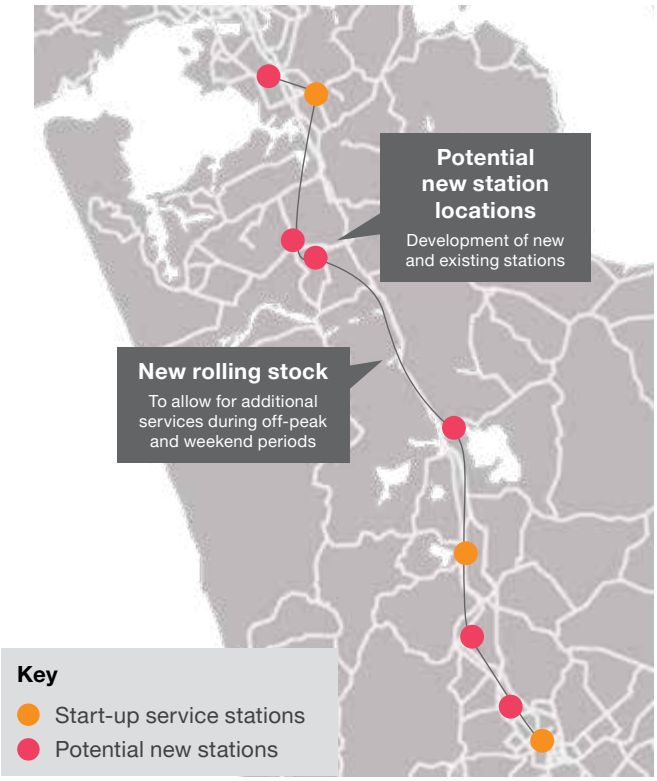
As there are no existing commuter passenger rail services within the Waikato, the Te Huia passenger rail service will primarily integrate with Hamilton's existing bus network. Approximately, 37 bus routes currently operate across the Waikato region, the majority operating within Hamilton's urban area. Private vehicles (e.g. cars) remain the primary mode of travel across the region, and therefore integration with the roading network (e.g. through park and ride facilities and bus routes) will also be critical to the success of the Te Huia passenger rail service. Hamilton City Council is currently investigating opportunities for internal passenger transport systems (e.g. between Cambridge, Morrinsville and Hamilton Airport). To enhance outcomes, these should be integrated with Te Huia where possible.

Waikato Regional Council is responsible for regional land transport planning, and delivering public transport services in the Waikato. However, responsibility for the provision of transport infrastructure (roading, rail and bus stations, bus stops) rests with each territorial authority within the region. To support integration between regional and territorial authorities, regional transport committees have been established, which are responsible for preparing regional transport plans and include a representative from each territorial authority within the region.

Te Huia passenger rail service

The Te Huia passenger rail service will initially be implemented as a start-up service, delivering two on-peak services daily between Auckland and Hamilton. Conceptual plans for an enhanced service are being investigated and could include improvements such as expansion of existing stations, new stations, increased service frequency and direct connectivity further into Auckland. The start-up service includes stations at Frankton, Rotokauri, Huntly and Papakura. Stops at locations such as Puhinui, Tuakau, Pokeno-Mercer, Meremere-Hampton Downs, Te Kauwhata, Taupiri-Hopuhopu and Ngāruawāhia could be added as part of the enhanced service.

Existing and potential new station locations



Indicative cost of the enhanced service

Total Cost	Capital	Operations
$100m	$100m	TBC

For the purposes of the Study, an indicative capital cost has been assumed. This could include elements such as the expansion of existing stations, new stations and additional rolling stock. This estimate excludes ongoing operating costs, which are still to be determined.

Start-up service timetable

	Mo	Tu	We	Th	Fr	Sa	Su
AM	2	2	2	2	2	1	0
OP	0	0	0	0	0	0	0
PM	2	2	2	2	2	1	0

Additional off peak and weekend services would increase timetable flexibility and open the service up to new users. The start-up service rolling stock may be sufficient to support some increase in service levels, after which additional rolling stock would be required.

Project benefits

Reduction in congestion

The Te Huia passenger rail service is expected to encourage modal shift along the Hamilton to Auckland Corridor, which will ease congestion on the roading network.

Improved reliability

The Te Huia service will be fully segregated from the roading network, and therefore can provide a more reliable service than the bus and roading networks.

Improved access

Improved access to economic and social opportunities (e.g. employment and education), through greater connection between the two regions (Auckland and Waikato).

Support urban growth

Providing a reliable commuter service between Auckland and Waikato will support urban growth within the H2A region through improved connectivity with urban centres.

Current role in the Te Huia passenger rail service

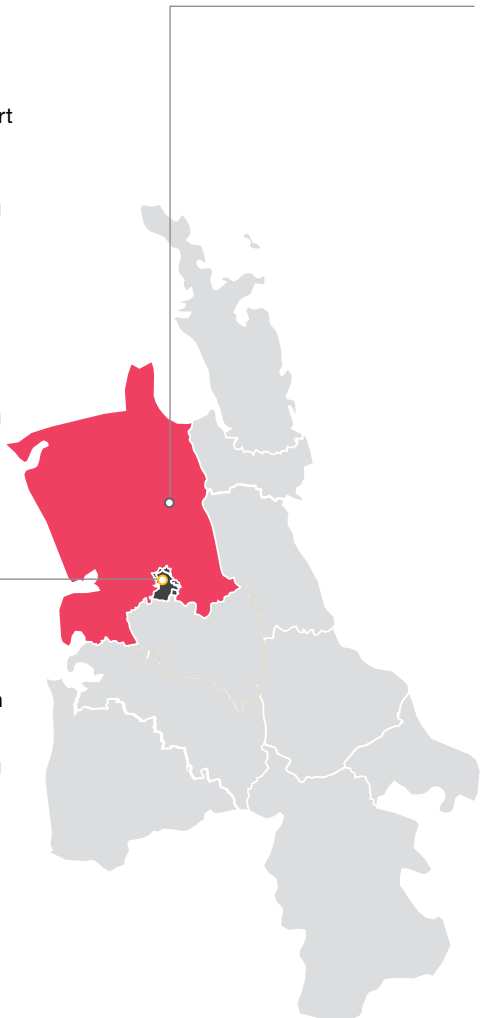
Key regional transport parties and roles

- Auckland Transport, an Auckland Council CCO, operates the Auckland public transport network (including rail) that the Te Huia service will connect to.
- Member of the Project Governance Working Group and Project Technical Control Group.

- Member of the Project Governance Working Group and Project Technical Control Group.

- Leading development of Frankton and The Base stations.
- Will operate and maintain the stations within the city area (excluding ticketing services).
- Member of the Project Governance Working Group and Project Technical Control Group.

- Will operate and maintain the rolling stock.
- Responsible for design of tracks and signalling.
- Owner and manager of all national rail network infrastructure.
- Member of the Project Governance Working Group and Project Technical Control Group.



- Leading the development of the Huntly station.
- Will operate and maintain the Huntly station.
- Involved in the Project Governance Working Group and Project Technical Control Group.

- Overall responsibility for the delivery of the service.
- Will be responsible for the fare system and integration of the service with the existing.
- Member of the Project Governance Working Group and Project Technical Control Group.

- Primary funder of the start up service.
- Member of the Project Governance Working Group and Project Technical Control Group.

Addressing sector challenges

Sector challenges

Regional public transportation faces a number of challenges.

Procurement complexities

Rail projects can be particularly complex to procure, in particular where there is no existing commuter rail in the region.

Segregated delivery

Inter-regional public transport requires the alignment of a number of stakeholders with overlapping delivery responsibilities, in particular for rail.

Funding and affordability

Investment in new forms of transport is required in advance of known demand. This brings funding challenges, as patronage revenues are unknown.

Te Huia passenger rail service – the first step in reshaping transport in the Waikato

Te Huia is the passenger rail service that will connect Waikato to Auckland. Initially capable of carrying over 500 passengers per day, the service seeks to address the challenges of increased pressure on existing transport connections, as well as enabling growth by connecting urban centres. As a start-up service Te Huia initially has limited stops and frequency of service. A number of improvements are being investigated to increase both stops and frequency, as well as taking the service further into Auckland.

Questions for this study

The focus of this Study is on transitioning into a new model for delivering passenger rail between Hamilton and Auckland, including the supply, operations and maintenance of rolling stock, and the development or improvement of stations.

Questions have focussed on how funding, financing and delivery models can enhance the start-up scheme to include new stations, a more frequent service and a connection further into Auckland – specific considerations will include:

Governance and control

How can co-governance and co-management of such a scheme be best implemented to streamline the core delivery and ongoing upgrade of the service?

Delivery and implementation

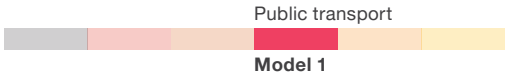
How can the solution best allocate risk between contracted parties and local authorities, ensuring that it optimises value for money and service quality?

Funding and affordability

How can long term funding best be secured, and how can it be structured to be as equitable as possible?

Commercial models

Two different commercial models were developed for the case study, both of which focus on governance frameworks and procurement approaches. The ‘partnership model’ presents a scenario of an immediate next step for Te Huia, while the ‘regional authority model’ represents a ‘blue sky’ potential long-term solution, which is not current government policy.



Model 1:

Partnership model

A key focus for this model is establishing an enduring framework for regional collaboration. This is achieved through the establishment of a regional heavy rail partnership. NZ Transport Agency, KiwiRail and Auckland Transport would also be part of the partnership, given their involvement in the delivery of heavy rail services across Auckland and the Waikato.

Delivery structure

Council delivery	Crown delivery	Private delivery	Iwi involvement
New entity	Stakeholder	Service provider	Project sponsor
Partnership	**Partnership**	Partnership	**Partnership**
Joint procurement	Shareholding	New SPV entity	Shareholding
Traditional delivery	Crown delivery	Full privatisation	Iwi delivery

Funding sources

Council funding	Crown funding	Value capture	Direct
General rates	Crown grant	Negotiated contribution	Private capital
Targeted rates	Seed capital	**Land intervention**	**Commercial opportunity**
Developer contributions	**Specific Crown funds**	**Property development**	Tax/duty
		IFF levy	**User pays**

Financing sources

Public finance

- Crown loan
- DMO (Crown facility)
- **LGFA**
- Crown equity

Private finance

- Bank debt
- Bonds/private placement
- Subordinated/convertible instruments
- Private equity

Capital delivery

Commercial model

- Alliance contract
- Construct only
- **Design and build**
- Managing contractor
- Enterprise model
- Design, build, operate, maintain
- Design, build, finance, operate, maintain
- Turnkey

Operations delivery

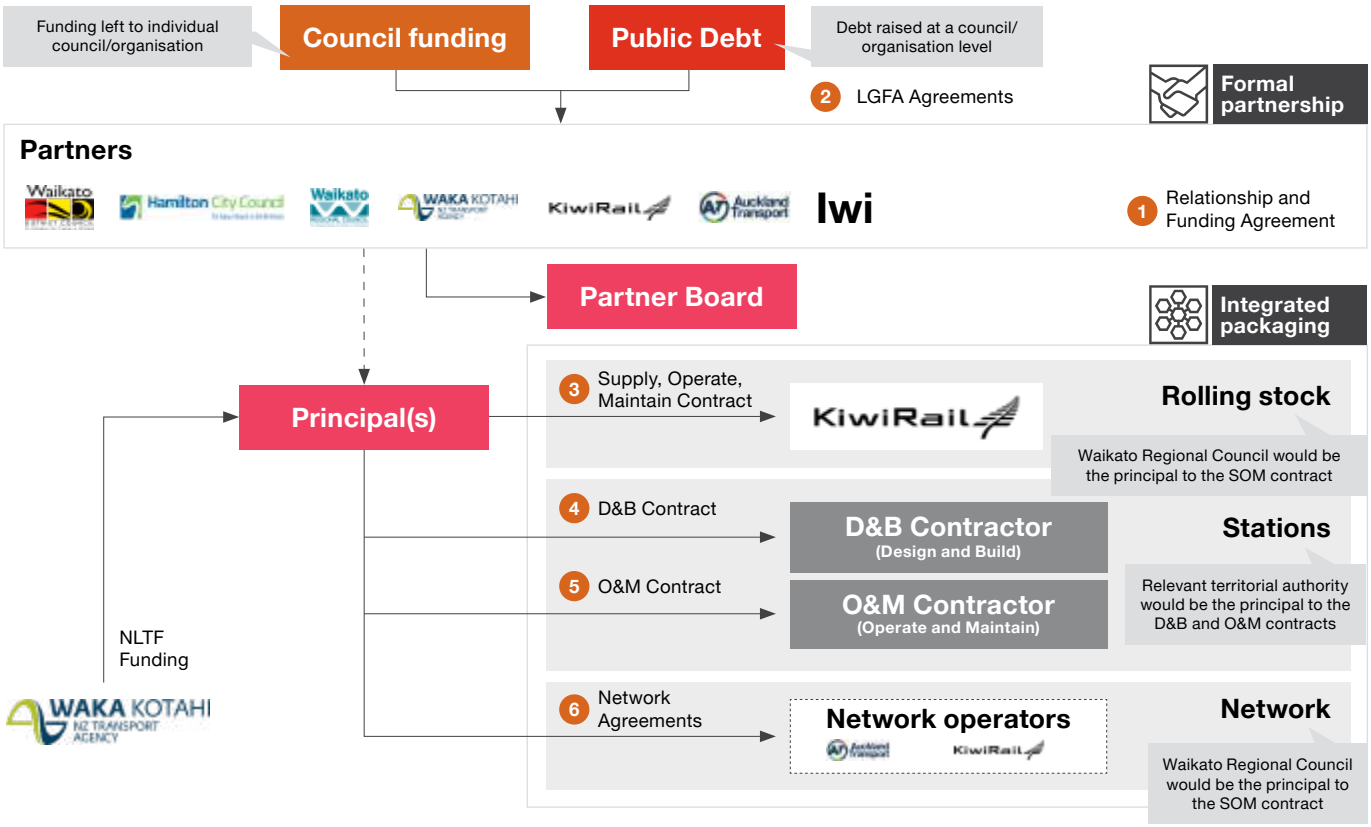
Commercial model

- Self perform
- Operate only
- **Operate and maintain[1]**
- **Supply, operate, maintain[2]**
- Design, build, operate, maintain
- Design, build, finance, operate, maintain
- Turnkey

1 O&M contract utilised for stations
2 SOM contract used for rollingstock

Commercial structure and contracts

Commercial structure diagram



Contract	Parties	Description
1. Relationship and Funding Agreement	Hamilton City Council, Waikato, KiwiRail, Auckland Transport, Waka Kotahi NZ Transport Agency, Waikato, Iwi	Agreement between the partner group, setting out: • How the partners will engage collaboratively with each other, including the business case framework for future/extension projects. • Governance, management and approvals frameworks for the individual project, which will endure for future works. • How funding and risk will be shared between the partners.
2. LGFA Agreements	Hamilton City Council, LGFA, Waikato, Waikato	Ordinary financing agreement between the LGFA and each respective borrowing local authority. Executed as a short form agreement under the Multi-Issuer Deed and Note Subscription Deed.
3. Supply, Operate, Maintain Contract	Principal, KiwiRail	Agreement between KiwiRail and the principal to supply, operate and maintain rolling stock on the network.
4. D&B Contracts	Principal, D&B Contractor	Fixed price agreement for the design and construction of the capital works at stations. Fixed scope requires contract variations for scope changes, but these may be pre-agreed as 'options' within the contract.
5. O&M Contracts	Principal, O&M Contractor	Fixed price and term agreement for the operations and maintenance of stations. Agreement will generally include fixed and variable charge components, and may include KPI/abatements.
6. Network Agreements	Principal, KiwiRail, Waka Kotahi NZ Transport Agency, Auckland Transport	Series of agreements that provide for the operation and maintenance of the network (e.g. access charges, track maintenance, etc.)

Explanation and evaluation

Delivery, capital and operations structure

Partner Board	**Governs the partnership** and sets its strategic direction. • Includes representatives from each member of the sponsor group. • Partnership Board receives delegations from partners and a specific approvals pathway will be established to promote efficiency.
Principal(s)	**Counterparty** to each of the contracts. • The relevant territorial authority would be the principal for contracts relating to the stations in their territory. • Waikato Regional Council would be the principal for the SOM contract and Network Agreements. • Responsible for managing the project (e.g. exercising rights under the contract).
Principal(s) **D&B Contractor (Design and Build)**	Contracting model tailored to the specific risks inherent with each project. • Traditional design and build contracts are preferred (where possible) given the increased budget certainty that these contracts provide. • Alliance contracts, which allow for greater risk sharing, preferred where there are high risk elements (e.g. presence of utilities, tunnelling).
Principal(s) KiwiRail	Supply, Operate, Maintain (SOM) contract with KiwiRail utilised to optimise risk transfer. **Separate contract to the RFA** • Promotes administrative efficiency – RFA is simplified as it does not include detailed risk allocations and commercial principles (including the payment mechanism) with KiwiRail, which may distract general partner negotiations. • Future flexibility – procuring the SOM contract separately allows variations or terminations to be completed without having to vary the RFA. **Payment mechanism (delivery phase)** • Fixed cost per vehicle paid on a milestone basis. **Payment mechanism (operations phase)** • Payment mechanism to include a performance regime (KPI/abatement) to transfer some of the operating risk (e.g. availability of rolling stock) to KiwiRail, who is better placed to manage these risks.

Features of delivering the enhanced Te Huia passenger rail project through a regional partnership:

Formal partnership

- ✓ **Collective planning** incentivises a regional approach to transport planning.
- ✓ Partnership model **does not preclude any funding, financing or procurement** models.
- ✓ Enduring nature of the partnership **promotes future collaboration**.
- ✓ Ability to **leverage the shared expertise** from partners.
- ✓ **Iwi involvement** provided through partnership role (or other as agreed with iwi).

Integrated packaging

- ✓ **Budget certainty** through fixed price contracts.
- ✓ Optimised risk transfer through **SOM contract and payment mechanism**.

Public transport

Model 1

Funding and Financing

Ratepayers	Local authorities will be responsible for imposing and collecting developer contributions, targeted rates and/or general rates to meet long-term funding commitments under the RFA. The impact of these commitments will also need to be reflected in respective Long Term Plans. These will be collected by each local authority and transferred to the authority on a proportional basis, in accordance with the funding commitment in the RFA.
WAKA KOTAHI NZ TRANSPORT AGENCY	NLTF funding provided through the current process (i.e. 'pay as you go'). Aligning partnership approval pathways with the existing NLTF funding application process and NZ Transport Agency approval framework may unlock efficiencies during the business case and planning stages.
Value creation	Opportunity for transit-orientated development at stations. • Potential for mixed use development, including food and beverage, commercial, and/or residential uses. • Integrating development at stations creates value through unlocking underutilised land and potentially catalysing private development. • Opportunity to capture long-term value through development partnering and purchasing land around stations.
Commercial opportunities	Opportunity to generate additional funding through the sale of advertising rights at stations and on the rollingstock (e.g. wrapping the shell).
Debt	Financing under the partnership model will generally be undertaken at an **individual partner level**, with the finance applied to the respective funding contributions. The partnership model does not preclude any financing approaches. LGFA borrowing likely to be the most cost-effective financing source.

Features of the funding and financing solution:

Formal partnership

- ✓ **Co-funding** – the funding burden shared between central and local government to minimise the impact on individual partners and ratepayers.
- ✓ **Economies of scale** – centralised procurement, packaging of projects/sub-projects and adopting regional solutions (i.e. servicing multiple districts where possible) leveraged to enhance scale, delivering synergies and value for money.
- ✓ **Unlocking partner funding** – aligning approvals with partner frameworks (particularly with NLTF funding applications) to assist with unlocking funding.

Other:

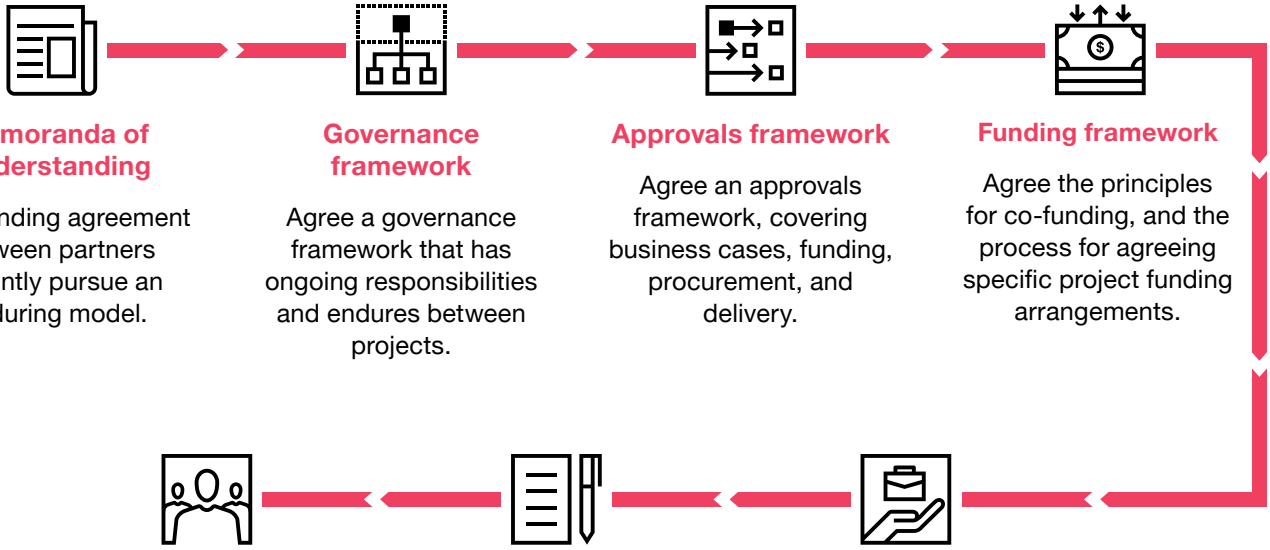
- ✓ **Value capture and commercial opportunities** delivering additional funding sources.

Model 1:

Areas of focus

Transitioning to an enduring partnership model

Transitioning to an enduring partnership model would leverage the existing governance framework to identify, investigate, endorse and deliver future projects. The enduring partnership model achieves this by establishing a framework for approving business cases, determining funding and risk allocations, engaging with other partners and stakeholders, and the procurement and delivery of new projects.



Memoranda of Understanding

Non-binding agreement between partners to jointly pursue an enduring model.

Governance framework

Agree a governance framework that has ongoing responsibilities and endures between projects.

Approvals framework

Agree an approvals framework, covering business cases, funding, procurement, and delivery.

Funding framework

Agree the principles for co-funding, and the process for agreeing specific project funding arrangements.

Partnership Board

Partnership Board and other governance groups established

Relationship and Funding Agreement

Partnership and agreed position from the previous steps formalised.

Commercial arrangements

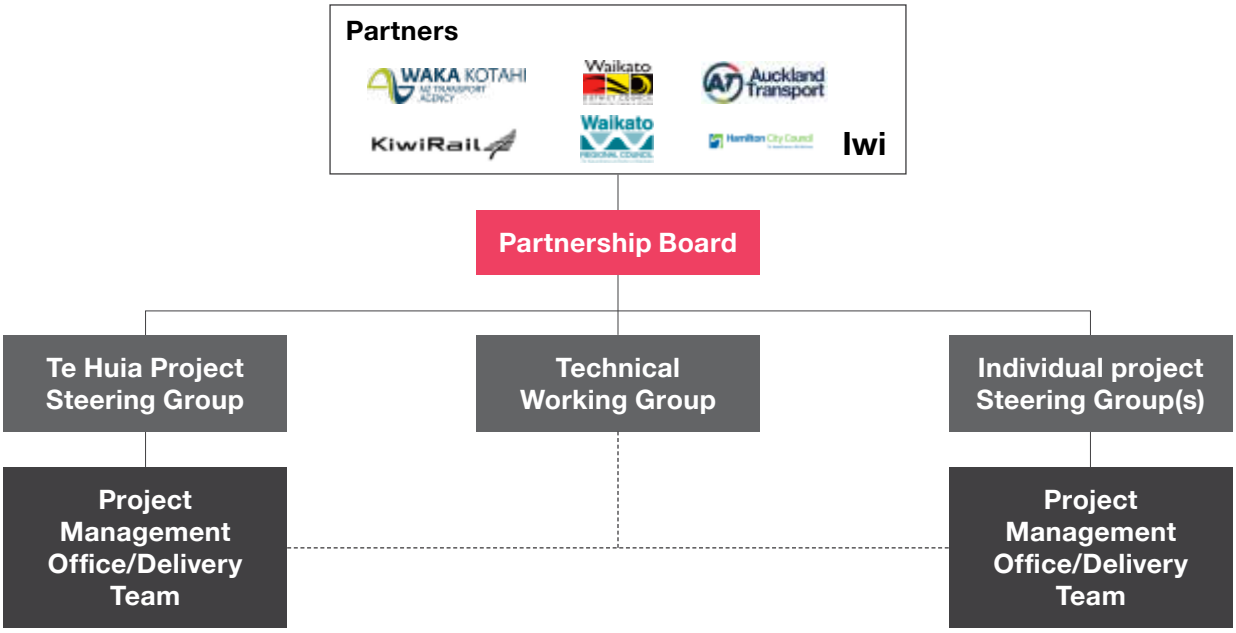
Agree general commercial principles (e.g. procurement process, asset ownership), noting these may vary between projects.

Indicative partnership structure

Under this structure, partners would be provided with representation on the Partnership Board, which would have approval authority in the business case, funding, procurement and delivery processes. Final approvals would remain with partner organisations.

The Technical Working Group may also operate across projects, providing technical advice and assurance throughout the business case phase.

Indicative partnership structure



There may be an opportunity to run a centralised project management office to provide additional efficiencies.

Model 2:

Regional authority model

A key focus for this model is establishing a new regional authority, which would be collectively owned by local authorities in the region. A new approach to NLTF funding to unlock central government funding is also proposed. A new regional authority may require legislative change and would need to be cognisant of the Future of Rail review, which will provide a more enduring framework for the planning and funding of rail.

Delivery structure

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New entity	Stakeholder	**Service provider**	Project sponsor
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Joint procurement	Shareholding	New SPV entity	Shareholding
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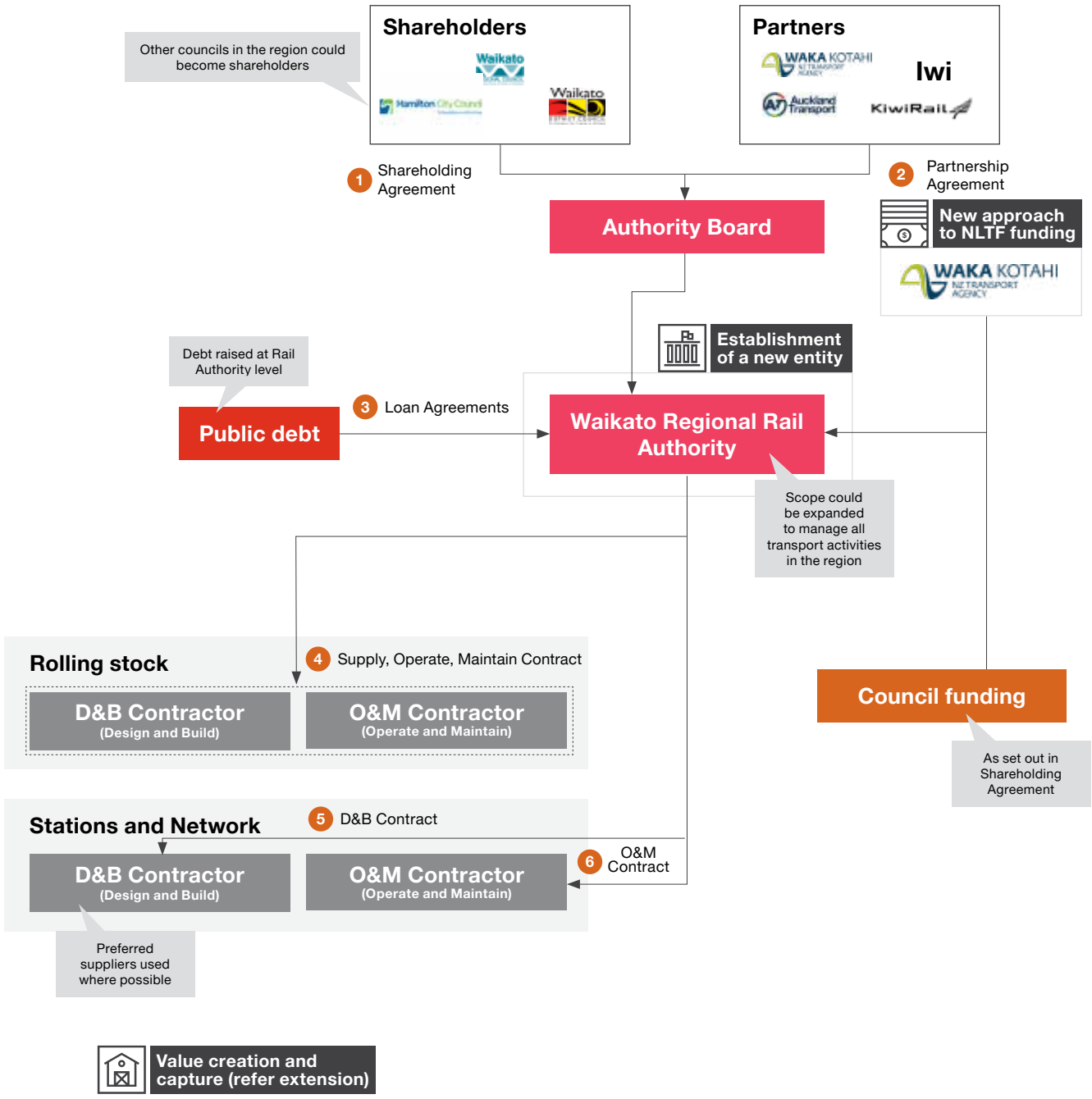
Commercial structure and contracts

Commercial structure diagram



Outline of core contracts

Contract	Parties	Description
1. Shareholding Agreement	Hamilton City Council Waikato Regional Council Waikato District Council	Shareholding Agreement setting out: • Ownership structure (e.g. shareholding allocation) • Ownership of assets (including physical and IP, initial vesting) • Governance framework (including voting rights) • Funding contributions • Termination • Powers (likely to be also set out in statute).
2. Partnership Agreement	Waikato Regional Rail Authority KiwiRail Auckland Transport Waka Kotahi NZ Transport Agency Iwi	Partnership Agreement setting out: • Partner governance roles • Principles of 'good faith' and collaboration • Dispute resolution • Communication and engagement protocols.
3. Loan Agreements	Waikato Regional Rail Authority Banks Wholesale investors	The Waikato Regional Rail Authority may raise finance itself (i.e. rather than through shareholders), and will require the necessary powers to execute loan agreements with potential lenders.
4. Supply, Operate, Maintain Contract	Waikato Regional Rail Authority D&B Contractor O&M Contractor	Agreement for the supply, operations and maintenance of rolling stock. Depot works may be incorporated into this contract where necessary.
5. D&B Contract	Waikato Regional Rail Authority D&B Contractor	Fixed price agreement for the design and construction of the capital works.
6. O&M Contract	Waikato Regional Rail Authority O&M Contractor	Agreement for the operations and maintenance of stations. The payment and performance regimes will be set out under the contract.

Public transport

Model 2

Explanation and evaluation

Delivery, capital and operations structure

Waikato Regional Rail Authority	**A new entity** ('Waikato Regional Rail Authority'), collectively owned by local authorities established to initially manage the delivery of passenger rail services. Ultimately scope could be expanded to manage all transport activities in the region. • The authority would own all physical assets and associated intellectual property (excluding rail network assets, e.g. track). • Responsible for capital and operations planning in the region. Would further work alongside Waikato Regional Council to develop the regional land transport plan (RLTP). Could ultimately take on responsibility for the RLTP. • Responsible for its own consenting applications, land acquisition and consultation/ stakeholder engagement activities. Waikato Regional Council may also engage the authority's assistance when responding to resource consents (similar to Auckland Transport's role). • May benefit from being established through statute to ensure it is fit for purpose (e.g. has the appropriate powers).
Authority Board	**Governs** the Waikato Regional Rail Authority, includes representatives from shareholders, Crown and iwi.
Waikato Regional Rail Authority **D&B Contractor (Design and Build)**	Contracting model tailored to the specific risks inherent with each project. • Traditional design and build contracts are preferred (where possible) given the increased budget certainty that these contracts provide. • Alliance contracts, which allow for greater risk sharing, preferred where there are high risk elements (e.g. presence of utilities). • Preferred suppliers used where a pipeline of work can be established.
Waikato Regional Rail Authority **D&B Contractor** / **O&M Contractor**	Supply, Operate, Maintain (SOM) contract utilised to optimise risk transfer. • High degree of interface risk between the supply, operations and maintenance of the rollingstock, which can be transferred to the private sector. • The SOM contractor should be procured to deliver depot works (if required).

Features of delivering the enhanced Te Huia passenger rail project through a new regional authority:

Establishment of a new entity

- ✓ **Regional decision making** enhanced through delivering planning activities centrally.
- ✓ Ability to **leverage the shared expertise** of shareholders and partners through establishing centres of excellence within the Authority.
- ✓ **Flexibility to extend the scope** of the entity to include all transport activities.

Other:

- ✓ **Budget certainty** through fixed price contracts.
- ✓ Optimised risk transfer through SOM contract and payment mechanism.
- ✓ Iwi involvement provided through partnership role (or other as agreed with iwi).
- ✓ **Procurement efficiency** where scale can be delivered through establishing a pipeline of work.

Funding and Financing

WAKA KOTAHI NZ TRANSPORT AGENCY	Under the 'regional authority model' there may be an opportunity to explore alternative funding models. One option (that is not current government policy) is for NLTF funding to be allocated based on a long-term programme (as set out in the RLTP), this would replace the existing project-by-project business case approach. • Provides funding certainty for the NZ Transport Agency and the Authority. • NZ Transport Agency involved in the governance group to ensure it retains appropriate oversight over the application of funding. • However, this alternative approach does create risk around the robustness and quality of decision making, and whether value for money is achieved, which would need to be adequately addressed. • In addition, any change to funding models would need to be cognisant of changes under the Future of Rail framework, which is now in place.
Ratepayers	Local authorities will be responsible for imposing and collecting developer contributions, targeted rates and general rates. These will be collected by each local authority and transferred to the authority on a proportional basis.
New taxes or charges	Opportunity to implement new taxes or charges (as seen in other jurisdictions), in particular those that can incentivise mode shift (note this may require a change in current government policy and is included as part of a 'blue sky' solution).
Commercial opportunities	The commercial opportunities (e.g. advertising, value creation) outlined previously under the Partnership Model would also be available as potential funding sources under the Regional Entity Model.
Debt	The Authority could be established to borrow directly (i.e. rather than relying on local authorities). • Direct borrowing is likely to be more expensive than borrowing through shareholders, should the authority be unable to borrow through the LGFA (which may require changes to the current LGFA borrowing arrangements). • However, there are benefits of direct borrowing, which may outweigh the additional cost, which are outlined below: – Greater funding certainty – Alignment of financing decisions with the borrowing purpose – Greater efficiency through avoiding on-lending agreements, which can add additional complexity (e.g. determining an appropriate commercial borrowing rate) – Avoids duplication of transaction costs – Tenor.

Features of the funding and financing solution:

New approach to NLTF funding

- ✓ Funding certainty for the NZ Transport Agency and the Authority.
- ✓ Establishment of central authority **avoids having to work through individual shareholder funding processes**.

Other:

- ✓ Potential implementation of new taxes or charges that incentivise **mode shift** (note this may require a change in current government policy and is included as part of a 'blue sky' solution).
- ✓ Time and cost associated with **on-lending arrangements avoided** through direct borrowing.
- ✓ Efficiencies available through avoiding multiple transactions (e.g. duplication of transaction costs).

Model 2:

Areas of focus

Establishment of a regional transport authority

Case study

Metrolinx – Canada

The Greater Toronto Transportation Authority (Metrolinx) was established through statute in 2006 to transform the way transport infrastructure was delivered across the Greater Toronto and Hamilton area. The Authority was designed to specifically address the issues the area was facing, which is outlined in the table below.

Issue	Description	Solution
Description	Planning, funding and financing, procurement and operation of the network was poorly integrated between the nine local transit agencies operating in the region.	An integrated approach to planning was delivered through establishing Metrolinx as a regional entity, with the specific mandate to develop a new regional transport plan (The Big Move 2008). A regional investment strategy was also developed to integrate the funding approach across the region.
Solution	Planning, funding and financing, procurement and operation of the network was poorly integrated between the nine local transit agencies operating in the region.	The regional transport plan provided a platform for local agencies to co-fund infrastructure. The Government of Ontario provided a significant funding contribution (formed part of the CA$11.5 billion of funding available under the MoveOntario commitment), which was available for regional projects. Additional funding was unlocked through an increase in the existing Harmonised Sales Tax and the gas tax, and a charge levied on all off-street non-residential parking spaces.

Comparison of the public transport models

How can co-governance and co-management of such a scheme be best implemented to streamline the core delivery and ongoing upgrade of the service?

Governance and control:

Model 1: Partnership delivery	Model 2: Regional authority delivery
• Individual partner control managed through governance roles. • Enduring collaboration facilitated through partnership structure. • Funding framework agreed upfront, streamlining future negotiations over funding contributions. • Does not require establishment of a new entity. • Flexibility to extend partnership to other transport projects in the region.	• Governance and control based upon shareholding in new authority. • Centralised planning, consenting, land acquisition and consultation. • Legislation and consultation may be required. • Ability to leverage the shared expertise of shareholders. • Opportunity to increase scope to include all transport services, fully integrating the delivery of transport services across the region. • Potential for a new NLTF funding model.

How can the solution best allocate risk between contracted parties and councils, ensuring that it optimises value for money and service quality?

Delivery and implementation:

Model 1: Partnership delivery	Model 2: Regional authority delivery
• Procurement by individual partners with expertise in those areas e.g. KiwiRail. • Packaging optionality for capital and operational delivery by private sector (e.g. alliance/enterprise models). • Operator involved in the supply (design and build) of rolling stock, mitigating interface risk. • Budget certainty obtained through fixed price design and build contracts where appropriate.	• Procurement undertaken by the authority. • Opportunity for scope to be expanded to manage all transport activities in the region. • More packaging optionality than the partnership (e.g. could potentially procure and own rolling stock itself). • Less interfaces to manage as authority would assume responsibility for stations as well as service delivery.

How can long term funding best be secured, and how can it be structured to be as equitable as possible?

Funding and affordability:

Model 1: Partnership delivery	Model 2: Regional authority delivery
• Council funding (and debt) spread across all local authorities involved. • Streamlined NLTF funding through alignment of approval processes. • Debt still raised at local authority level (but can access LGFA).	• Separate NLTF allocation for the authority based on a programme approach. • Debt raised at authority level rather than at a local authority level, potentially providing additional debt headroom for local authorities (depending upon ownership, structure and risk allocation). • Establishment costs upfront, however cost efficiencies may be achieved as the scope of the organisation increases.

Extension

Hamilton Central station

Introduction

Making use of value capture tools has become increasingly important for transport procurers internationally. As transport projects in New Zealand increase in size and scale these tools will need to be employed to:

1. Maximise the benefits of the transport investment (e.g. by supporting transit orientated development opportunities and/or land use change).
2. Equitably capture some of the land value uplift attributable to the transport investment, in particular where there is a constrained funding environment.

The potential redevelopment of Hamilton Central Station has been used as a hypothetical extension of the case study, to demonstrate how partnering with a private developer could be implemented to maximise project benefits (development economics have not been investigated as part of the Study). A similar commercial model could be explored for other opportunities along the alignment, or for other similar projects. However, the project specific economics for each opportunity would need to be carefully considered.

Source: Hamilton City Council

The opportunity

Transportation projects like Te Huia create opportunities for integrated urban development in the surrounding area.

Integrated urban development creates value through unlocking underutilised land, and can be expected to catalyse further private development across the surrounding area. Non-financial outcomes may also be achieved through improved access and integration, a higher quality user experience, and the creation of a dynamic environment to support the transportation infrastructure.

Additional benefits may be achieved through extending the scope of the development to improve the overall public realm (e.g. public spaces and amenities, green spaces, pedestrian-orientated zones and community precincts).

Delivery structure

One potential delivery structure would be a development agreement (DA) between Hamilton City Council and a 'corporate' developer procured through a competitive process (e.g. listed entities; substantial private developers; iwi entities). This delivery model can provide the following benefits.

Private sector expertise – private sector expertise and innovation can be leveraged to assist with the master-planning, management and delivery of the development.

Control – a development agreement operates like a partnership, with the public sector typically retaining overall control and ownership of the infrastructure assets, and the investor potentially owning the commercial assets, with risk allocation clearly defined.

Additional funding – delivery structure may deliver additional upfront funding through the sale of land, ground leases, development rights and other negotiated arrangements.

Equity upside – DAs provide the flexibility to tailor the payment structure to enable Hamilton City Council to share in the long-term uplift in value.

Development site considerations

Greenfield sites	Brownfield sites
Greenfield sites provide a high level of control, where land is under existing council ownership.	Brownfield opportunities can require detailed negotiations with existing landowners. Favourable negotiation terms may be achieved where the addition of the station enables redevelopment and/or repurposing of the land.

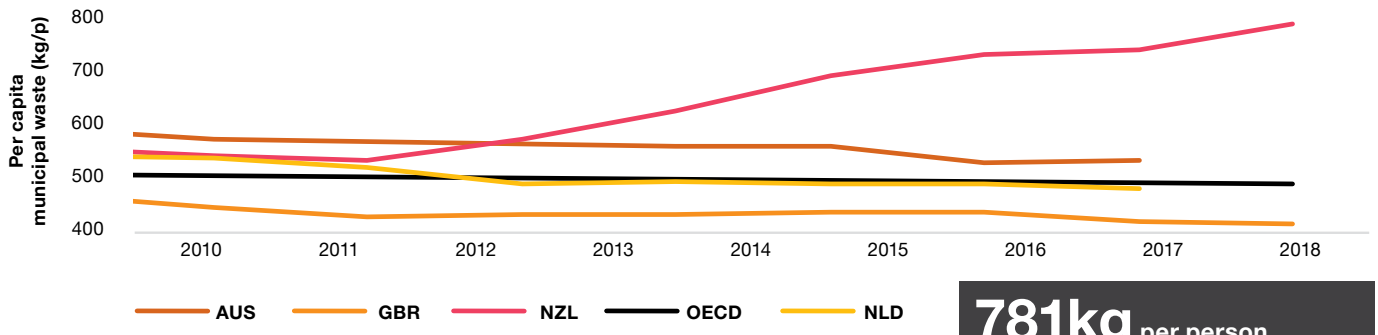
Municipal Solid waste

Sector overview

International comparison

Per person, New Zealand is one of the highest producers of council controlled (municipal) waste[1] in the world, and continues to experience growth in waste generation. Further, a high proportion of New Zealand's waste is going to landfill, rather than being diverted, which is compounding the adverse environmental impacts.

Per capita municipal waste (2010-2018)



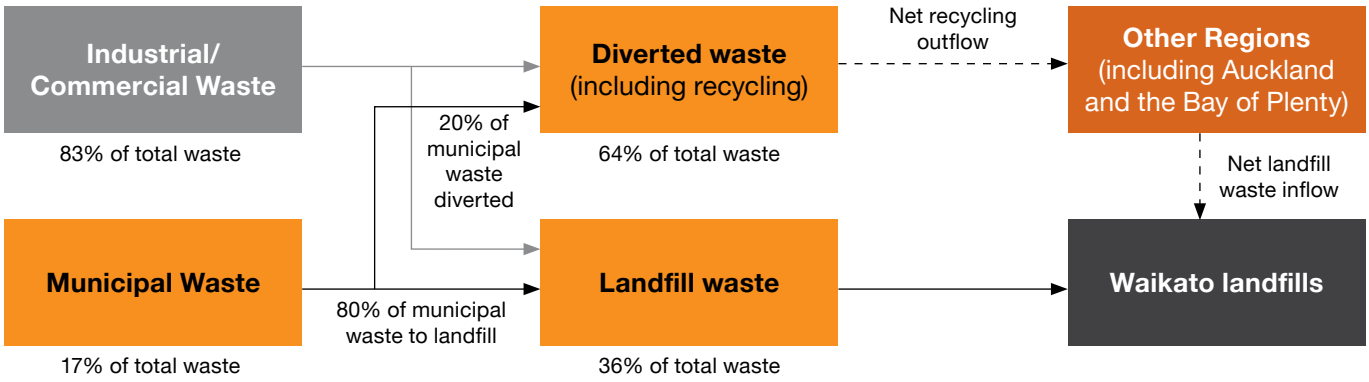
Source: OECD Data

781kg per person
municipal waste generated in New Zealand in 2018, nearly 50% higher than the OECD average.

Movement of waste in the Waikato region

A 2007 report[2] by the Waikato Regional Council estimated that 80% of municipal waste went to landfill. As the Waikato region is a net importer of landfill waste, this predominantly ends up in local landfills along with waste from outside the region, in particular Auckland and the Bay of Plenty.

Waikato waste movement



1 The OECD definition of municipal waste is waste collected and treated by or for municipalities (e.g. councils). It covers waste from households, office buildings, institutions and small businesses, as well as yard and garden waste, street sweepings, and the contents of litter bins. The definition excludes waste from sewage networks and treatment, as well as waste from construction and demolition activities.

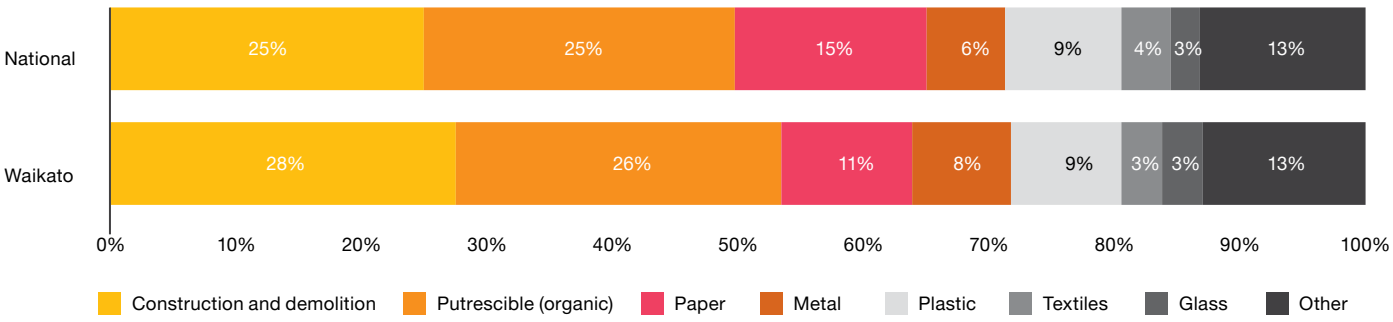
2 Waikato Regional Council Waste Infrastructure Stocktake and Strategic Assessment, June 2007

The organic waste opportunity

Organic waste accounts for approximately 25% of the Waikato region's municipal waste, which provides a significant opportunity for diversion. The percentage is even higher (~50%) when looking specifically at kerbside waste (which accounts for 15-20% of the region's waste to landfill), which would be the focus of this project.

It is estimated that 135,000 tonnes of organic waste is disposed of at landfill, cleanfill and industrial landfills within the Waikato each year. Approximately 107,000 tonnes of this comes from commercial activities, indicating a large industrial/commercial supply of organic waste.

Composition of municipal waste



Source: Waikato Regional Council Waste Strategy Review, June 2015

Divertible municipal collection

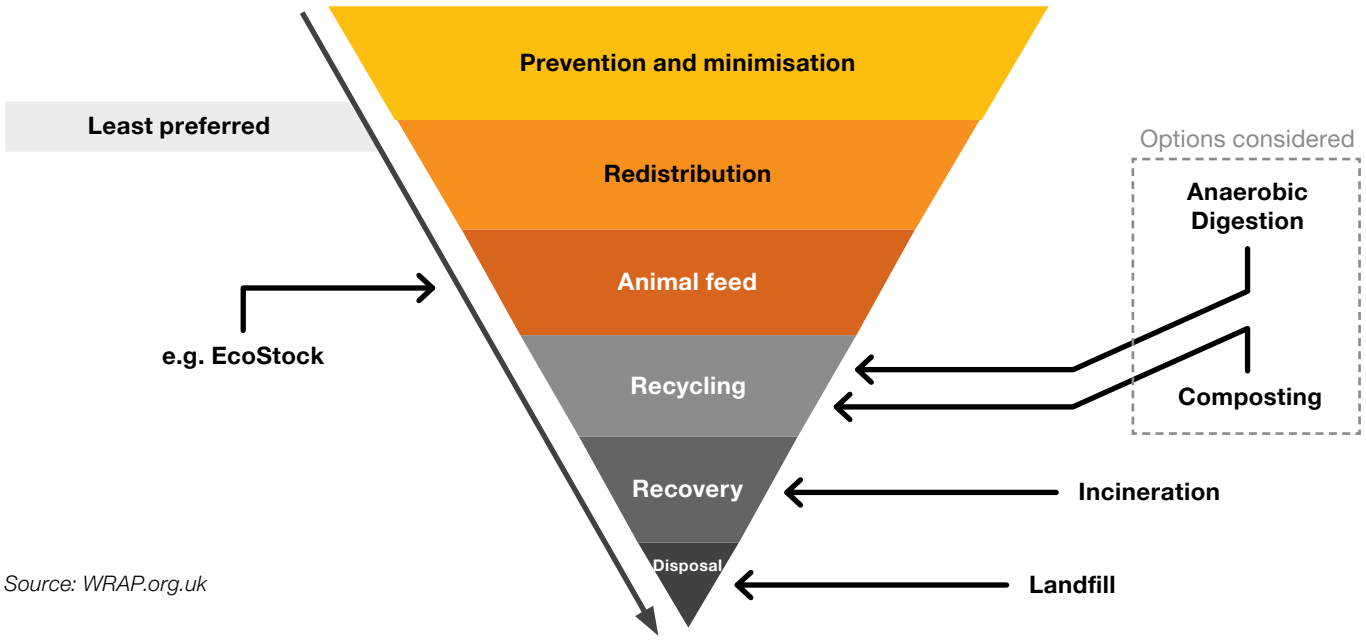
Based on estimates obtained from 2017 Waste Assessments for the Hamilton, Waikato and Waipā districts, up to 50% of municipal waste disposed at landfills is organic waste, which could be diverted from landfill if separately collected and an anaerobic digestion plant or industrial composting facility was available. Hamilton City Council plans to begin collecting food scraps in 2020, diverting this waste to a composting facility.

Food waste hierarchy

Food waste hierarchy – improving regional waste management

The food waste hierarchy is a core waste management and minimisation concept, which has been incorporated into central and local government polices. The waste hierarchy provides a framework to evaluate the preferred approach to waste minimisation. Approaches at the top of the hierarchy have a smaller environmental impact, and are therefore considered more favourable than those lower on the hierarchy, which have a greater environmental impact.

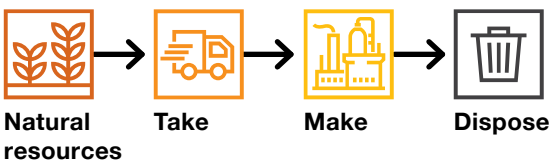
Food waste hierarchy



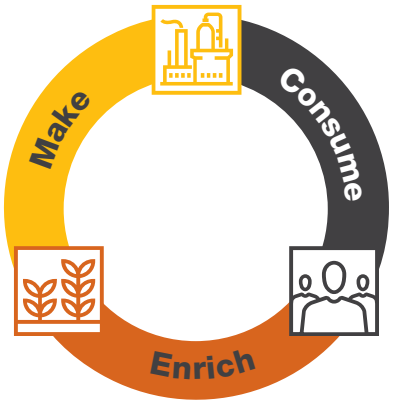
Source: WRAP.org.uk

Greater use of anaerobic digestion and/or composting enable movement up the food waste hierarchy, and are consistent with current policy of transiting towards a circular economy. Under a circular economy, the focus is on waste minimisation rather, than waste management. The figure below demonstrates the differences between a linear economy (current state) and a circular economy (desired future state).

Linear economy



Circular economy

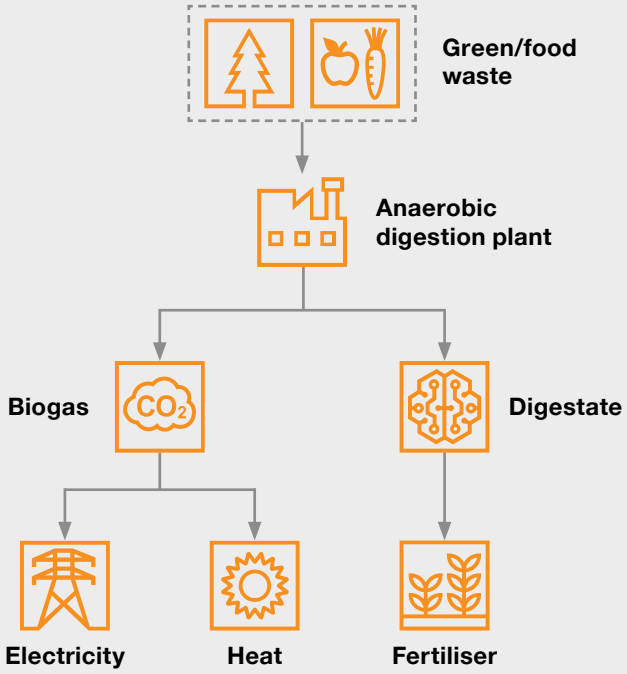


Processing food waste

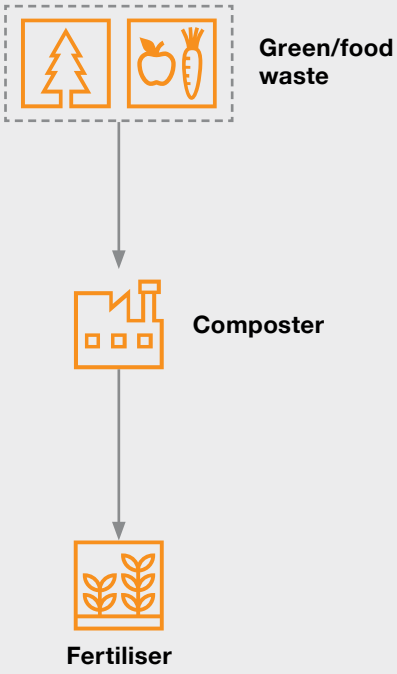
There are two types of facilities that may be developed to process food waste and produce useful by-products (e.g. compost, heat and energy):

- an anaerobic digestion facility – treatment facility that processes green and/or food waste through a controlled biological decomposition process with no oxygen. There are several types of anaerobic digestion facility (e.g. mesophilic, thermophilic, wet, dry), which are targeted to process particular input materials and/or generate particular by-products.
- a composting facility – treatment facility to process green and/or food waste through an oxygenated and controlled biological decomposition process. While there are different variants of composter, the process undertaken is typically the same for each variant.

Anaerobic digestion process



Composting process



By-products produced under the different facilities

Anaerobic digestion facility

- Biogas – can be used as a substitute for natural gas to produce electivity and heat, or compressed and used as transport fuel.
- Digestate – low quality bio-fertiliser that is typically then processed further to improve its quality.
- Electricity – can be connected to local networks or sold back to the grid.
- Heat – generated through burning the biogas.

Composting facility

- High nutrient fertiliser, including nitrogen, phosphate, potash, sulphur and magnesium. May have liming properties depending on input material.
- Can be sold as fertiliser, or reapplied by sponsors in other areas of their business (e.g. fertiliser used on council reserves and parks as part of ongoing maintenance).

There are a number of factors that should be considered when determining what type of facility is most appropriate, which are outlined in the table below:

Factor	Consideration for anaerobic digestion	Consideration for composting
Type of input material	• Will drive qualities and quality of end by-products.	• Will drive qualities and quality of end by-products.
Opportunity to use useful by-products	• Opportunity to re-use heat/electricity, however the location of the facilities will drive the feasibility of these arrangements.	• Can use any fertiliser/compost generated for maintaining council reserves and parks, rather than sourcing these products externally.
Commercial opportunities	• Opportunity for closed loop networks, where facility supports nearby businesses (e.g. EcoGas, which is using the heat and electricity from its anaerobic digestion plant to power and warm local greenhouses). • Can process wastewater, farm and other industrial/commercial organic waste.	• Limited commercial opportunities outside of directly on-selling compost. • Could process most farm and other industrial/commercial organic waste.
Market dynamics for end products	• Difficult to sell heat by-products, other than through a commercial arrangement with a nearby business. • Can sell electricity back to the grid. • May not be a strong market for digestate in New Zealand, given high quality fertilisers/ composts available.	• Currently strong supply in the market, which is compressing prices. • Potential opportunity for fertiliser that meets 'organic' labelling requirements.
Supplier market	• Currently few providers in New Zealand, supplier market growing in Australia and well developed in the United Kingdom.	• Currently a large number of potential providers (e.g. Hampton Downs facility and Xtreme Zero Waste in Raglan).
Risk allocation	• High level of technology risk requires greater risk transfer to the private sector.	• Relatively lower technology risk associated, given simpler process.
Volume of solid waste	• Requires a minimum volume of ~20,000 tonnes of waste annually.	• Potentially more flexibility over minimum volume requirements.

Local authorities may procure a particular technology that is preferred, or run an open tender where bidders are required to bid back a technical solution. Under an open tender, local authorities would be able to holistically assess the bids, including considering the wider environmental and social elements.

When scoping the project, local authorities will also need to consider factors such as transportation costs and adverse environmental impacts. In rural communities, where there is a high degree of transportation required, smaller local facilities may be preferred to a single large sub-regional facility. Given the additional flexibility compositing facilities have in relation to volume, they are likely to be better suited to more rural regions.

The model developed for this Study was based upon an anaerobic digestion plant, however many of the same funding, financing and delivery features would be equally applicable to an industrial compositing facility.

Municipal waste summary

A significant proportion of the Waikato region's waste stream and waste infrastructure is controlled by the private sector. This includes the collection of industrial and commercial waste, and ownership and management of transfer stations and landfills.

Regional waste summary

Waikato District Council

Waste statistics
- ~7,522 tonnes kerbside refuse
- ~3,361 tonnes kerbside recycling
- ~31% diversion rate
- ~43% organics (of kerbside refuse)

Council services
- Weekly kerbside refuse and recycling collection services
- Food waste collection service in Raglan
- Council drop off points and monthly recycling for ex-Franklin District Council and rural Raglan areas

Charging
- Pre-paid bags (Raglan)
- Pre-paid stickers/tags (North, Central and Tuakau township)
- Recycling funded through rates

Source: 2017 Waste Assessment

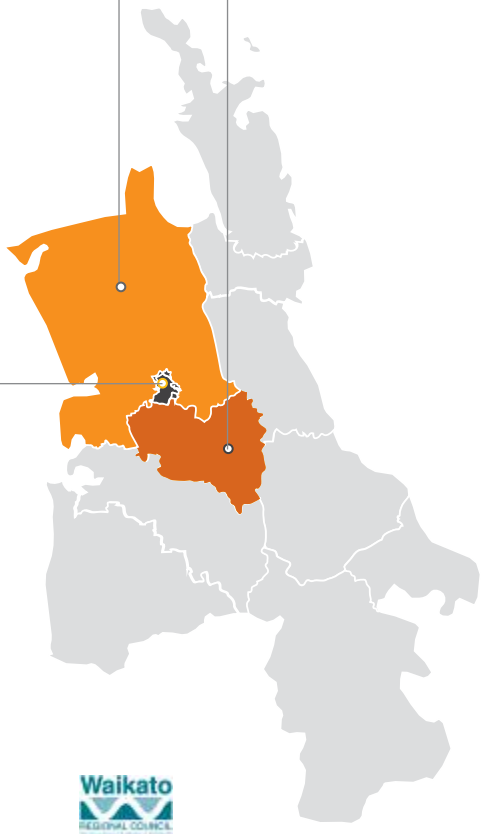
Hamilton City Council

Waste statistics
- ~23,263 tonnes kerbside refuse
- ~8,806 tonnes kerbside recycling
- ~27% diversion rate
- ~50% organics (of kerbside refuse)

Council services
- Weekly kerbside refuse and recycling collection services
- Introducing a food scraps collection service in late 2020

Charging
- Kerbside refuse collection rates funded
- Recycling funded through rates (an extra recycling bin can be purchased)

Source: 2017 Waste Assessment



Waikato Regional Council

- Responsible for monitoring waste in the region.
- Responsible for granting of resource consents around discharge of contaminants and management of hazardous substances.

Waipa District Council

Waste statistics
- ~8,400 tonnes kerbside refuse
- ~3,411 tonnes kerbside recycling
- ~29% diversion rate
- ~2,193 tonnes of food waste (no information available on other organic waste)

Council services
- Kerbside recycling collection services
- Waipā District Council does not provide a council-managed refuse service

Charging
- Recycling funded through targeted rate

Source: 2017 Waste Assessment

Accessible waste infrastructure

Landfills
- North Waikato Regional Landfill (EnviroWaste Services Ltd) – Hampton Downs
- Tirohia Landfill (Waste Management) – Hauraki District
- Tokoroa Landfill (South Waikato District Council)
- Te Kuiti Landfill (Waitomo District Council)

Transfer stations
- Lincoln Street Transfer Station (owned by Hamilton City Council and leased to Waste Management) – refuse, recycling
- Sunshine Avenue Transfer Station (EnviroWaste Services Ltd) – refuse, recycling, organics
- Xtreme Zero Waste (Xtreme Zero Waste) – refuse, recycling, organics
- Huntly Transfer Station (Metowaste) – refuse, recycling
- Te Kauwhata Refuse Transfer Station (Metrowaste) – refuse, recycling
- Te Awamutu Refuse Transfer Station (Waste Management NZ) – refuse, recycling, organics
- Red Bins Ltd (Waste Management NZ) – refuse, recycling, organics
- Cambridge Refuse Transfer Station (Waste Management NZ) – refuse, recycling, organics

Source: 2017 HCC, WDC and Waipā DC Waste Assessments

Sub-regional solid waste

Project overview

Construction of a sub-regional solid waste facility to expand disposal options within Waikato-Hamilton-Waipā districts. An anaerobic digestion plant is proposed (refer previous slides) as a potential/hypothetical project. While the solution is primarily focused on addressing municipal waste, commercial, industrial and farm organic waste could be processed through the same facility.

Capital delivery

The sub-regional solid waste project involves development of a new anaerobic digestion plant to service the Waikato-Hamilton-Waipā districts. The plant is assumed to be capable of processing at least 30,000 tonnes of municipal organic waste per year (including a proportion of industrial and commercial waste).

Operational delivery

The anaerobic digestion plant is intended to have an asset life of at least 20 years, providing long-term capacity to the region.

Sub-regional anaerobic digestion facility

Capital cost
~$25m

Operations and maintenance cost
~$150 per tonne

Operating term
~15 years

Asset life
>20 years

Project benefits

Transition towards a closed-loop economy

By-products from the anaerobic digestion plant can be used to generate biofuel, electricity and heat, which supports the transition towards a closed-loop economy (e.g. waste to energy).

Greater proportion of waste diverted

An anaerobic digestion plant will allow a greater proportion of municipal waste to be diverted from landfill.

Higher on the waste hierarchy

An anaerobic digestion plant operates at a higher level on the waste hierarchy (re-use) than incineration (treatment) and landfill (dispose), which are the current alternatives.

Improved air quality

Methane and carbon dioxide gases emitted during the anaerobic digestion process are captured rather than spilling into the atmosphere as they would at a landfill.

Addressing sector challenges

Sector challenges

Local authorities are facing a number of core challenges to the delivery of waste services.

Technology investment

Significant investment in technology and innovation is required to develop viable waste treatment alternatives.

Insufficient scale

Waste services are delivered individually by territorial authorities, which does not provide sufficient scale to mitigate volume risks or attract expertise.

Funding and affordability

Local authorities are increasingly facing balance sheet and funding constraints while ratepayers are facing increasing levels of rates. Alternative treatment options are typically more expensive than landfill.

Sub-regional Waste Facility – a model to optimise private sector involvement?

The sub-regional waste facility model seeks to address these challenges through packaging waste services across the region, drawing on the Waste Minimisation Fund and incentivising private sector innovation through a long-term arrangement.

The private sector will have the ability to aggregate waste across the region to mitigate volume risk, whilst the packaging approach delivers sufficient scale for investment in technology and innovation.

Questions for this study

Waste minimisation is increasingly seen as an important issue. The environmental impact of the current landfill approach is unsustainable. Due to the high investment required in sustainable waste facilities, there is a growing need for regional and sub-regional approaches.

As a model for other regions, this Study will investigate funding, financing and delivery structures for a sub-regional waste facility – specific considerations will include:

Governance and control

How can an appropriate level of council control be maintained, while ensuring suitable risk transfer and desired outcomes (e.g. environmentally friendly processes) are achieved?

Delivery and implementation

How can the benefits of scale best be leveraged to optimise environmental outcomes, while minimising council exposure to technology and other hard to manage risks?

Funding and affordability

How can better environmental outcomes be achieved, while minimising the impact on ratepayers?

Commercial models

A ‘private SPV model’ was developed to demonstrate how sub-regional partnerships and long-term integrated procurement can be used to address the questions identified above. A fully privatised solution (e.g. non-reverting facility) was considered as a potential extension to the project.

Private SPV model

Long-term concession agreement to incentivise private sector investment, technology and innovation. A sub-regional approach to collection enables the redirection of solid waste to ensure minimum thresholds can be achieved. Gate fees and a pay-as-you-throw charge to allocate the cost of waste production to the producer.

Delivery structure

Council delivery	Crown delivery	Private delivery	Iwi involvement
New entity	**Stakeholder**	Service provider	**Project sponsor**
Partnership	Partnership	Partnership	Partnership
Joint procurement	Shareholding	**New SPV entity**	Shareholding
Traditional delivery	Crown delivery	Full privatisation	Iwi delivery

Funding sources

Council funding	Crown funding	Value capture	Direct
General rates	Crown grant	Negotiated contribution	**Private capital**
Targeted rates	Seed capital	Land intervention	**Commercial opportunity**
Developer contributions	**Specific Crown funds**	Property development	Tax/duty
		IFF levy	**User pays**

Financing sources

Public finance

- Crown loan
- DMO (Crown facility)
- LGFA
- Crown equity

Private finance

- **Bank debt**
- **Bonds/private placement**
- Subordinated/convertible instruments
- Private equity

Capital delivery

Commercial model

- Alliance contract
- Construct only
- Design and build
- Managing contractor
- Enterprise model
- Design, build, operate, maintain
- **Design, build, finance, operate, maintain**

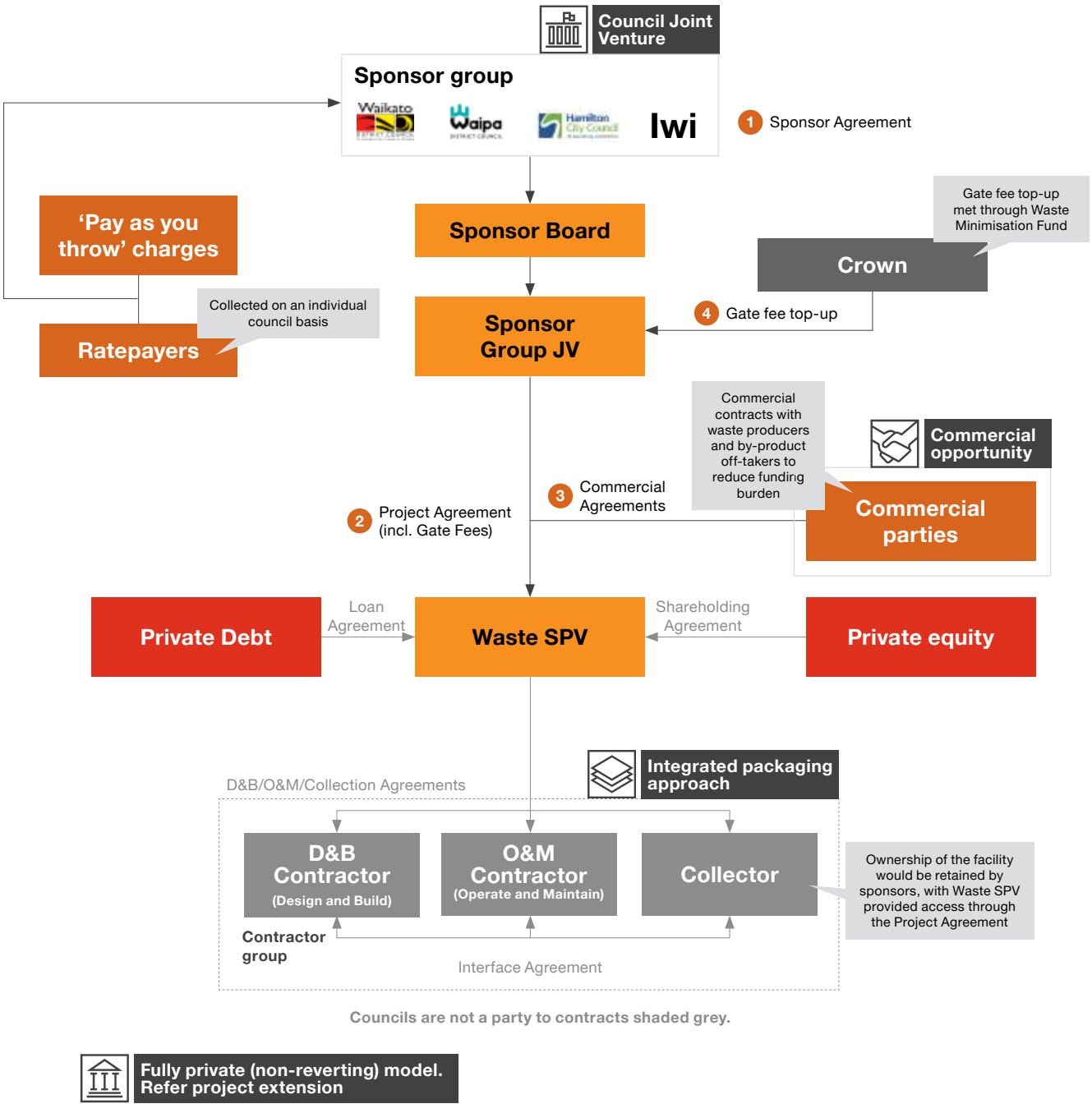
Operations delivery

Commercial model

- Self perform
- Operate only
- Operate and maintain
- Supply, operate, maintain
- Design, build, operate, maintain
- **Design, build, finance, operate, maintain**
- Turnkey

Commercial structure and contracts

Commercial structure diagram



Outline of core contracts

Contract	Parties	Description
1. Sponsor Agreement	Hamilton City Council, Waikato District Council, Waipa District Council, Iwi	Agreement between the sponsor group, which sets out the following: • How the sponsor group will engage collaboratively with each other • The governance, management and approval framework • How funding will be shared between the sponsor group • Vesting of assets.
2. Project Agreement	Sponsor Group JV Waste SPV	The Project Agreement will provide for the following: • Design • Construction • Operations • Maintenance • Collection of organic waste across the participating districts • Financing. It will include the payment mechanism and performance obligations, which are linked to the achievement of project outcomes.
3. Commercial Agreements	Sponsor Group JV Commercial parties	Agreement for the commercial supply of solid waste services between commercial parties and the Waste SPV.
4. Gate fee top-up	Ministry for the Environment Sponsor Group JV	A formal agreement between Ministry for the Environment (MfE) (as administrator of the Waste Minimisation Fund) and the Sponsor Group JV will likely be required to support the Project Agreement and any associated loan agreements.

Explanation and evaluation

Delivery, capital and operations structure

Sponsor Group Joint Venture (JV)

A **new delivery vehicle** ('Sponsor Group JV') established to manage organic waste services across the sub-region.

- Owner of the anerobic digestion plant and associated assets.
- Contracts with the private sector delivery vehicle.

Sponsor Board

Governs the Sponsor Group JV and sets its strategic direction.

- Includes representatives from each member of the sponsor group

Waste SPV

A **new delivery vehicle** ('Waste SPV') established by **private sector** equity to contract with the Sponsor Group JV and deliver and operate the anaerobic digestion plant.

- Designs builds, finances and operates the anaerobic digestion plant but does not own the underlying assets.

Waste SPV

Design, build, finance, operate, maintain

- A standard form contract utilised that contractors are already familiar with to minimise transaction costs.
- Waste SPV required to meet a number of strict minimum standards set out in the contract (e.g. environmental performance).
- Due to the level of interface and technological risk (being one of the first facilities of its type in New Zealand) and integrated contract (e.g. DBFOM) has been selected as the preferred procurement option. Alternatively, a DBOM has could also be considered, but does not bring the risk transfer and due diligence benefits associated with private finance, which are considered beneficial for such a pathfinder project.

D&B Contractor (Design and Build)

Payment mechanism (construction phase)

- No payments made during the construction phase.

O&M Contractor (Operate and Maintain)

Payment mechanism (operations phase)

- Volume (paid on a per tonne basis) multiplied by a gate fee.
- Likely to require minimum and maximum waste commitments from the Sponsor Group JV, with compensation paid where waste volumes are below the minimum and waste diverted where volumes are above the maximum.

Collector

Collection

Included for the following reasons (but would not necessarily need to be):

- **New service** – more efficient to procure together within the same package as the delivery and operations to avoid duplication of procurement costs.
- **Integration** – provides additional control over the interface between the collector and operator, which allows the associated interface risk to be transferred to the private sector efficiently (e.g. value for money).
- **Market interest** – including collection activities within the tendered package is generally desirable to the market, increasing market interest in the project.

Features of delivering and operating an anaerobic digestion plant through a private SPV delivery model include:

Council Joint Venture

- ✓ **Economies of scale** – sub-regional approach delivers additional scale, which enhances market interest and value for money, provides opportunities to deliver improved efficiency, and incentivises investment in technology and innovation.
- ✓ **Regional decision making** – the single delivery vehicle brings each of the sponsors together, facilitating regional decision making. The Sponsors Agreement and governance structures further support regional decision making.
- ✓ **Leverage expertise** – expertise across the sponsor group can be leveraged through the single entity.
- ✓ **Iwi involvement** – iwi would be invited to be sponsors and provided with representation on governance groups.

Integrated packaging approach

- ✓ **Whole of life pricing** – whole of life pricing is incentivised through a long-term concession arrangement, where operations risk is transferred to the Waste SPV, who is also responsible for delivery of the asset. Asset handback requirements would be imposed under the contract to ensure asset management is completed to a high standard, and to protect the sponsor group from unforeseen costs upon transfer of asset responsibilities at the end of the contract.
- ✓ **Investment and innovation** – investment in technology and innovation is incentivised by providing a long-term revenue stream and aligning the private sector investment horizon with the asset life.
- ✓ **Market interest** – long-term concession arrangements provide larger packages and a long-term revenue stream, which are desirable to the private sector.
- ✓ **Wider outcomes** – delivers environmental outcomes and aligns customer incentives with waste minimisation objectives.

Funding and Financing

Ratepayers	Territorial authorities responsible for imposing and collecting targeted rates. • Collected by each territorial authority and transferred to the Sponsor Group JV on a proportional basis. • Targeted rate preferred to extending bag fees for organic waste to ensure a cost difference between refuse and organic waste, incentivising households to separate organic waste.
'Pay as you throw' charges	Revenue from bag fees charged on kerbside refuse will be leveraged as a funding source, which has the additional benefit of disincentivising waste production. However, the charge will be appropriately sized to ensure it does not incentivise dumping.
Commercial parties	Sponsors to facilitate commercial arrangements between Waste SPV and commercial and industrial organisations operating within the region. This is expected to include: • Commercial waste contracts (a significant volume of organic waste is produced in the commercial sector which is outside of territorial authority control). • Off-take agreements for the useful by-products generated during the anaerobic digestion process (e.g. electricity, heat, biofuel and fertiliser). This may provide additional funding and reduce the level of risk passed onto Sponsors. There is also opportunity for Sponsors to be the off-taker for products they require, such as electricity and fertiliser.
Ministry for the Environment	Crown gate fee top-up funded through the Waste Minimisation Fund. • The Waste Minimisation Fund provides a contribution to the gate fee agreed between Sponsors and the Waste SPV in the Project Agreement, assisting with the affordability of the project for ratepayers. • Top-up to only apply to territorial authority waste, not commercial contracts. • As administrator of the Waste Minimisation Fund, MfE would be actively involved in negotiations. • The Waste Minimisation Fund is funded through a levy on landfills.
Private equity	Private equity brings delivery expertise and facilitates risk transfer to the private sector, for risks the private sector is best able to manage. Ensures the private sector is highly motivated to manage project risks (including interface risks amongst the contractor group) to achieve the project outcomes and undertake detailed due diligence.
Private debt	Private debt facilitates additional risk transfer and enhanced due diligence requirements. • Private debt supports ongoing risk transfer to the private sector, which is desirable given the high degree of technological (and other) risks. • Greater degree of risk transfer is consistent with the level of control provided to the private sector.

Features of the funding and financing solution:

Commercial opportunity

- ✓ **Commercial arrangements leveraged** to reduce upfront capital burden and reduce the level of volume risk sponsors/Crown would be required to take.
- ✓ **Useful by-products commercialised** to reduce costs incurred by the sponsors and support the transition to a closed loop economy.

Integrated packaging approach

- ✓ **Private sector due diligence** – including finance within the concession agreement transfers risk to the private sector, incentivising detailed due diligence of a project's viability. This can avoid investing in waste facilities, which end up being unviable.
- ✓ Enhanced risk transfer inherent with private finance solution **encourages innovation.** This innovation will be critical to solving the growing need to invest in environmental waste disposal.
- ✓ As the private sector is responsible for providing upfront capital, it **defers the need for upfront sponsor contributions**.
- ✓ Depending on the specific payment structure, private finance **may provide more favourable balance sheet treatment** than direct council borrowing.

Other:

- ✓ Leverages a **number of different funding sources** to reduce the burden on local authorities and align the payers with the beneficiaries.
- ✓ Balances the objective **of allocating costs to consumers against creating perverse incentives** (e.g. removing financial incentive to sort organic waste, dumping risk).

Area of focus

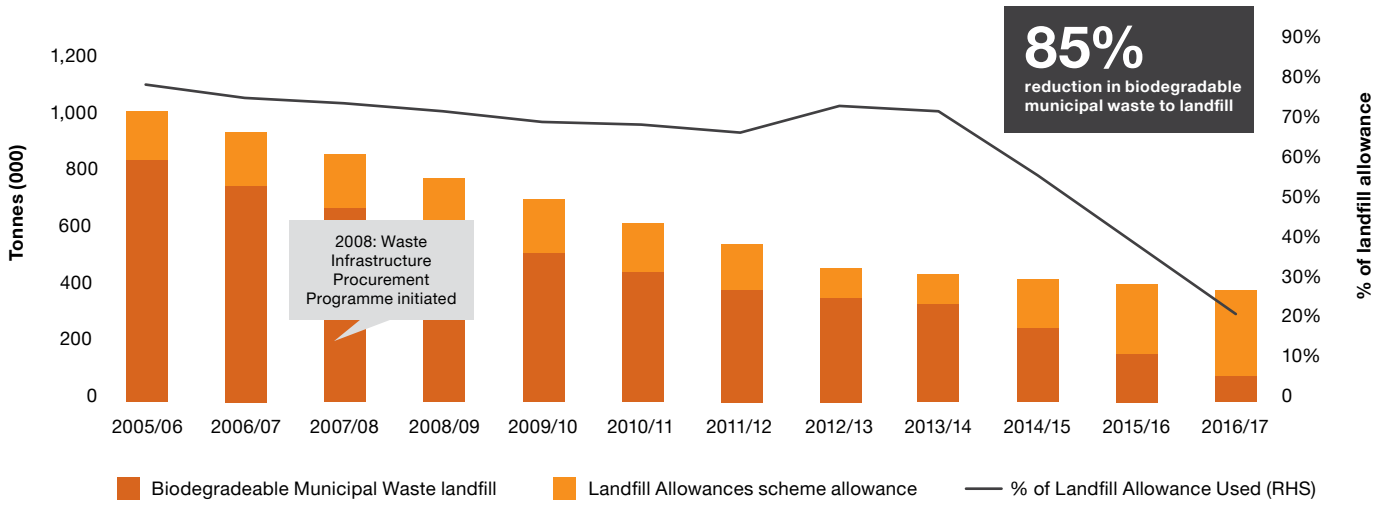
Welsh Government's Waste Infrastructure Procurement Programme

Case study

Waste Infrastructure Procurement Programme

Overview

Welsh councils were struggling to meet the EU Landfill Directive, a statutory obligation on Wales to reduce the amount of waste sent to landfill. The Welsh Government developed the Waste Infrastructure Procurement Programme, which provided financial, technical and legal support for councils, to assist councils make the step change required to meet their waste reduction obligations. The programme has been very successful at diverting biodegradable (organic) waste from landfill, which is evident from the figure below.



Source: Natural resources Wales

Sub-regional approach:

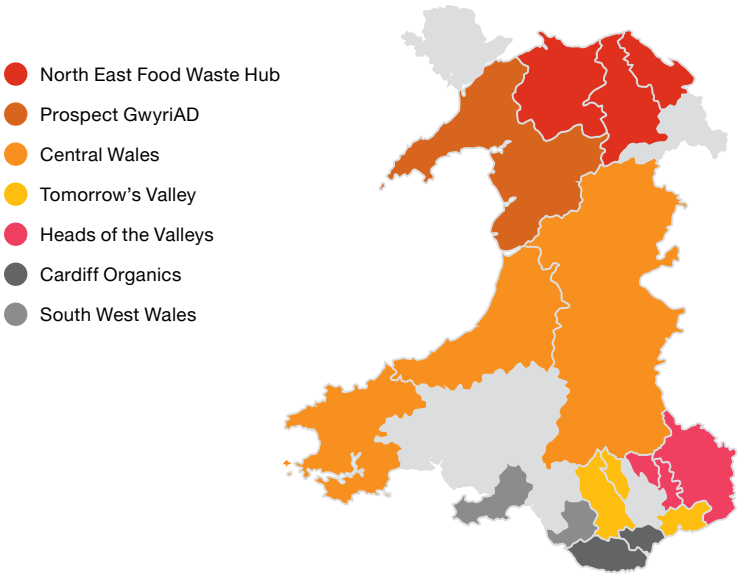
To incentivise council partnerships, the Welsh Government funding was more readily available for projects delivered in partnerships.

The Welsh Government required council partnerships to sign two Inter Authority Agreements, one which set out council rights and obligations during the initial project development period, and a second, signed later, covered the contract lifetime.

A 'lead authority' was selected for each project, which was the signatory to the project contracts.

The adjacent figure outlines the council partnerships that were established.

Council partnerships



Commercial structure:

Design, Build, Finance, Operate contracts were successfully utilised by a number of council partnerships, because these contracts incentivised whole of life pricing, supported economies of scale (e.g. through larger packages), and were attractive to the contract market. Most contracts had 15 year operating terms.

Case study

Metropolitan Waste and Resource Recovery Group – Melbourne

Overview

A number of councils in South-East Melbourne formed the Metropolitan Waste and Resource Recovery Group (MWRRG) to help them meet the Victorian Government's target of diverting 80% of municipal waste from landfill by 2030. MWRRG is leading the procurement of an AUD 650m advanced waste processing solution, which will service municipal waste from 16 councils in the area.

Rather than specifying technological requirements, tenderers were required to 'bid-back' their proposed solution to demonstrate how they would deliver on MWRG's outcomes. Tenderers were encouraged to consider how third-party waste (e.g. commercial/industrial users and wastewater) may be incorporated within their solution to optimise overall environmental and social outcomes.

Contracting model

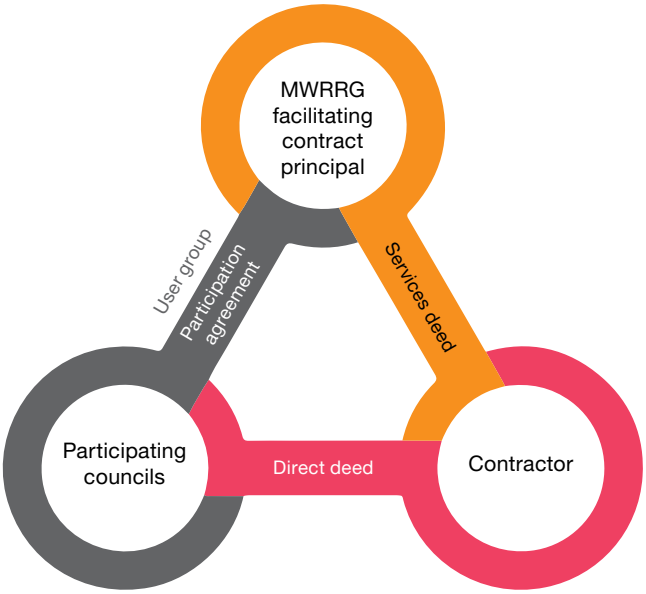
Whilst a specific contracting model was not determined at the Expression of Interest (EOI) procurement stage, MWRRG indicated that the scope of services would likely include design, construction, commissioning, operation and maintenance of one or more advanced waste plants on a project finance basis. The associated business case contemplated different private sector ownership models, including Build, Operate, Own, Transfer and Build, Operate, Own models.

Securing investment through aggregation of waste

Collectively, the councils are expected to deliver approximately 500,000 tonnes of waste annually, which is well above the minimum volume for viability assumed under the business case. On an individual basis, no councils had the capacity to meet the minimum threshold, which meant advanced waste facilities could not be procured individually.

MWRRG received a number of responses at the EOI stage indicating strong private sector interest.

Key contracts



Source: MWRRG.vic.gov.au

Benefits that multi-council contracts deliver:

- Long term service security at an affordable cost to councils
- Greater combined waste volumes to attract innovative technological solutions
- Cost effective access to specialist consultants and MWRRG's expertise
- Centralised contract management
- Single administration of service provision provided by MWRRG

Private SPV model assessment

How can an appropriate level of control be maintained, while ensuring suitable risk transfer and desired outcomes (e.g. environmentally friendly processes) are achieved?

Governance and control:

- Underlying asset would remain under sponsor ownership, ensuring the sponsor group retain an appropriate level of control.
- Private sector required to meet environmental standards under the contract, and will be required to monitor and report on environmental performance.
- Iwi invited to participate as a sponsor, to ensure active participation.

How can the benefits of best scale be leveraged to optimise environmental outcomes, while minimising council exposure to technology and other hard to manage risks?

Delivery and implementation:

- Scale incorporated by procuring as a single concession holder (e.g. Sponsor Group JV).
- Whole of life approach incentivised through procuring the Design and Build and Operations and Maintenance components together.
- Long-term revenue stream provided through a long-term concession arrangement that incentivises investment in technology and innovation.

How can better environmental outcomes be achieved, while minimising the impact on ratepayers?

Funding and affordability:

- Scale generated by adopting a sub-regional approach and leveraged to minimise the burden on individual local authorities and their ratepayers, further, scale partially mitigates volume risk.
- Useful by-products commercialised to ease the funding burden on sponsors.
- Waste Minimisation Fund leveraged to assist with affordability of the project (Waste Minimisation Fund is funded through a levy on landfills).
- Sponsor group connections leveraged to facilitate commercial negotiations between Waste SPV and commercial parties to provide additional scale and address volume risk.

Extension

Private ownership model

Overview

Private ownership models for anaerobic digestion plants have been successfully implemented internationally, typically providing cost advantages (through lower gate fees), while still achieving project outcomes (e.g. environmental). Under a fully privatised solution, the waste provider owns the land, anaerobic digestion plant and all associated assets. The table below outlines the core differences between the private ownership model and the proposed private SPV model.

Difference between the private ownership and private SPV model

Characteristic	Private SPV model	Private ownership model
Asset ownership	• **Land** – owned by Sponsor Group JV (or a sponsor). • **Assets** – owned by Waste SPV during the construction phase, but vested in the Sponsor Group JV upon completion. • **Lease/license** – Waste SPV access provided through lease/license (provided under the Project Agreement).	• **Land** – owned by Waste SPV (or one of its subsidiaries). • **Assets** – owned by Waste SPV throughout the asset life. • **Lease/license** – not required.
Agreement	• **Project Agreement** – includes the construction, operation and maintenance of the anaerobic digestion plant.	• **Service agreement** – agreement to process organic waste (e.g. construction of the plant is not included).
Payment mechanism	• Gate fee x volume.	• Gate fee x volume.
Procurement	• Procured through Sponsor Group JV.	• Joint procurement by territorial authorities.

Assessment of the fully privatised model

The key trade-off to consider when evaluating the private ownership model is additional cost efficiency (e.g. lower gate fees) against the lower level of control (compared to public ownership of the anaerobic digestion plant). The key advantages and disadvantages of the private ownership model (compared to the public ownership model) are set out below:

- ✓ typically delivers lower gate fees because the cost of delivery is spread over its operating life of the asset, rather than the contracted operating term
- ✓ greater incentive for waste provider to deliver waste services for industrial and commercial users, providing additional scale and addressing the issues with treating commercial waste
- ✓ can achieve a greater level of risk transfer to the private sector, which is key given the high degree of technology risk associated with anaerobic digestion plant
- × private sector ownership reduces local authority control (e.g. over plant location, scale of plant, etc.)
- × financial disincentive to reduce waste, given waste volumes drive revenue
- × private sector retains full control of useful by-products, which restricts the ability for local authorities to drive a transition towards a closed-loop economy.

Scalability – Territorial authorities across the Waikato and neighbouring regions (e.g. Bay of Plenty) could form part of the structure, through the joint procurement model.

Restoration Project

Sector overview

Waikato river

The Waikato River is the longest and most significant river system in New Zealand, and is the primary source of water for the Waikato. A number of factors including strong growth pressures, high water usage, erosion and pollution from stock effluent have caused a general decline in the water quality, adversely impacting the surrounding ecosystem.

There are a number of trusts, funds and community groups dedicated to restoring the river and its surrounding ecosystem. The projects delivered by these entities are typically funded and procured by each organisation separately, resulting in a disaggregated approach to restoration activities.

The Waikato River Authority partially addresses these issues by providing a coordinated approach to restoration, by setting, implementing and funding (as trustee for the Waikato River Clean-up Trust) river restoration activities.

However, the Waikato River Authority is constrained to river restoration activities through its statutory mandate, which prevents its expansion into other restoration opportunities (e.g. reforestation across the region). Further, it is challenging for the Waikato River Authority to fully unlock funding from each of the other trusts, funds and community groups currently operating.

Regions across New Zealand are facing similar challenges addressing the decline in water quality and natural environment. The 2020 National Policy Statement for Freshwater Management, which is part of the Action for Healthy Waterways Package and comes into force in late 2020, imposes higher standards for freshwater and imposes new requirements on regional authorities.

Waikato River Authority

The Waikato River Authority is a statutory body, established through two separate pieces of enabling legislation.

- Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act.
- Ngati Tuwharetoa, Raukawa, and Te Arawa River Iwi Waikato River Act.

The Waikato River Authority was established as a co-governance body to provide redress for the confiscation of Waikato lands and help restore the Waikato River. A government funding commitment of $210 million, delivered over 30 years, was provided to the Waikato River Authority to ensure it had appropriate resources to protect the Waikato River from further degradation.

Action for Healthy Waterways Package

Action for Healthy Waterways Package summary	
Amendments to the RMA	Better, faster, more nationally consistent freshwater management. New planning process will require new council plans by 2025.
New policy statement on freshwater	Strengthen and clarify the requirement to manage freshwater in a more integrated and holistic manner, considering the overall health and wellbeing of freshwater systems.
New standards and requirements	Higher freshwater standards imposed, including additional monitoring and management requirements.
Safer drinking water	Stricter land use management surrounding waterways that form the source of drinking water supply.
Better stormwater and wastewater management	Minimum standards for stormwater and wastewater discharge and overflows into waterways.
Improved farming practices	Farmers and growers required to develop freshwater risk management plans, and restriction on further land intensification. Restrictions may be extended to cover water discharge.

Waikato River restoration initiative

Project overview

The Waikato and Waipā River Restoration Strategy was developed by the Waikato Regional Council in association with DairyNZ and the Waikato River Authority. The restoration strategy identifies a number of erosion control, habitat rehabilitation, biodiversity enhancement and water quality projects to improve the overall quality of the freshwater system, and provide protection against further damage to the natural environment. This Study has considered the packaging of restoration strategy projects located within the central and lower Waikato catchment, with a collective cost of approximately $115 million.

Eroding bank requiring erosion control

Erosion control

$78m

Large scale pole planting, reforestation, fencing and other erosion control activities to mitigate the impact of erosion (e.g. sediment input into wetlands and waterbodies

Overgrown weeds along stream preventing spawning

Habitat rehabilitation

$33m

Rehabilitation of aquatic habitats through management of invasive species, weed control and establishment of native species.

Area in need of weed control to allow native regeneration

Biodiversity

$4m

Development of a restoration plan to promote biodiversity. Elements include pest and weed management, native reforestation and protective fencing.

Fencing to protect waterways from livestock

Water quality

$1m

Programmes of work (e.g. protective fencing) to protect and enhance existing wetlands, support water purification and overall fresh water quality in the region.

Project benefits

Community resilience

Community resilience is enhanced through reforestation and erosion control activities, which provide additional protection from flooding, land slips, and further water pollution

Improved water quality

Improvements to water quality will protect access to clean and safe drinking water for the region, as well as support recreational water uses (e.g. swimming)

Protect culture and heritage

Connection with awa forms a core part of Māori culture, guardianship and heritage. Restoring the river's health will enhance this connection and provide opportunities for Kaitiaki

Increased biodiversity

River restoration will directly promote the re-establishment of a wide biodiversity of plants and animals, both within the river itself and the surrounding area

Addressing sector challenges

Sector challenges

Local authorities are facing a number of core challenges to the delivery of restoration projects.

Fragmented funding sources

Difficult to unlock available funding due to the fragmented nature of the different funding sources (e.g. different remits and funding applications).

Segregated delivery

Projects rely on multiple community groups procuring individual sub-projects, which fall into their remit.

Project objectives

Project objectives are primarily environmental, with limited individual benefits to any one individual, resulting in minimal incentive for commercial involvement.

Waikato River Restoration – a model for centralising restoration efforts?

The Waikato River Restoration model seeks to address these challenges through the establishment of a centralised restoration entity, which coordinates the funding, financing and procurement of restoration projects.

Centralising restoration activities within a single entity will provide greater scale, funding and procurement synergies, and a central touchpoint for partnering with iwi.

Questions for this study

As a model for future similar schemes, this Study will focus on how funding, financing and delivery structures can be used to optimise the benefits from the Waikato River Restoration model. Specific considerations will include:

Governance and control

How can governance frameworks best be implemented to support a more co-ordinated approach? How can stakeholders (e.g. Iwi) be actively involved within these frameworks?

Delivery and implementation

How can procurement, public engagement and other associated activities be centralised to optimise the delivery of restoration projects across the region?

Funding and affordability

How can funding be unlocked from the large number of fragmented funding sources? How can private and public partners support be incentivised to support restoration activities?

Commercial models

A single commercial model was developed for this case study, which focused on the establishment a new centralised entity to co-ordinate the funding, financing and procurement of restoration activities within the sub-region. The potential to partner with public and private sector parties to leverage expertise and realise co-funding opportunities was also considered.

Public council entity model

A key focus for this model is establishing a new centralised entity to co-ordinate the funding, financing and procurement of restoration activities within the Waikato. To recognise the importance of Māori co-management and co-governance of these activities, particularly in relation to the Waikato River, iwi will be invited to participate as a shareholder in the entity.

Delivery structure

Council delivery	Crown delivery	Private delivery	Iwi involvement
New entity	**Stakeholder**	**Service provider**	Project sponsor
Partnership	Partnership	Partnership	Partnership
Joint procurement	Shareholding	New SPV entity	**Shareholding**
Traditional delivery	Crown delivery	Full privatisation	Iwi delivery

Funding sources

Council funding	Crown funding	Value capture	Direct
General rates	Crown grant	Negotiated contribution	Private capital
Targeted rates	Seed capital	Land intervention	Commercial opportunity
Developer contributions	**Specific Crown funds**	Property development	Tax/duty
		IFF levy	User pays

Financing sources

Public finance

- Crown loan
- DMO (Crown facility)
- LGFA
- Crown equity

Private finance

- **Bank debt**
- Bonds/private placement
- Subordinated/convertible instruments
- Private equity

Capital delivery

Commercial model

- **Alliance contract**
- Construct only
- Design and build
- Managing contractor
- Enterprise model
- Design, build, operate, maintain
- Design, build, finance, operate, maintain
- Turnkey

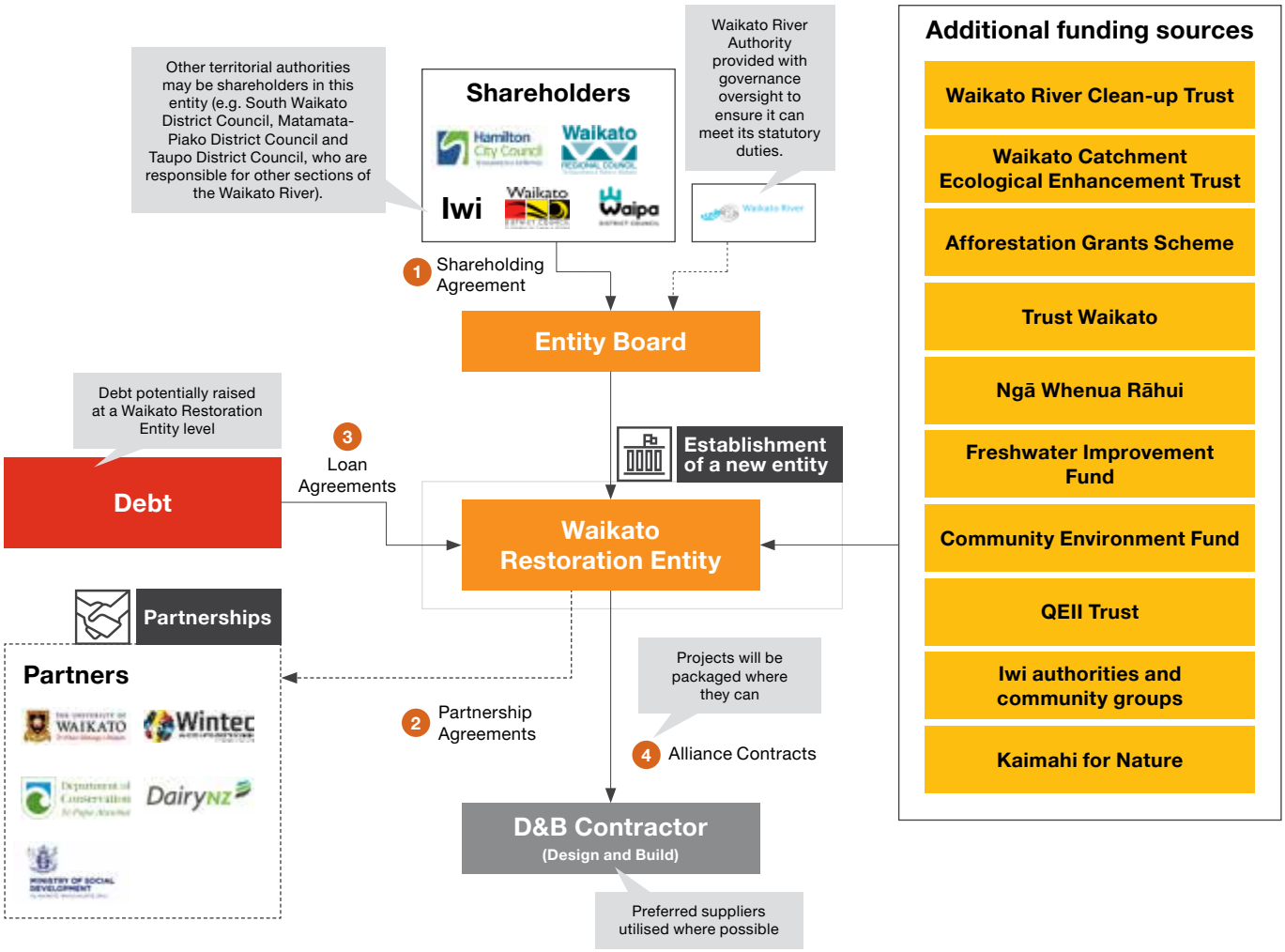
Operations delivery

Commercial model

- Self perform
- Operate only
- Operate and maintain
- Supply, operate, maintain
- Design, build, operate, maintain
- Design, build, finance, operate, maintain
- Turnkey
- **N/A**

Commercial structure and contracts

Commercial structure diagram



Outline of core contracts

Contract	Parties	Description
1. Shareholder Agreement	Hamilton City Council, Waikato Regional Council, Waipa District Council, Waikato District Council, Iwi	Shareholding Agreement between the shareholders, setting out: • Ownership structure (e.g. shareholding allocation) • Ownership of assets (including physical and IP, initial vesting) • Governance framework (including additional documents, agreements that will need to be acceded to) • Funding contributions • Engagement between shareholders (e.g. spirit of collaboration, dispute resolution, etc) • Termination.
2. Partnership Agreements	Waikato Restoration Entity	Agreement between the Waikato Restoration Entity and strategic partners. Terms will vary depending on the individual party, but may include funding contribution, co-commissioning of studies or free/low cost labour.
3. Loan Agreements	Waikato Restoration Entity, Banks	Loan agreements between Waikato Restoration Entity and capital provider. The ability for the Waikato Restoration Entity to utilise debt would be dependent on its ability to secure long-term commitments from funding providers.
4. Alliance Contracts	D&B Contractor, Waikato Restoration Entity	Alliance contract for the design and construction of any contracted restoration works.

Explanation and evaluation

Delivery, capital and operations structure

Waikato Restoration Entity	**A new entity** ('Waikato Restoration Entity') established to manage restoration projects across the region. • Initial focus on restoring the central and lower catchment of the Waikato River, however expanding into other locations and types of restoration project (e.g. delivering native forest reforestation) consistent with broader restoration mandate. • Unlikely to own restoration assets, which will be retained by shareholders/partners/ landowners. • Responsible for coordinating funding, financing and procurement activities.
Entity Board	**Governs** the Waikato Restoration Entity, including selection of projects. • Includes representatives from shareholders (local authorities, iwi). • May include private or public partners that are strategically aligned and/or significant financial contributors (e.g. Department of Conservation, Waikato River Authority).
Waikato Restoration Entity **D&B Contractor (Design and Build)**	Restoration projects generally rely heavily upon volunteer labour, however for larger and more complex projects, contractors will be procured under an alliance contract. • Packaging of sub-projects/projects used where possible to provide additional scale and procurement synergies. • Where a significant pipeline of work can be leveraged, an enterprise model (e.g. preferred suppliers) will provide additional value.

Features of delivering restoration through a new centralised public council entity include:

Establishment of a new entity

- ✓ **Unlocking funding** – the core problem with obtaining funding is that the available funds, community trusts and funding schemes are highly fragmented, each with their own mandate and funding application process. By centralising the funding of these projects, the new entity can leverage expertise and co-ordinate funding applications to improve access to these funds.
- ✓ **Centralised planning** – having a centralised planning framework will assist with the prioritisation and delivery of projects. Opportunities to package a number of smaller projects/sub-projects can be more readily identified and implemented, which should lead to better value for money outcomes.
- ✓ **Centralised procurement** – currently, restoration projects generally rely on a number of community groups procuring volunteers or running their own procurement processes (for more substantial projects) to deliver works. By centralising these procurement activities, preferred supplier/panel arrangements can be utilised, which can provide better value for money than individual procurements.
- ✓ **Iwi involvement** – ensuring iwi, hapū, rōpū Māori are actively involved in all aspects of restoration projects will be critical to its success, and is required in many instances under Te Tiriti o Waitangi, Treaty principles and associated settlements. Iwi in the area could be invited to be shareholders in the entity, and provided with governance and oversight roles that appropriately reflect the essential part they play.
- ✓ **Appropriate powers** – the new entity may be provided with certain statutory powers to assist with its restoration purpose (e.g. compulsory acquisition of land). Where these powers were not directly granted, the entity would be able to quickly and efficiently leverage the powers of its shareholders, which community groups do not currently have the ability to do.

Partnerships

- ✓ **Partnerships** – the intention is for the entity to partner with a variety of public and private organisations, to leverage expertise, access new funding sources and connect partners with projects that match their interests (e.g. utilising the entity's partnership with the Waikato River Authority for projects that relate to the restoration of the Waikato River). Through partnerships with tertiary providers (e.g. the University of Waikato), local schools, iwi and community groups the entity can provide research, education and training opportunities related to the region's natural environment. The benefits of are clearly observable from the Maniapoto Marae Wānanga initiative undertaken by the Waikato River Authority.
- ✓ **Volunteer and community involvement** – the new entity is designed to facilitate partnerships with the community and volunteers, to facilitate and enhance community involvement in restoration projects. The partnership with DoC and the Ministry for Social Development will also assist with matching unemployed people searching for work with potential employment opportunities through the new Kaimahi for Nature programme.

Funding and Financing

Funds, community trusts, schemes	**Funds, Community Trusts and Funding Schemes** leveraged to meet the cost of delivering projects • Stronger relationships and understanding of application processes, and mandates developed through centralised entity. • Ability to leverage existing expertise through shareholders.
Public/private partners	Partnerships developed with relevant public and private sector organisations. • Leverage existing expertise in the area (e.g. Waikato River Authority). • Potential to unlock additional funding through partners (e.g. a tertiary provider co-funding a restoration project as part of a conservation study). • Ability to expand volunteer network through partnerships (e.g. corporate events such as 'plant a tree day').
Kaimahi for Nature	Additional funding through DoC's kaimahi for nature fund, which has $200m allocated, may be available for restoration projects. The delivery structure has been designed to ensure it complies with the requirements (e.g. alliance between Treaty partners, the Crown and local government).
Debt	Finance raised centrally through the Waikato Restoration Entity, enabling a portfolio approach to borrowing (e.g. wider than under a project-to-project basis). As it is likely to be a small quantum, there is the potential for government debt or direct bank lending. If the debt requirement is of a sufficient scale, 'green financing' may be utilised to incentivise environmental outcomes. 'Green finance' is unlikely to provide cost savings initially, but may in the future once the market is more established. Opportunities for green financing include: • **Capital relief schemes** – capital relief provided to banks for 'green loans', lowering the bank's costs associated with lending, which could be passed onto the borrower • **LGFA 'green financing' programme** – the LGFA could issue specific 'green bonds' through its existing bond programme.

Features of the funding and financing solution:

Establishment of a new entity

- ✓ **Co-ordinated approach to funding** – centralised entity able to unlock funding from relevant funds, community trusts, funding schemes and partners quickly and efficiently.
- ✓ **Local authority shareholding** – local authority funding accessed more efficiently through shareholding relationships.
- ✓ **Optimise value from offset environmental compensation** – the entity may be able to deliver enhanced environmental outcomes through co-ordinating the application of offset environmental compensation to appropriate projects.
- ✓ **Additional scale** providing improved access to debt markets.
- ✓ Opportunity to **develop the 'green** financing' market **in New Zealand,** which may drive better environmental outcomes.
- ✓ Alignment of finance costs to environmental performance through specific 'green financing' instruments.

Area of focus

Establishment of a regional conservation authority

Toronto and Region Conservation Authority – Canada

Overview:

The Toronto and Region Conservation Authority (TRCA) was established as one of 36 Conservation Authorities in Ontario, to enhance and safeguard the natural environment. The TRCA operates across nine watersheds (and their collective Lake Ontario waterfront shorelines), spanning six upper-tier municipalities.

TRCA works closely alongside a large number of public and private partners to optimise environmental outcomes. The support provided varies depending on the specific partner, including funding, land use planning and research. It is also responsible for community engagement and co-ordinates volunteer involvement.

The TRCA is a statutory authority, established through the Conservation Authorities Act 1946. Its mandate was amended in 2019, and now includes programs and services related to the:

- risk of natural hazards
- conservations and management of lands owned or controlled by the authority, including any interests in land registered on title
- authority's duties, function and responsibilities as a source protection authority under the Clean Water Act 2006
- authority's duties, function and responsibilities under an Act prescribed by the regulations.

The TRCA utilises a range of different methods to exercise control over land, from restrictive covenants and statutory easements to fee simple ownership. The TRCA also utilises development partnerships to deliver low impact developments across the region.

Public council entity model

Assessment against key questions

How can governance frameworks best be implemented to support a more co-ordinated approach? How can stakeholders (e.g. iwi) be actively involved within these frameworks?

Governance and control:

- Shareholding local authorities retain a high level of control through voting rights and representation on governance groups attached to their shareholdings. However, the collective ownership model will restrict individual autonomy (e.g. an individual territorial authority cannot impose control over other shareholders).
- Iwi are invited to participate as a shareholder, however will have the flexibility to determine how they would like to be involved (e.g. through partnership or governance roles).
- Opportunity for public involvement – schools, trusts, education programmes.
- Centralisation of expertise in the new regional entity.

How can procurement, public engagement and other associated activities be centralised to optimise the delivery of restoration projects across the region?

Delivery and implementation:

- Centralised approach to procurement can allow project packaging to provide greater scale. Efficiencies through avoiding cost duplication are also available.
- Partnerships with public and private sector entities provide opportunities to develop joint initiatives, utilise private sector capital and access additional funding.
- Opportunity to develop a pipeline of work to utilise preferred suppliers where possible.
- Centralised entity may optimise the application of volunteer time (e.g. through ability to establish volunteering programmes, development of partnerships with charitable (and other) organisations, and prioritisation of projects).

How can funding be unlocked from the large number of fragmented funding sources? How can private and public partners support be optimised?

Funding and affordability:

- Centralised entity allows a coordinated approach to grant applications, unlocking funding from available funding sources. Other efficiencies may also be achieved through the coordinated approach (e.g. ability to match individual projects to the specific mandates of trusts, funds, etc.).
- Potential to borrow centrally at the entity level, providing financing efficiencies.
- Access to 'green financing' enhanced through scale delivered by consolidation of restoration efforts. The single entity is also better placed to access alternative financing options and opportunities (e.g. changes to bank capital requirements for 'green loans').
- Ability to access greater pools of capital through scale, e.g. partnerships with education groups, environmental authorities and trusts and neighbouring businesses.
- Potential for commercial investment (e.g. universities) in regeneration or research projects.

Conclusion

The alternative funding, financing and delivery models presented in this Study provide examples of how the collective capacity, expertise and resources of local and central government, iwi and other stakeholders may be leveraged to deliver infrastructure in a new and sustainable way. The models presented draw on the various tools available in the local authority 'toolbox', with each combination designed to address the specific challenges of the sector and project.

When investigating new delivery models, local authorities should consider key project objectives, and how the project can best deliver environmental, social and sustainability outcomes. Many of the tools within the 'toolbox' have sufficient flexibility to be tailored to specifically address these considerations and, by working together, optimise the overall benefits of each project. Specific financial and commercial decisions should also be considered when investigating new delivery models, to ensure the model is 'fit-for-purpose' and implementable for the parties involved.

Partnership opportunities with public and private sector parties should be leveraged where possible. Leveraging these opportunities has yielded positive results internationally, particularly where there has been a joint commitment to delivering on project outcomes.

If you any questions, or would like to know more about the topics discussed in this Study, please get in touch:

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