

# Taupo District Council

## Peer Review – Three Waters Activity

22 February 2013



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22 February 2013

***Taupo District Council - Peer Review Three Waters Activity***

Dear Rob

We are pleased to provide this report based on our review of Council's Three Waters operations. The review required detailed analysis and review of these activities to enable a high level performance scorecard assessment.

This facilitated an understanding of Council's general improvement progress in the delivery of three waters and the identification of issues and opportunities as you seek to continuously improve the operation and delivery of these services.

This report is provided in accordance with the terms of our letter of engagement dated 11 October 2012, and is subject to the restrictions set out in Appendix A of this report.

Yours sincerely

A handwritten signature in black ink, appearing to read 'David Walker', written over a horizontal line.

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# *Executive summary*

## *Background and objectives*

Taupo District Council (TDC) along with the wider local government sector, has been dealing with a number of pressures and challenges since the inception of the global financial crisis (GFC) in 2008. This resulted in a constrained economic environment leading to contraction in funding lines, constraints in the ability to increase rates and charges and the need for additional debt to meet resulting funding gaps.

Due to these pressures and the resulting outcomes, government has taken a more proactive interest in the sector resulting in a number of reviews and reforms. Some of the reforms are fundamental given they may potentially change the core role of local government. In parallel with proposed changes to core local government purpose, additional statutory requirements and performance assessments are being implemented by Central Government.

Prior to these recent government initiatives, TDC had already initiated a number of measures to respond to the external environment including organisation restructure, cost containment, deferral of projects and renewed emphasis on debt repayment. A significant driver of costs for the Council has been the development and enhancement of 3 Water infrastructure. Although growth has been a factor in the increased resource demand from this area, key drivers for infrastructure upgrades have been the requirement to meet drinking water standards and waste water discharge standards. Although these requirements have been imposed on a sector-wide basis, the impact on TDC has been accentuated due to the large number of water and wastewater treatment plants which total 31 across the district.

The provision of water services itself has also been a specific area of focus for the government given growing awareness of the importance of water across its various uses and its strategic economic and environment importance. The national infrastructure unit of government (NIU) when undertaking its infrastructure assessment in 2011 rated the water sector as the lowest performing infrastructure sector.

Given this background context and allied with the fact that the Three Waters' function accounts for approximately half of TDC revenue and expenditure, the Council wishes to understand how well it is performing these functions and accordingly its ability to respond to current opportunities and challenges.

To carry out this assessment it was agreed to utilise the national infrastructure unit performance assessment methodology and its enhanced process specifically developed for the water sector. This assessment was to be complemented by a high level economic assessment to better understand the community's affordability of TDC services. Allied with historical analysis of Three Waters' performance, this would assist the identification and determination of both current performance and opportunities for future improvement.

The findings were also to take account of the various government and regional reviews and reforms (Appendix C) which have covered a range of topic areas including:

- infrastructure efficiency
- operational efficiency
- productivity
- water reform
- regional governance.

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## Peer review approach

The approach was grounded in the work published by the NIU in the National Infrastructure Plan (NIP) 2011 national infrastructure assessment. This approach was subsequently enhanced through a detailed operator level pilot study. The pilot study, which was completed in 2012 included TDC as a participant.

The core methodology is based upon six guiding principles applicable to all infrastructure delivery and is underpinned by a detailed performance metric framework. The six guiding principles which are applicable to all infrastructure include:

- investment analysis
- resilience
- funding mechanisms
- accountability and performance
- regulation
- coordination.

Across these principles, the assessment itself focuses on processes, decision-making, key output and measure results. Assessment and scoring are reported utilising a traffic light system. In broad terms, a metric receiving a green score has to be 'occurring effectively', an amber score if it 'occurs but could be further developed', and a red score if it 'does not occur or is ineffective'. This scoring scale is commonly used in benchmarking. The aggregation of upward scores into principle level scores is explained in Appendix F.

## General findings

The overall findings shown overleaf indicate TDC has improved both on the NIP 2011 sector results, and the earlier pilot study which was restricted to TDC water and wastewater operations. This has occurred with the addition of stormwater to create a full Three Waters' assessment. General findings by principle include:

- **investment analysis** - TDC's approach to asset management has been found to be of sound practice which is being enhanced through a continuous improvement programme. The multiplicity of small schemes is challenging but TDC is able to compensate through in-depth operational knowledge, enhanced asset management processes and automated monitoring systems
- **resilience** - arguably TDC benefits from the very distributed nature of its infrastructure which partially de-risks the potential scale and scope of emergencies. However given its unique geographic location, TDC has undertaken a number of assessments and has mitigations in place albeit they could be enhanced further
- **funding** - although TDC does not operate universal metering schemes beyond major commercial users, it has a direct targeted rate approach across all schemes requiring the users of each to effectively fund specific scheme costs. TDC is also considering various extensions to its current funding regimes which would facilitate an improved assessment against this principle
- **accountability and performance** - performance metrics reviewed indicate a positive and improving scenario across the Three Waters. This is being facilitated in no small way through the extensive renewal programme occurring across all plants, now and through to the end of the current long term plan (LTP) period ending 2022. TDC accordingly has a good base to maintain and track improvement across all KPIs going forward
- **regulation** - regulation for the water sector generally is problematic with the fragmentation of responsibilities across numerous government agencies and environmental authorities with no body in





place to oversee and integrate regulations where necessary. Within this context, there is arguably a rigid approach to certain standards, including drinking water and wastewater discharge quality. This is particularly problematic for TDC given the large number of very small schemes it operates. In wastewater quality, for instance, we understand that TDC meets and exceeds the nitrogen discharge requirements in wastewater quality across all its plants. However on a plant by plant basis this is not the case and the cost of achieving regulations across small plants both in wastewater and water can be cost prohibitive for small numbers of users. In this regard, further work should be considered in the area of cost benefits and advocacy thereof

- **coordination** - TDC's geographic remoteness from other districts' major centres limit its immediate ability to effectively coordinate with other infrastructure providers, particularly neighbouring Councils. However it does have the opportunity to participate in up to three regional groupings currently seriously considering shared services and other enhancements which it could assess and leverage if potential benefits were identified. Within the district itself, infrastructure has been coordinated with growth zones planned and in place for cost effective growth when required.

### Overall principle level assessment results

TDC scores for comparative purposes include individual, two water (water and wastewater combined) and three water (two water plus stormwater). The detailed assessment is provided in Appendix E.

	NIP 2011		Taupo DC - 2011/12					Taupo DC - 2012/13		
	Whole water sector	Water & wastewater	3 waters	Water & wastewater	Water	Wastewater	Stormwater			
Investment analysis	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Resilience	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green
Funding Mechanisms	Red	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Accountability & Performance	Yellow	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Regulation	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Coordination	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green

- Assessment rating:
-  Occurs effectively
  -  Occurs but could be further developed
  -  Not occurring effectively
  -  Not applicable

These summary scores indicate that:

- coordination is occurring effectively
- investment analysis, resilience, accountability and performance and regulation occurs but could be further developed
- funding sits in the 'not occurring effectively' range, largely due to the narrow range of funding tools utilised and forecasting accuracy.

The progress that TDC has proactively made in the operation of its Three Waters' function has positioned itself well with regard to a number of the reform initiatives underway. Reconciliation with proposed mandatory performance measures by way of example, have confirmed TDC is already prepared to meet their requirements without any significant changes. Benchmarking across a range of infrastructure service and financial metrics also position TDC mid range, if not higher, across the peer sector comparisons.

These mid range benchmark findings were consistent with the rates affordability research undertaken during this review. Key findings in this research indicate that the TDC rates burden falls within the expected household expenditure component range of 3%-4%. In addition, district annual household

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income also sits mid range within its comparator group. Accordingly the current rates burden is not regarded as being out of step with comparator Councils.

## ***Opportunities for improvement***

The peer review identified a number of opportunities for further improvement, including:

- enhancement of demand forecasting through the continuation of bulk water meter installation
- technical assessment of universal water metering opportunities and associated conversion of targeted rates for water and wastewater to assist demand management and supply pressures
- level of service reviews being completed taking account of individual scheme cost benefits
- extension to the condition assessment programme to enhance renewal programme and planning
- further enhancing emergency planning through the finalisation of public health plans to complete a comprehensive disaster management plan framework
- addressing gaps relating to stormwater overland flowpath mapping
- continuing to enhance SCADA monitoring systems, particularly with the capability of remote operation
- reviewing progress against all key KPIs to identify further enhancement opportunities
- advocating with regulatory agencies for greater flexibility in the composition of standards
- assessing shared services opportunities arising through the respective regional reviews.

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# 1. Introduction

## 1.1 Background

TDC through its 2012 10-year planning process, implemented a number of changes to the three waters<sup>1</sup> programme of works. Changes from the 2009 10-year plan were necessary due to the ongoing constrained economic environment post the global financial crisis. TDC, along with other councils in the local government sector, have had to deal with a number of revenue constraints and issues including:

- contraction of development contributions
- reduction in sundry fees and charges
- increased pressure to minimise ongoing rates increases
- change in rating incidence at the individual ratepayer level
- meeting land bank financing requirements.

Although TDC has proactively responded to this environment through a combination of measures including organisation reshaping, cost containment and deferral of three waters' projects, the flexibility of its response in this infrastructure category is somewhat constrained given:

- much of the infrastructure is decentralised, e.g. numerous satellite water and wastewater schemes
- the historical nature of many of the schemes which were designed to serve very small catchments
- the tourism nature of the district requiring a peak load capacity in both water and wastewater treatment plants
- the availability of water sources given the lake and waterway priorities for other users e.g. energy
- higher than average wastewater treatment standards required due to the sensitivity of the Lake Taupo environment
- lack of flexibility in drinking water standards requiring high quality outputs even for the small schemes.

The impact of these increased regulatory standards in particular, has created additional funding demands not only for TDC but local government generally.

The resulting impact on communities nationally by way of increased levels of rating and council debt post 2008 has come to the attention of the government. A recent regulatory impact statement prepared by the Department of Internal Affairs (DIA) in March 2012, stated that councils may not be making prudent decisions, due to:

- lack of skills
- failure of governance frameworks or decision-making processes
- not having sufficient focus on, or incentives for, operating as efficiently as possible.

Local government as a whole was viewed as not doing enough to constrain spending, debt and costs. In addition, smaller rural councils would continue to face challenges to fund renewals as their existing infrastructure nears the end of its life over the next decade.

DIA also noted excessive levels of debt could be seen to place an undue burden on future generations, potentially restricting future choices including the ability of councils to borrow to meet emergencies or unforeseen circumstances.

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<sup>1</sup> Three waters incorporates water supply (collection, treatment, reticulation to users, wastewater (collection, treatment and disposal) and stormwater (management, control and discharge)



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Management of these effects was viewed as being strengthened if councils have robust financial management and practices that drive efficiency, sustainability and flexibility. To facilitate solutions to these issues, the government has initiated a number of reforms and advisory groups, including one specifically dealing with the delivery of infrastructure.

TDC in response to the financial pressures and prior to the governmental responses, had already proactively undertaken a combination of measures including:

- organisation restructure
- cost containment
- project deferral
- peer review of financial strategy.

This proactive approach to constrain rates, expenditure and debt is consistent with the Auditor-General's 2012<sup>2</sup> sector findings.

## **1.2 Objectives**

TDC is seeking to test the validity of its agreed position and direction to current sector context and issues within its three waters' function which accounts for approximately 50% of TDC revenue and expenditure. In doing so it would like to understand how the report conclusions arising from this review, position TDC to respond to the opportunities and challenges that the current infrastructure/regionalisation debates are creating.

This review involved undertaking an assessment of the current three water plans and projections through:

- utilising as a base the national infrastructure unit assessment methodology (as specifically developed for the water sector), to assess and analyse:
  - coherence and alignment of strategies, priorities and decision-making
  - investment analysis, including asset management processes, demand forecasting, procurement process and costs and benefits
  - network resilience and approach to risk management
  - funding mechanisms, including long term outlook and actual vs budget performance
  - accountability and performance, including performance against agreed outputs and outcomes
  - regulation, including a review of burden vs benefits and legislative compliance
  - coordination or shared services potential or significance.
- completing a high level economic assessment to better understand the community's affordability of council services through the analysis of Statistics NZ data, Ministry of Health deprivation indices, council property and other records
- reviewing a high level historical analysis produced by TDC of three waters revenue and financing, to assess trends including rates sensitivity, implications for expenditure flexibility
- identifying and summarising key opportunities and challenges for regional infrastructure provision being raised through the government reform programme and regional governance reviews.

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<sup>2</sup> Matters arising from the 2012-2022 local authority long term plans, Controller and Auditor-General, December 2012

### 1.3 Historical context

The Taupo District occupies a large proportion of the Central North Island Volcanic Plateau together with the complete catchment area of Lake Taupo and Upper Waikato River areas.

Whilst the majority of the district is situated within the Waikato region, a small proportion also intrudes into the Bay of Plenty, Hawke's Bay and Manawatu-Wanganui regions. The district comprises 6,354 sq km of land and 616 sq km of lake.

Prior to 1950 the district was largely undeveloped and sparsely populated. Since that time, the population has increased rapidly to approximately 34,000 (June 2010). Urban growth has focused on Taupo township and various lakeshore settlements, whilst rural land development has been dramatic with the conversion of scrub wastelands to productive farmlands, exotic forest plantations and conversion to lifestyle properties.

Taupo township, along with many of the district's small settlements, is serviced by Three Waters infrastructure. The treatment plants for water and wastewater that were installed from the 1950s onwards have had to be scheduled from 2008 into their first cycle of renewals. This cycle has been accelerated due to a combination of asset age, district growth, drinking water standards, and wastewater and stormwater discharge regulations.

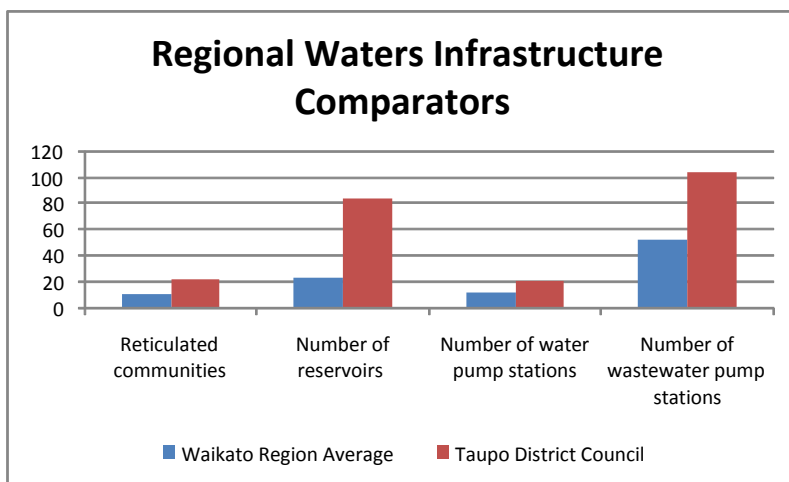
Historically, the District and its predecessors, for a variety of reasons, installed infrastructure from Taupo township through to the smallest of communities including Waihaha, which has only 37 connections. These developments proceeded without the benefit of modern and robust cost benefit analysis. Council Plants and facilities include:

	Water	Wastewater
Taupo	✓	✓
Acacia Bay/Mapara*	✓	✓
Kinloch/Whakaroa*	✓	✓
Waitahanui	✓	✓
Mangakino	✓	✓
Atiamuri	✓	✓
Whakamaru	✓	✓
Turangi	✓	✓
Motuoapu	✓	✓
Omori/Kuratau/Pukawa	✓	✓
Hatepe	✓	
Whareroa	✓	✓
Centennial (irrigation)	✓	
Bonshaw Park (rural)	✓	
Whakamoenga	✓	
Waihaha (rural incl. irrigation)	✓	

	Water	Wastewater
Tirohanga/Serenity Cove(rural incl irrigation)	✓	
River Road	✓	
Motutere (campground only)	✓	✓
	19	12

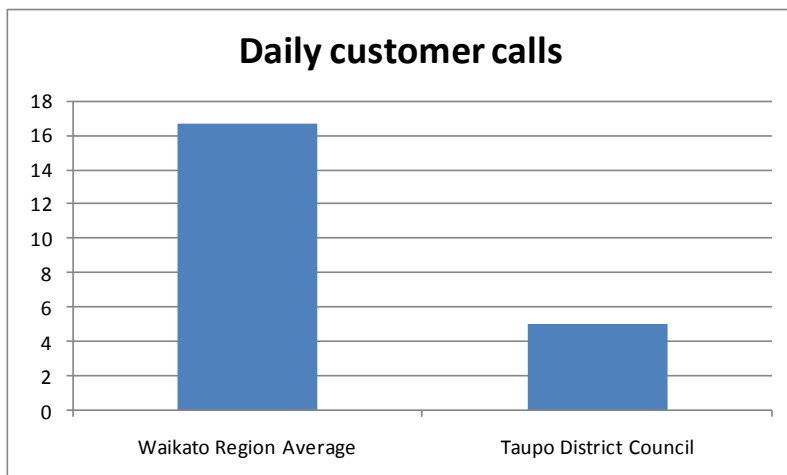
\* Mapara and Whakaroa are connected to public water supplies through Acacia Bay and Kinloch. These two settlements are not connected for wastewater.

The extent of this multiplicity of systems which TDC is required to manage is contrasted starkly against some of the average infrastructure holdings across the 11 Councils in the Waikato region<sup>3</sup> as shown below.



Source: Waikato Regional Waters’ Study, PwC analysis

Despite the requirement to run and operate the largest network of infrastructure within the region, TDC has a lower than average rate of customer complaint calls, a favourable trend, shown in the following table.



Source: Waikato Regional Waters’ Study, PwC analysis

<sup>3</sup> Sourced from data contained in the 2012 Waikato Regional Waters’ Study

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## **2. Setting the context**

### **2.1 The local government landscape**

In March 2012 the Better Local Government Regulatory Impact Statement was prepared by the Department of Internal Affairs, which backgrounded current cross-sector concerns and the options to respond to them. At an overall level, the regulatory impact assessment panel<sup>4</sup> indicated there was evidence of problems within the local government sector including councils not making prudent decisions, and the sector not focussing on constraining spending, debt and costs. In addition, there was concern that not all councils were making good decisions due to lack of skills, failures of governance frameworks or decision-making processes, or not having sufficient focus on, or incentives to, operate as efficiently as possible.

In doing so it noted that debt was used by local government to fund capital expenditure which, between 2002 and 2012 had increased from \$1.6 billion per annum to \$4 billion per annum, an increase of 154%. It noted that the major drivers of this debt growth included building new infrastructure but also renewing ageing infrastructure particularly reticulation and wastewater services.

It highlighted that many Councils, particularly smaller rural councils would continue to face challenges to fund renewals as their existing infrastructure nears the end of its life. However the ability of local government to minimise these effects would be strengthened if councils had robust financial policies and practices that drive efficiency, sustainability and flexibility.

In addition, the root cause of the problem of inefficiency and lack of fiscal restraint reflected deficiencies in local government related legislation, in particular the Local Government Act 2002, which it noted provided no direction as to what councils should be expected to do.

The net result of the Better Local Government Review was government signing off an eight point reform programme to make local government more efficient in its delivery of services, comprising:

- refocusing the purpose of local government
- introducing fiscal responsibility requirements
- strengthening governance provisions
- streamlining council reorganisation procedures
- establishing a local government efficiency taskforce
- developing a framework for central/local government roles
- investigating the efficiency of local government infrastructure provision
- reviewing the use of development contributions.

### **2.2 Taskforce reviews**

The reform programme led to the establishment of three major taskforce reviews covering infrastructure delivery, general sector efficiency and productivity.

#### **2.2.1 Local government infrastructure efficiency expert advisory group**

The local government infrastructure efficiency expert advisory group was tasked with item 7 in the eight point plan, being efficiency of infrastructure provision. In particular, the terms of reference<sup>5</sup> was

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<sup>4</sup> Regulatory Impact Statement, Better Local Government, 16 March 2012

<sup>5</sup> Terms of Reference, Local Government Infrastructure Efficiency, Expert Advisory Group, September 2012

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established to explore issues and report on better ways to manage the costs of local government infrastructure incorporating:

- exploration of greater flexibility in the purchase of infrastructure
- possible introduction of volumetric charging for wastewater
- understand the cost implications of standards for infrastructure.

Particular areas of advice that the advisory group was to focus on included:

- what opportunities exist to reduce the current and future overall costs of purchasing
- what barriers stop local government from exploring and implementing the opportunities
- how barriers to opportunities may be avoided, reduced or overcome
- how local government can improve its consideration of the benefits and cost implications of decisions they take in relation to infrastructure when selecting projects.

Current indicators regarding report timing are March 2013. However, given the government's infrastructure emphasis, allied with the mandate given to this taskforce, it is likely that a broad range of improvement recommendations will be made. These may range from shared services at the low change end of the spectrum to regionalisation of utility services at the high end.

### **2.2.2 Local government efficiency taskforce**

In June 2012, the government also announced the establishment of a local government efficiency taskforce whose brief was to focus on improvements to local government consultation, planning and financial reporting requirements and practices. The objective of this brief was to provide additional guidance to the overall Better Local Government Reform programme. Although a major focus was planning and consultation, this group also provided advice<sup>6</sup> relating to purchasing, procurement and the sharing of good practice and innovation which are relevant to this review.

### **2.2.3 Productivity commission**

The third enquiry within the eight point plan related to local government regulation which was briefed to the New Zealand Productivity Commission in May 2012 to undertake. A key aspect of this enquiry related to the clarity of roles between central and local government. Previous elements of water management were to be considered within this review albeit biased toward regional as opposed to the local level issues. The initial outcome of this review was a draft report published late 2012<sup>7</sup> seeking further submissions prior to the preparation of final recommendations. Although its references to water are regionally focused, it has acknowledged a number of issues including implementation issues at the local level. Changes that may arise are likely to be longer term in nature, so beyond the scope of this review.

## **2.3 Sector developments**

### **2.3.1 Land and Water Forum**

The Land and Water Forum is a representative water stakeholder forum which has government support to build consensus around water policy approaches for the country. In October 2012 the forum issued its third report<sup>8</sup> which contained a number of relevant directions for urban water management, in particular, the forum has made it clear that:

- setting of limits needs to take place to apply to water quality and quantity

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<sup>6</sup> Report of the Local Government Efficiency Taskforce, November 2012

<sup>7</sup> Towards Better Local Regulation, draft report, New Zealand Productivity Commission, December 2012

<sup>8</sup> Third Report of the Land and Water Forum, Managing Water Quality and Allocating Water, October 2012

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- limits will be set for particular contaminants
  - urban drinking water, urban stormwater and urban wastewater discharges need to be managed within contaminant limits
  - enforcement practices of regional councils relating to territorial local authorities' consent conditions need to be more consistently applied. In particular it was noted that once the consents have expired, territorial local authorities often delay making the investment to bring their wastewater and stormwater systems up to specification
  - the forum's mandate for this phase of work didn't allow it to consider the suitability of existing institutional arrangements for water management in urban environments. Accordingly the way water services infrastructure is managed and organised should be investigated to consider the potential benefits of rationalisation.

The desire to maintain regulatory standards is of particular relevance to TDC given they apply across all of its numerous water and wastewater schemes.

### 2.3.2 National infrastructure unit

The NIU in its 2012 annual report<sup>9</sup> reaffirmed some of the directions highlighted in this section of the report, but also noted that the fresh start for fresh water (FSFW) programme was underway. This programme of reform included consideration of water objectives, limits and allocation mechanisms, and was informed by the ongoing work of the land and water forum. It noted that the outcomes of this programme were intended to provide decision-making frameworks critical to the planning and provision of long life infrastructure and facilitating regional water planning and land use. In addition it noted that for the first time all councils were now required to report Three Waters (water, wastewater and stormwater) clearly and separately within their long term financial plans, and there would be a requirement for mandatory non-financial performance measurement currently being development through the Department of Internal Affairs.

Our assessment (Appendix D) of the current draft measures published by DIA indicates that TDC is already largely compliant and through its annual report, has been reporting Three Waters separately and in detail for a number of years.

However, this requirement is likely to necessitate some minor changes to TDC reporting processes, given some performance metrics (customer satisfaction) are only reported bi-annually and others may be slightly different from existing measure wording.

### 2.3.3 Water New Zealand

Water New Zealand, in its role as the water sector leader and advocate, has been operating a water benchmarking service since 2007. The number of participants has progressively expanded with TDC joining the participants in the current financial year. This benchmarking service is providing the base for an ongoing analysis of performance and improvement for the industry.

During 2011, Water New Zealand in conjunction with the New Zealand Council for Infrastructure Development initiated a pilot performance assessment framework based on National Infrastructure Unit guidelines<sup>10</sup>. Taupo District Council participated in this pilot study which also provided an inter-Council peer review opportunity and identification of business improvement initiatives.

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<sup>9</sup> Infrastructure 2012, National State of Infrastructure Report, November 2012

<sup>10</sup> National Infrastructure Plan 2011

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## ***2.4 Regional developments***

During 2012 the Waikato Mayoral Forum commissioned a strategic review of water and wastewater activities in the region with particular emphasis on the ability of shared services to enhance the effectiveness of water and wastewater services. The reviewers recommended that a regional approach to shared services be considered and secondly an investigation into the merits of a water/wastewater CCO be commissioned.

Although it was not the mandate of this region-wide review to compare Councils it produced a range of comparative data across all 11 Councils studied. This data reinforced the comparative extent of the infrastructure managed by TDC and featured within section 1.2 of this report along with some relevant customer and staffing data which are featured later in this report. These indicate low numbers of customer inquiry/complaint calls and only a slightly higher than average staffing level despite the greater number of systems managed.

The overall outcome of the regional review was under consideration at the time of writing, but in conjunction with TDC's own initiatives, places the Council in a sound position to address many of the issues arising through the reviews.

### 3. *Three Waters' assessment*

In 2011 TDC participated in a pilot study sponsored by Water New Zealand and the New Zealand Council for Infrastructure Development in association with the NIU. This study developed a framework to assess the performance of individual water and wastewater operators against the six guiding principles set out in the 2011 National Infrastructure Plan. TDC, along with the other study group councils, were subsequently assessed at a high level against the performance framework.

Given the robustness of the methodology and the opportunity to reassess TDC's subsequent progress the approach has been reutilised taking account of:

- assessment of TDC data and information at a more detailed level
- subsequent refinements through its utilisation with other sector participants
- inclusion of stormwater as a separate category
- sector feedback on the pilot study.

At a summary level, the review is able to assess TDC's status and progress against both the:

- original 2011 Infrastructure Plan results, and
- TDC's results from its inclusion in the 2011/12 pilot study

The methodology is based around the following six guiding principles:

<b>Guiding Principle</b>	<b>Good practice description</b>
<b>Investment Analysis</b>	Investment is well analysed and takes sufficient account of potential changes in demand.
<b>Resilience</b>	National infrastructure networks are able to deal with significant disruption and changing circumstances.
<b>Funding Mechanisms</b>	Maintain a consistent and long term commitment to infrastructure funding and utilise a broad range of funding tools.
<b>Accountability and Performance</b>	It is clear who is making decisions, and on what basis, and what outcomes are being sought.
<b>Regulation</b>	Regulation enables investment in infrastructure that is consistent with other principles, and reduces lead times and certainty.
<b>Coordination</b>	Infrastructure decisions are well coordinated across different providers and are sufficiently integrated with decisions about land use.

The principles focus on processes and decision-making, on the basis that quality of processes and decision-making lead to good outcomes. However, the assessment is complemented by consideration of key output and measure results.

Each principle is underpinned by a series of metrics which are assessed and scored using a traffic light system.

Each metric has its own individual achievement criteria, which the scores are based on. That is, for each question there is a criterion for each of the green, amber and red categories, which the operator is assessed against.

For some metrics, there is also a 'black' score, where the metric is not applicable. In each case, 'not applicable' is described with the other criteria.



The metrics and their analysis follows in this section. The criteria for each question and scoring mechanism are set out in Appendices E and F.

Where appropriate, additional information including comparative charts, supplements the core principle analysis and discussion.

### 3.1 Investment analysis

#### 3.1.1 Context

Good performance against the principle of investment analysis is described in the NIP as “investment is well analysed and takes sufficient account of potential changes in demand.”

The NIP states that investment should be subject to rigorous analysis and be based on consistent evaluation techniques. It states that investment decisions should consider future demand, building additional capacity and development options into infrastructure, the value of networks, wider economic benefits, and the effects of ownership including maintenance over the life of the infrastructure.

The metrics that are used to assess performance against this principle are:

1. The methodology used for appraising investments
2. The frequency, and method, of revisions to asset management plans (AMPs)
3. The extent to which different ownership structures are considered for potential new capital investments
4. The process used to forecast water demand
5. The time period used to appraise the costs and benefits of potential capital investments
6. The cost and benefit items included in an appraisal of potential capital investments
7. The basis for decisions to replace existing assets.

#### 3.1.2 Results

Investment analysis		3 waters	Water & wastewater	Water	Wastewater	Stormwater
Overall		Yellow	Yellow	Yellow	Yellow	Yellow
1	Methodology	Green	Green	Green	Green	Green
2	AMP revisions	Yellow	Yellow	Yellow	Yellow	Yellow
3	Ownership structures considered	Yellow	Yellow	Yellow	Yellow	Yellow
4	Demand forecasting process	Yellow	Yellow	Yellow	Yellow	Yellow
5	Time period for appraisal	Green	Green	Green	Green	Green
6	Cost and benefits inclusion	Green	Yellow	Green	Yellow	Green
a	Environmental effects	Green	Green	Green	Green	Green
b	Social effects	Green	Green	Green	Green	Green
c	Economic development	Green	Green	Green	Green	Green
d	Integration with other sectors	Yellow	Yellow	Yellow	Yellow	Green
e	Value of reduced levels of service	Yellow	Yellow	Yellow	Yellow	Yellow
f	Future legislative changes	Green	Yellow	Green	Yellow	Green
7	Replacement decision basis	Green	Green	Green	Green	Green

### 3.1.3 Key matters

Key matters that we identified in this assessment include:

- asset management procedures are based on sector best practice utilising the New Zealand asset management support (NAMS) manual
- full asset management plans (AMPs) are prepared every three years with ongoing continuous review for the purpose of annual planning
- alternative ownership/funding structures are typically not considered given the small scale of plants but were considered in the case of the new Taupo town water treatment plant which had greater scale
- demand forecasting is based on various factors as opposed to a comprehensive modelling approach. These include historical demand and leakage levels, forecast growth, changes as a result of management initiatives eg leak detection and operator/contractor intelligence
- a variety of cross-benefit factors are taken into account including broad risk assessment, resource consent conditions, plant optimisation studies and consideration of just-in-time infrastructure
- TDC has limitations relating to its ability to close down smaller high cost schemes given section 131 of the Local Government Act places restrictions on the ability to both close or transfer responsibility for small schemes
- levels of service have not been reviewed since 2006 but are due to be done in the 2015–2025 LTP round
- replacement of assets is primarily based on condition assessments which is consistent with best practice
- major projects currently deferred beyond the current 10 year plan include the \$3.6 million CBD upgrade and \$5.9 million industrial area upgrade relating to the piping of overland stormwater flows. We understand that without this infrastructure the Council is still meeting its non-flooding KPI for habitable floors
- TDC has a fit-for-purpose approach to infrastructure asset acquisition through a process of determining base parameters before procuring infrastructure, eg considering water demand management as an alternative to infrastructure build
- whole-of-life cost is ordinarily considered within the requirements of the tender process to ensure significant future operating costs are well understood
- all plants are subject to a monitoring regime including the utilisation of SCADA, a remote monitoring system. In addition, maintenance decisions take account of the various intelligence points available including operators, contractors and asset managers.

### 3.1.4 Investment analysis summary

As a key element of Investment Analysis, TDC's approach to asset management is based on sound practice improving through an ongoing enhancement and improvement programme, overseen by a dedicated asset manager.

The multiplicity of small schemes provide a challenge to the level of investment analysis able to be applied, but TDC are able to compensate through in-depth operator and contractor knowledge, enhanced asset documentation and enhanced utilisation of SCADA monitoring systems.

Areas identified for improvement include:

- more explicit consideration of alternative ownership structures and cost benefit analysis
- service levels when reviewed during the 2015 LTP process considering cost benefits of individual schemes

- 
- continued exploration of automation opportunities given the distributed nature of the infrastructure
  - enhancement of demand forecasting processes, particularly with the extension of metering in the main township.

## 3.2 Resilience

### 3.2.1 Context

Good performance against the principle of resilience is described in the NIP as “national infrastructure networks are able to deal with significant disruption and changing circumstances.”

The NIP states that to improve the resilience of infrastructure networks, there needs to be appropriate design and construction standards, organisations should identify hazards, assess vulnerabilities and plan for emergencies, they should acknowledge the value of adaptability and redundancy, and identify and manage cross-sectoral dependencies.

The metrics that are used to assess performance against this principle are:

1. The design and constructions standards followed
2. The extent of any risk assessment for natural hazards
3. The extent of any assessments of asset/network vulnerability
4. The extent to which key risks are understood and mitigated
5. The extent to which investment in the resilience of the network is considered
6. The elements of a contingency plan for a power outage.

### 3.2.2 Results

Resilience		3 waters	Water & wastewater	Water	Wastewater	Stormwater
Overall		Yellow	Yellow	Yellow	Yellow	Green
8	Design and construction standards	Green	Green	Green	Green	Green
9	Natural hazard risk assessments	Green	Green	Green	Green	Green
10	Vulnerability assessments	Yellow	Yellow	Yellow	Yellow	Yellow
11	Key risks: understanding and mitigation	Yellow	Yellow	Yellow	Yellow	Yellow
12	Network resilience consideration	Yellow	Yellow	Yellow	Yellow	Green
a	Duplications and redundancies	Yellow	Yellow	Yellow	Yellow	Green
b	Secondary power supplies	Green	Green	Green	Green	Black
13	Contingency plan for power outage	Yellow	Yellow	Yellow	Yellow	Black

### 3.2.3 Key matters

Key matters that we identified in this assessment include:

- TDC utilises various codes which have been developed under the overriding New Zealand standards code NZS4404. Subsidiary codes include building, seismic, fire and electrical works
- natural hazard risk assessments are undertaken which consider possible effects, likelihood of effect and adequacy of existing controls. The large number of independent plants provides an opportunity to mitigate risks whilst having in place additional equipment such as spare generators which can be utilised on a number of locations if required

- vulnerability assessments are typically considered three yearly for input into the AMP and LTP and TDC has a number of plans to respond to issues eg public health monitoring plan and algal bloom management plan. Currently there are eight approved public health management plans and ten in draft for submission. In addition, business continuity plans have been developed for both water and wastewater
- The volcanic nature of the district enables ‘on site’ disposal of stormwater through soakage for the majority of township structures which decreases risk within this activity
- there are gaps relating to comprehensive disaster management planning and stormwater overland flowpath mapping, as highlighted in section 8.1 of the stormwater asset management plan. Section 8.3 of this plan also highlights that historically maintenance has been carried out on a reactionary basis rather than a preventative basis. This is expected to be enhanced through the utilisation of the stormwater contract to incorporate condition assessments of structures
- operating procedures for all plants had been documented
- water and wastewater operating teams have been consolidated onto a single site based at the wastewater treatment plant which improves a number of staff related matters including load and knowledge sharing.

### 3.2.4 Resilience summary

Arguably the very distributed nature of TDC’s 3 Water infrastructure partially de-risks the Council in the case of emergencies or natural events given outside of the main town each system is standalone. However, given the district is located close to a number of potentially significant hazards including the Central Plateau volcanic field, it has undertaken a number of assessments and has mitigations in place such as temporary power generators.

Taking account of TDC’s critical risks being subject to assessment and mitigation, areas identified for improvement include:

- comprehensive assessment of all assets as opposed to critical assets only
- finalise the public health plans to complete the development a comprehensive package of disaster management plans
- transitioning stormwater services toward a preventative as opposed to reactive maintenance basis
- addressing identified gaps in stormwater planning.

## 3.3 Funding

### 3.3.1 Context

Good performance against the principle of funding mechanisms is described in the NIP as “*maintain a consistent and long-term commitment to infrastructure funding and utilise a broad range of funding tools.*”

This description covers two items, and these are the key elements of the detailed discussion of funding mechanisms in the NIP.

The metrics that are used to assess performance against this principle are:

1. The difference between actual capex and planned capex
2. The difference between the costs of service provision and the revenue collected
3. The type of funding tools used to collect revenue
4. The extent to which alternative funding tools are considered

5. The use of debt.

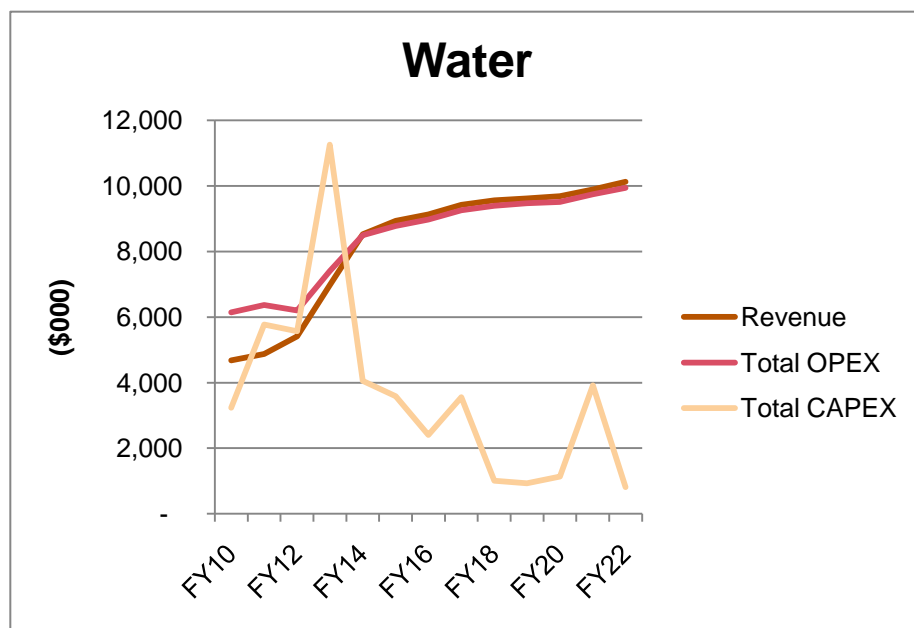
3.3.2 Results

Funding Mechanisms		3 waters	Water & wastewater	Water	Wastewater	Stormwater
Overall		[Yellow]	[Yellow]	[Yellow]	[Yellow]	[Yellow]
14	Actual vs budget capex	[Red]	[Red]	[Red]	[Yellow]	[Red]
15	Costs vs revenue	[Red]	[Red]	[Red]	[Red]	[Green]
16	Funding tools used	[Red]	[Red]	[Yellow]	[Red]	[Red]
17	Consideration of alternative funding tools	[Yellow]	[Yellow]	[Yellow]	[Yellow]	[Yellow]
a	Metering	[Red]	[Red]	[Yellow]	[Red]	[Black]
b	Volumetric vs fixed charges	[Red]	[Red]	[Yellow]	[Red]	[Black]
c	User charges vs rates	[Yellow]	[Yellow]	[Yellow]	[Yellow]	[Yellow]
d	Targeted vs general rates	[Green]	[Green]	[Green]	[Green]	[Yellow]
e	Development contributions policy	[Green]	[Green]	[Green]	[Green]	[Green]
18	Use of debt	[Green]	[Green]	[Green]	[Green]	[Green]

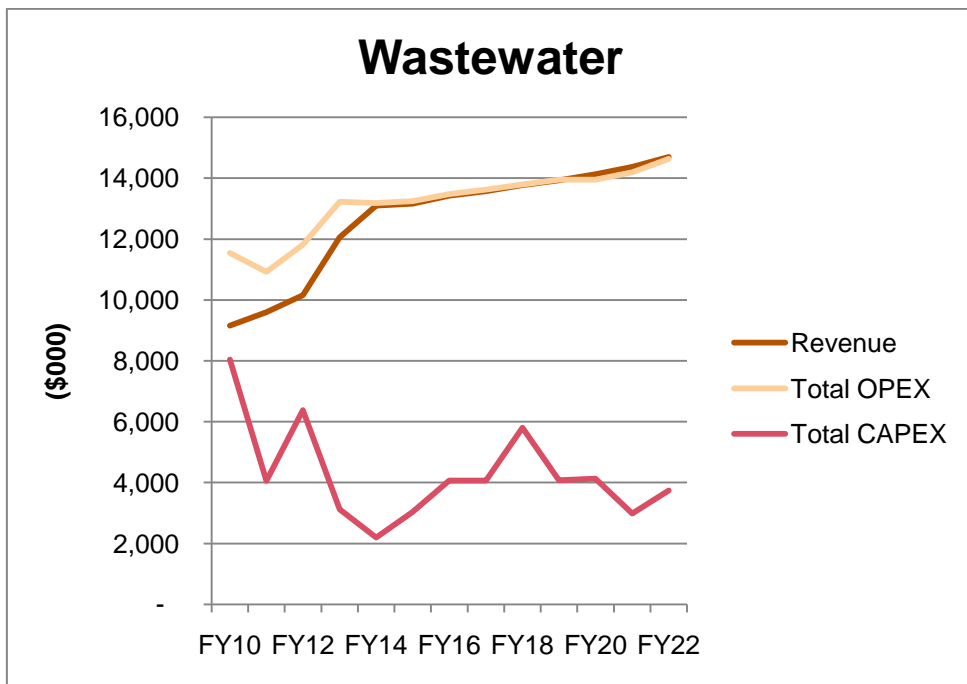
3.3.3 Key matters

Key matters that we identified in this assessment include:

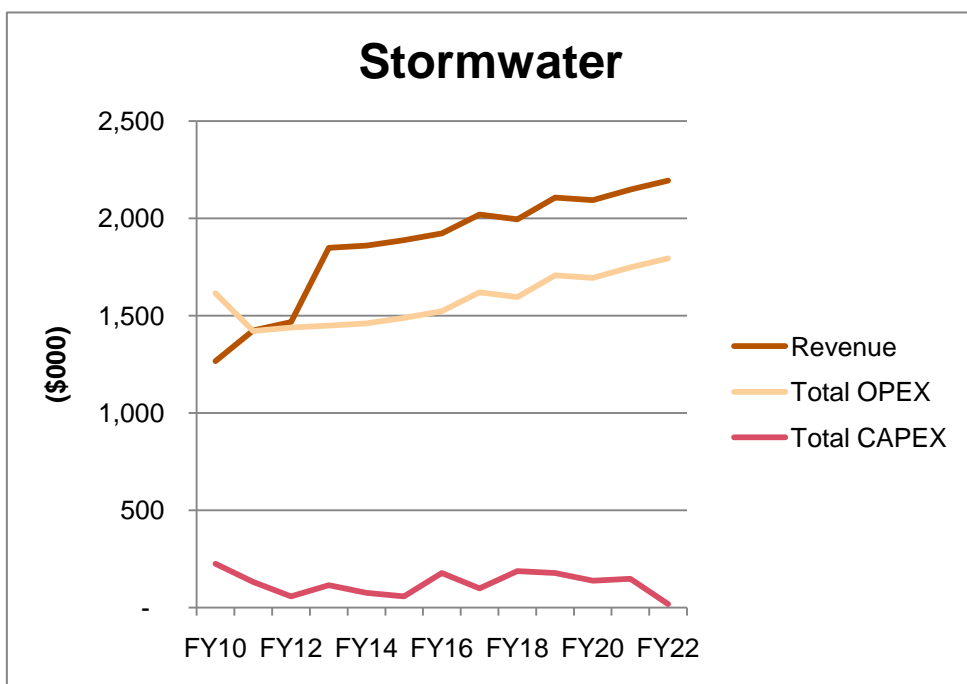
- actual versus budgeted capex over a three year average is running at a 10%-20% variation. The largest contributor to this variation is the Taupo township water supply which we understand will still be completed by the original timeframe, being August 2013
- initial (FY10-FY13) water and wastewater operating expenditure as detailed in the following charts, exceeds annual revenues by approximately 20% but is programmed to be rebalanced during the following 10 year plan period. Stormwater operational expenditure is ordinarily financed out of general rates and has a more consistent profile over the 13 year period. Funding including depreciation should ordinarily exceed costs to provide headroom for debt servicing, capital expenditure renewals and operating expenditure. In TDC's case overall funding is managed and balanced through equity reserves.



Source: TDC, PwC analysis



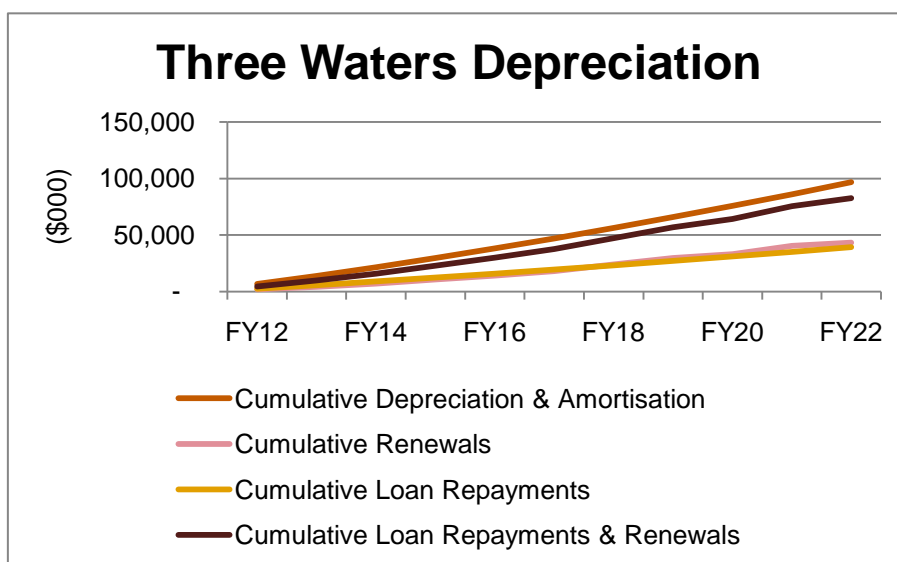
Source: TDC, PwC analysis



Source: TDC, PwC analysis

- TDC is beginning to move on the issue of water demand management through the installation of large bulk meters to improve its understanding of water flows and leak detection opportunities, albeit this is limited to the major schemes due to the cost of implementing monitoring regimes on small schemes
- universal metering has been considered in the past for Taupo township but we have been advised that estimates place Council at around a breakeven point from an economic perspective. Allied with community resistance, this is unlikely to be progressed. We note that the question of universal water metering had not been tested politically through a formal council process

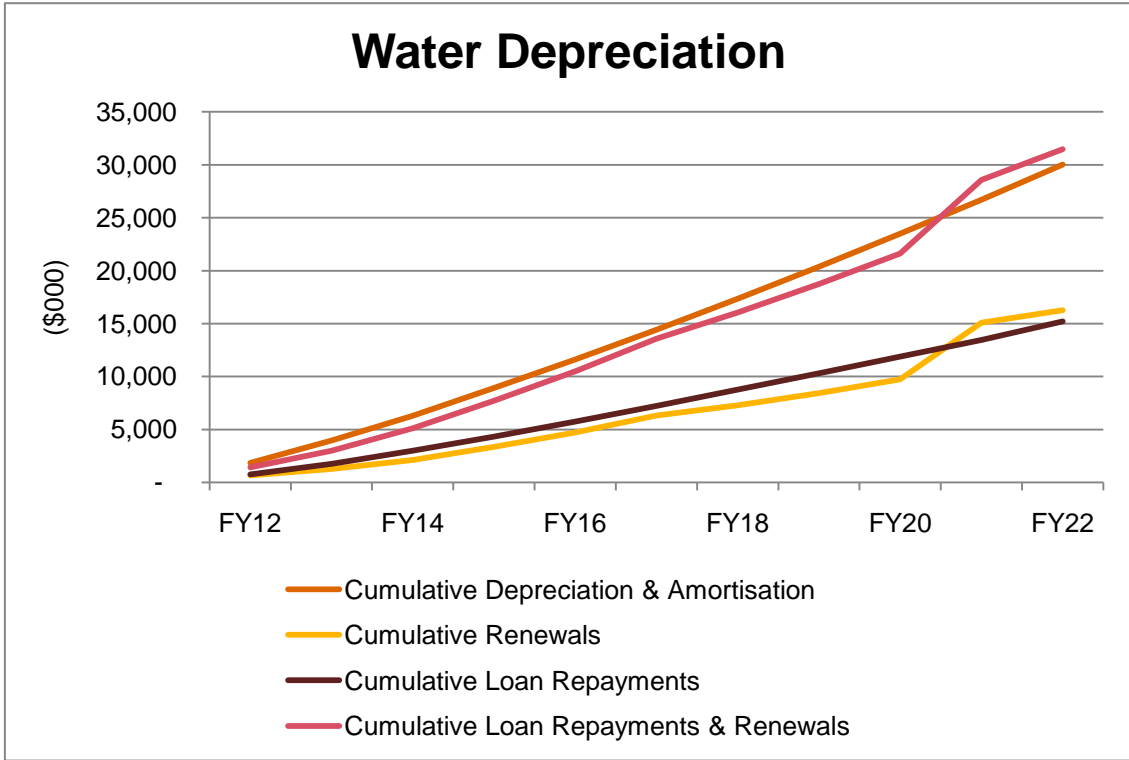
- major industrial and commercial users are supplied through meters and subject to other charges such as trade wastes
- Council currently only charges trade waste at the bulk user end as opposed to retail and commercial users generally, and we understand TDC may consider extending trade waste charging, once it collects further information through its waste collection process on fats, oils and greases
- TDC has been able to develop and operate a successful wastewater effluent reuse business. This is by way of irrigation and fertiliser for a hay baling business. This currently raises approximately \$1 million in bale sales annually. We understand from management that there may be other opportunities for the effluent reuse, which could potentially free up the two farms currently owned by the Council for the hay baling operation
- TDC as reported by the Controller and Auditor-General in matters arising from the 2012-22 Local Authority Long Term Plans reported that TDC as a local authority, had the highest proportion of gross debt to total revenue in 2012/13 being 258%. This advice we note did exclude the impact of investments such as the \$75.7 million held in deposits and bonds as at 30 June 2012<sup>11</sup>, meaning the 'net' debt position was much lower.
- Standard & Poors in its October 2012 assessment of TDC reinforced this gross high debt burden and moderate budget performance, but maintained its credit rating on the basis that TDC has a debt repayment strategy in place supported through the forecasting within the long term plan of capital and operating expenditure. Standard & Poors also noted that TDC's large capital expenditure programme in the past had been a prime contributor to the debt position
- given that a large portion of the water infrastructure has been upgraded it would appear that this expenditure is now under control. Benchmark comparisons with other Councils are generally favourable across a range of metrics including cost and employee numbers despite having the highest number of independent plants to maintain
- current high asset valuation issues have led management to reduce the level of depreciation charged as highlighted in the following charts covering the period to 2022. This position would be improved with a better understanding of assets gained through physical condition assessments. In the interim we understand management has recently agreed to fully fund depreciation from 1 July 2013 on the basis of current valuation
- management has confirmed that depreciation funding received is transferred to equity reserve annually which is used to fund renewal programmes and loan repayments. Given the relatively young asset base, the current depreciation profile overall exceeds combined renewal spend and loan repayments albeit stormwater is the major contributor to this difference as the following charts highlight.



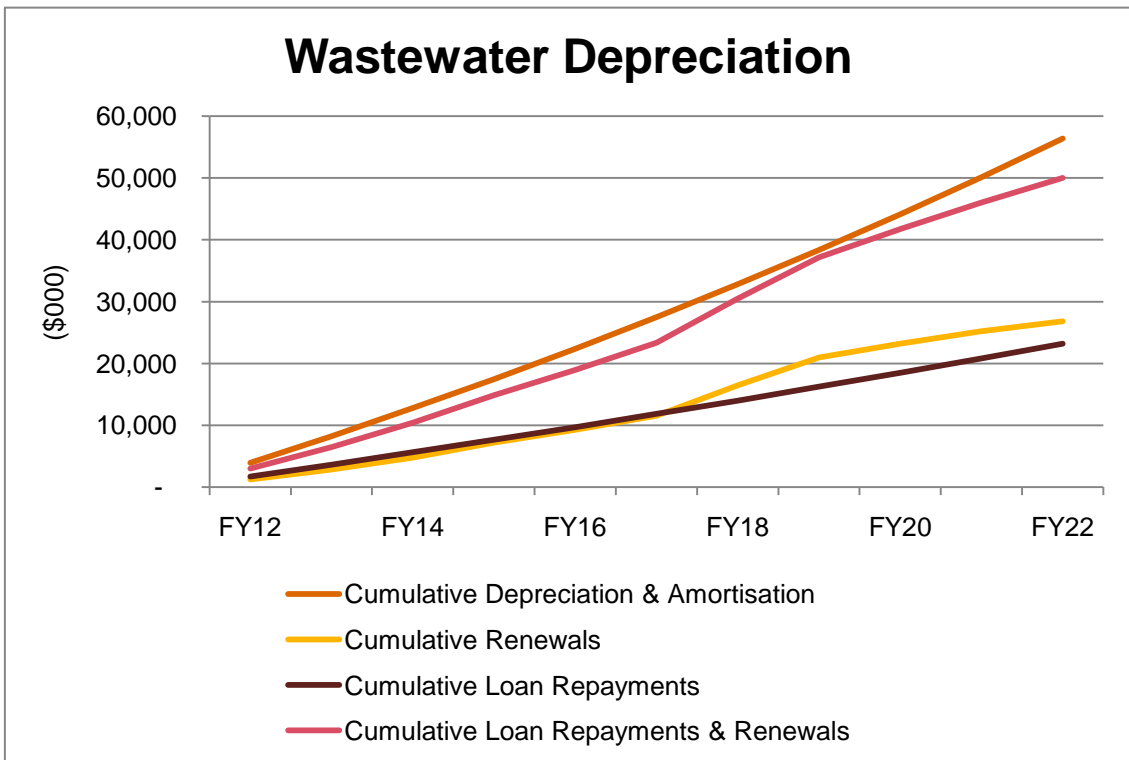
Source: TDC, PwC analysis

<sup>11</sup> Note 10, page 132, Taupo District Council Annual Report 2011/12

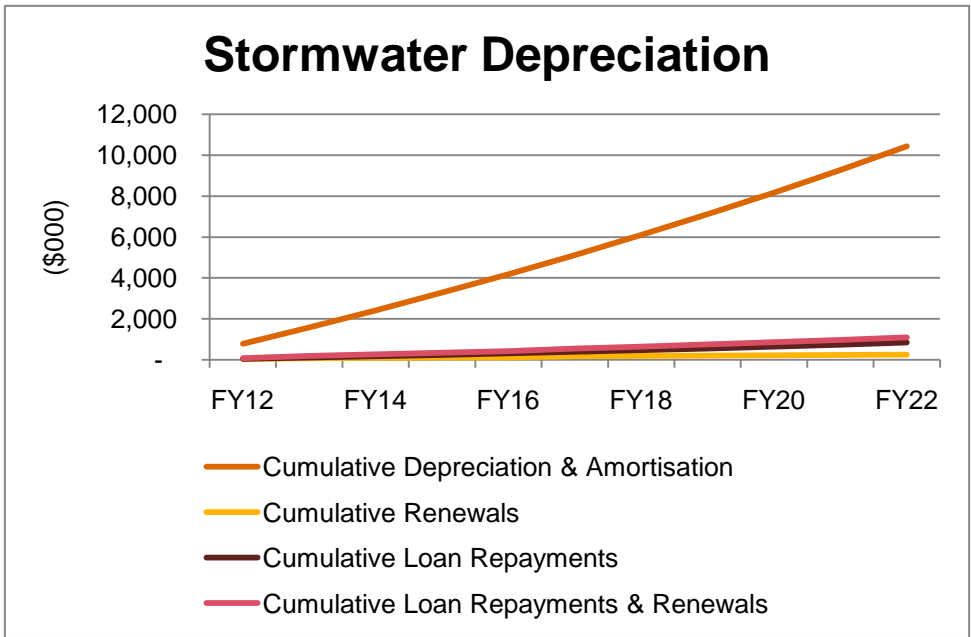




Source: TDC, PwC analysis

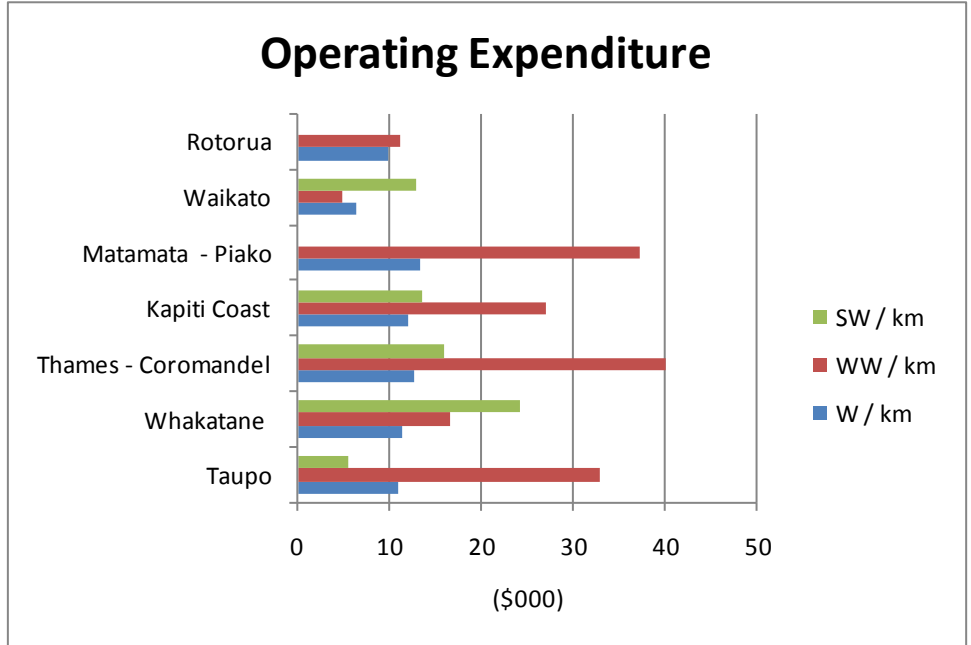


Source: TDC, PwC analysis



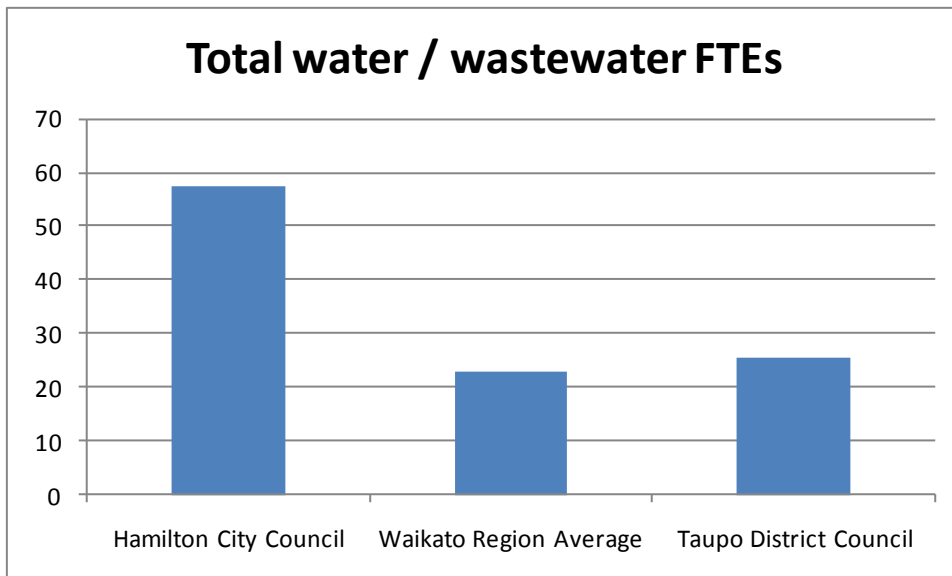
Source: TDC, PwC analysis

- major stormwater renewals are not forecast to occur pre 2022, which is currently manifesting itself in the largest gap between depreciation charged and the combination of renewal expenditure and loan repayment across the Three Waters. This position reinforces the desirability of extending the use of condition ratings to maximise the accuracy of future projections and reduce risk of over or undercharging consumers
- cost benchmarks shown below and summarised in Appendix B indicate favourable to mid range costs across Three Water opex comparison areas:



Source: PwC analysis

- benchmarked staff numbers are close to the regional benchmark average which is a favourable result given TDC has the largest number of plants to operate:



Source: Waikato Regional Waters' Study, PwC analysis

### 3.3.4 Funding mechanisms summary

TDC's funding mechanism results have improved from the earlier pilot study report and the original NIP sector assessment. This reflects a strong utilisation and continuation of a targeted rates policy which is designed to recover costs directly from the users of each water and wastewater scheme. This position is likely to be enhanced through the extension of the trade wastes recovery programme and the planned roll out of bulk water meters for bulk usage and leak detection purposes.

Key aspects to further enhance this progress include:

- formal consideration of universal metering for Taupo township
- assessment of township wastewater charging on the basis of water usage
- compliance with the outlined debt repayment strategy
- reviewing the budgeting process for major capital and renewal works to improve accuracy of forecasting.

## 3.4 Accountability and performance

### 3.4.1 Context

Good performance against the principle of accountability and performance is described in the NIP as “it is clear who is making decisions and on what basis, and what outcomes are being sought.”

The NIP states that there need to be stronger indicators of performance, that there need to be ongoing reviews of whether assets are fit for purpose and have the best ownership structure, and that there is consideration of the best governance and ownership structures.

The metrics that are used to assess performance against this principle are:

1. The set of KPIs which the operator measures itself against
2. The extent to which benchmarking is used
3. How asset condition assessments are undertaken
4. How criticality assessments are undertaken, and the extent to which a hierarchy of assets by criticality exists
5. The extent to which different operational models are considered.

### 3.4.2 Results

Accountability & Performance		3 waters	Water & wastewater	Water	Wastewater	Stormwater
Overall						
19	KPIs					
20	KPI outcomes					
21	Benchmarking					
22	Condition assessments					
23	Criticality assessments & hierarchy					
24	Operational model consideration					
a	Governance					
b	Service delivery					

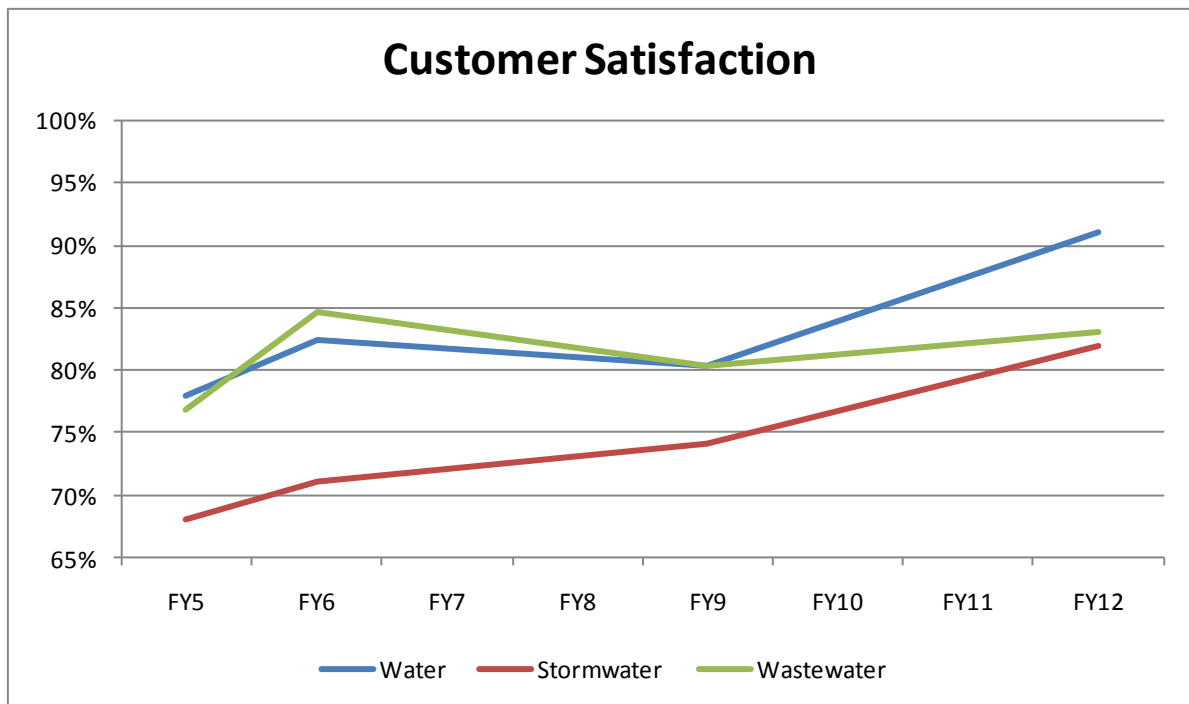
### 3.4.3 Key matters

Key matters that we identified in this assessment include:

- key customer and service KPIs indicate a mid to high range of performance amongst benchmark operators as shown in the following two tables and chart. These include both customer satisfaction and service orientated measures. These results also indicate:
  - a general improvement across the three years highlighted
  - current non-compliance with drinking water standards which are being addressed, as highlighted, later in this section.

Measure	FY10	FY11	FY12
<b>Water</b>			
Service interruptions	19	8	35
Response to interruptions	Target Not Achieved	Target Not Achieved	Target Not Achieved
Customer satisfaction	80%		91%
Compliance with resource consent conditions	Achieved	Achieved	Achieved
No abatement notices or enforcement proceedings	Achieved	Achieved	Achieved
Safe drinking water	Target Not Achieved	Target Not Achieved	Target Not Achieved
<b>Stormwater</b>			
Customer satisfaction	74%		82%
Compliance with resource consent conditions	Achieved	Achieved	Achieved
No abatement notices or enforcement proceedings	Achieved	Achieved	Achieved
<b>Wastewater</b>			
Number of overflows	44	50	47
Customer satisfaction	80%		83%
Compliance with resource consent conditions	94%	97%	92%
No abatement notices or enforcement proceedings	Not Achieved	Achieved	Achieved

Source: TDC, PwC analysis



Source: TDC, PwC analysis

Comparator Councils	Customer Satisfaction			Service Interruptions (W)	Overflows (WW)
	W	WW	SW		
<b>Taupo</b>	<b>91%</b>	<b>83%</b>	<b>82%</b>	<b>35</b>	<b>47</b>
Whakatane	74%	79%	56%		
Thames - Coromandel	83%	91%	74%		3
Kapiti Coast				219	79
Selwyn					3
Matamata - Piako	94%		70%		6
Horowhenua				26	36

Source: Comparator Council reports, PwC analysis

- TDC joined the Water NZ benchmarking club in 2012 which will assist the capture of additional continuous improvement opportunities. We understand TDC is one of 16 Councils nationwide to participate
- on the ground operations are separated from asset management within the organisation structure. This was a specific decision of the recent overall organisation restructure but it is evident from meetings with managers and staff there is good communication between the two component parts of the Three Waters operation
- best practices are followed in terms of condition assessments for all above ground plant including pump stations but has yet to be implemented with underground infrastructure which is currently done on an as needs basis
- all plants are linked through the SCADA continuous monitoring scheme which in addition to being a good efficiency tool to monitor remote plants, also assists with resource consent compliance and reporting. We note the water supply asset management plan confirms that Council is continuing to upgrade this telemetry network and install further chemical analyses for all the water treatment plants which will enable continuous monitoring of water quality for compliance purposes. An example of this equipment is shown in the following picture taken within the Mangakino plant:



- Council's monitoring programmes and data management systems offer significant potential benefits in both compliance in the management of risk and efficiency of operation
- limited progress is being made against reducing overall water demand and is hampered by a lack of metering in the main town. In this regard we note that Council issued a press statement on 17 January 2013 requesting responsible water use and advising of watering restrictions
- the operational model consideration during the organisation restructure was restricted to Council's internal structure and did not take account of other models such as a CCO for the delivery of Three Water services, a consideration recommended by NIP
- in terms of service delivery, the majority of work is contracted out excluding treatment which TDC has slowly moved to from being largely in-house over a 10 year period. It is also currently considering opportunities to outsource the laboratory services or form some new commercial arrangement.

#### 3.4.4 Accountability and performance summary

TDC's accountability and performance assessment indicates a generally positive and improving scenario as a number of initiatives are being implemented including:

- the entry into the Water New Zealand benchmarking club
- actual KPI results which are generally trending upward
- implementation of management roles focused on operations and asset arrangement specifically
- Improvement opportunities include:
  - maintaining the improvement track across all key KPIs where it is required and cost beneficial to do so
  - widening the utilisation of condition assessments
  - utilising the opportunity presented through wider regional shared services reviews to assess the relative merits of alternative governance structures
  - addressing current water demand issues
  - continuing to automate plant operations where it is cost effective to do so.

## 3.5 Regulation

### 3.5.1 Context

Good performance against the principle of regulation is described in the NIP as “*regulation enables investment in infrastructure that is consistent with other principles, and reduces lead times and uncertainty.*”

The NIP states regulation should ensure that infrastructure is provided at the right time in the right place, balancing short and long-term objectives, and that regulation should allow more streamlined and efficient infrastructure delivery. The NIP includes a lengthy discussion of various items that regulation should aim to achieve.

The metrics that are used to assess performance against this principle are:

1. The extent to which the regulations are understood
2. The achievability of regulations
3. Whether the benefits of regulation exceed the burden
4. Whether regulations are understandable, certain, and predictable
5. Whether regulations allow for innovative solutions
6. Whether regulations recognise the long-term nature of the sector
7. The extent to which regulation helps achieve high quality services
8. The enforcement of regulations.

These metrics provide a good coverage of the elements of the regulation principle. For most of these metrics TDC, along with other sector operators, has limited control over the performance being assessed.

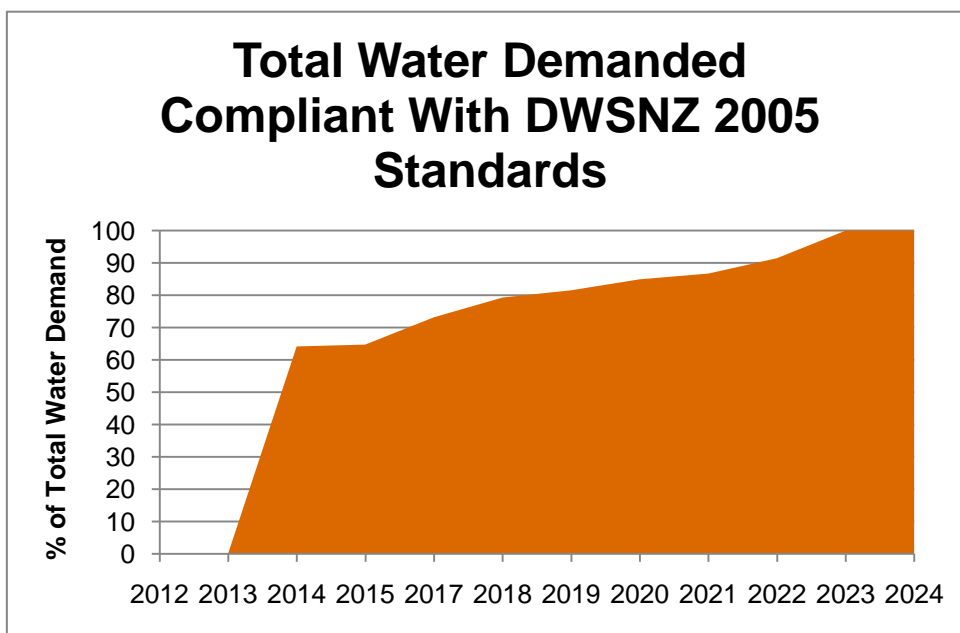
### 3.5.2 Results

Regulation		3 waters	Water & wastewater	Water	Wastewater	Stormwater
Overall						
25	Understanding of the regulations					
26	Achievability					
27	Burden vs benefits					
28	Understandability, certainty, predictability					
29	Allowance of innovation					
30	Long-term nature recognised					
31	Help achieve quality					
32	Enforcement					

### 3.5.3 Key matters

Key matters that we identified in this assessment include:

- management has a clear understanding of key regulations, including drinking water standards, wastewater and stormwater discharge requirements. Section 1.1.3 of the asset management plans contained a full stocktake of legislation and regulations and link to the Brooker's web based legislation service for detailed requirements
- stormwater is fully compliant with all consents in place and complied with
- water and wastewater are largely compliant. Wastewater has an ongoing issue with ensuring all plants meet the nitrogen reduction standard, albeit on a group basis, we are advised that the standard is met
- water will be significantly compliant once the new Taupo town treatment plant comes on stream during 2013 as in the water asset management plan.



Source: TDC AMP

- by 2022, being the end of the current LTP period, 90% of water supply as highlighted in the chart, will be compliant
- TDC compliance costs are high due to the combination of multiple plants and the particular resource consent conditions highlighted
- aspects of the regulation such as allowance for innovation and recognition of the long term nature of the assets, are problematic as they are from an industry perspective. For example nitrogen reduction requirements per plant, and where innovation is restricted by the regulator
- overall programme compliance with drinking water standards will substantially be achieved as the major water treatment facilities are commissioned during 2013.

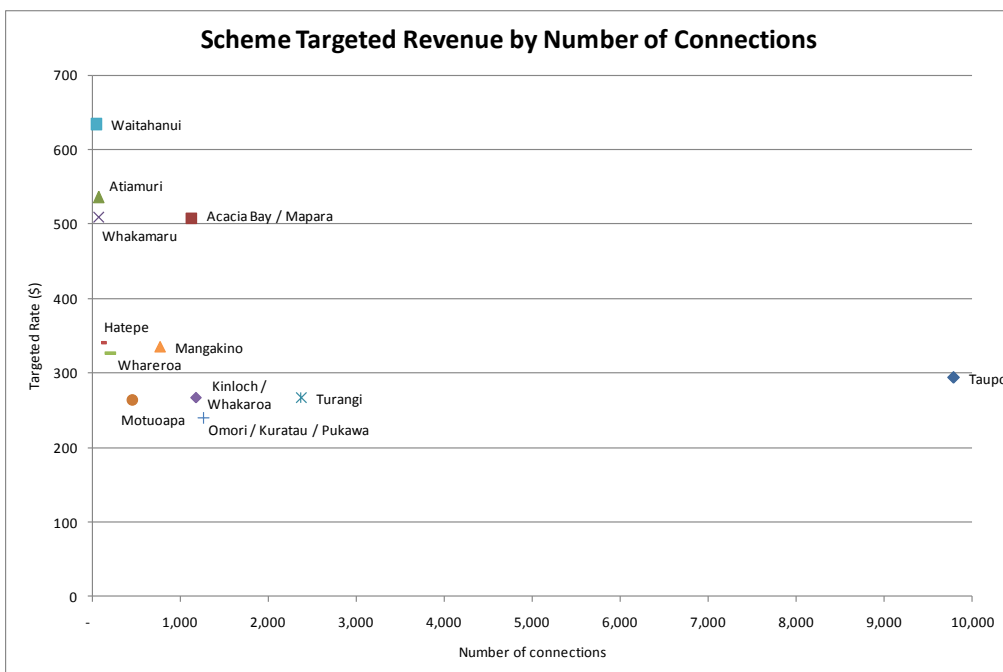
### 3.5.4 Regulation summary

TDC is making progress against the key regulatory requirements of drinking water and wastewater discharge standards. Lack of flexibility in the regulatory framework which was highlighted in the earlier pilot study is particularly onerous for TDC given both the quantity and small size of a number of its schemes. The Hatepe water treatment plant shown overleaf is one such example which services less than 100 properties but is still required to meet the same standards as major treatment plants.





Ultimately this situation can manifest itself in higher costs or small scheme customers as shown by this targeted rate comparison across a number of the water schemes. Here the smallest of schemes can be required to pay targeted rates double that of the main Taupo town supply.



Source: TDC, PwC analysis

Despite this situation, TDC with some assistance from the Government’s drinking water and wastewater subsidy scheme, has been able to upgrade a number of plants as depicted by the new filtration equipment in the Mangakino plant:



Apart from completing the planned scheme upgrades and better documenting the regulatory framework, there is limited ability for TDC to significantly improve its performance against this principle due to the regulatory framework. Given the costs imposed by this framework on small distributed schemes, there would be merit in TDC understanding cost benefits and subsequently advocating for greater flexibility in the standards applied.

## 3.6 Coordination

### 3.6.1 Context


























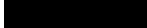
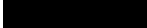
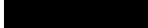
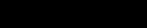
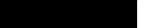
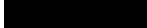
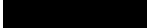
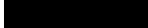
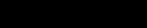
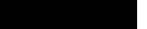





Good performance against the principle of investment analysis is described in the NIP as “*infrastructure decisions are well coordinated across different providers and are integrated with decisions about land use.*”

The NIP states that land-use and infrastructure decisions should be coordinated, that different infrastructure sectors should coordinate provision, and that strategic regional plans be used to inform local infrastructure decisions.

The metrics that are used to assess performance against this principle are:

1. The interface between water planners and land-use planners
2. The extent to which water plans recognise regional plans
3. The extent to which operators coordinate with other water operators regarding water use plans
4. The extent to which operators coordinate with other water operators in the delivery of expenditure
5. The extent to which operators collaborate with other infrastructure providers in the delivery of expenditure.

### 3.6.2 Results

Coordination		3 waters	Water & wastewater	Water	Wastewater	Stormwater
Overall						
33	Interface with land-use planners					
34	Recognition of regional plans					
35	Collaboration with other councils on water use plans					
36	Collaboration with other councils on delivery					
a	<i>Capital investments and assets</i>					
b	<i>Operations and maintenance</i>					
37	Collaboration with other infrastructure providers					

### 3.6.3 Key matters

Key matters that we identified in this assessment include:

- TDC has confirmed their land use planning includes requirements for Three Waters and is consistent with the AMPs. Three Waters' staff also have input into the land use planning process to ensure full integration and consistency between plans
- growth has been planned and can be accommodated within the township development zones
- the AMP and LTP recognises the Waikato Regional Council's regional plan Variation Five which ensures consistency with water allocation requirements
- recognition of regional plans is potentially complicated by the fact that TDC falls into three regional council zones, being Waikato, Bay of Plenty and Hawke's Bay. Currently all water and wastewater infrastructure of the district is within the Waikato district
- higher efficiency can be achieved by grouping networks together to extract synergies from better application, coordination and economies of scale. This is problematic for Taupo given the district's geography which is equally remote from the next nearest major provincial centres of Hamilton, Tauranga and Napier/Hastings
- given that TDC operate a large number of small schemes anchored by a major town scheme, the integrated management approach appears to enable economies of scale to occur across them, albeit on a small scale
- geographical remoteness from other Three Water network operators has not precluded TDC from undertaking collaboration where the opportunity arises with other infrastructure providers such as Land Transport New Zealand with the stormwater interface.



### 3.6.4 Coordination summary

Taking account of the more limited ability of TDC to coordinate with other providers due to geographic remoteness it scores high across available coordination metrics.

However, further opportunities to enhance coordination such as those available through regional shared services initiatives should be evaluated as they arise. For the purposes of this assessment they have been excluded on the basis of current limited availability.

## 3.7 Overall assessment

The overall assessment which summarises the results of the individual principles, highlights that the processes TDC has in place have been on a continuous improvement track when compared to both the original NIP assessment and the subsequent 2011/12 pilot assessment programme that TDC participated in. This has occurred considering the assessment at the level of Three Waters or restricted to water and wastewater services only.

	NIP 2011		Taupo DC - 2011/12					Taupo DC - 2012/13		
	Whole water sector	Water & wastewater	3 waters	Water & wastewater	Water	Wastewater	Stormwater			
Investment analysis	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Resilience	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green
Funding Mechanisms	Red	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Accountability & Performance	Yellow	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Regulation	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Coordination	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green

This improving process performance is reinforced when considering improving results against key metrics including:

- drinking water standards
- wastewater discharge standards
- stormwater standards
- customer satisfaction across Three Waters
- service reliability
- Three Waters' performance benchmarking against comparator Councils.

Benchmark comparators taking account of the large quantum of plant and headcount, potentially indicate comparative cost effectiveness.

This positive picture needs to be tempered with a number of factors that need ongoing or additional management attention including:

- management of debt in accordance with the LTP programme
- maintaining the agreed capital and renewal works' programme
- finalising public health plans to complete a comprehensive disaster management plan framework
- technical consideration of the merits of universal metering for the town
- improving accuracy of capital works forecasting

- 
- rigorous scrutiny of shared services opportunities
  - advocating for a more flexible regulatory regime.

A number of other more tactical improvement opportunities have also been identified throughout this peer review assessment. These need to be reviewed and prioritised by TDC to continue progressing its overall 3 Water continuous improvement programme.

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## 4. Rates affordability research

### Rates affordability

This section considers the question of whether there is headroom in rates funding by examining whether rates in the Taupo District are affordable. Consideration of rates affordability begins by asking what an affordable level of rates is, before reviewing the total rates burden per household by household composition in Taupo and a number of comparator Local Authorities.

#### *What is an affordable level of rates?*

Finding a rule of thumb as to a “fair” or “affordable” level of rates is challenging. Our search of international literature highlighted two difficulties. One was finding appropriate comparator areas – district jurisdictions with small populations split across urban and rural areas. The second difficulty was the wide range of rates levels we found (in dollar terms), and the challenge in representing these as a share of household incomes for particular areas overseas.

Fortunately, Statistics New Zealand data provides an indication of the average household spend on rates as a share of income, as well as spending on other housing costs. These proportions of income spent are considered in this section.

#### **New Zealand average rates burden**

Figure 1 overleaf shows the average proportion of household income spent on rates and other housing costs in 2011 across New Zealand, according to the Household Economic Survey published by Statistics New Zealand (2011).<sup>12</sup>

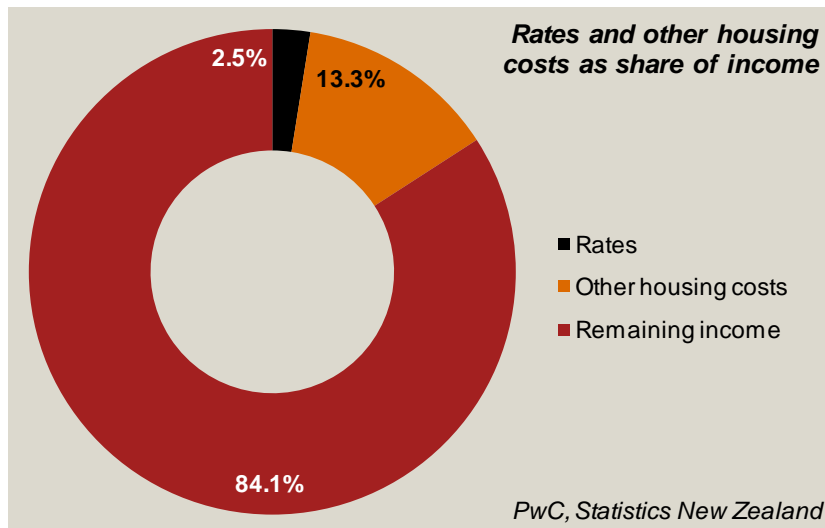
Average household incomes for the year ended June 2011 were around \$81,000, with approximately \$2,050 per household spent on rates in the same year. This equates to an annual spend on rates of around 2.5% of income. Other spending on housing, on mortgage or rent payments, and insurance, accounted for a further 13.3%.

The New Zealand Productivity Commission Enquiry on Housing Affordability (2012) stated that the Registered Master Builders’ Federation do not believe rates are a hindrance to housing demand. However, the Enquiry did note that recent rates increases have been rapid and that there are some concerns over the “housing rich but income poor” who are unable to continue to own a house and afford to pay their rates particularly later on in life. This is not necessarily a rates affordability question, but may suggest that other funding mechanisms are required by this group, such as reverse mortgages or rates postponement arrangements. In this regard we note that TDC have a rates postponement policy in place which allows for reverse mortgages.

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<sup>12</sup> It is important to note that these figures also include Regional Council rates.

**Figure 1 Rates and other housing costs as a proportion of income, New Zealand 2011**



### What does this mean?

An important point to note is that these figures only consider the incidence of rates burden across households. In other words, the data is somewhat skewed in two ways. First, because this survey covers both renters (who “pay” rates through their rental expenses) and dwelling-owners, it may not reflect the exact role of rates unless the proportion of renters and owners in the survey lines up exactly with the mix of renters and owners across New Zealand.

Second, the figure of 2.5% will only include the residential rates burden. Commercial and other rates, are passed on to residents through the prices for goods and services they pay. So in reality a portion of commercial rates is also borne by households, but is not directly charged to them. Through our subsequent analysis, we consider the total rates burden (residential, commercial and other) to be borne by dwelling-owners.

As a headline comparator then, we would expect rates at local council level to be somewhere higher than 2.5% of incomes (including regional council rates) on average, probably between 3% and 4%. However, we acknowledge that there are significant variations on this, with many rural council areas anecdotally characterised by low levels of rates.

### *Taupo rates as a proportion of income by household type*

Having established a reasonable range for the average rates burden per dwelling, we considered what the average rates burden is for Taupo District, and how that burden varies as a proportion of household income for different household types or compositions.

#### **Rates per rateable property**

We collected data on the number of rateable properties from PropertyIQ. From the range of rateable property types, we selected residential, lifestyle and rural properties as the denominator in the following equation:

- total rates burden per household = rates revenue / rateable properties

The rationale behind this equation is that the burden for rates ultimately falls on the resident population, even though the incidence of the rates may fall on a commercial property (business). Most residents are likely to live at residential, lifestyle or rural properties.

Businesses will, in most instances, recoup the cost of commercial rates from residents of the relevant district (with some notable exceptions in the case of large exporting manufacturers for instance). We have therefore used total rates revenue divided by the three rateable unit types to estimate the burden per household across Taupo and comparator Councils overleaf.

In the case of Taupo, total rates revenue for the June 2012 year was \$58.5 million, while the number of rateable properties was estimated at around 20,700. As the analysis of comparator Councils highlighted below, Taupo has a large number of holiday homes, meaning the number of rateable properties is slightly higher than the number of resident households.

### Household types used in the analysis

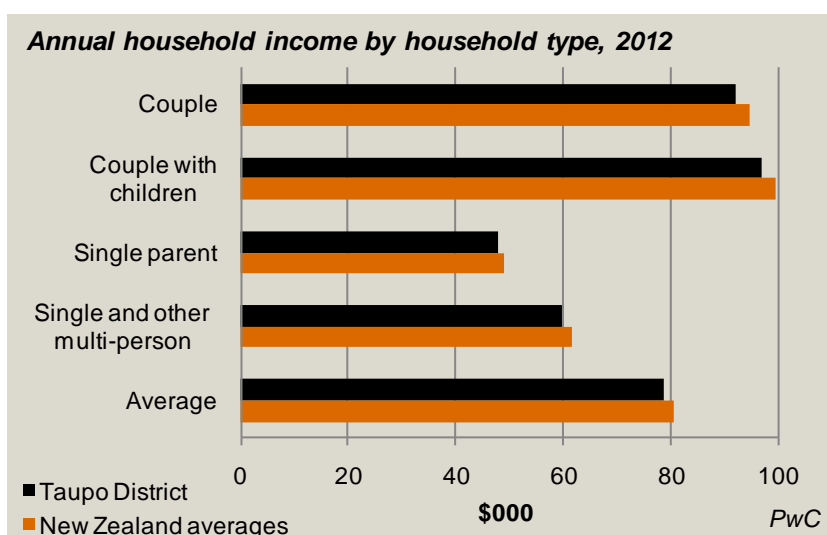
Statistics New Zealand collects average household income data at a New Zealand level across several household types, from single person households to multi-person households, to couples with and without children, and single parents. PwC has used this data, along with a range of other data sources, to build a model of household incomes by Local Authority (LA) by household type for 2012.

The grouped household types we use in our analysis are:

- single parent households
- couples
- couples with children
- single and other multi-person (such as flat-mate) households.

There are significant differences in average earnings for these household types in Taupo District and across New Zealand, as shown in Figure 2.

**Figure 2 Annual household income by household type, Taupo and New Zealand 2012**



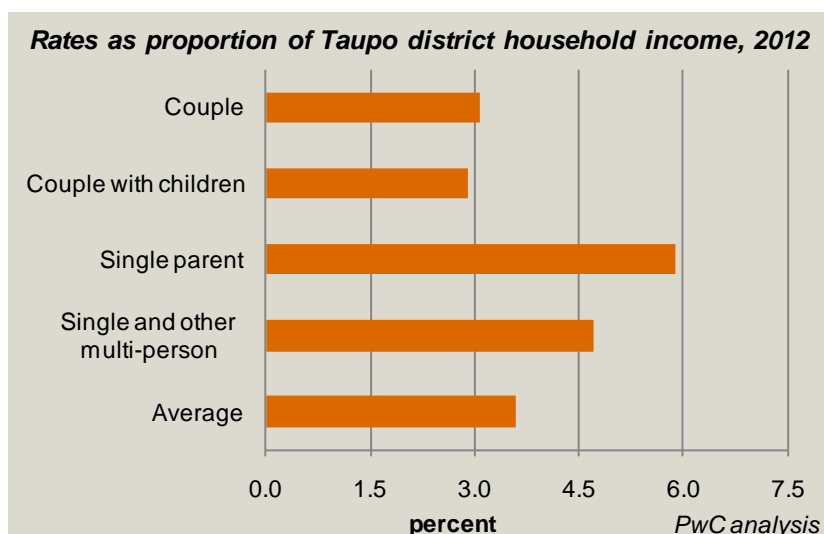
In Taupo, as across most of New Zealand, households consisting of a couple with children tend to have the highest incomes. In the case of Taupo household incomes for couples with children average approximately \$97,000. Couples without children have slightly lower incomes, at \$92,000. The lowest incomes are in single parent households, at an average of approximately \$48,000.

Overall, incomes in Taupo average around \$79,000 per household, slightly below the New Zealand average of around \$81,000. This latter figure is skewed by significantly higher incomes in Auckland and Wellington.



Figure 3 shows what average proportion of household income goes to rates in each household type in Taupo District.

**Figure 3 Rates as a share of household income by household type**



On average, the rates burden across the District is around 3.6% of household incomes, based on the mix of household types. This sits within the expected range of 3% to 4% established in the analysis of the overall New Zealand rates burden. With the lowest household incomes, single parents in Taupo as elsewhere are likely to spend a far larger proportion of their incomes on rates, at 5.9%. Couples with children spend 2.9% of household incomes on rates.

#### What does this mean?

This headline analysis of Taupo District rates burden suggests that the District falls within the expected range of rates burden per household of 3% to 4%.

Because Taupo District is characterised by a large number of holiday houses, this analysis is likely to slightly overestimate the burden borne by Taupo District households. Many Taupo District ratepayers are not residents, and given their ability to maintain holiday homes, probably earn above the average household income. But given data constraints, our analysis estimates the average household income of households resident in Taupo District. In reality, the burden borne by ratepayers in Taupo (whether resident or non-resident) is likely to be slightly less than 3.6% of household incomes.

#### Comparison across Local Authorities

Having considered the total rates burden per dwelling in Taupo District compared to the New Zealand average, we then considered how this burden compares with that of appropriate comparator LAs.

#### Choosing appropriate Comparator Local Authorities

Comparator LAs were chosen based on their similarity across a number of factors:

- Urban-rural mix
- Overall population and household size
- Income levels
- Geographic location.

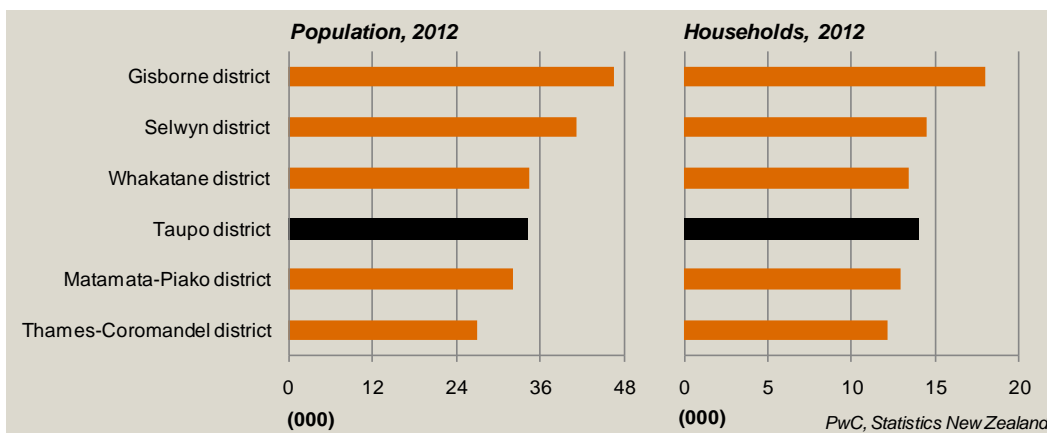
This set of factors resulted in the following comparator LAs:

- Gisborne District
- Matamata-Piako District
- Selwyn District
- Thames-Coromandel District

- Whakatane District.

Figure 4 presents the population and number of households for the comparator LAs selected.

**Figure 4 Population and households by comparator LA**

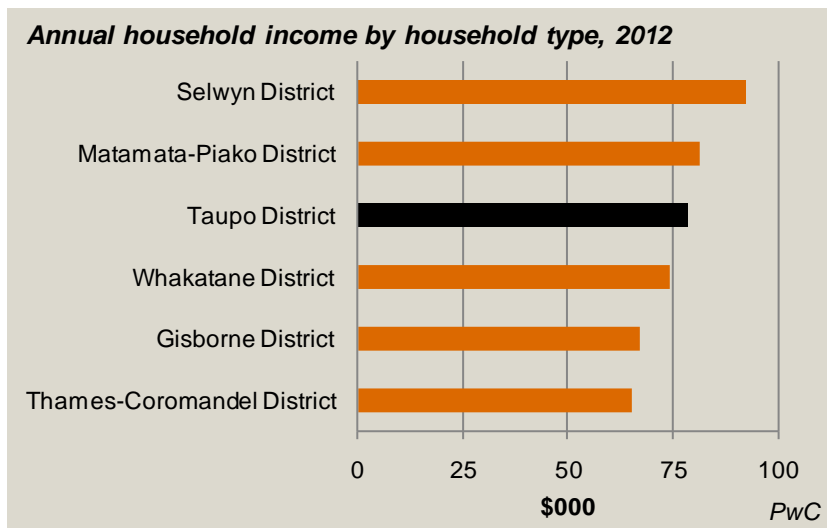


The Taupo District has a population estimated at around 34,000 as at 2012, with approximately 14,000 households, according to Statistics New Zealand. This places it in the middle of the group of comparator LAs. Gisborne is the most populous of the comparators, with 46,600 people and around 18,000 households. The Thames-Coromandel District has 27,000 residents and 12,100 households.

Like Taupo, Thames-Coromandel also has a large number of non-residents who have holiday homes in the District. Those numbers are excluded from this analysis, however.

Figure 5 shows the annual household income of each comparator LA.

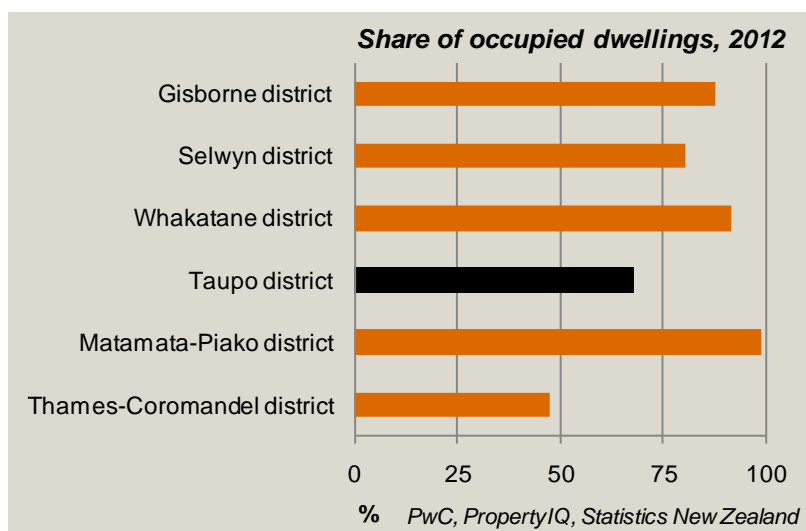
**Figure 5 Household income by household type**



The Taupo District once again sits in the middle of the comparator group. The Thames-Coromandel District has the lowest average household income in the group, at around \$65,200. At the other end of the spectrum, the Selwyn District has an average household income of around \$92,600, one of the highest in the country.

As alluded to previously, the proportion of local dwellings that are occupied by residents varies across Council districts. Some parts of the country, like Taupo and Thames-Coromandel District, are popular holiday destinations for New Zealanders, many of whom have holiday houses. Figure 6 shows resident households as a proportion of residential, lifestyle and rural rating units.

**Figure 6 Share of dwellings that are occupied**



Less than half of dwellings in the Thames-Coromandel District are occupied by usual residents. In Taupo, the share is 68%. Across the other comparator LAs, the share is above 75%. This comparator group provide a good mix between LAs where most dwellings are permanently occupied and ones that have large numbers of visitors.

#### **Sourcing rates data for comparator LAs**

Rates forecasts for the six comparator LAs for the June 2012 year were sourced from the 2012-22 Long-Term Plans (LTPs).<sup>13</sup> We were also able to source actual rates revenue data for the June 2012 year from Taupo District. Because the actual figures for Taupo District were available, and were so close to the LTCCP forecasts for 2012, we used those figures.<sup>14</sup>

#### **The comparison**

Figure 7 (overleaf) shows the total rates burden as a proportion of household income by household type for Taupo District and the five comparator LAs.

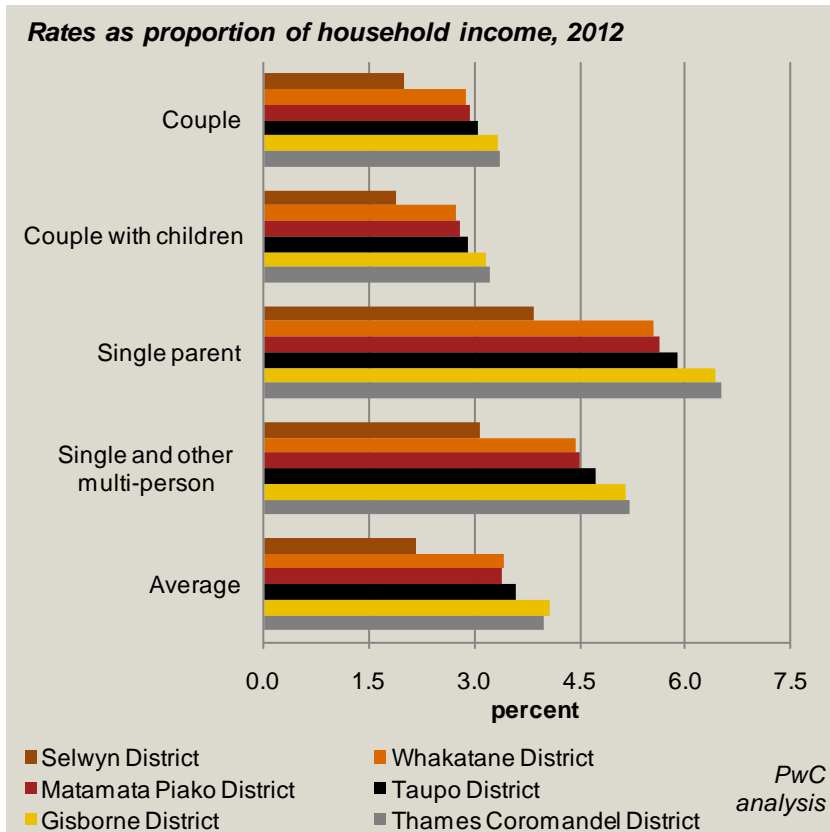
Taupo District rates as a proportion of household income sits in the middle of the comparator group. Across all household types, rates per rating unit as a proportion of household income for Taupo are third lowest.

For single parents in Taupo, rates comprise just under 6% of household income, while this number is much lower at around 3% for couples and couples with children. Rates make up 3.6% of average household income for Taupo, which is slightly higher than for Selwyn, Matamata-Piako and Whakatane, and lower than for Gisborne and Thames-Coromandel.

<sup>13</sup> Note that rates revenue projections in the LTCCPs are GST exclusive. Figures presented in this report have been revised to include GST.

<sup>14</sup> Comparing expected rates revenue for the June 2012 year from the 2009-19 LTCCP with actual rates revenue from the June 2012 year yielded a difference of just 2.6%, which is an impressive level of accuracy given the economic uncertainties within which the 2009 forecasts were made.

**Figure 7 - Rates as a proportion of household income, by household type**



**What does this mean?**

The Taupo District rates burden is not out of step with comparator LAs. It shares many similarities with the Thames-Coromandel District in terms of a large number of non-residents, yet has a lower rates burden. In other ways it more similar to Gisborne given its rural-urban mix, yet it once again has a slightly lower rates burden.

The two largely rural Districts included – Selwyn and Matamata-Piako – have traditionally been characterised by lower rates burdens, a trend that continues here despite their relatively small populations. Further, they are relatively high income Districts, which further accentuates the gap between these two Districts and the others in the comparison.

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## *Appendix A - Restrictions*

This report has been prepared for Taupo District Council to detail the results of a review of the Three Waters activity peer review. This report has been prepared solely for this purpose and should not be relied upon for any other purpose. We accept no liability to any party should it be used for any purpose other than that for which it was prepared.

This report has been prepared solely for use by Taupo District Council and may not be copied or distributed to third parties without our prior written consent.

To the fullest extent permitted by law, PwC accepts no duty of care to any third party in connection with the provision of this report and/or any related information or explanation (together, the "Information"). Accordingly, regardless of the form of action, whether in contract, tort (including without limitation, negligence) or otherwise, and to the extent permitted by applicable law, PwC accepts no liability of any kind to any third party and disclaims all responsibility for the consequences of any third party acting or refraining to act in reliance on the Information.

We have not independently verified the accuracy of information provided to us, and have not conducted any form of audit in respect of any of the information provided. Accordingly, we express no opinion on the reliability, accuracy, or completeness of the information provided to us and upon which we have relied.

The statements and opinions expressed herein have been made in good faith, and on the basis that all information relied upon is true and accurate in all material respects, and not misleading by reason of omission or otherwise.

The statements and opinions expressed in this report are based on information available as at the date of the report.

We reserve the right, but will be under no obligation, to review or amend our report if any additional information, which was in existence on the date of this report, was not brought to our attention, or subsequently comes to light.

This report is issued pursuant to the terms and conditions set out in our letter of engagement dated 11 October 2012.

# Appendix B – Benchmark Data

Benchmarking Data												
Comparator Councils	Population Served		Properties / Connections Served		Demand / Discharge (m3 / day)		Distance (km)					
	W	WW	W	WW	W	WW	W	WW	SW			
<b>Taupo</b>	<b>45,576</b>	<b>42900</b>	<b>18,990</b>	<b>17,855</b>	<b>42,450</b>	<b>12,844</b>	<b>570</b>	<b>360</b>	<b>259</b>			
Whakatane	34,530	22590	12,301	8,289	15,350		516	175	90			
Thames - Coromandel	-	-	18,283	22,596		8,219	588	412	193			
Kapiti Coast							571	280	210			
Selwyn	28,000	18,000										
Matamata - Piako	18,000	17,000	8,842	8,664	21,918	8,219	328	195				
Horowhenua												
Waikato							689	234	72			
Rotorua							719	548				
Financials	Infrastructure Value (\$000)			Revenue (\$000)			OPEX (\$000)			CAPEX (\$000)		
	W	WW	SW	W	WW	SW	W	WW	SW	W	WW	SW
<b>Taupo</b>	<b>57,492</b>	<b>91,797</b>	<b>48,794</b>	<b>5,409</b>	<b>10,158</b>	<b>1</b>	<b>6,202</b>	<b>11,820</b>	<b>1,439</b>	<b>5,571</b>	<b>6,376</b>	<b>57</b>
Whakatane	64,240	42,899	40,446	5,390	2,063	1,450	5,898	2,920	2,163	1,963	1,482	325
Thames - Coromandel	96,920	154,048	70,390	8,057	16,290	3,329	7,495	16,476	3,081	5,186	5,821	2,747
Kapiti Coast	74,493	83,138	55,586	473	761	182	6,925	7,552	2,859	5,797	5,055	5,533
Matamata - Piako	42,576	67,165	34,410				4,383	7,258	1,574			
Waikato							4,345	3,286	925	988	6,624	2854
Rotorua							7,046	8,100	2,036	2,319	11,836	999
Quality	Customer Satisfaction			Service Interruptio	Overflows							
	W	WW	SW			W	WW	SW	W	WW	SW	

Source: TDC, comparator Councils, PwC analysis

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## *Appendix C – External References*

- 2010/2011 National Performance Review Report, Water Utilities, Water NZ
- Water Services Association of Australia, Asset Process Benchmarking 2008
- Infrastructure 2012, National State of Infrastructure Report, National Infrastructure Advisory Board and National Infrastructure Unit, November 2012
- Building Infrastructure, National Infrastructure Unit, November 2012
- National Water Industry, 2008 Report Card and Road Map, NZ Council for Infrastructure Development, September 2008
- Terms of Reference, Local Government Infrastructure Efficiency, Expert Advisory Group, September 2012
- Regulatory Impact Statement, Better Local Government Agency Disclosure Statement, 16 March 2012
- Third Report of the Land and Water Forum, Managing Water Quality and Allocating Water, Land and Water Forum, October 2012
- Future Wellington – Proud, Prosperous and Resilient, Wellington Region, Local Government Review Panel, October 2012
- Asset Management for Public Entities: Learning from Local Government Examples, Audit New Zealand, April 2010
- Removing Barriers to Water Infrastructure Development in the Local Government Act 2002 – Regulatory Impact Statement, Treasury, October 2009
- Matters Arising from the 2012-2011 Local Authority Long Term Plans, Controller and Auditor-General, December 2012
- A Strategic Review of Opportunities Arising from ‘Shared Services’ Relating to the Water and Wastewater Activities of Territorial Authorities in the Waikato Region, November 2012
- Report of the Local Government Efficiency Taskforce, November 2012
- Towards Better Local Regulation, draft report, New Zealand Productivity Commission, December 2012
- National Infrastructure Plan 2011
- Ratings Direct, Standard and Poors' Rating Services, Taupo District Council, 28 October 2012.

## Appendix D – Metrics Comparison

### Metrics comparison with proposed DIA Mandatory Performance Measures

	Activity	TDC Position	Comment
A	Water Supply		
1	Compliance with NZ drinking water standards	Currently measuring	
2	Percentage of water loss from each municipal water reticulation network	Currently enhancing measurement	Restricted to Taupo town supply – subsidiary networks cost prohibitive and less value to measure i.e. loss to level of spend equation
3(a)	Response time to attend to urgent issues including notification to attendance to resolution	Measure number of issues, not response time	With some minor changes to their system, TDC advise they will be able to measure
3(b)	Response time to attend to non urgent issues including notification to attendance to resolution	Measure number of issues, not response time	With some minor changes to their system, TDC advise they will be able to measure
4(a)	Number of complaints per 1000 connections	Currently measuring	
4(b)	Surveyed customer satisfaction	Currently measuring	
5	Demand management – average consumption of water per person per day	Currently measuring	
B	Wastewater		
1	Annual dry weather overflows per 1000 connections	Currently measuring	
2	Compliance with resource consents	Currently measuring	
3	% bio solids that are reused on an annual basis	Currently measuring	
4	Median response time to attend to sewage overflows	Measure number of issues, not response time	With some minor changes to their system, TDC advise they will be able to measure



5(a)	Number of complaints per 1000 connections	Currently measuring	
5(b)	Surveyed customer satisfaction	Currently measuring	
C	Stormwater		
1	Number of flooding events to habitable floors	Currently measuring	
2	Compliance with resource consents	Currently measuring	
3	Median response time to attend to sewage overflows	Measure number of issues, not response time	With some minor changes to their system, TDC advise they will be able to measure
5(a)	Number of complaints per 1000 connections	Currently measuring	
5(b)	Surveyed customer satisfaction	Currently measuring	

# Appendix E – Detailed scoring and criteria table

Question	Subject	Taupo DC - Scores			Criteria			
		Water	Wastewater	Stormwater	Green	Amber	Red	Black (not applicable)
<b>Investment analysis</b>								
	Overall							
1	Methodology	Green	Green	Green	External guidelines	Internal guidelines	Minimal guidelines	
2	AMP revisions	Amber	Amber	Amber	Live, updated at least annually	At least 3yrly with LTP	Less frequently than 3 years	
3	Ownership structures considered	Amber	Amber	Amber	Need to have some projects of sufficient scale, and to seriously consider them for each large project	Scale plus some consideration	No scale or no consideration	
4	Demand forecasting process	Amber	Amber	Amber	Have detailed data, and forecasts internally consistent with assumptions (eg demand mgmt)	Limited data, but forecasts internally consistent with assumptions	Internal inconsistencies	
5	Time period for appraisal	Green	Green	Green	Useful lives	Long-terms where appropriate	Short-terms	
6	Cost and benefits inclusion	Green	Amber	Green				
a	Environmental effects	Green	Green	Green	Included to a sufficient extent	Included to a limited extent	Not included	
b	Social effects	Green	Green	Green	Included to a sufficient extent	Included to a limited extent	Not included	
c	Economic development	Green	Green	Green	Yes with examples	In general or to some extent	No consideration	
d	Integration with other sectors	Amber	Amber	Green	Yes with examples	In general or to some extent	No consideration	
e	Value of reduced levels of service	Amber	Amber	Amber	Valued	Qualitative consideration, or only some items considered	Not really considered	
f	Future legislative changes	Green	Amber	Green	Money spent in advance of requirement	Consideration in advance	Not considered	
7	Replacement decision basis	Green	Green	Green	Condition assessment	Bit of each	Design life	

Resilience		Water	Wastewater	Stormwater			
Overall							
8	Design and construction standards				No problems; have code of compliance, manual or similar	Some code of compliance or similar, but issues experienced	Inconsistent standards, minimal code of compliance of similar, or significant problems experienced
9	Natural hazard risk assessments				Most assets assessed for natural hazard risk	Some assets assessed (eg for critical assets)	Minimal understanding of natural hazard risk
10	Vulnerability assessments				Most assets to a standard	Critical assets	Not even all critical assets
11	Key risks: understanding and mitigation				Well understood and well mitigated	Either (i) well understood but limited mitigation, or (ii) some understanding and some mitigation	Minimal understanding and mitigation
12	Network resilience consideration						
a	<i>Duplications and redundancies</i>				Serious consideration/SW to 1:100 year overland flow std	Some consideration	Minimal consideration
b	<i>Secondary power supplies</i>				Serious consideration	Some consideration	Minimal consideration
13	Contingency plan for power outage				Contingency plan and agreement with Lines Company	Contingency Plan	Limited contingency plan

Funding Mechanisms		Water	Wastewater	Stormwater				
Overall								
14	Actual vs budget capex				Actual within 10% of budget on average or in total over 3 years, and within 20% in each year	Actual within 20% of budget on average or in total over 3 years	Other	
15	Costs vs revenue				Revenue between 0-5% above costs, in average or in total over 3 years	Revenue between 5-10% above costs, in average or in total over 3 years	Other	
16	Funding tools used				W&WW: Volumetric charges account for at least 30% of revenue, in total over 3 years. S: At least 50% targeted rates.	W&WW: Volumetric charges account for 10-30% of revenue, and targeted rates at least 50%, in total over 3 years. S: At least 25% targeted rate.	Other	
17	Consideration of alternative funding tools							
a	<i>Metering</i>				Full study undertaken, or already universal metering	Some consideration	Minimal consideration	
b	<i>Volumetric vs fixed charges</i>				Full study undertaken	Some consideration	Minimal consideration	
c	<i>User charges vs rates</i>				Full study undertaken, or only user charged used	Some consideration	Minimal consideration	
d	<i>Targeted vs general rates</i>				Full study undertaken, or all rates targeted	Some consideration	Minimal consideration	No rates used
e	<i>Development contributions policy</i>				Yes	Some consideration	No	
18	Use of debt				Debt a key part of infrastructure funding; allocated to specific assets, and linked to funding arrangements.	Some allocation of debt to assets and some linkage to funding arrangements.	Minimal allocation or linkage.	

Accountability & Performance		Water	Wastewater	Stormwater	
Overall					
19	KPIs				4-10 KPIs each; in general enable assessment of performance; 5/6 or 4/5 of key KPIs in our list
20	KPI outcomes				In general enable assessment of performance; 3 of key KPIs in our list Other
21	Benchmarking				At least 80% of published KPIs achieved
22	Condition assessments				50-80% of published KPIs achieved
23	Criticality assessments & hierarchy				Less than of published 50% achieved
24	Operational model consideration				WNZ + something else
a	Governance				Done at least 3 yearly, reflected in LTP, for all critical assets and a sample of others
b	Service delivery				Some conditional assessment, and linked to LTP
					Minimal condition assessment or poor link to LTP
					Rigorous assessment & documented hierarchy
					Informal hierarchy and/or assessment
					Minimal assessments
					Formal consideration of external governance options
					Some and/or informal consideration of external options
					Minimal consideration - eg only considered structure of in-house dept
					Formal consideration
					Some consideration
					Minimal consideration

Regulation		Water	Wastewater	Stormwater			
Overall							
25	Understanding of the regulations				Formal identification process, and internal documentation	Intuitive knowledge of main regulations	Limited understanding
26	Achievability				Yes - need scale to be able to achieve with resources	Yes, but difficult (eg because of limited resources)	Generally not
27	Burden vs benefits				Yes	To some extent	No
28	Understandability, certainty, predictability				Yes, understood and predictable	To some extent	No
29	Allowance of innovation				Regional council encourages innovation	Some allowance	Minimal allowance
30	Long-term nature recognised				Yes	To some extent	No
31	Help achieve quality				Yes	Partial (eg drinking water is national, but wastewater & SW standards are not)	No
32	Enforcement				Strong, well-understood, predictable	Mixed (incl prosecution experience)	Inconsistent and uncertain, and/or weak

Coordination		Water	Wastewater	Stormwater				
Overall								
33	Interface with land-use planners				Consistent plans, useful interaction between planners; right throughout planning process	Problematic engagement	Inconsistent planning	
34	Recognition of regional plans				Have a regional water plan and this being followed in AMP	No regional water plan but consistency with District Plan	Inconsistency	
35	Collaboration with other councils on water use plans				Collaboration with other councils	Limited collaboration	No collaboration	Geography of area either doesn't allow collaboration on water use issues, or limits its usefulness
36	Collaboration with other councils on delivery							
a	<i>Capital investments and assets</i>				Extensive collaboration with other providers	Some collaboration	No collaboration	Geography of area either doesn't allow collaboration on capital projects, or limits its usefulness
b	<i>Operations and maintenance</i>				Extensive collaboration with other providers	Some collaboration	No collaboration	Geography of area either doesn't allow collaboration on ops and maintenance, or limits its usefulness
37	Collaboration with other infrastructure providers				Extensive attempts at collaboration, with providers both within council and external	Some attempt at collaboration, eg only with providers within council	Minimal collaboration	

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# *Appendix F – Assessment Methodology - scoring assessment process*

We assess performance against each metric using a traffic light scoring system.

Each metric has its own individual achievement criteria, which the scores are based on. That is, for each question there is a criterion for each of green, amber and red, which the operator has to meet in order to achieve that score.

For some metrics, there is also a 'black' score, where the metric is not applicable. In each case, 'not applicable' is described with the other criteria.

Deriving scores for each principle from scores for each metric

It was agreed that scores for each principle would be derived using the following formulae.

If metric scores are weighted as:

Green = 1

Amber = 0.5

Red = 0

Then principle scores are derived as:

Green = average of at least 0.8 across applicable metrics

Amber = average of at least 0.4 across applicable metrics

Red = average of less than 0.4 across applicable metrics

These average scores were deemed appropriate given that they intuitively correspond with the NIP scoring criteria of 'occurs effectively', 'occurs but could be improved' and 'does not occur effectively'.